IBM System z Technology Summit

Why companies worldwide are running their ESB platforms on

Agenda

- **IBM SOA and ESB Offerings**
- **WebSphere Message Broker on System z**
- **WebSphere ESB on System z**
- **WebSphere DataPower and System z**

IBM System z Technology

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IBM SOA and ESB Offerings

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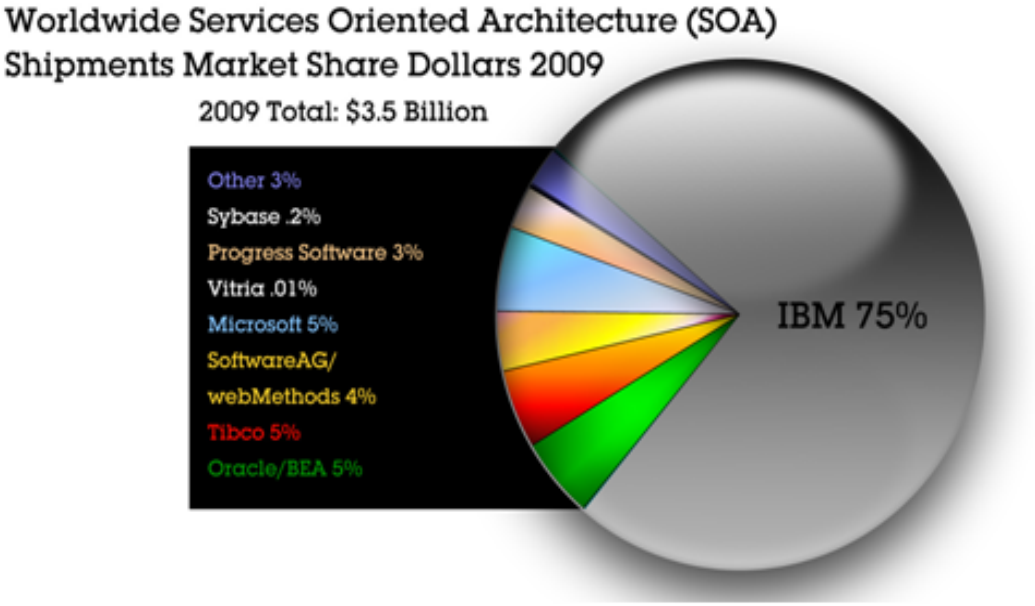
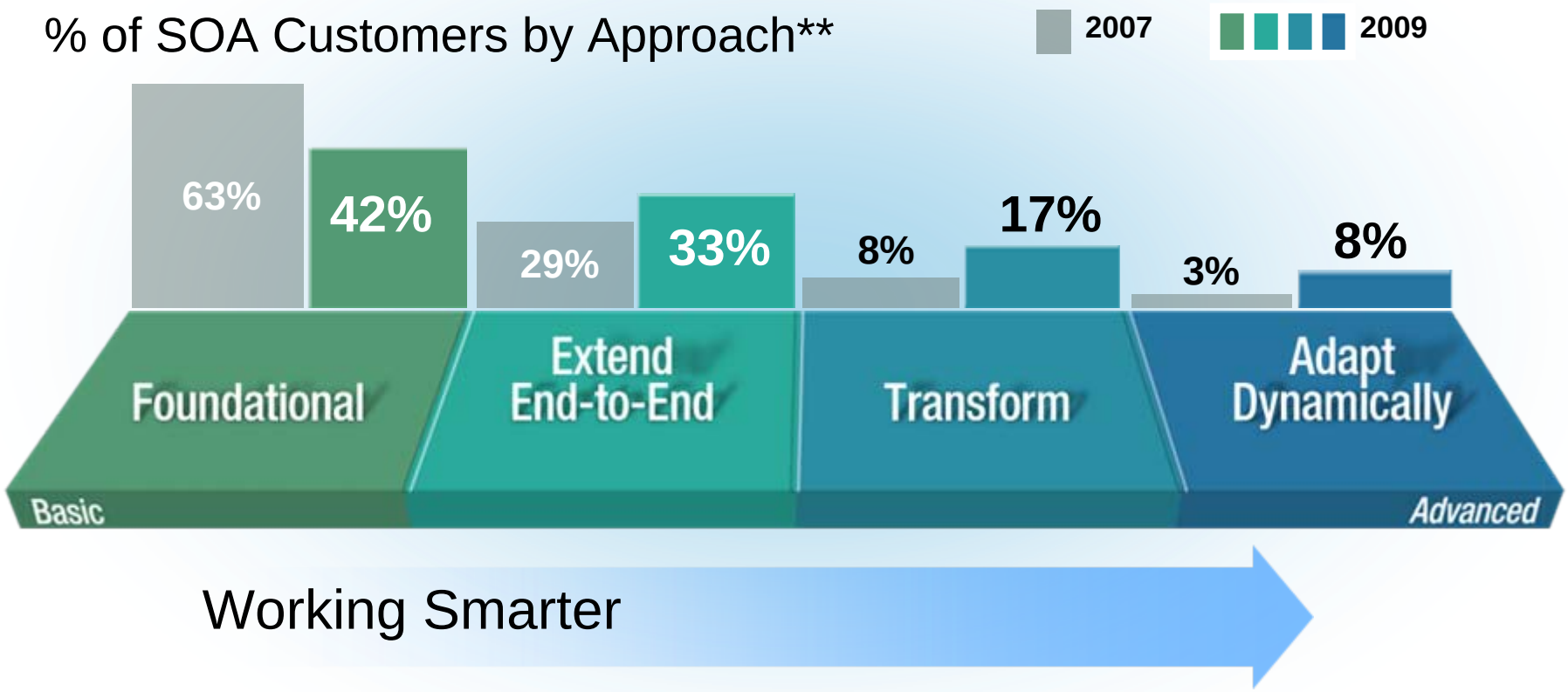
IBM has dominated and now drives the SOA marketplace



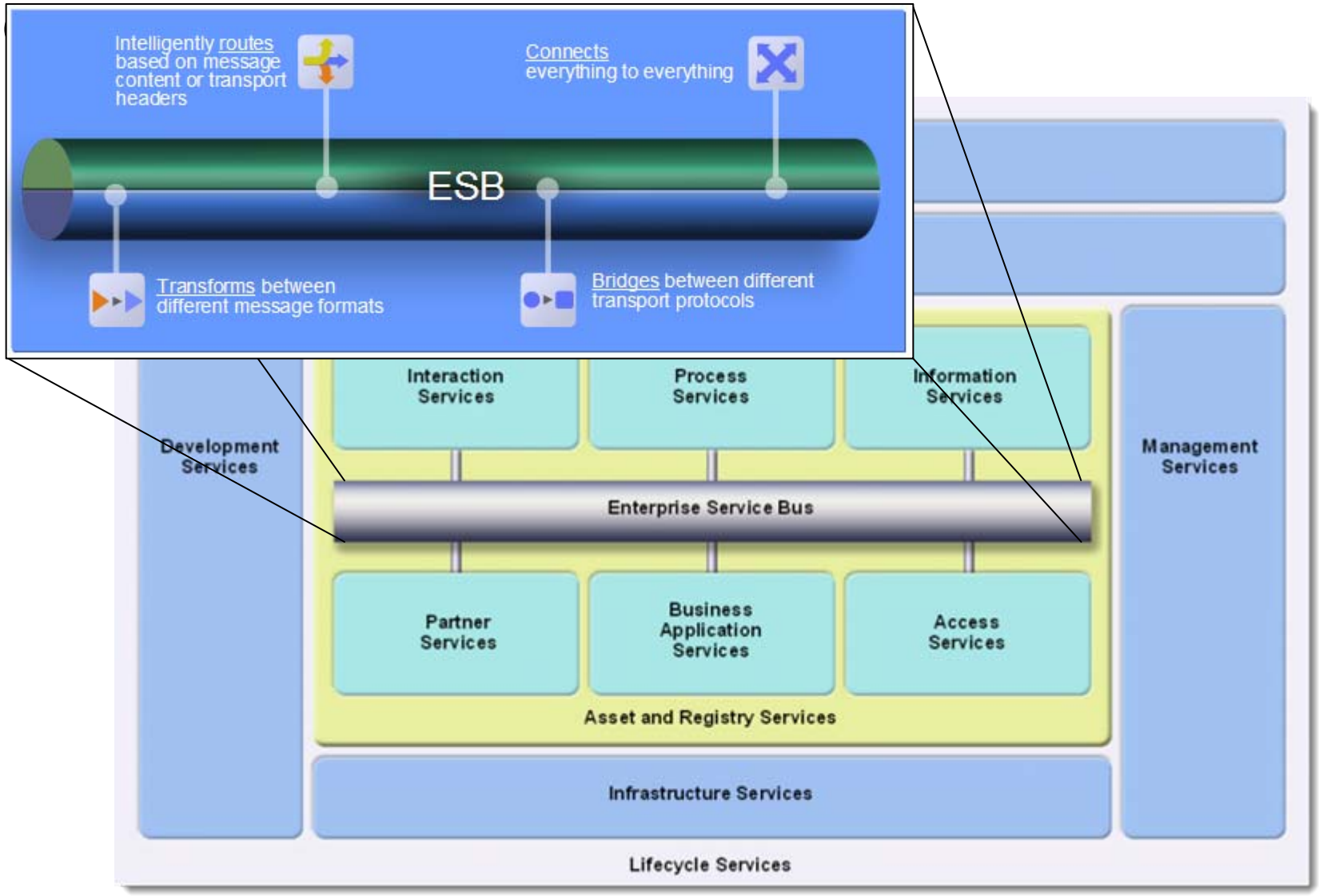
- **IBM's sales of SOA-enabling products and services have eclipsed those of its nearest competitors, Oracle/BEA/Sun and TIBCO**
- **Over 8,000 "SOA Implementations" worldwide**
- **This is due in large part to IBM's leadership in driving innovation in the space.**

> ***"IBM ESBs have the broadest set of supported runtime protocols, connectivity options, mediation capabilities, security, commercial data standards, and service monitoring and management, hands down."***
>
> **- Gartner**

IBM's customers continue to adopt SOA and extend its use

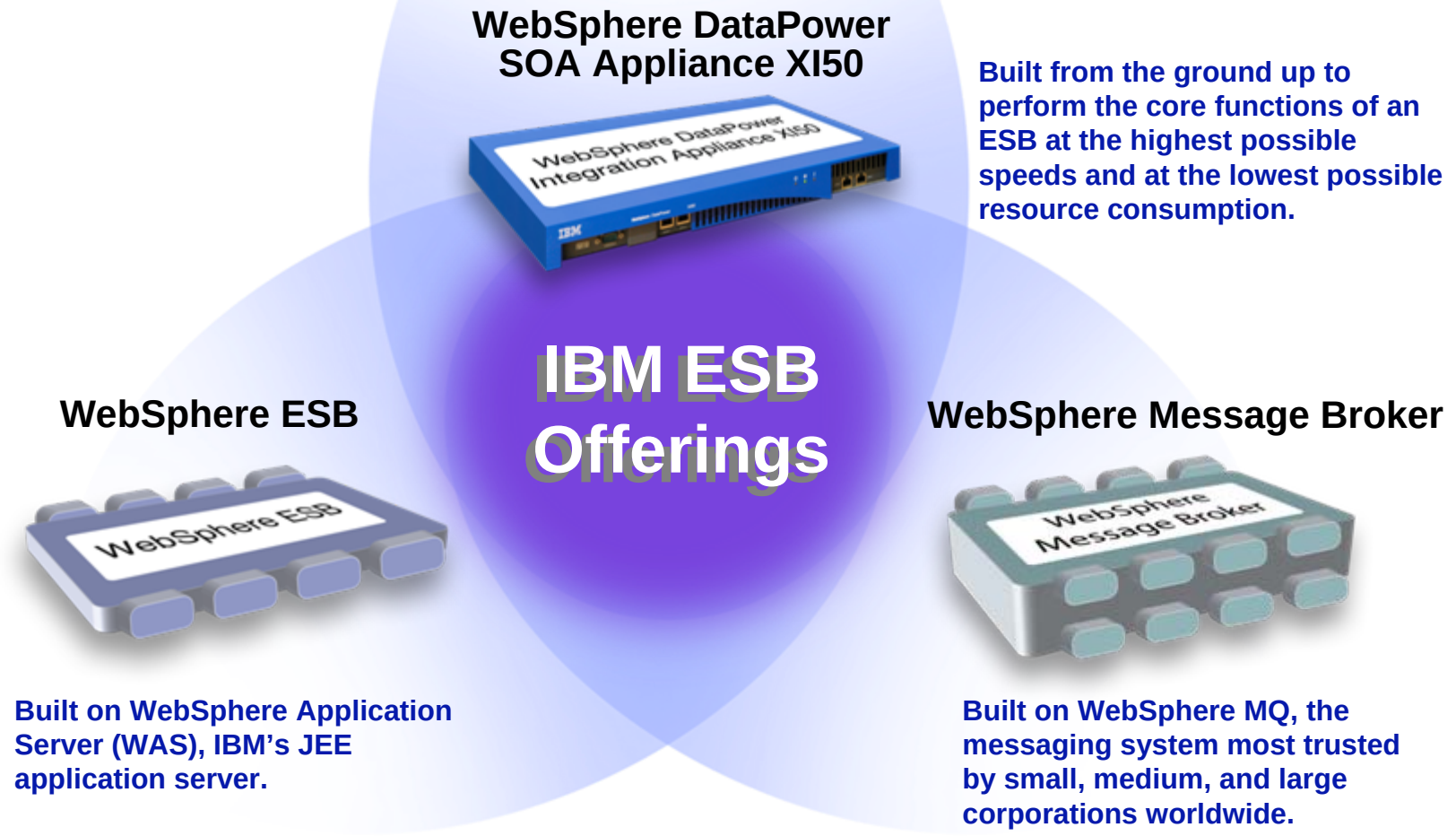


The ***Enterprise Service Bus*** is at the heart of service



IBM offers 3 distinct ESB solutions

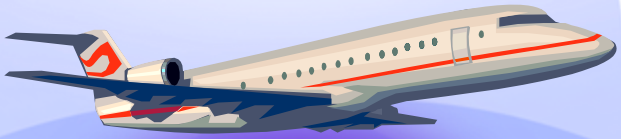
IBM does not package a monolithic ESB solution, but rather applies the right one to the right environment



One size ESB does NOT fit all…

The capability to adapt solutions to the business at hand has been part of IBM's success in the marketplace

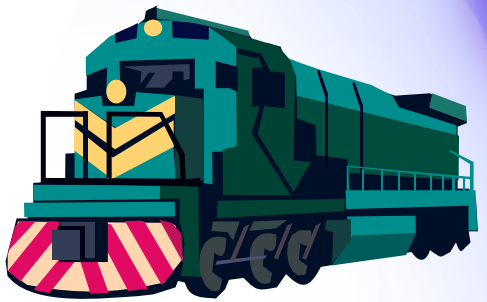
WebSphere DataPower SOA Appliance XI50



- ultra secure
- ultra fast to deploy
- ultra efficient for universal functions

IBM ESB Offerings

WebSphere ESB

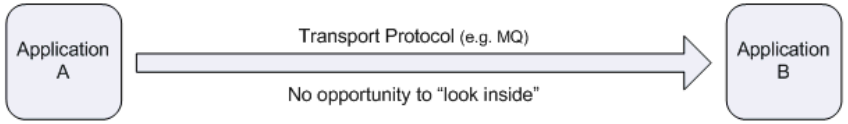


- built on WebSphere Application Server (WAS)
- if you are on "rails" – JEE – it fits right onto your tracks

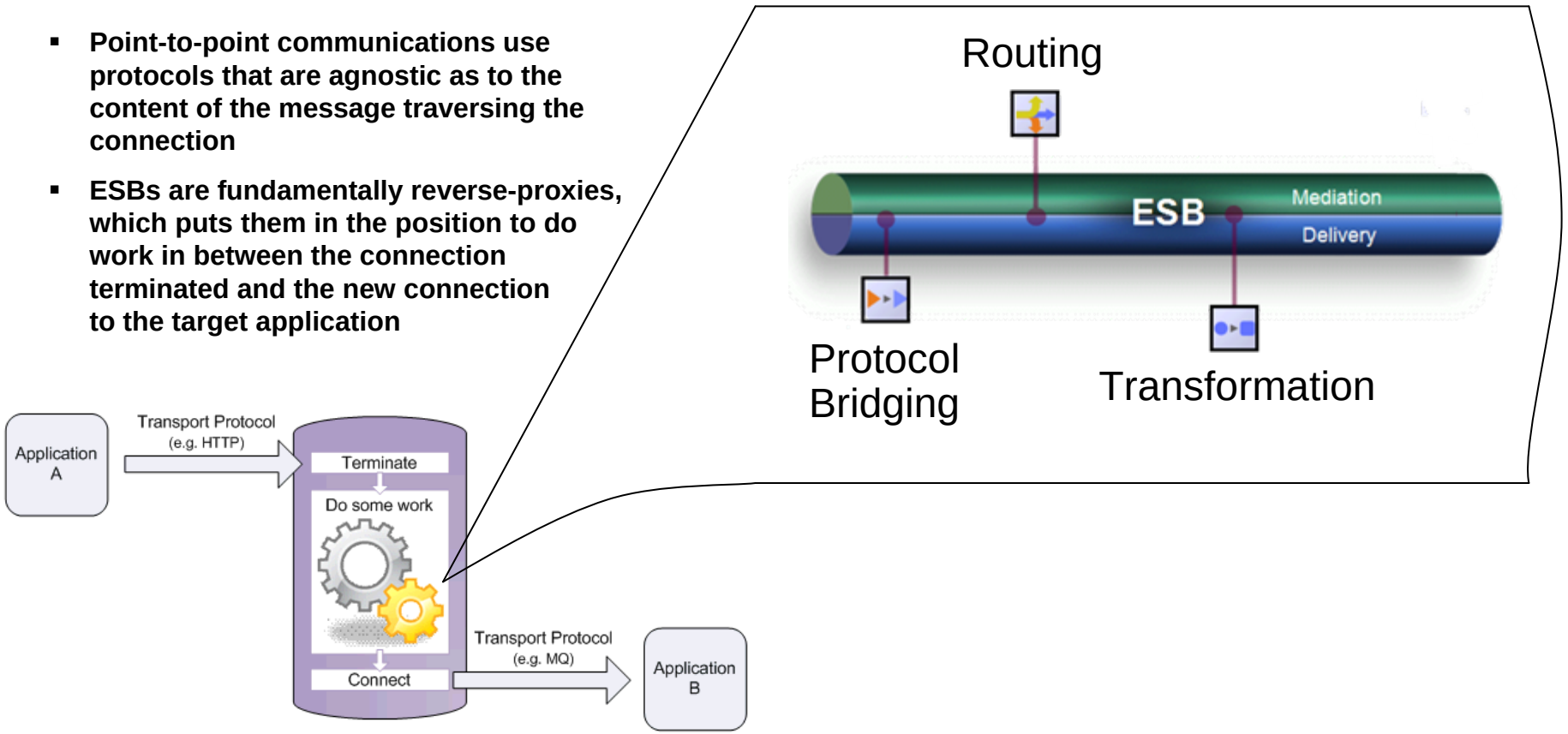
WebSphere Message Broker

- can get "anything" "anywhere"
- universal reach into any application

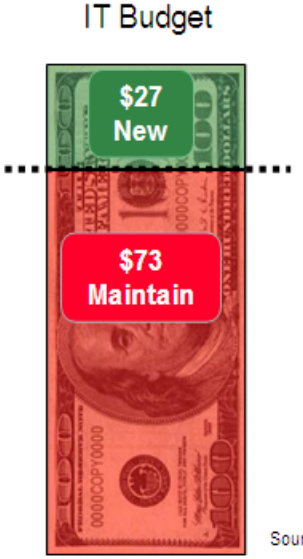
ESBs are functionally pretty simple…



- **Point-to-point communications use protocols that are agnostic as to the content of the message traversing the connection**
- **ESBs are fundamentally reverse-proxies, which puts them in the position to do work in between the connection terminated and the new connection to the target application**



…BUT have become critical to the success of enterprises around the world



The conundrum facing CIOs:

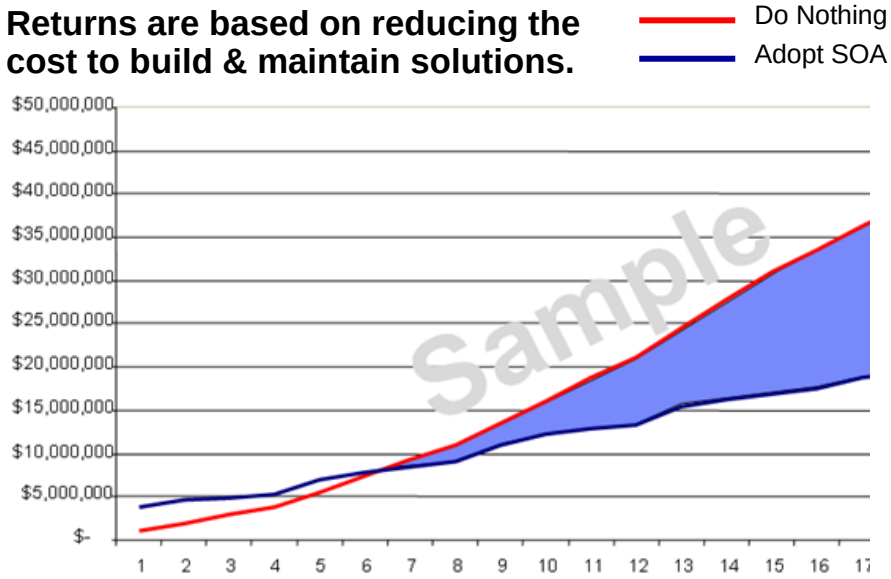
How to get more for less when…

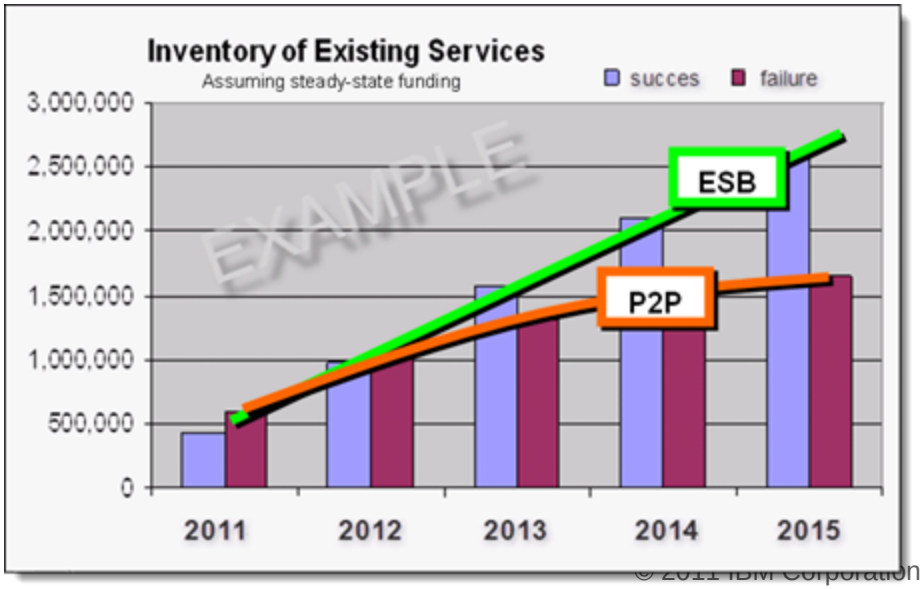
- Fixed costs of maintaining existing systems consume IT budgets
- Limited opportunities for new value-adding investments
- Every new investment creates additional maintenance costs

Source: Boston Consulting Group

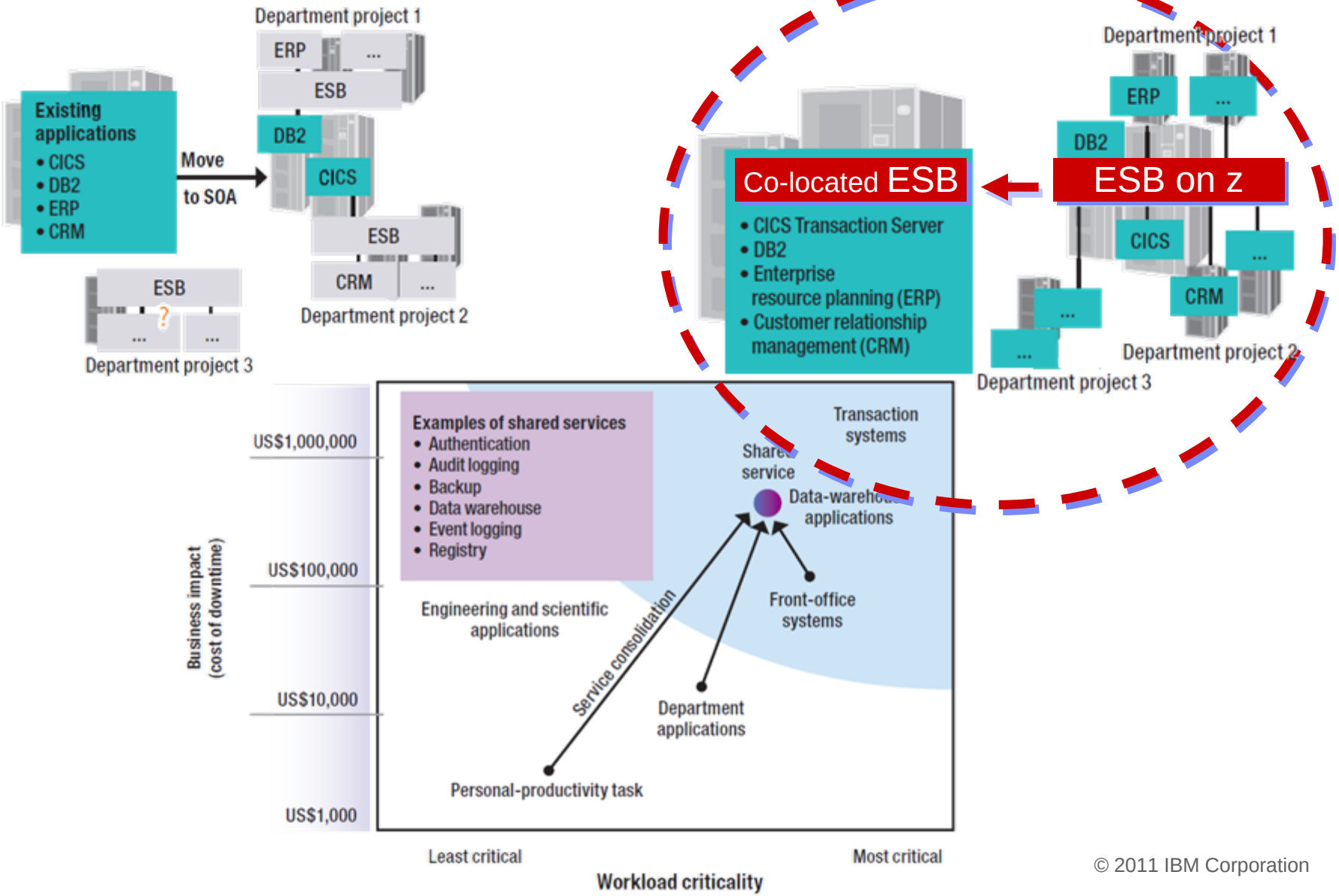
- **Most organizations apply returns back to the project budget**
- **This is in a large part what is meant by "SOA increases business agility" – after a short period of time recovering initial investments, SOA shops are able to devote more of their resources to delivering new functionality to the business**

Returns are based on reducing the cost to build & maintain solutions.





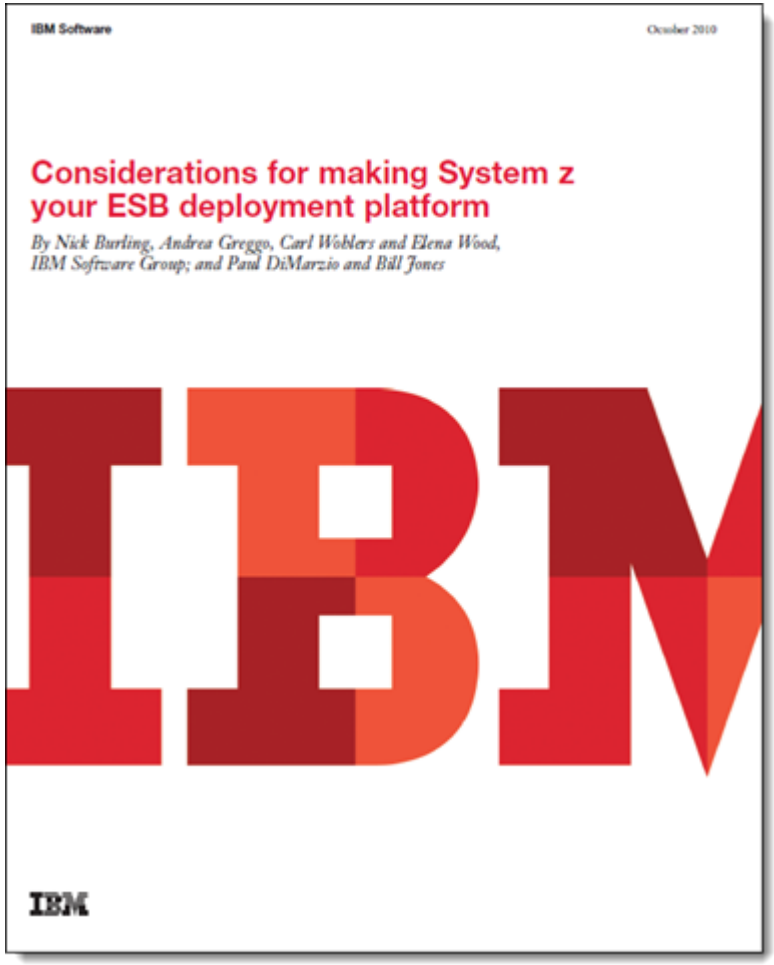
Continued adoption for more critical work drives more change



The reasons why enterprises are choosing System z for the ESBs

- **Puts the ESB on steroids by leveraging** *features only available on System z*
  - SYSPLEX continuous availability
  - Automatic Restart Manager (ARM)
  - Goal oriented resource allocation with Workload Manager (WLM)
  - Shared Queues
- **It enables cost-effective reuse of z assets**
  - By leveraging in house System z management skills
  - By offloading of JVM instructions to execute on zSeries Application Assist Processor (zAAP) chips
- **It offers significantly improved ESB execution characteristics with proximity to data**
  - By co-location of ESB mediations with the data that they access

Everyone will receive a copy of “Considerations for making System z your ESB deployment platform”, October 2010



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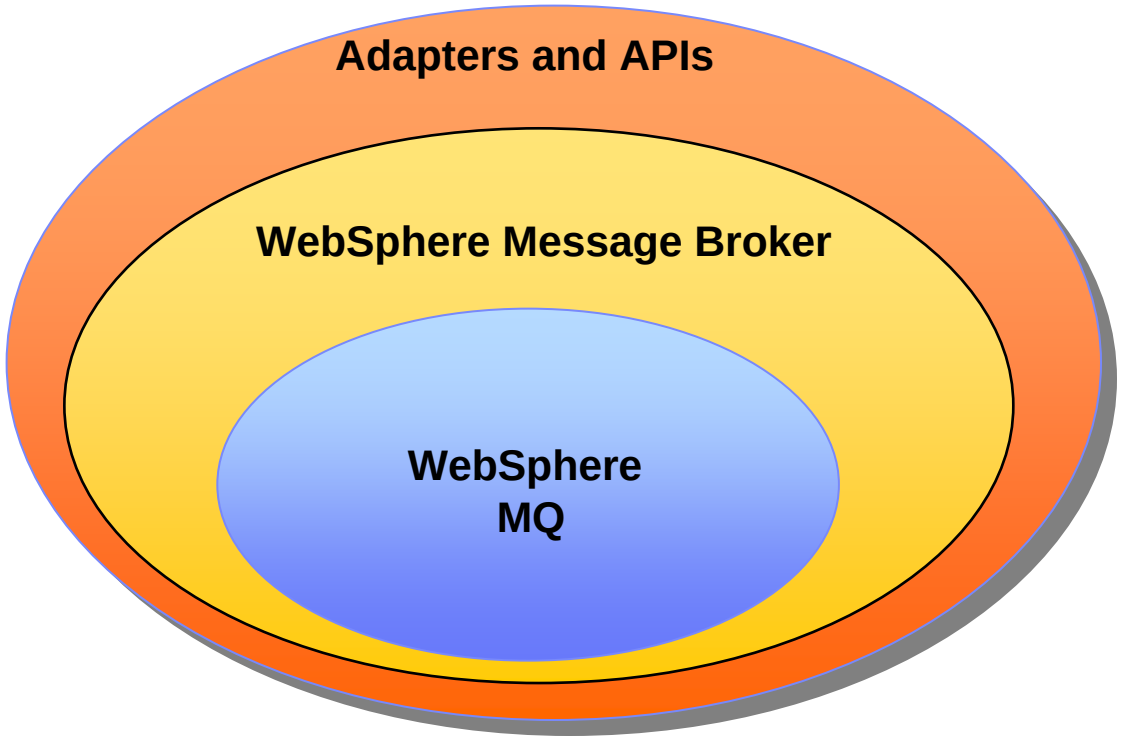
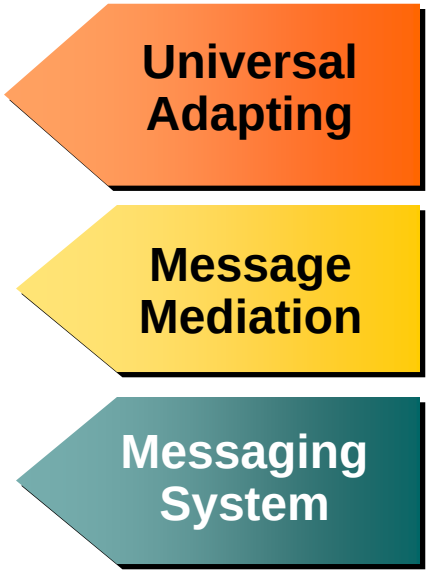
IBM System z Technology

WebSphere Message Broker

- **Bedrock: WMQ is the de facto standard for messaging**
- **WMB introspects those message to do core ESB mediation functions:**
  - Protocol Bridging, Transformation, Routing
- **But it extends those functions much further:**
  - Library of pre-built adapters into proprietary protocols and applications
  - Rich set of languages with which to tap directly into just about any obscure API (right down to sockets)

- **Things it can take advantage of on System z:**
  - SYSPLEX continuous availability
  - Automatic Restart Manager (ARM)
  - Goal oriented resource allocation with Workload Manager (WLM)
  - Shared Queues
  - zAAP processors (for Java Compute nodes)





For example: Enterprise Payments Hub at a North American Bank

The Need:

The bank had a legacy system that created difficulties in meeting the ongoing challenge of responding to banking requirements in a timely manner. It also wanted to capitalize on the newly formed SWIFT XML formats, to let clients track payments through the system in real time and to gain an integrated view of all the ways in which it interacted with enterprise clients.

The Solution:

The bank leveraged the IBM Banking Industry Framework for payments and securities to build an enterprise payments hub solution. At the heart of the solution is IBM enterprise payments platform (EPP) with ***WebSphere Message Broker*** as a middle layer integration hub on which to facilitate processing of information that was ***significantly more efficient at the transaction level*** than any other solution considered. IBM's industry expertise and understanding of international SWIFT payments regulations resulted in unique technology advancements

What Makes It Smarter:

- Gains an integrated view of transaction histories, including volumes and types of payments platforms used
- Provides customers with access to a real-time view of their transactions
- Results in better understanding of product and payments platform utilization, resulting in improved efficiency

Solution components:

- IBM System z10™
- IBM WebSphere Message Broker®
- IBM enterprise payments platform (EPP) assets v1.07

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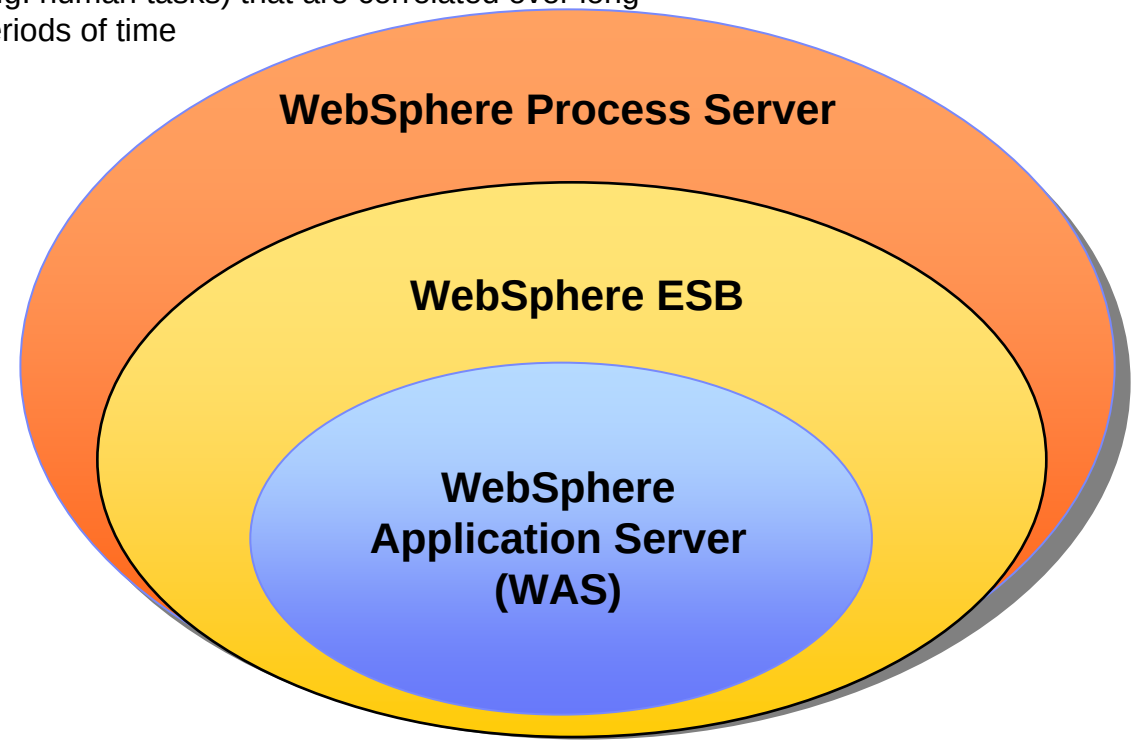
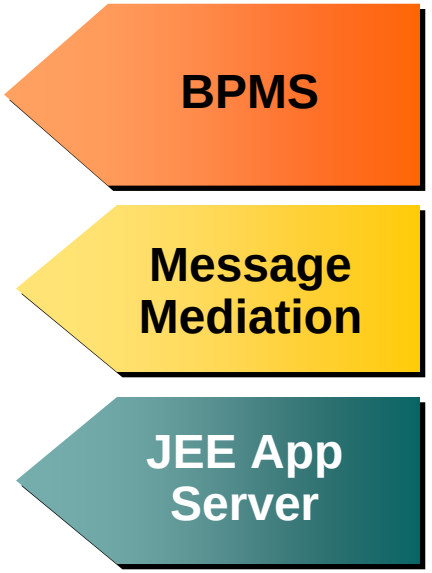
IBM System z Technology

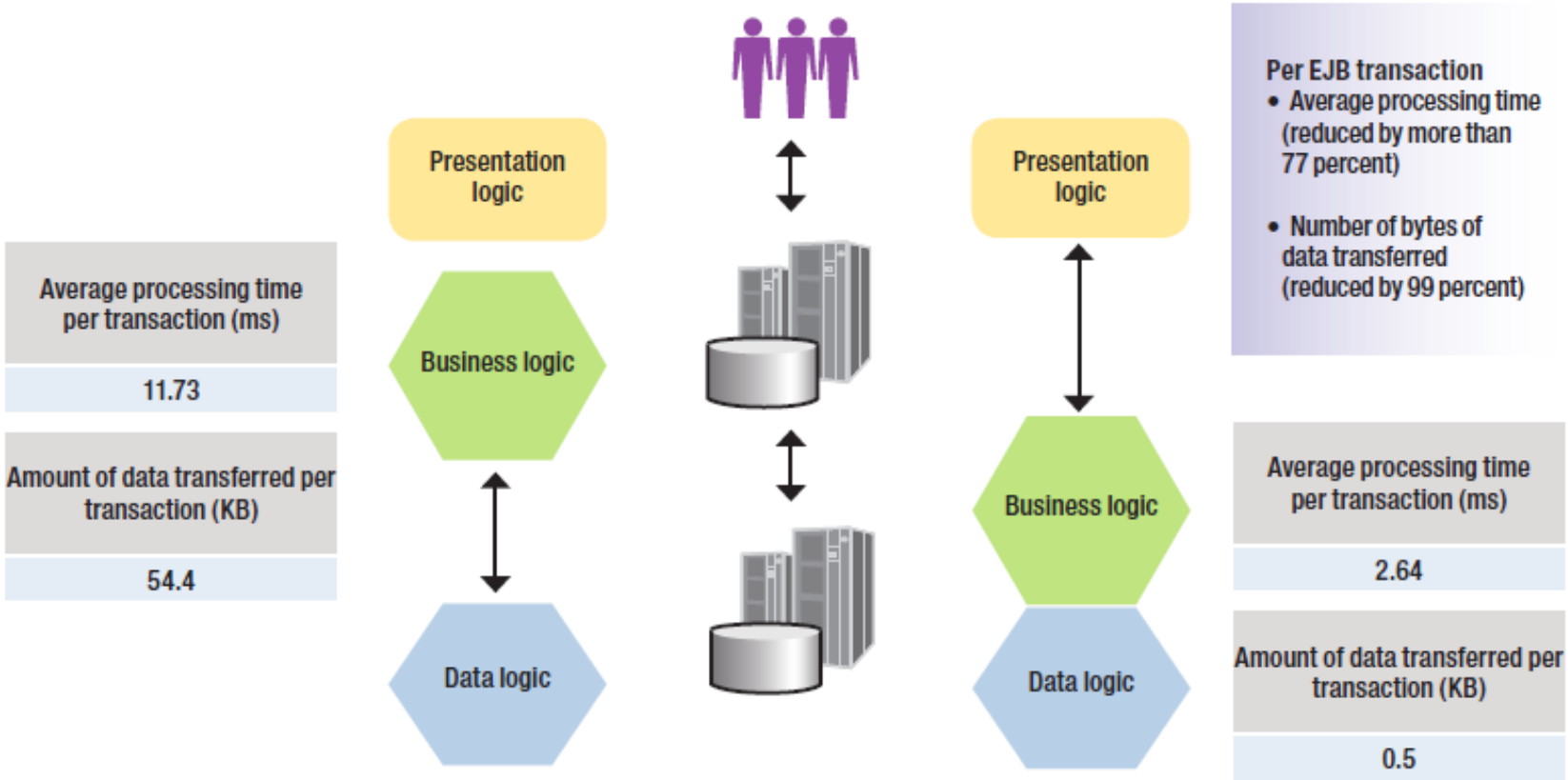
WebSphere ESB

- **Bedrock: WAS is the leading JEE application server**
- **WESB accepts messages over standard protocols (e.g. HTTP/SOAP) and introspects those message to do core ESB mediation functions:**
  - Protocol Bridging, Transformation, Routing
- **But it extends those functions much further:**
  - Process Server can be added to provide state management between message and other events (e.g. human tasks) that are correlated over long periods of time
- **Things it can take advantage of on System z:**
  - SYSPLEX continuous availability
  - Automatic Restart Manager (ARM)
  - Goal oriented resource allocation with Workload Manager (WLM)
  - zAAP processors



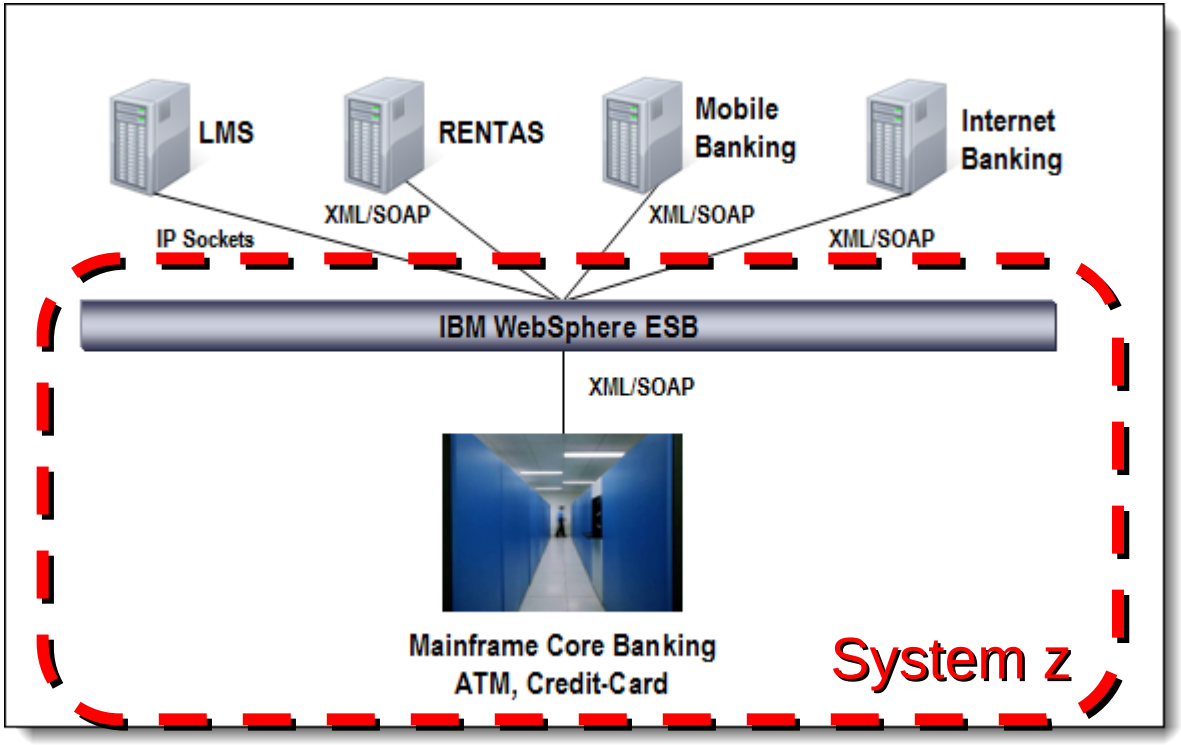


Co-location is particularly effective for Java-based solutions



A South Asian Bank

- **Longstanding System z operations**
- **Decided between distributed and System z**
- **Co-location performance benefits were an influential factor in deciding to deploy the ESB to System z**



Solution components:

- IBM System z9™
- IBM WebSphere ESB®

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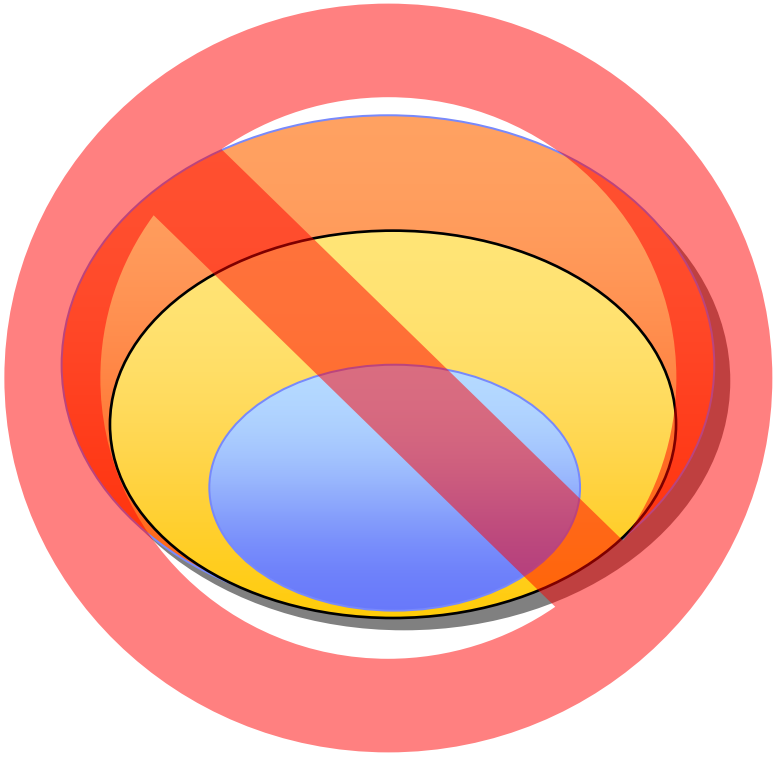
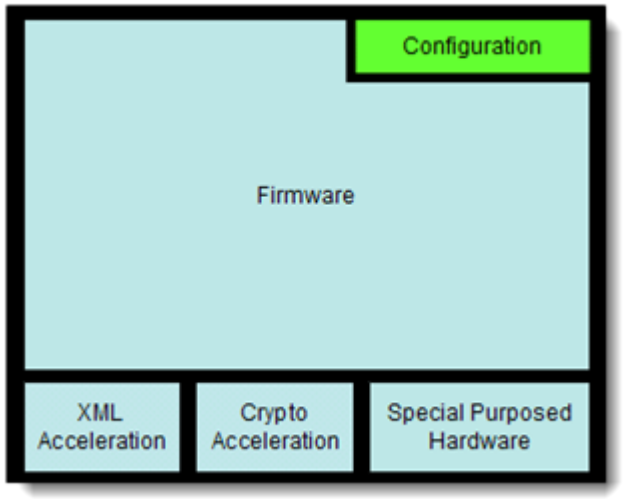
WebSphere DataPower

- **As an appliance made up of hardware and microcode software that have evolved together specifically to work with each other, DataPower cannot run on z/OS…**



- **But that does not mean that it cannot take advantage some System z features.**
- **Things it can take advantage of on System z:**
  - SYSPLEX continuous availability
  - Shared Queues (requires MQ install on Z)



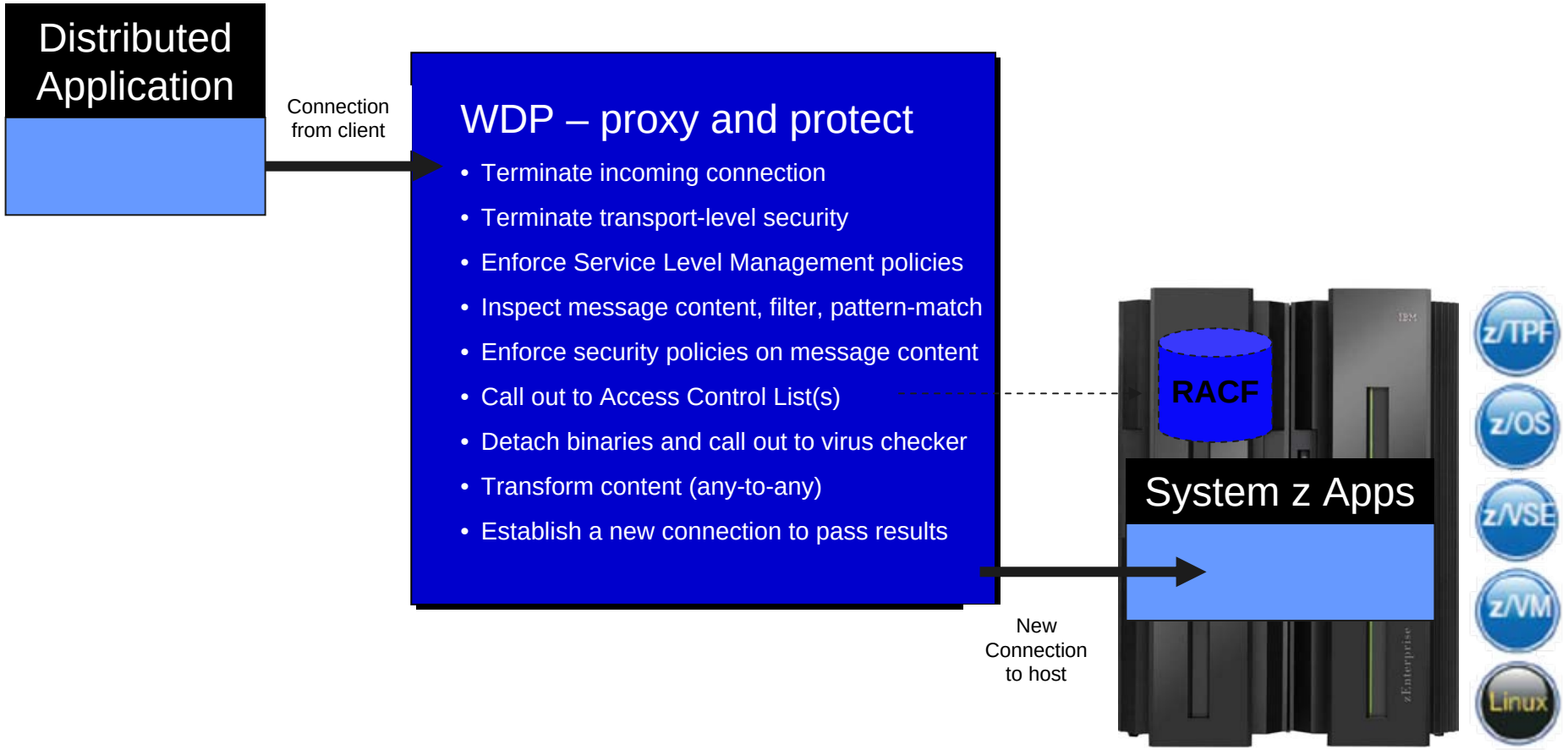
Config-only Development

Mediation microcode

Hardware
Intellectual Property

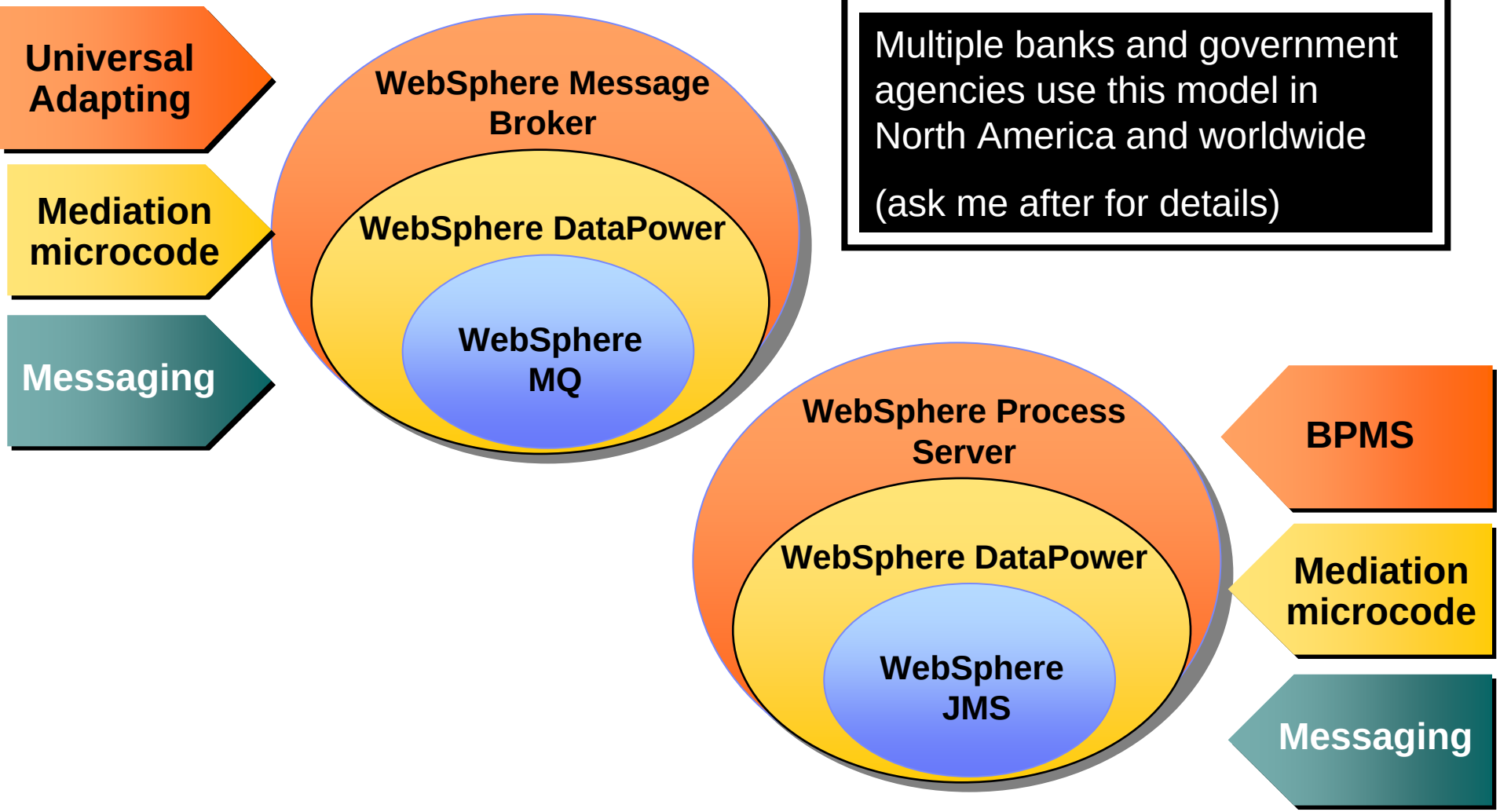
DataPower is widely deployed as a gateway to mainframe services…

Due to its rich feature set and hardware acceleration modules for security policy enforcement



...and DataPower is also widely used in hybrid ESB deployments

Because it reduces the time, effort and computational resources needed for core ESB mediation work



Agenda

THANK YOU!

How can you learn more?

IBM System z Technology

z doctor is in!
Visit the z Solution Suite for 1-1 consultations; see the zEnterprise in action

Save the Date

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