

# Enterprise Service Bus options



## Aim: Reduce the cost and time of application changes

Connectivity logic **coded into** existing **applications**

- **Difficult** to manage
- **Cost and time** to change this logic is **high**



### The problems:

- IT **slow to react** to business changes
- IT **budget spent on maintenance** – little room for deploying new applications and services
- Lack of **business agility**

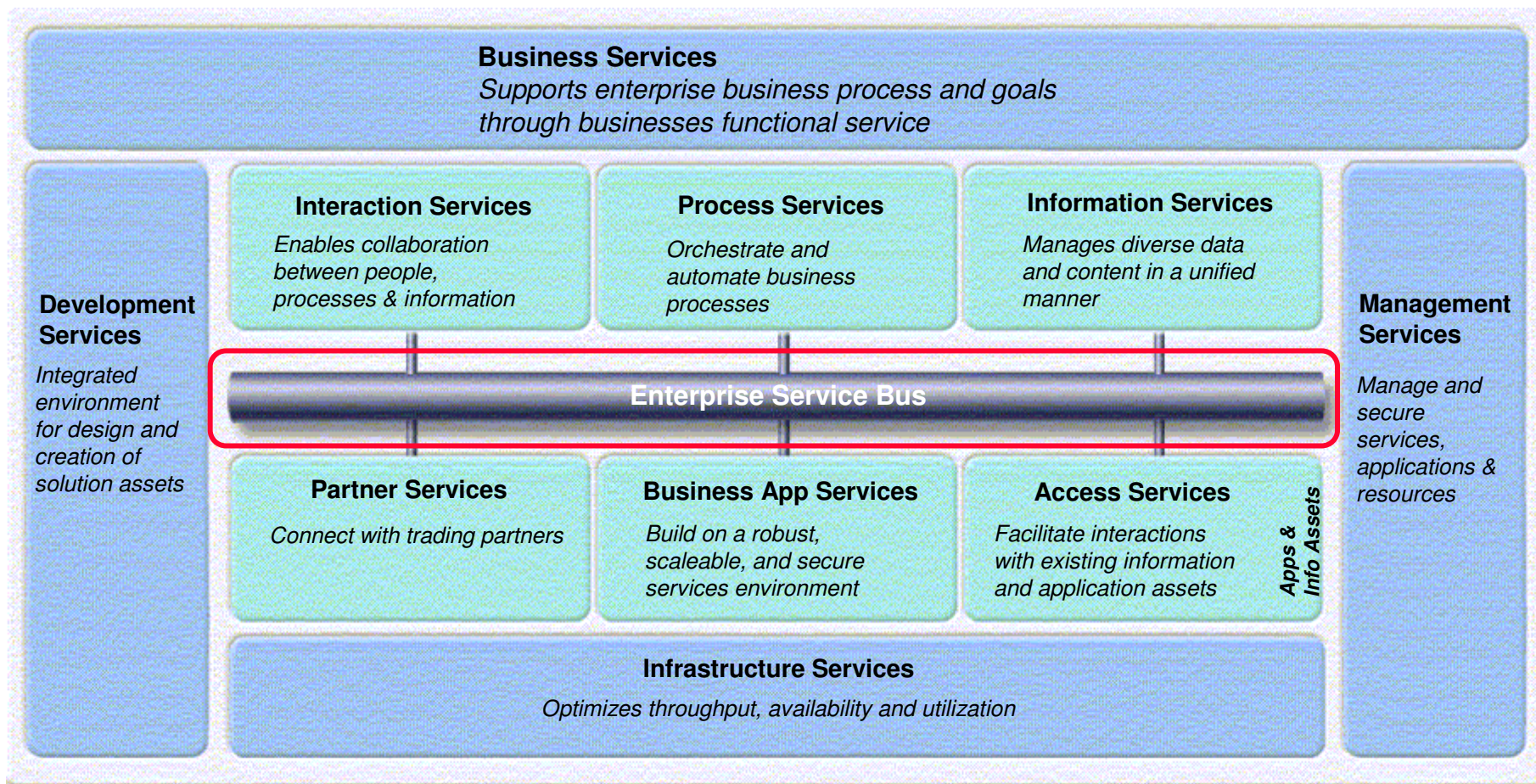
### Who is Impacted?

- **LOB** – **Pressure** to add new services faster
  - **Development** – Difficult to **maintain and evolve** existing logic embedded in applications
- Must **reduce cost and time** of application changes





# ESB in the SOA Foundation Reference Architecture







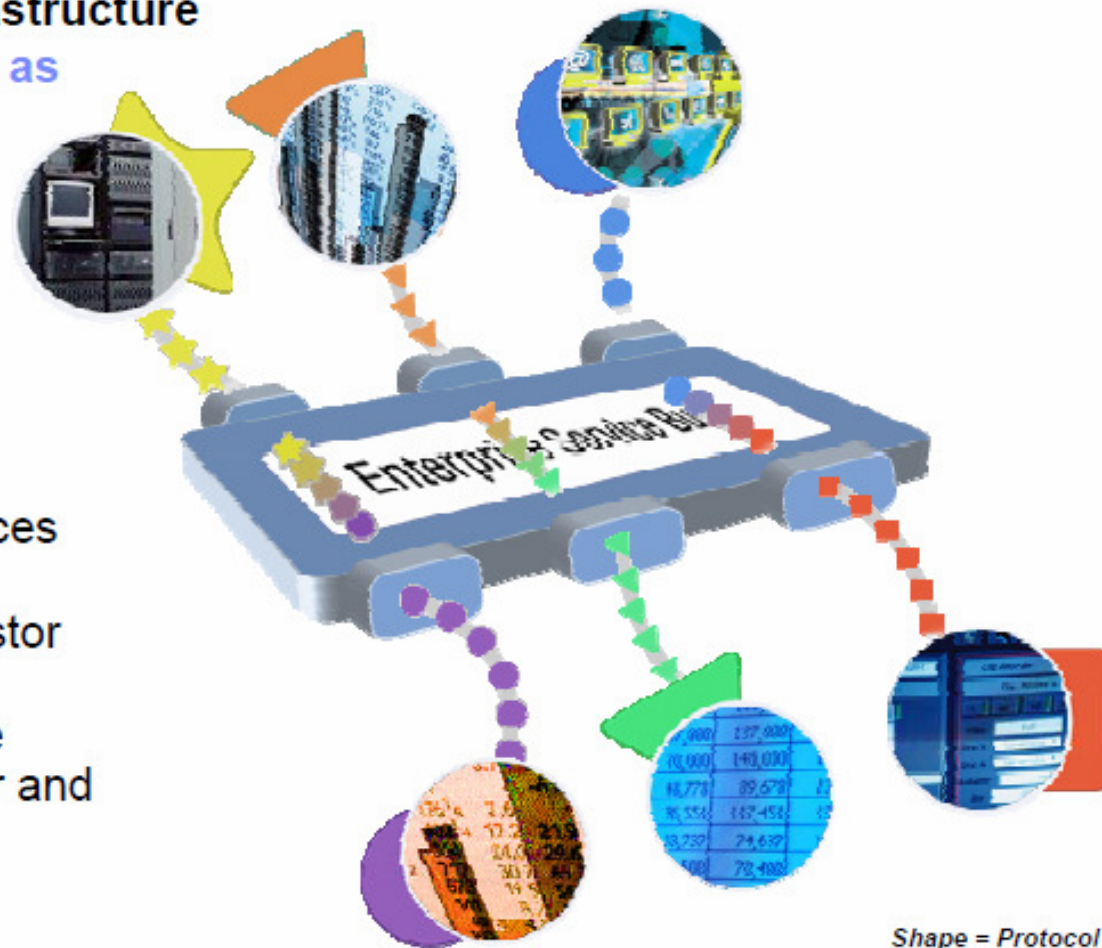
# What does an Enterprise Service Bus (ESB) do?

A flexible connectivity infrastructure for integrating applications as services...

.....which reduces the number, size, and complexity of interfaces.

An ESB:

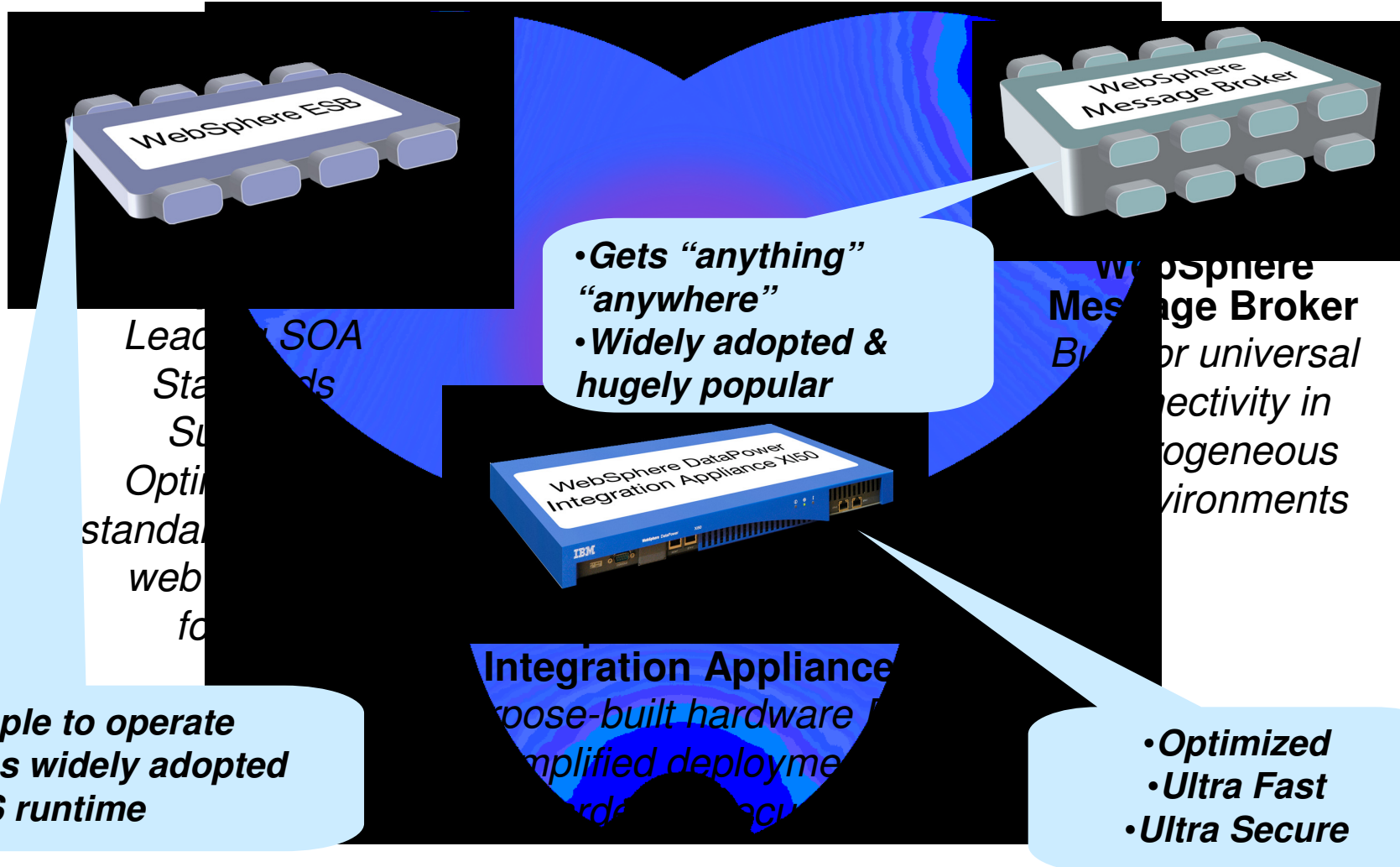
- ▶ **MATCHES & ROUTES** messages between services
- ▶ **CONVERTS** transport protocols between requestor and service
- ▶ **TRANSFORMS** message format between requestor and service
- ▶ **DISTRIBUTES** business events from/to disparate sources



Shape = Protocol  
Color = Data type



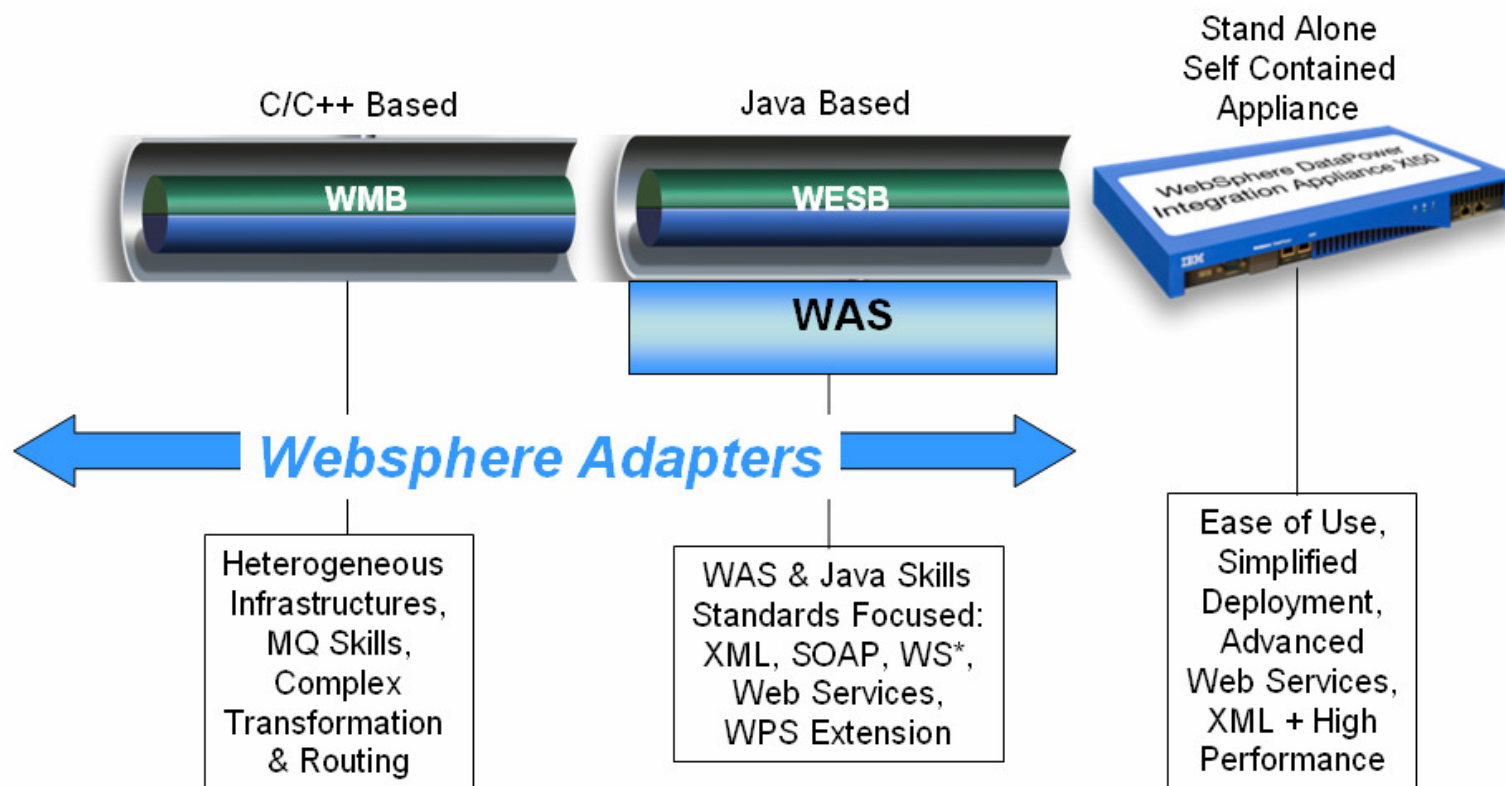
# An ESB reduces the number of interfaces to manage





## How do you know which ESB to use ?

1. Do not start with a particular product
2. First understand your pains/problems
3. Decide what you want the ESB to do
4. Then chose most appropriate product or products

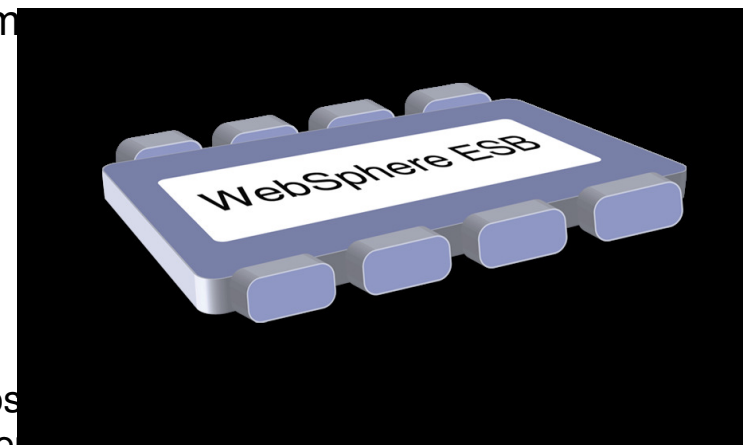




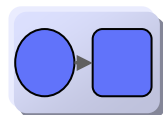
# WebSphere ESB

*Built on WebSphere Application Server for an integrated SOA platform*

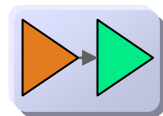
- Integrates seamlessly with the WebSphere platform
- Delivers business-critical qualities of service
- Easily extends to WebSphere Process Server
- Integrated solution for both service mediation and service hosting



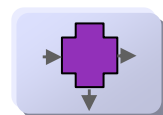
Delivers leadership in SOA standards for service composition, messaging and web services WebSphere Application Server engine



Integrates everything with WebSphere Adapters for enterprise applications, the breadth of the WebSphere ecosystem, and support for standard protocols



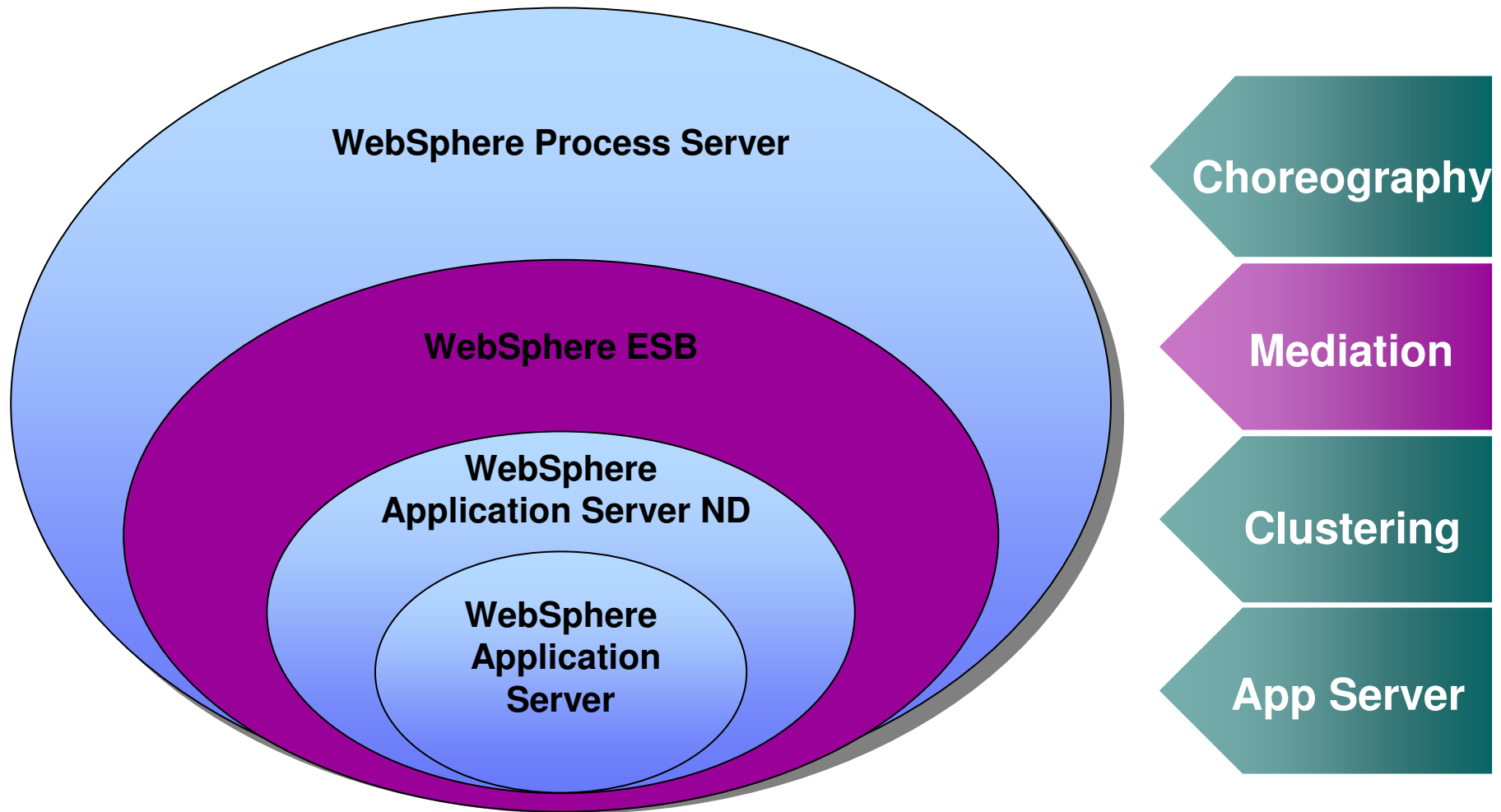
Optimized for standard XML and web services formats, with basic support for other common formats



Provides business visibility with embedded event engine for Business Activity Monitoring solutions



## WebSphere Application Server, ESB, and Process Server



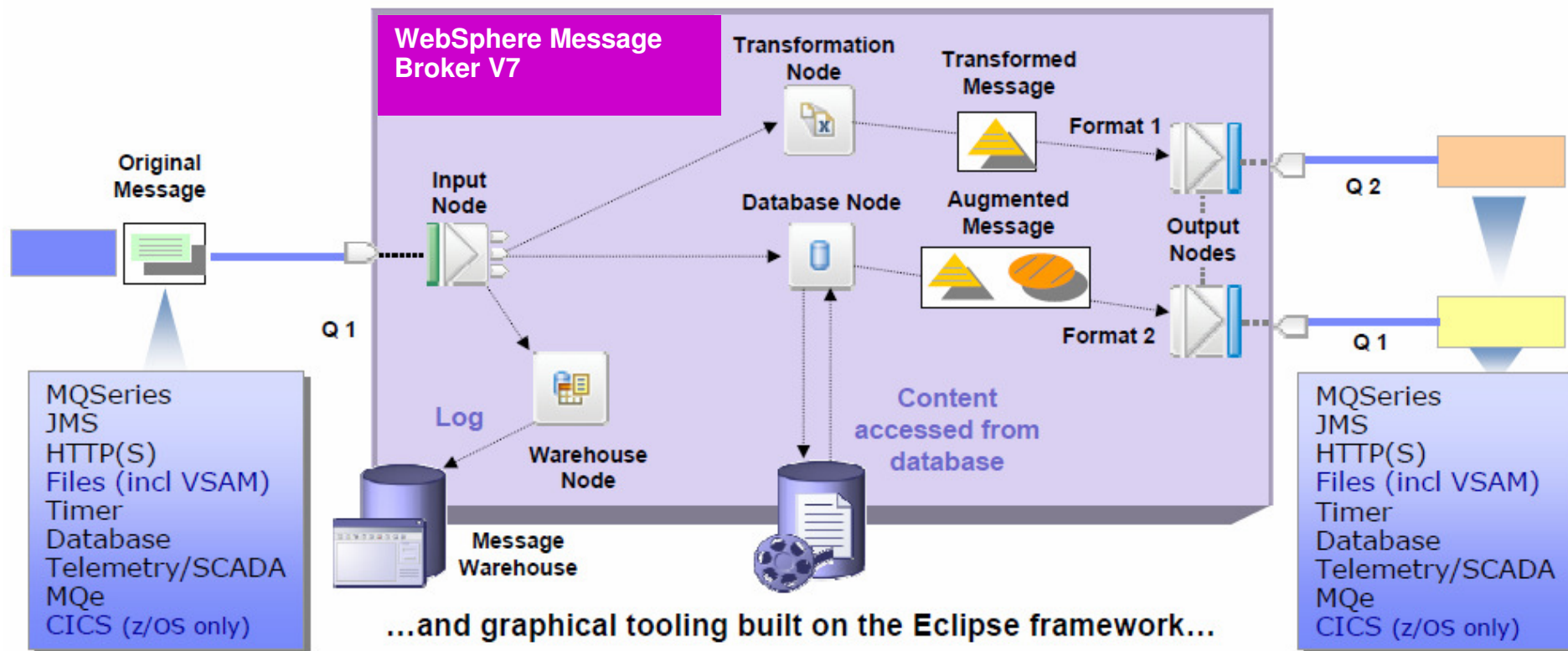




# WebSphere Message Broker

- Examines content and routes it accordingly
- Transforms content
- Augments content
- Logs content
- Matches and compares content
- Aggregates data from multiple sources

...With end-to-end transactional delivery...





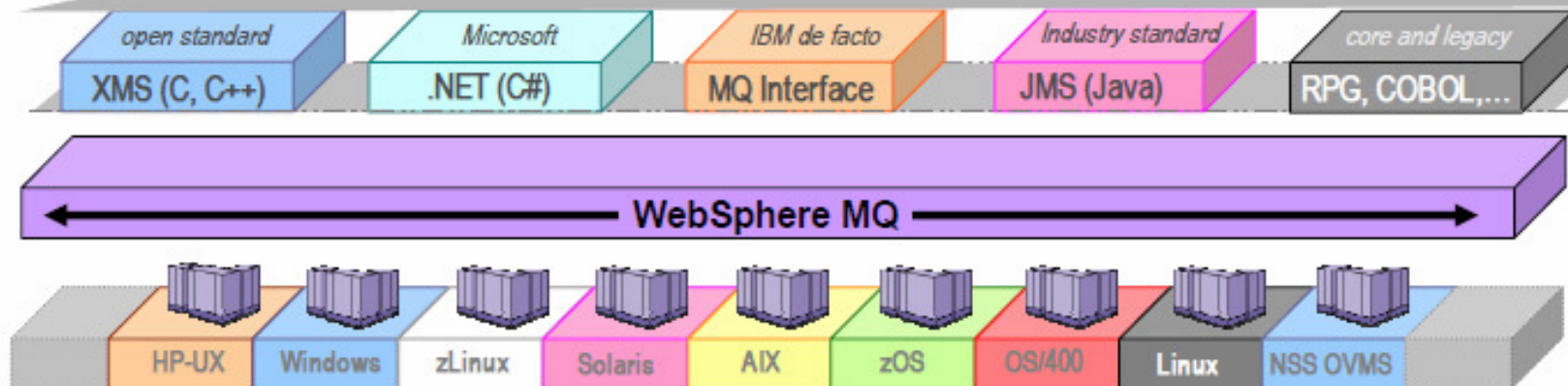
# WebSphere MQ facilitates universal connectivity for your Advanced ESB

**WebSphere MQ has the broadest support for:**

- programming languages
- messaging interfaces
- application environments
- OS platforms

**MQ gives you the freedom to:**

- Choose the technologies you prefer,
- Leverage the skills you already have to...
- Connect the applications you already have...



40+ platforms, 80+ platform configurations



IBM provides the broadest reach to 100s of endpoints through our adapters...

● **Web Services standards**

- WS-\*

● **Enterprise Applications**

- SAP
- Oracle E-Business Suite
- Siebel
- PeopleSoft Enterprise
- JD Edwards OneWorld
- Ariba Buyer
- Lotus Domino
- MS Exchange
- i2

● **Messaging / Clients**

- JMS
- WebSphere MQ
- XMS
- .NET
- C++
- Java
- MQe
- Multicast
- Real-time IP
- MQTT

● **Technologies**

- JDBC
- ODBC
- Email
- EJB
- Files
- FTP
- HTTP
- CORBA
- COM
- TCP
- LDAP

● **Data Formats**

- XML
- COBOL Copybook
- EDI X.12
- EDIFACT
- SWIFT
- FIX
- ACORD
- HIPAA
- HL7
- NCPDP
- C header

● **Data Sources**

- DB2
- Oracle
- Informix
- MS SQL Server
- Sybase
- JDBC
- ODBC
- VSAM
- IMS/DB
- Teradata

● **Host Systems**

- CICS
- IMS/TM
- COBOL
- RPG
- Tuxedo
- TN3270
- TN5250
- Batch
- Sequential files

*...plus hundreds more from IBM business partners...*



## Advantages of WebSphere Message Broker on z/OS

- 😊 z/OS specific nodes (VSAM, QSAM and CICS) and co-location advantages
- 😊 High availability (Shared Queues or MQ cluster)
- 😊 Execution Group ↔ Service Class (WLM)
- 😊 Java Compute nodes, JMS Real-time and Multicast ↔ zAAP
- 😊 z/OS features: Sysplex, ARM, RRS, RACF
- 😊 Multiprocess Message flows