Service Oriented Architecture

Michael Platt
Architect
Platform Strategy Group
Microsoft Corporation

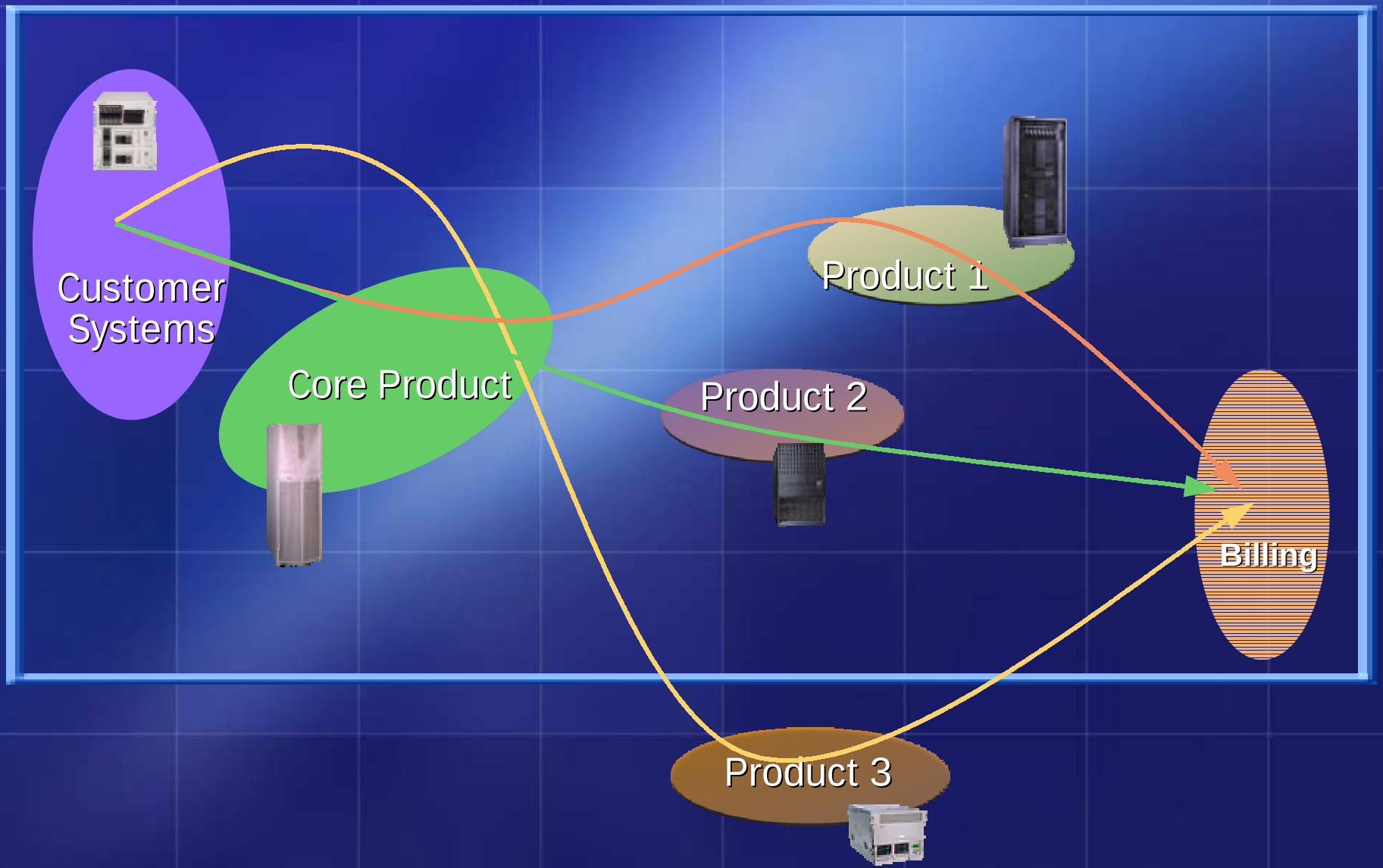
Agenda

- 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)

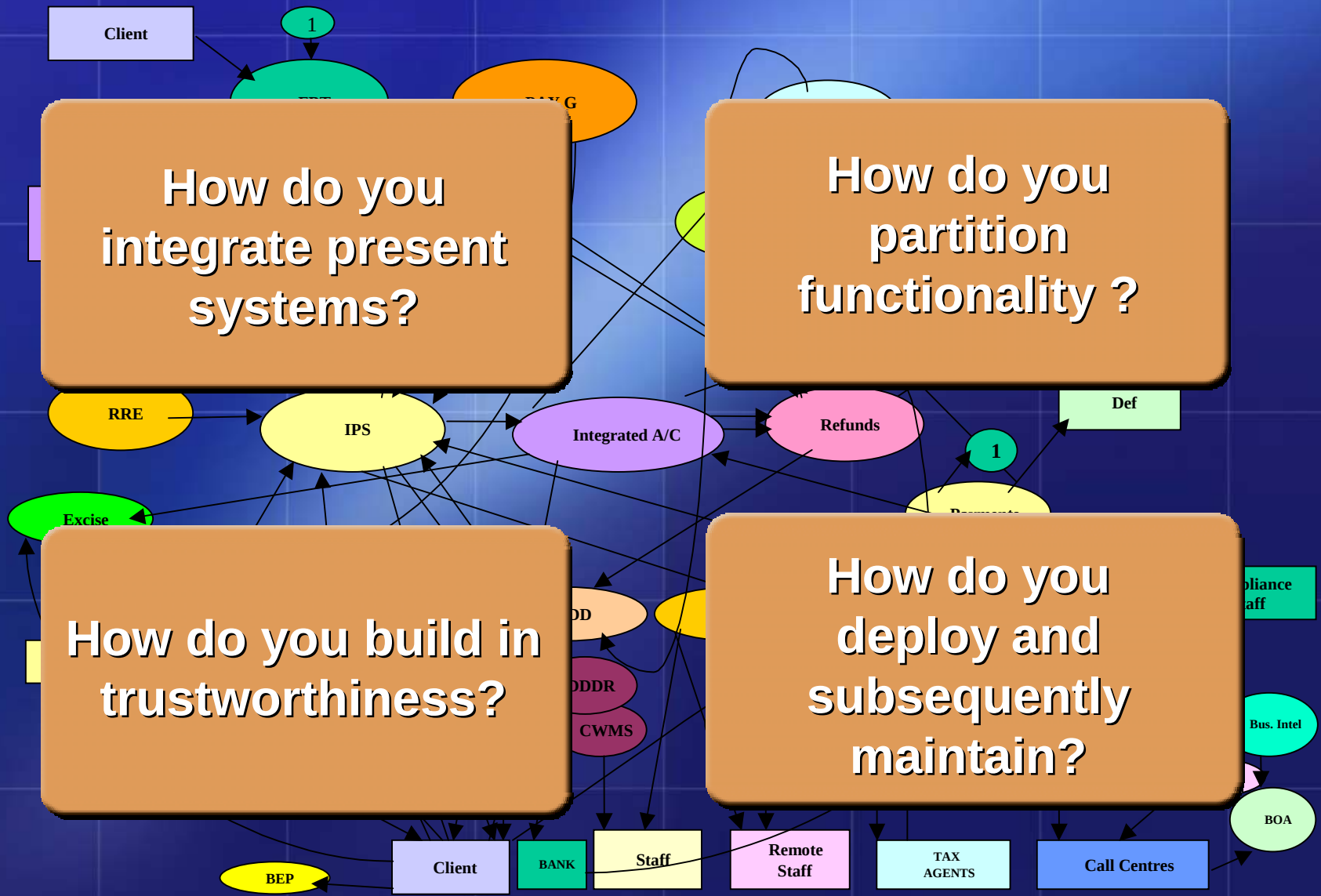
The Agile Company



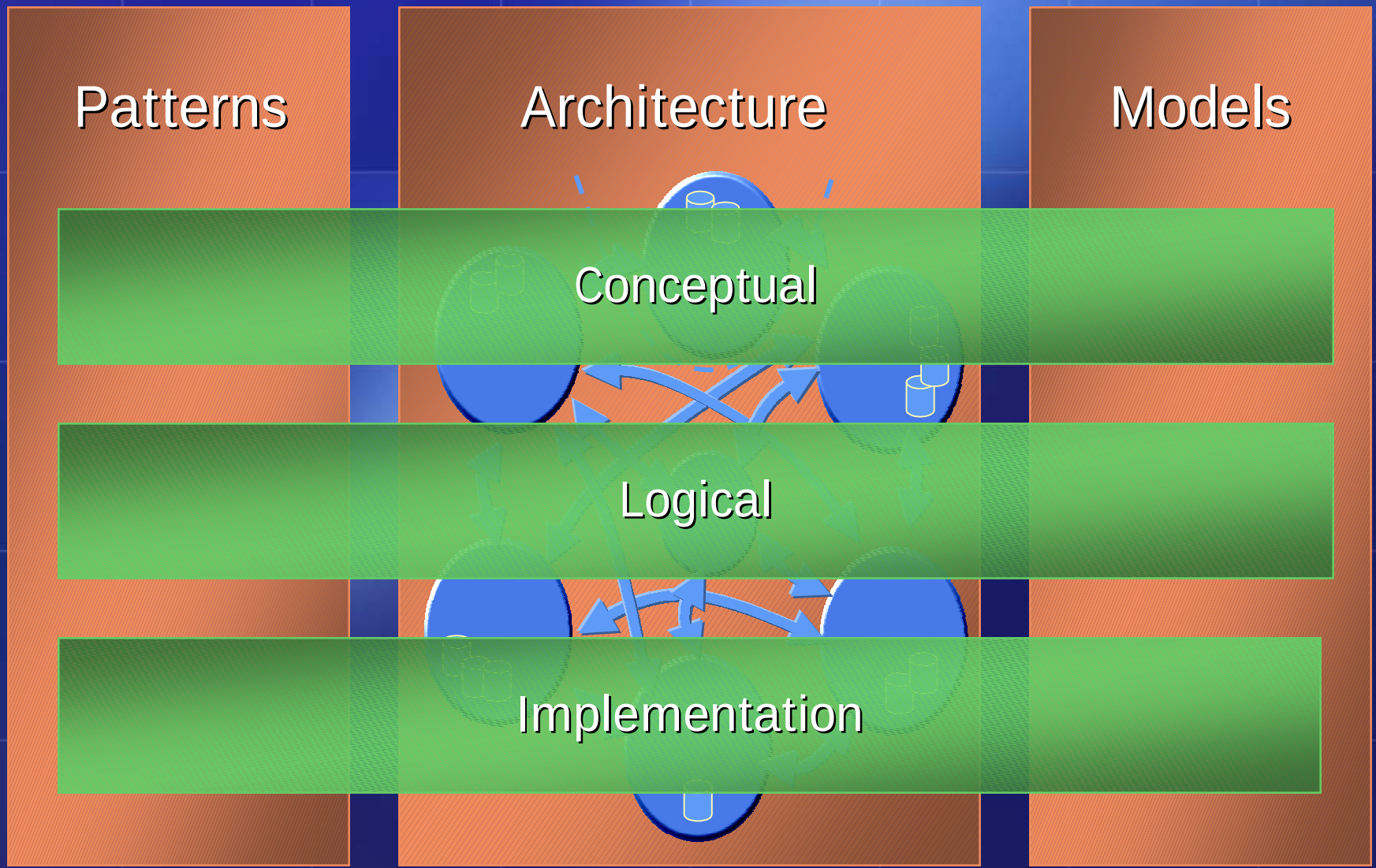
Connected and Agile

- 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

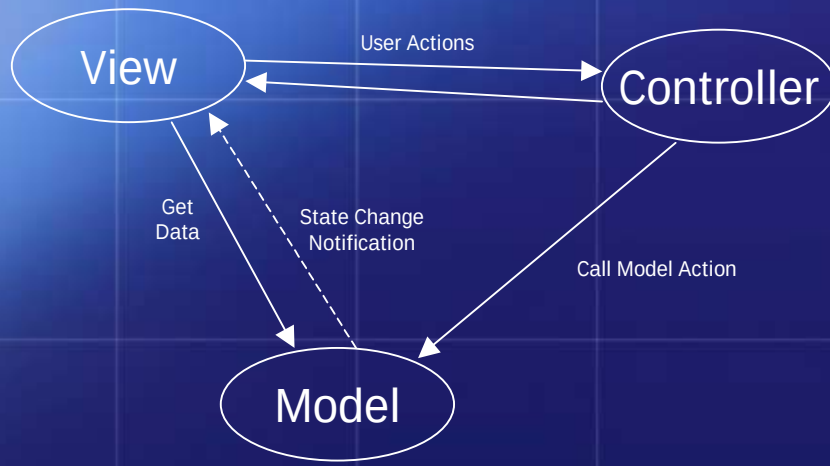


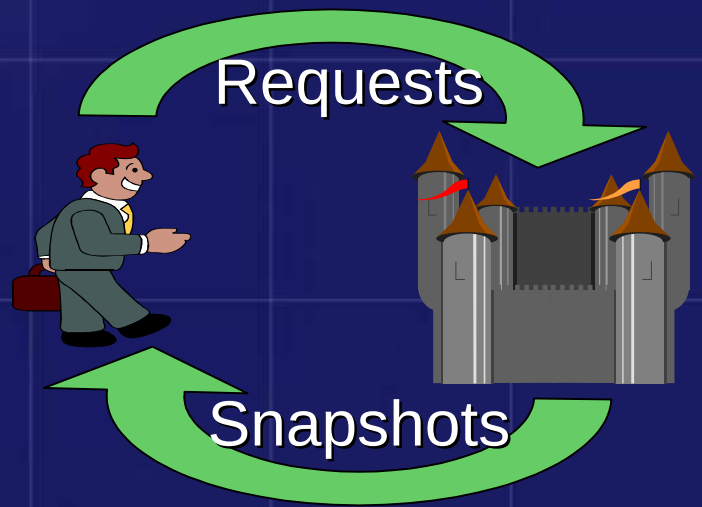
Patterns, Models, Architectures



Patterns

- 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



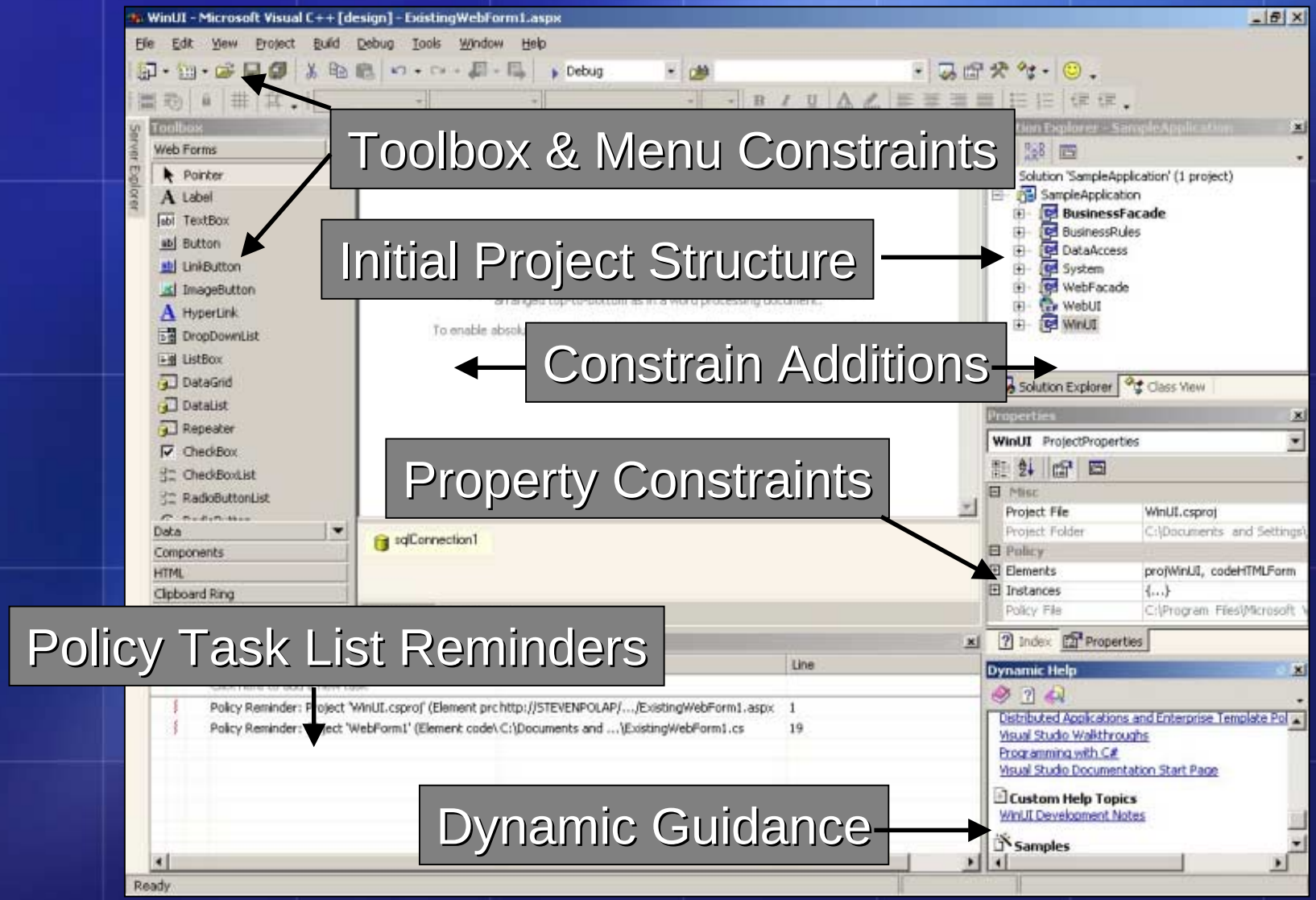


Guidance Available Today

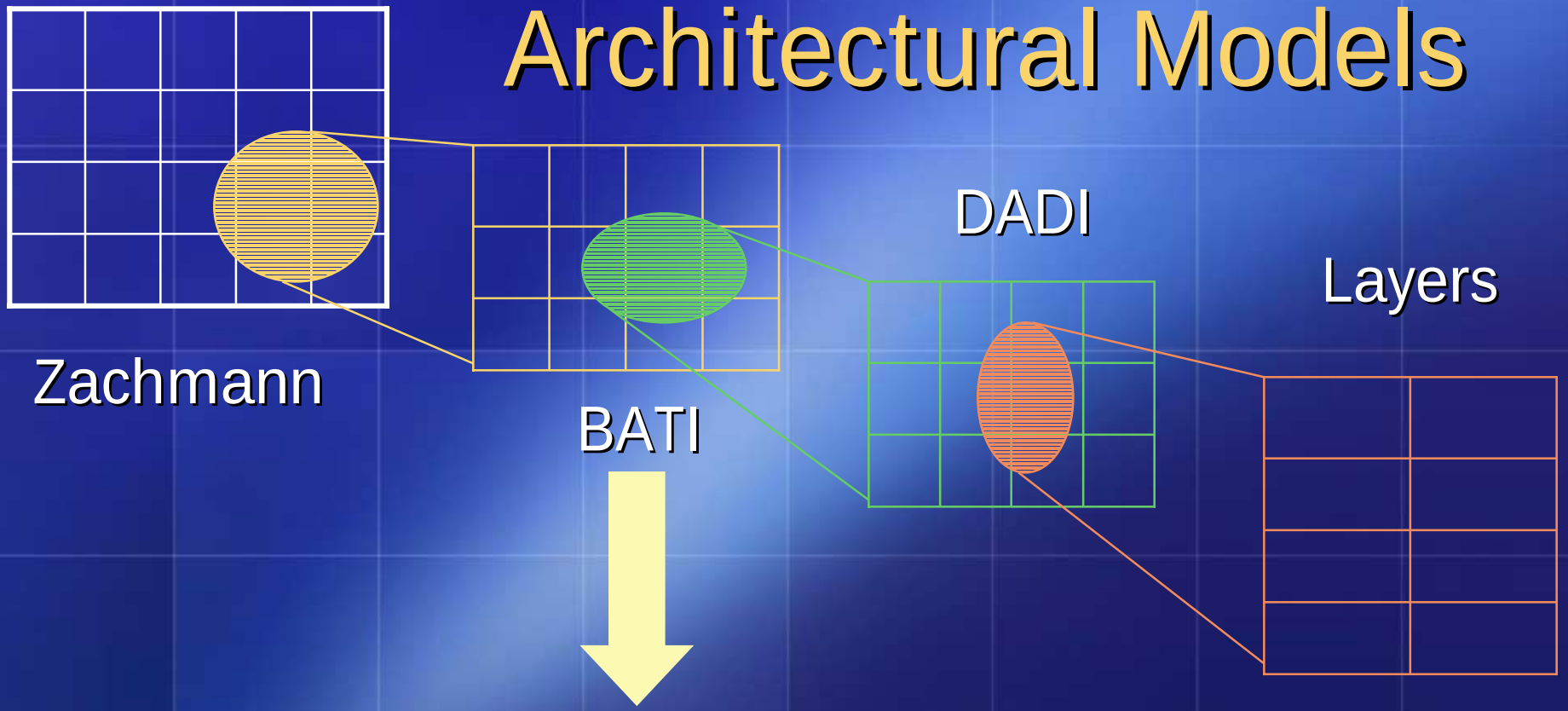
Reference Architectures	Reference Building Blocks	Operational Practices
• Internet Data Center • Business to consumer retail site • Enterprise, and ASP-based messaging • Distributed LOB Application	• Building enterprise-class distributed apps	• Core Infrastructure Deployment • Data Center Operations
• 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

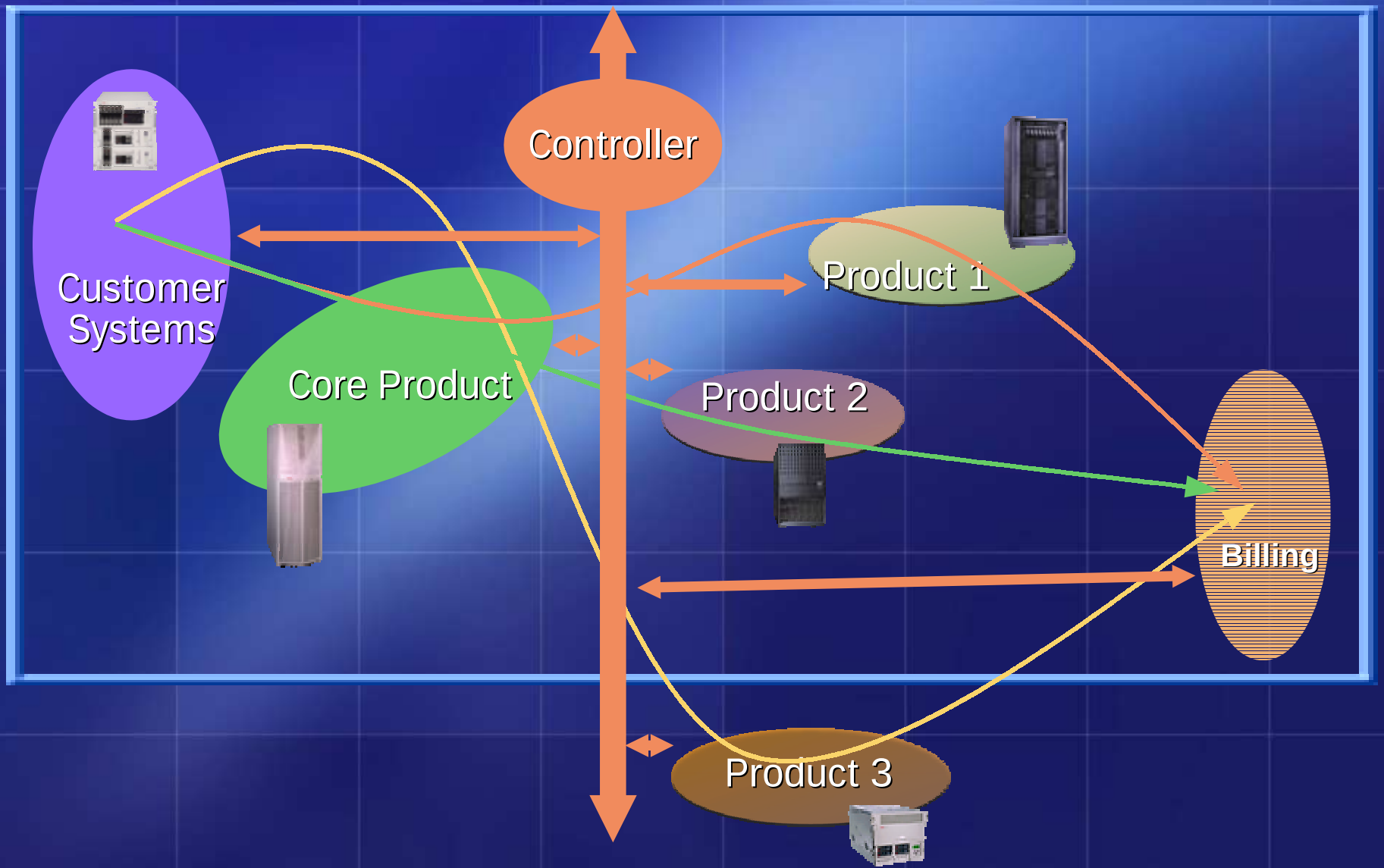


Architectural Models

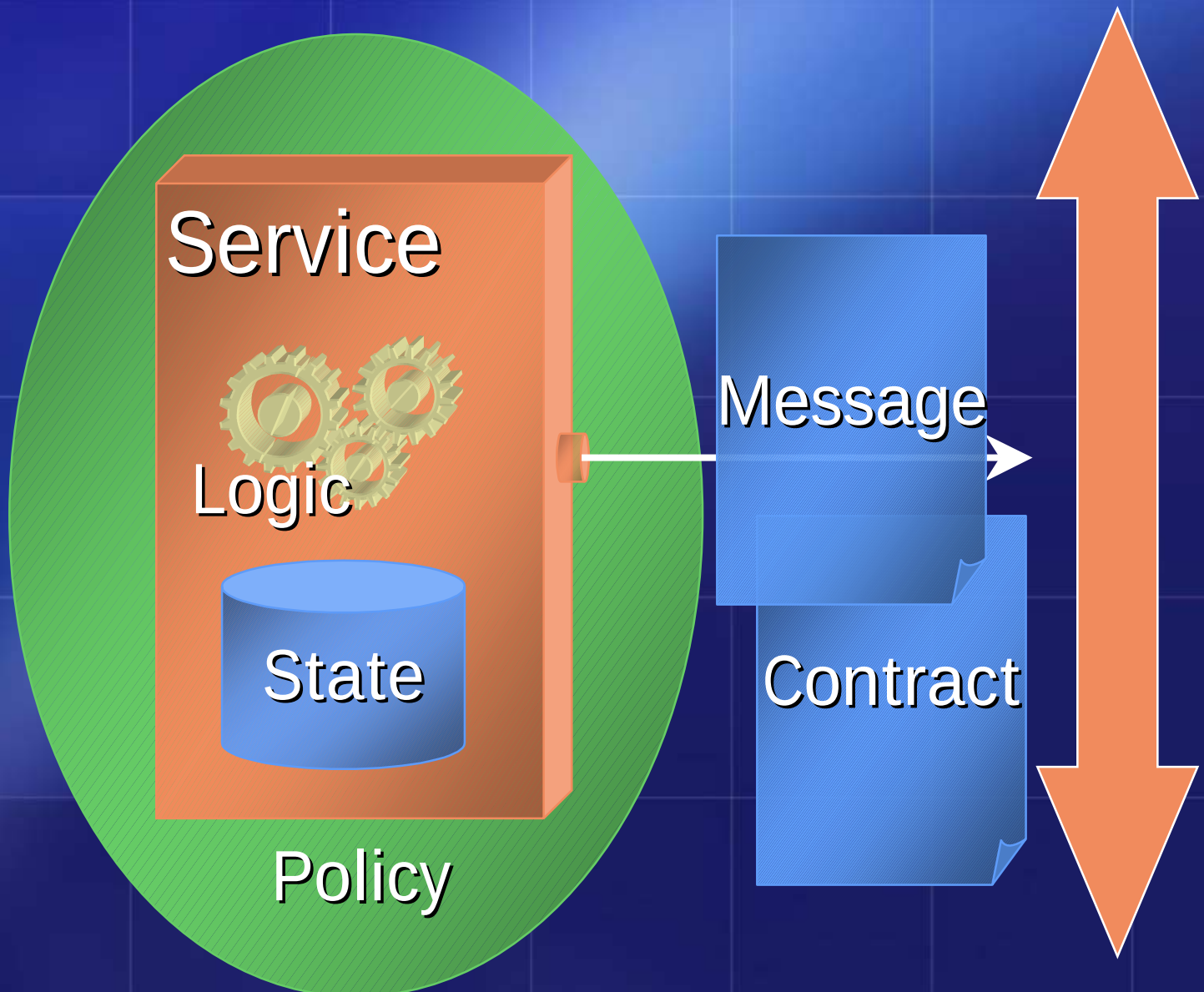


	Business	Application	Technical	Information
Conceptual	RTE	SOA	Web Services	KM
Logical	B2B etc	Application Diagram	N Tier	Information & Schema
Physical	Business Transaction	Code	Products & Hardware	Data

Service Oriented Architecture (SOA)

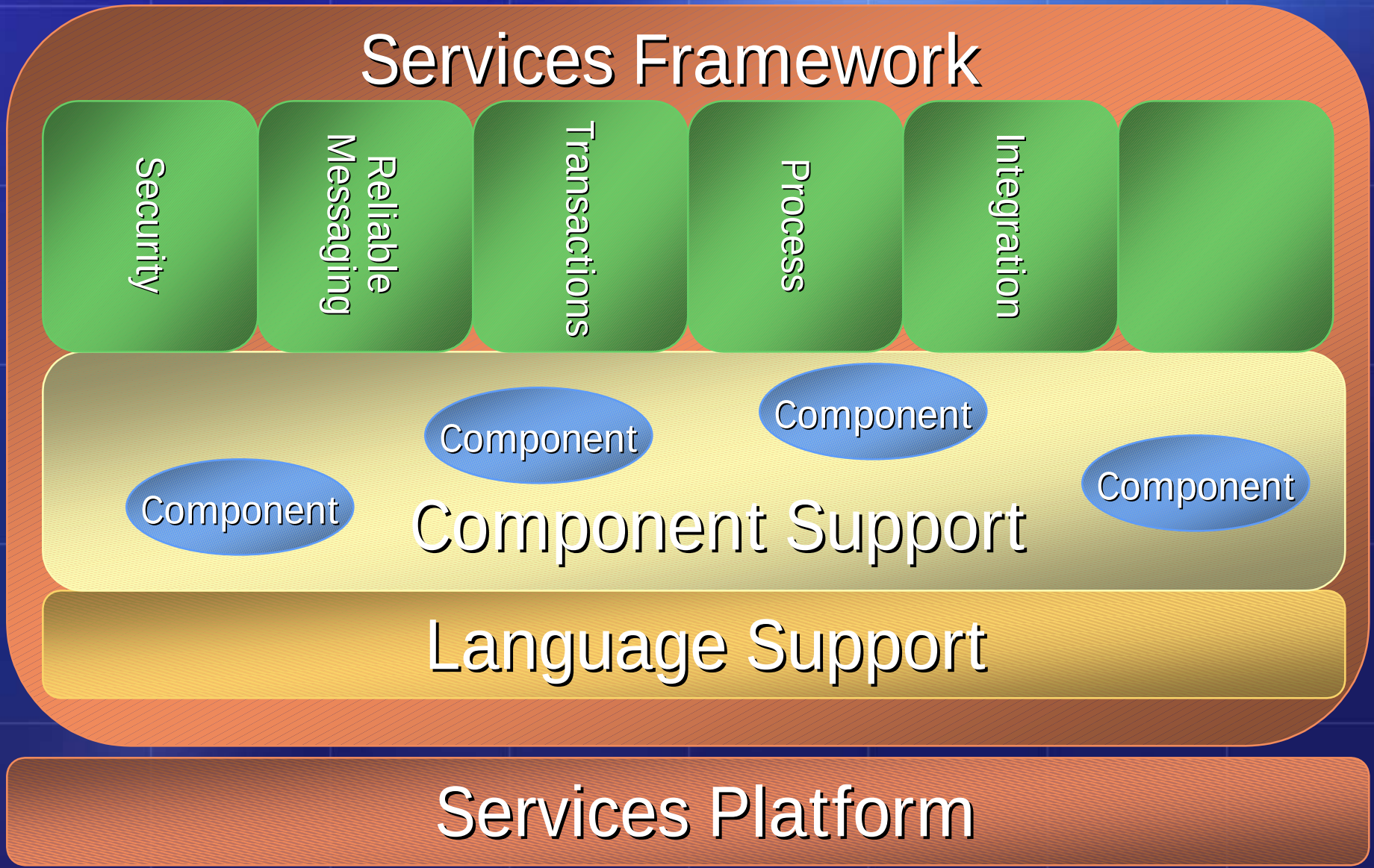


Inside a Service

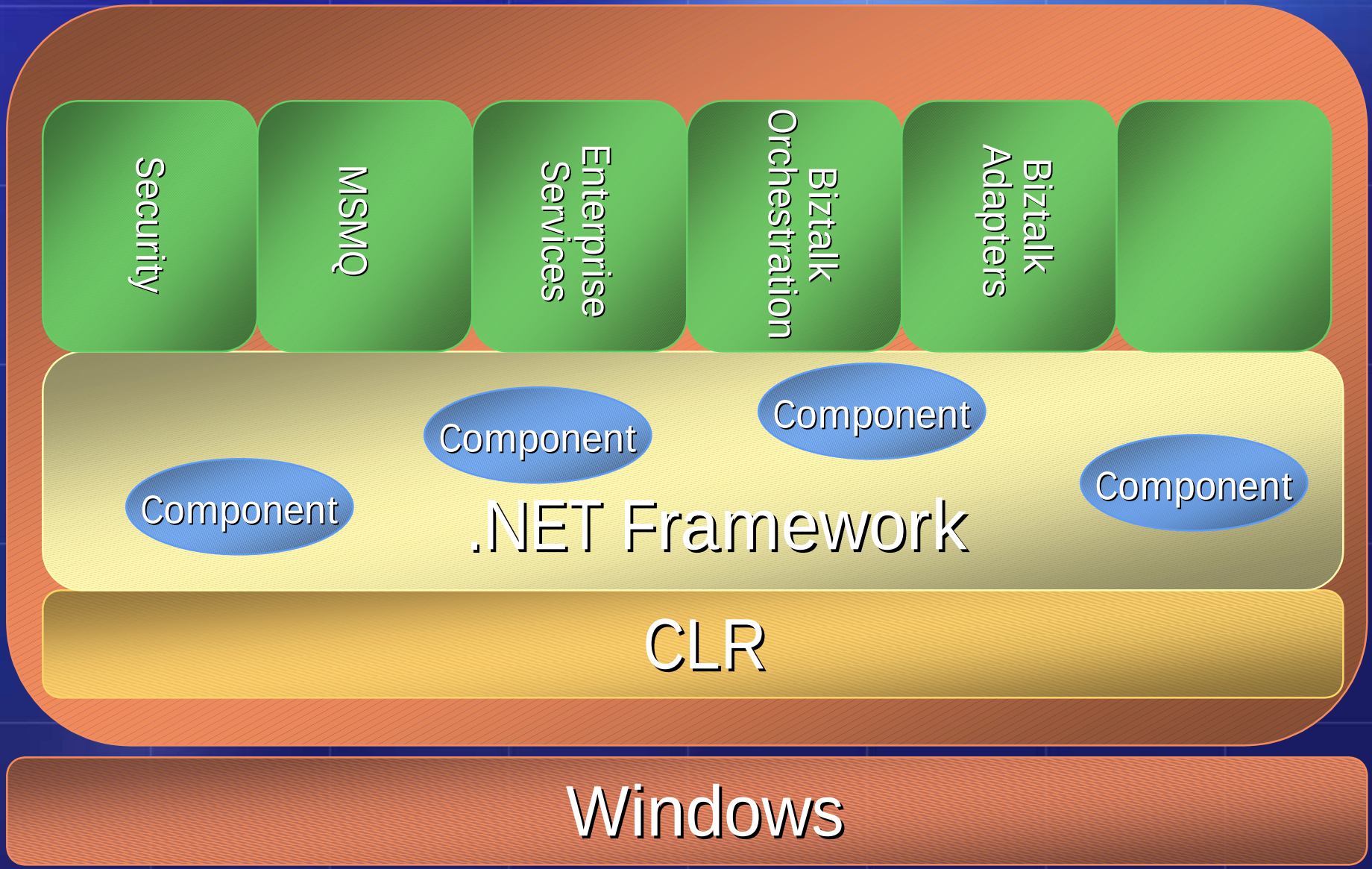


Layered Architecture

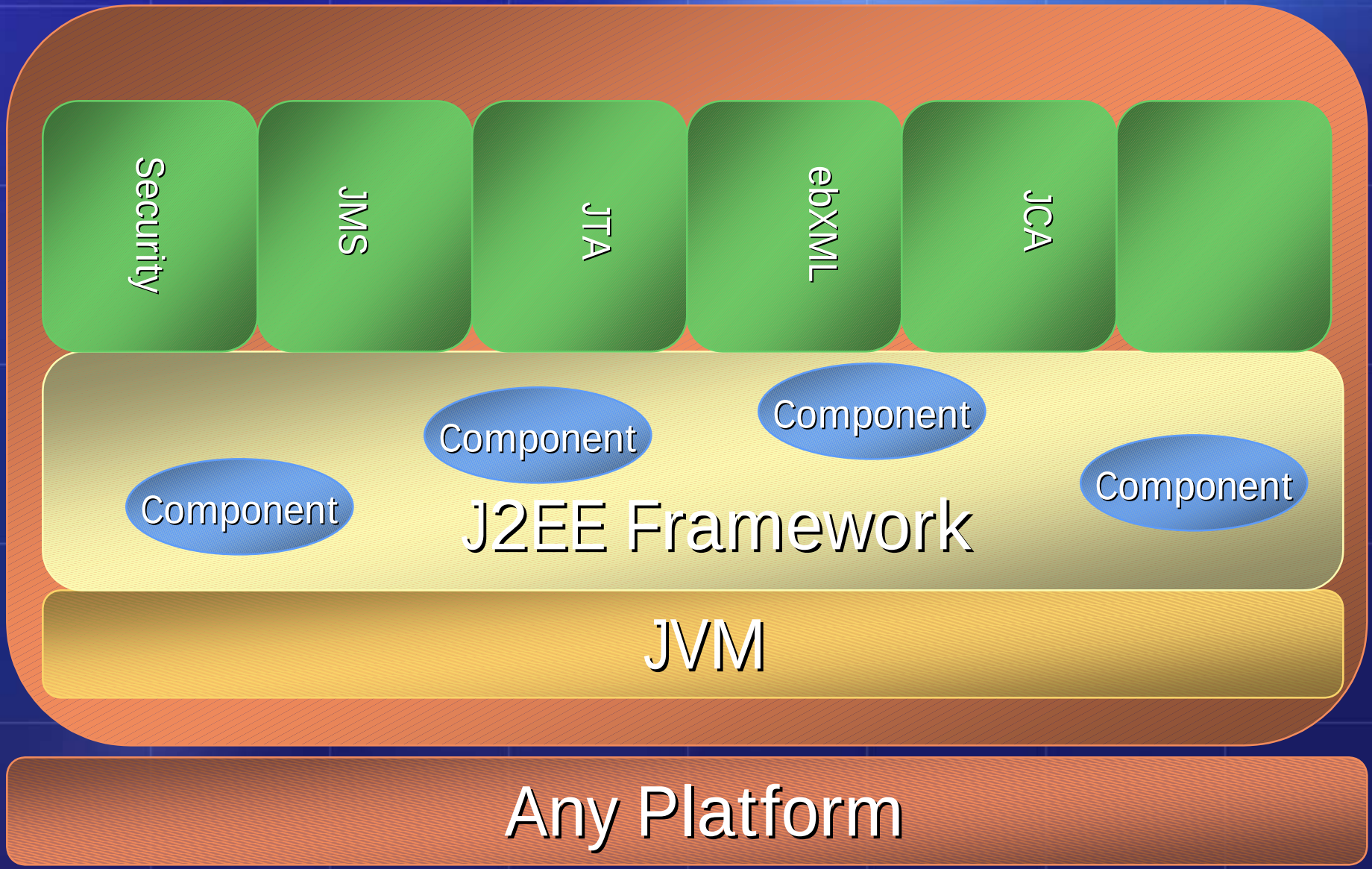
Logical Technical Architecture



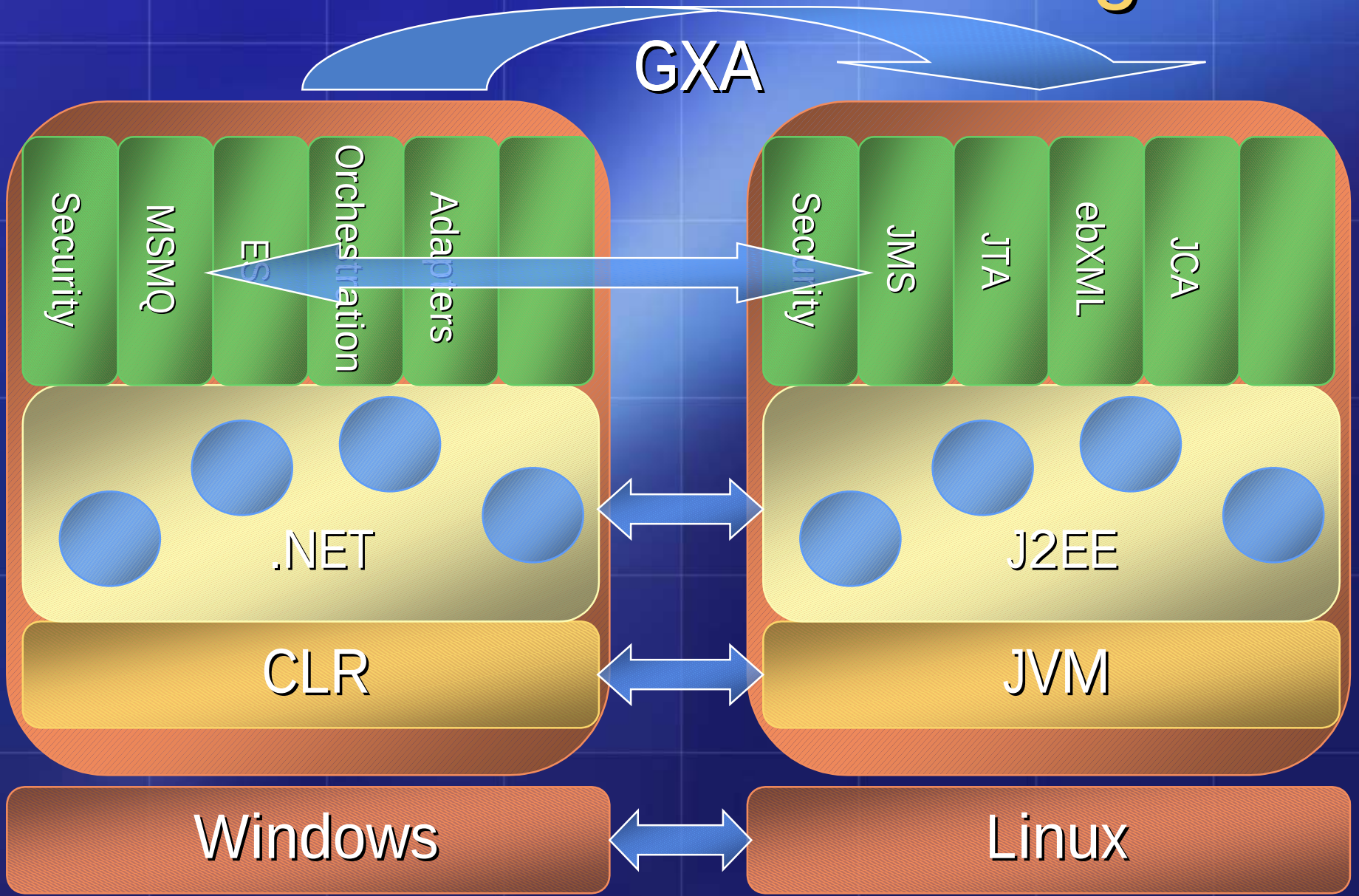
.NET Technical Architecture



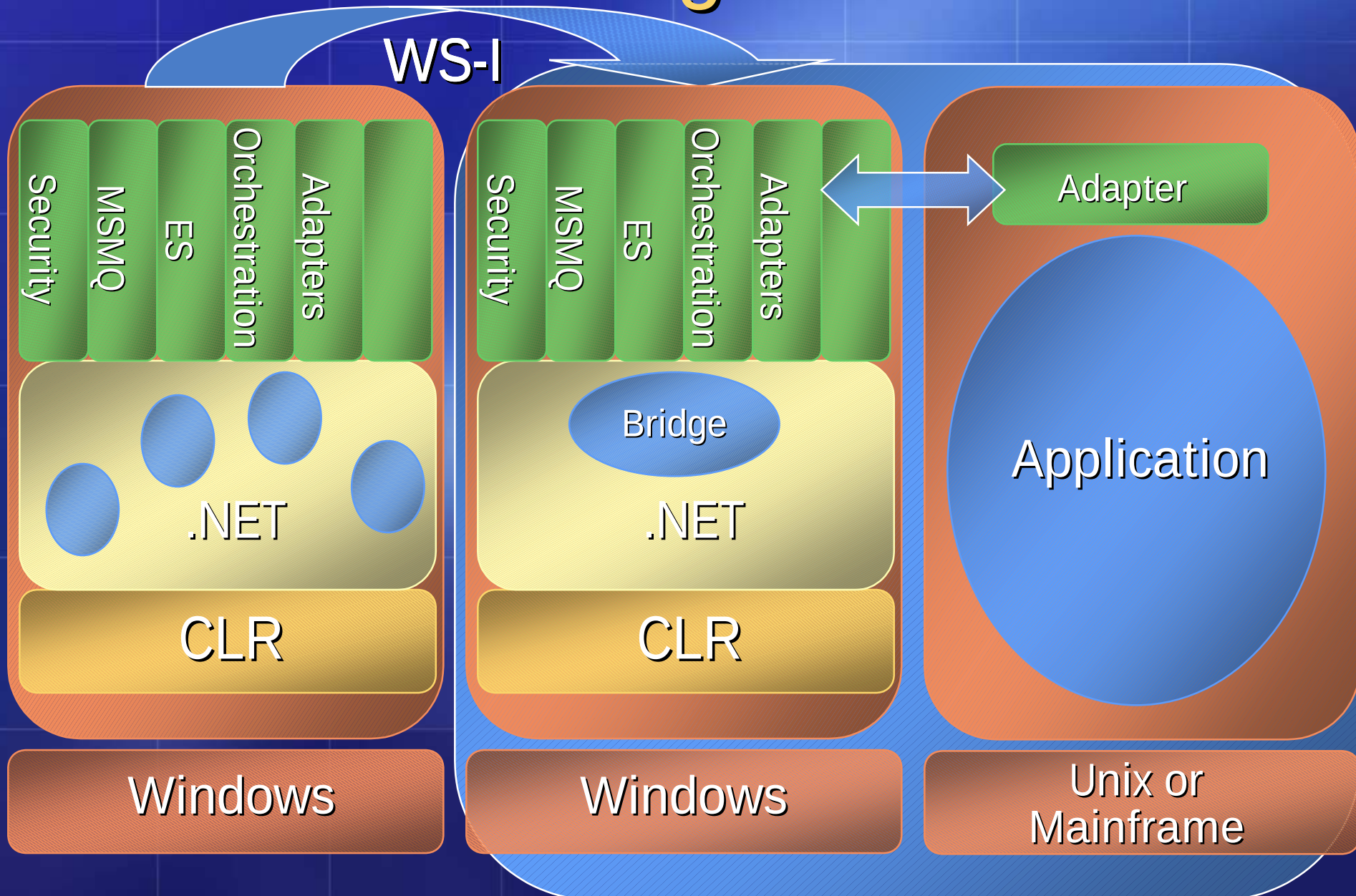
J2EE Technical Architecture



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