

Introduction to Pervasive Computing

for Business Partners

October 1, 2003

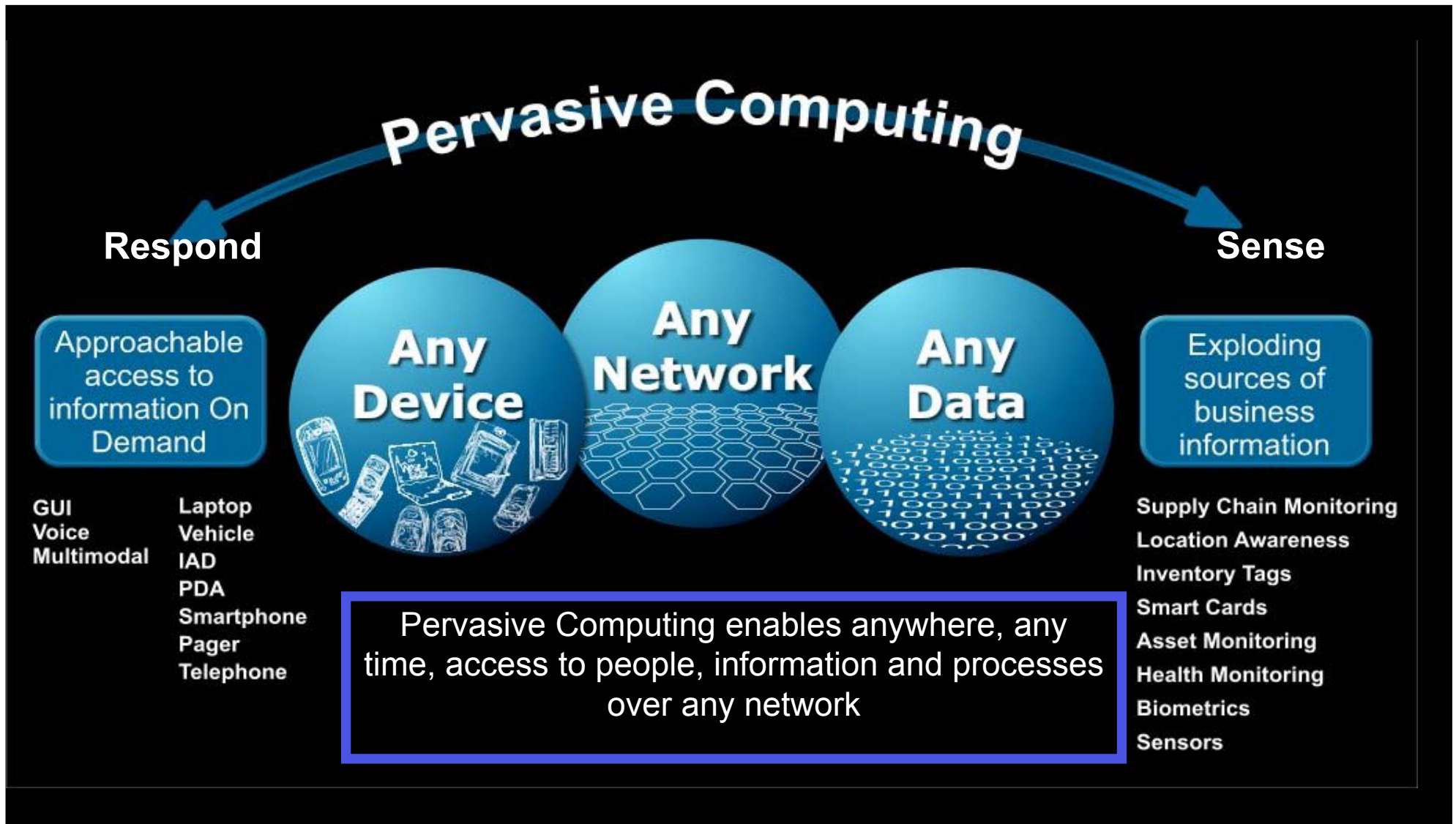


Introduction to Pervasive Computing

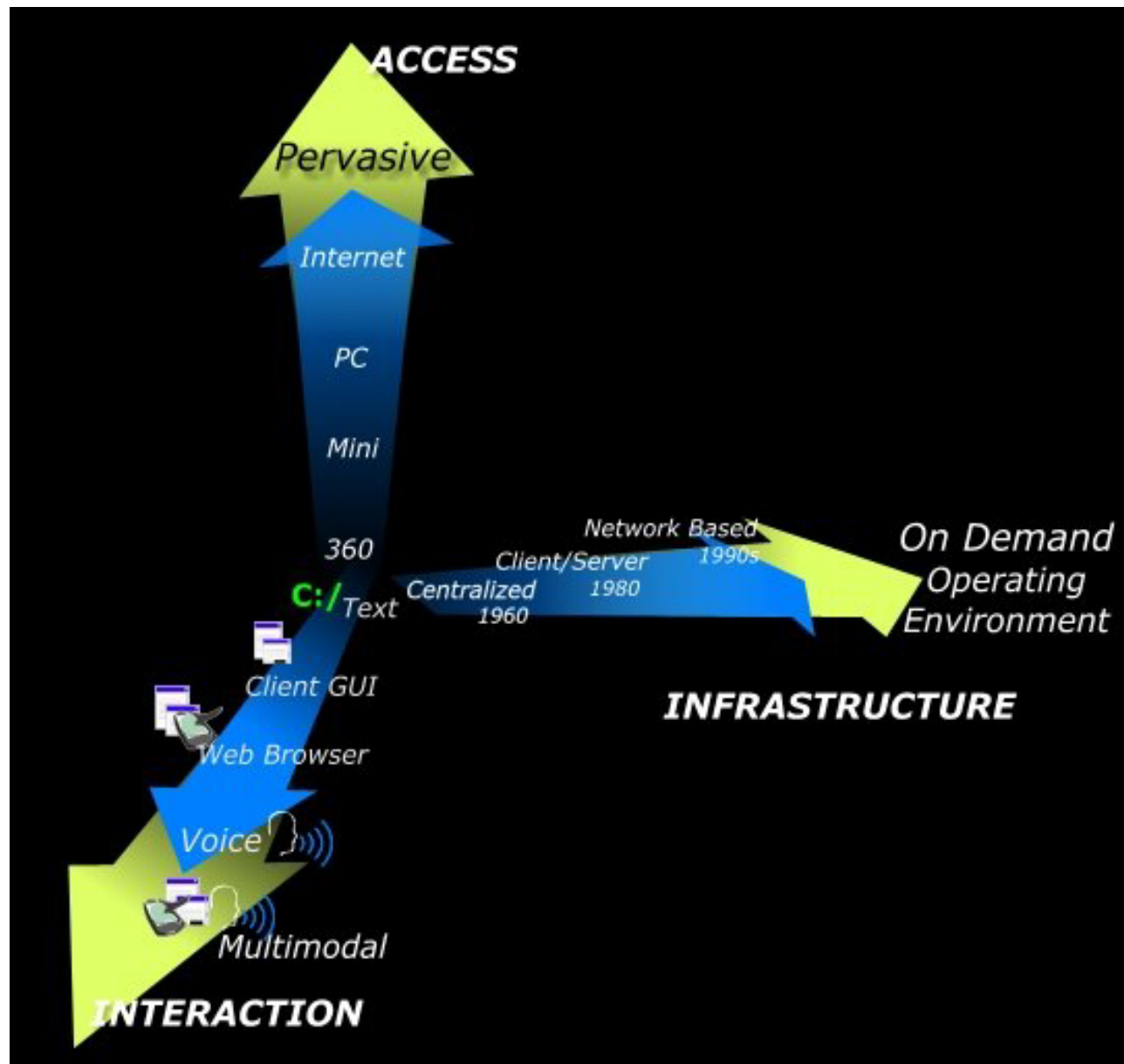
- *The Marketplace, The Opportunity and IBM's Pervasive Computing Vision*
- *Solutions and Offerings*
- *The Value of an IBM Partnership to Your Company*



Pervasive Computing Enables On Demand



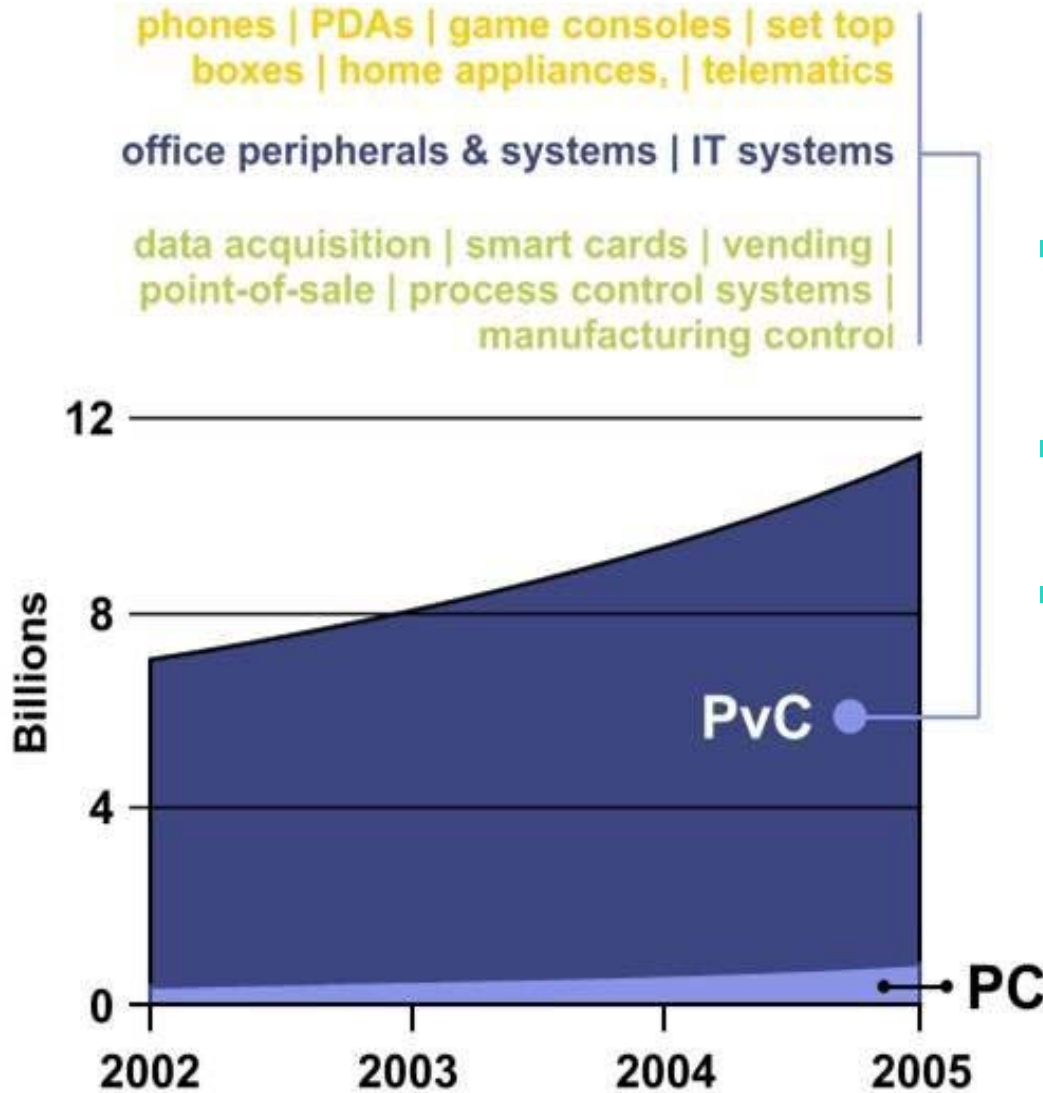
A Continuing Evolution of Computing



- More users as **access** becomes pervasive
- Ease of use concerns drive new **interaction**
- The **infrastructure** extends to new devices



An Explosion of Information Collection and Access



Source: IBM Market Intelligence 1Q2003

- More than 6 billion devices in 2002 ...growing to more than 10 billion by 2005
- Increasing connectivity and intelligence
- Nearly 70% of enterprises will deploy mobile solutions by 2005 (META Group)

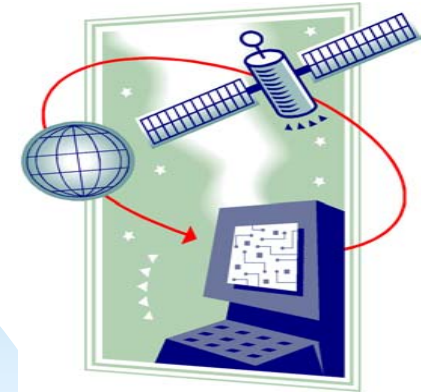


Market Outlook

Nearly 70% of enterprises will deploy mobile solutions by 2005

- META Group

By 2003.... number of pervasive computing devices exceed 6 billion
-IDC



Pervasive computing is a \$ 121 billion market in 2003

Sales of devices used in home automation systems will increase from \$1.3 billion in 2001 to \$2.5 billion in 2005.

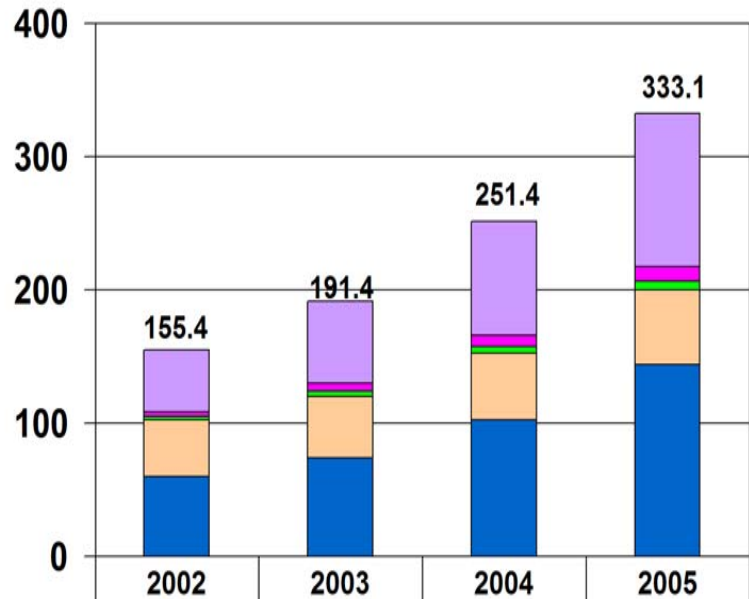
By 2004... 80% of new consumer applications will permit Internet access from mobile devices

-Gartner



Opportunity

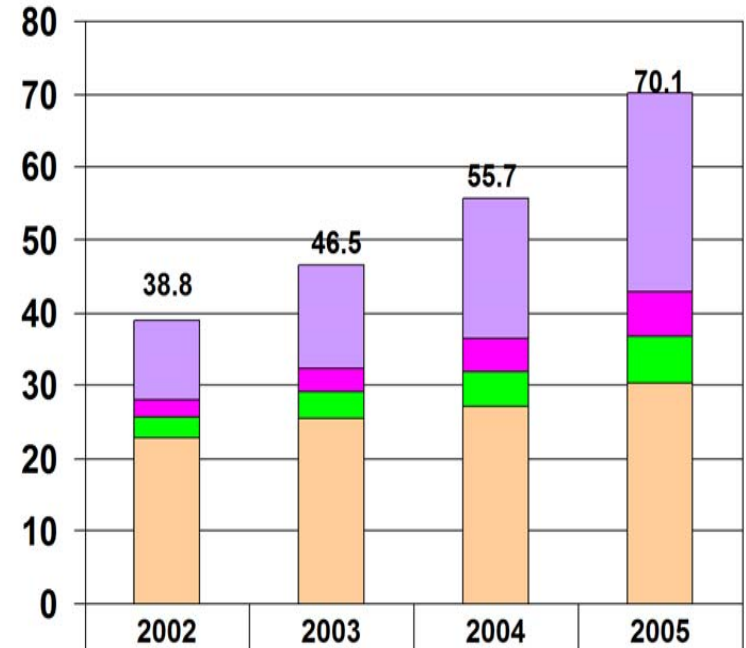
Total Available Market



	2002	2003	2004	2005
Services	46.7	61.5	85.5	115.4
Software	4.3	6.3	8.4	11.2
Hardware	2.6	3.6	4.9	6.5
OEM HwSw	42.1	46.3	50.7	56.6
Devices	59.8	73.7	101.9	143.4

CAGR
 35%
 38%
 36%
 10%
 34%

Selected Addressable Market



	2002	2003	2004	2005
Services	11	14.2	19.2	27.3
Software	2.3	3.3	4.6	6.1
Hardware	2.6	3.6	4.9	6.5
OEM HwSw	23	25.4	27	30.2

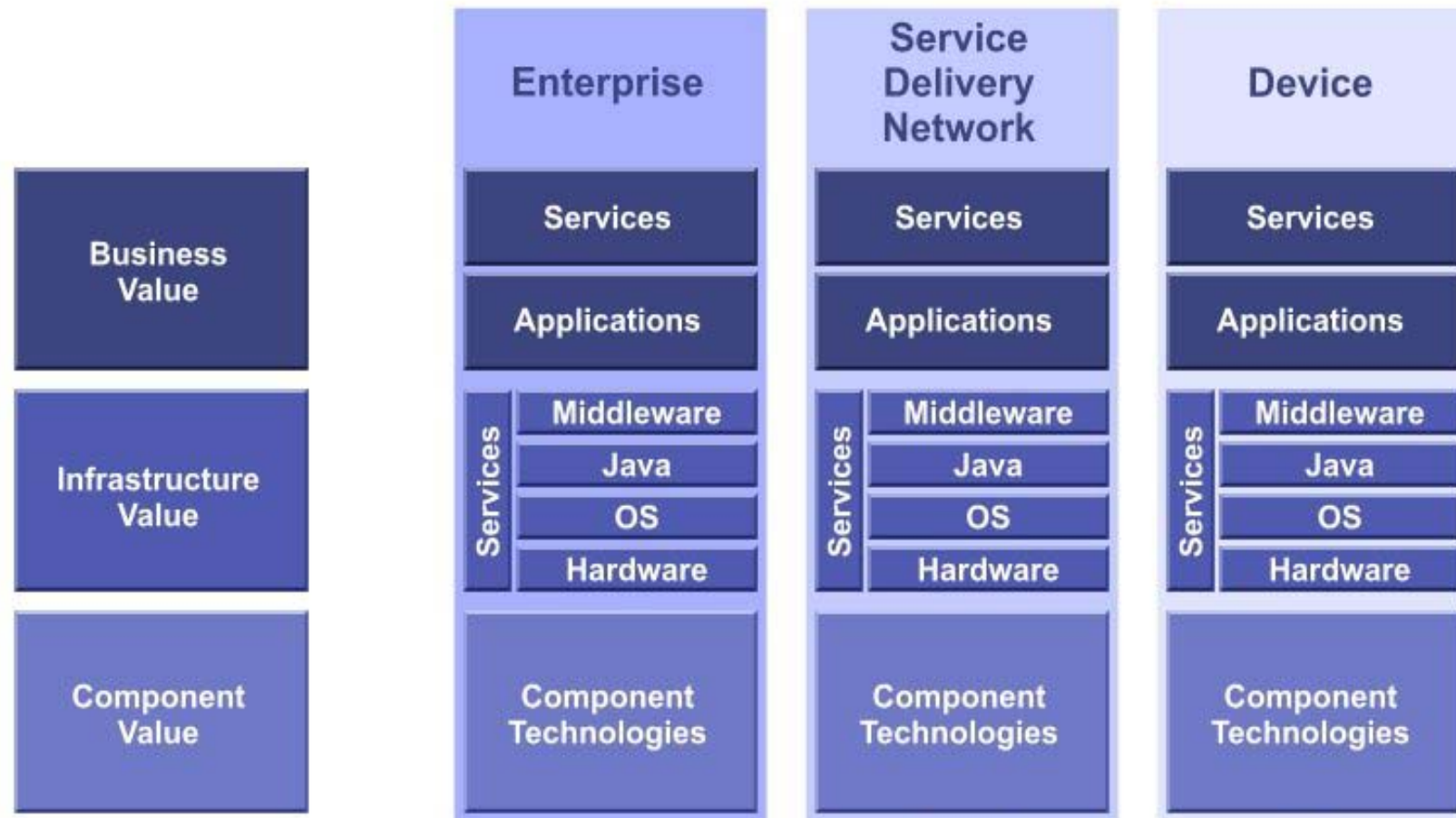
CAGR
 36%
 39%
 36%
 9%

Source: IDC Pervasive Market Sizing Project

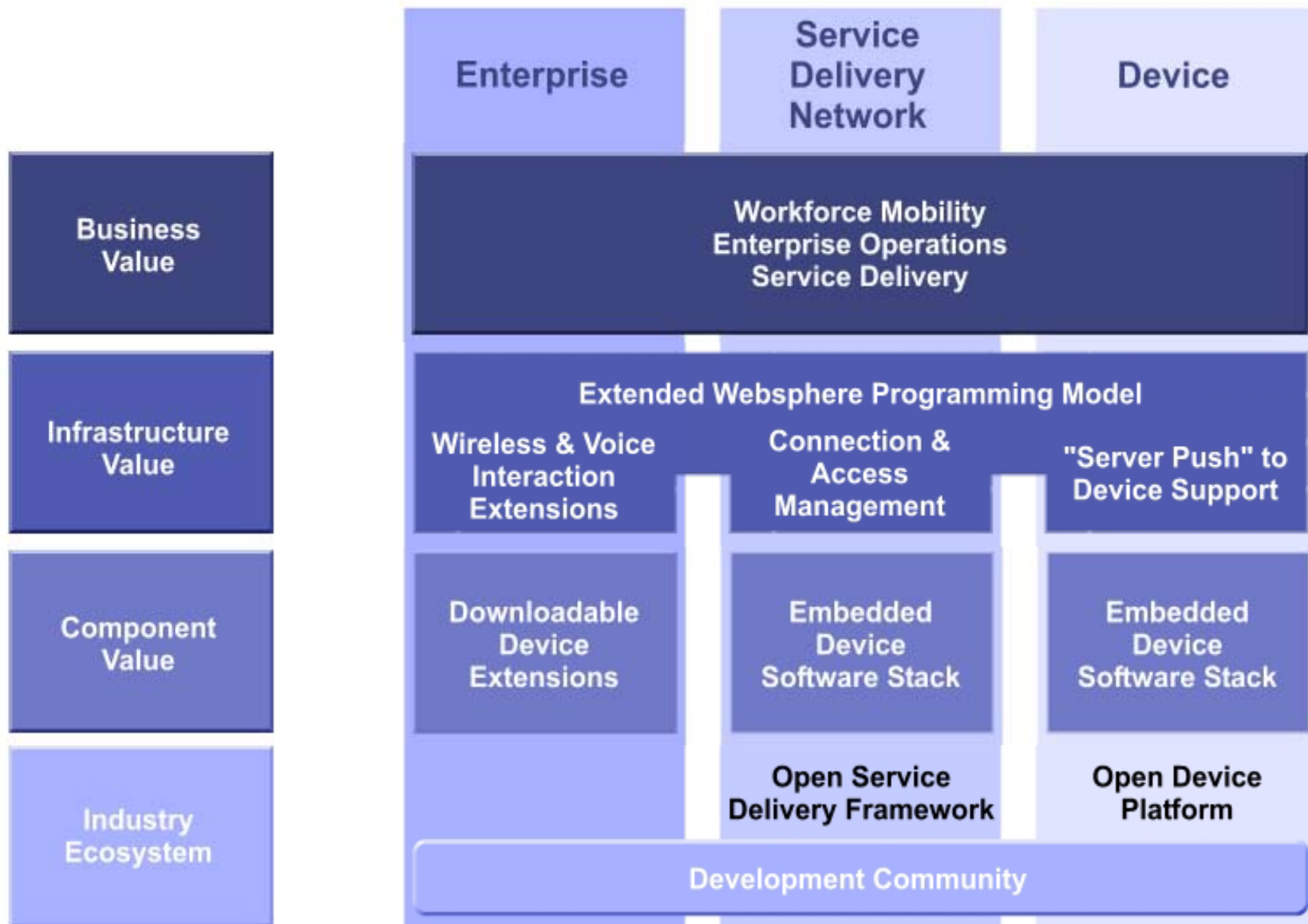
Note: Market Value in Billions



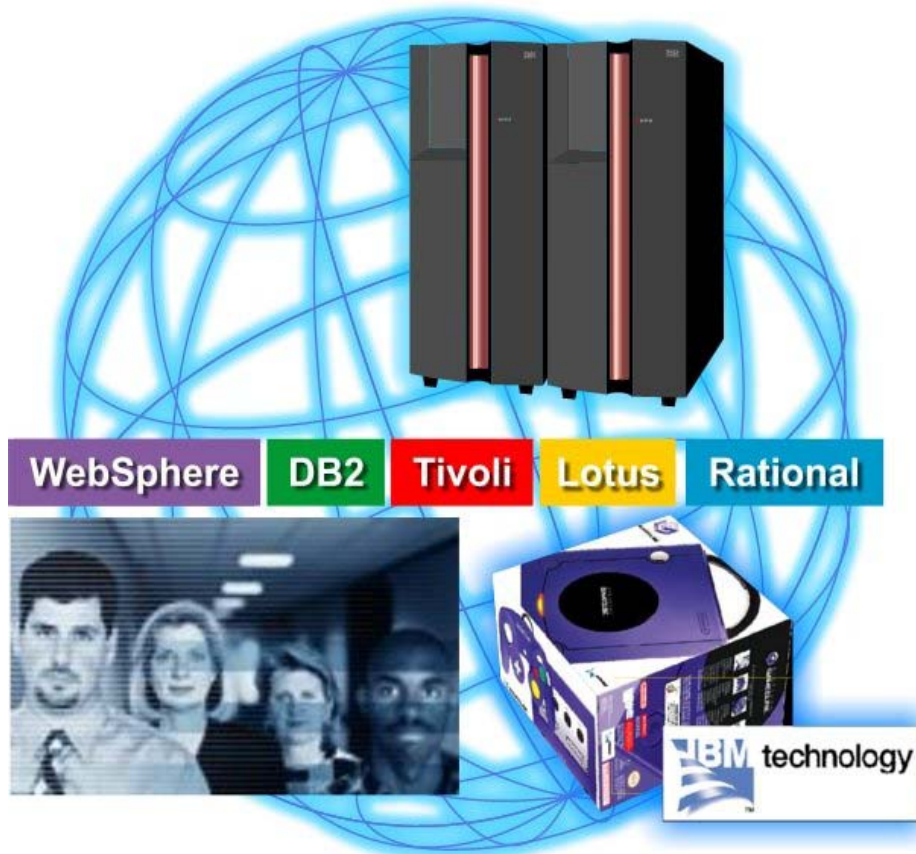
Strategy – Enabling End-to-End Solutions



Strategy – Enabling End-to-End Solutions



IBM's Pervasive Computing Portfolio



- **Technology:** PowerPC processors, customer logic solutions SiGe and advanced CMOS technology, engineering and technology services, IBM Research
- **Devices:** Wireless and Bluetooth-enabled ThinkPads
- **Hardware:** e-Servers, Storage
- **Software:** WebSphere, DB2, Lotus, Tivoli, Rational
- **Services:** Business Consulting, Integrated Technology, Hosting, Strategic Outsourcing, Learning, Application Management



IBM's Commitment

▶ **Thousands of IBM Employees Worldwide**

- *Over 25 % are developers and researchers*
- *150+ countries on 6 continents*

▶ **Over \$1.5 Billion Investment**

- *Product development*
- *Sales and marketing*
- *Services expertise*



Commitment to Standards



Pervasive Computing Challenges

Complexity of applications, range of connectivity options and number of devices create challenges for our customers

Mobility Challenges

- ✓ Connected, intermittent, disconnected
- ✓ Authentication and authorization
- ✓ Security
- ✓ Voice/data access
- ✓ Device management
- ✓ Scalability
- ✓ Services
 - Messaging services
 - Location awareness
 - Intelligent notification
 - Context awareness



Device Challenges

- ✓ Unique device capabilities
 - ✓ Varying programming models
 - ✓ No dominant standard
 - ✓ Wide range of target environments
- Multimodal interaction



Application Challenges

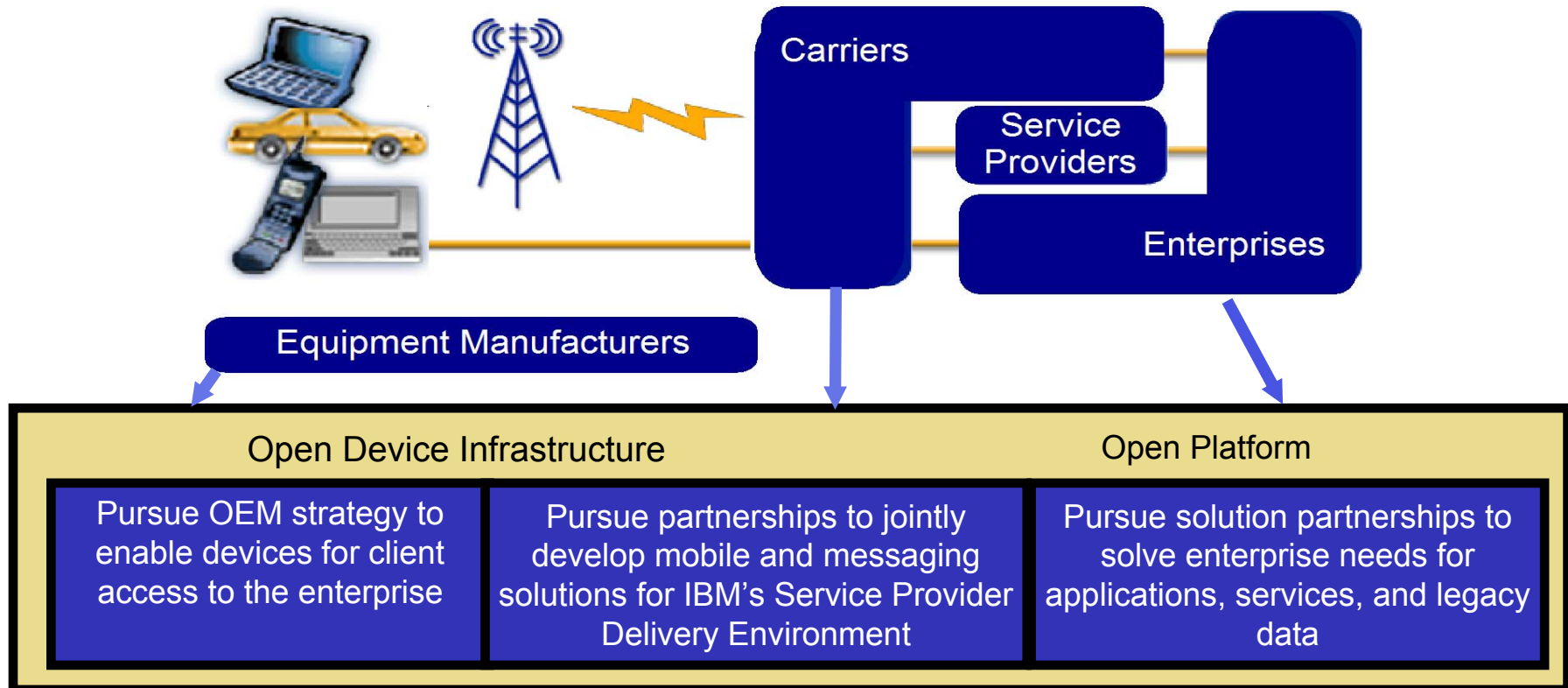
- ✓ Content aggregation
- ✓ Customization and personalization
- ✓ Multi-device capability
- ✓ e-mail & PIM
- ✓ Business Apps, Custom Apps
- ✓ Web Content & Web Apps



IBM's Pervasive Computing Strategy

Business Partners complete the solution: IBM can provide enablement assistance and go-to-market support

Development Community



IBM's Pervasive Computing Strategy

Provide customers with end-to-end solutions

Solution Focus

Workforce Mobility

Enterprise Operations

Telematics

Intelligent Home

Enterprise Infrastructure

Mobile Wireless Platform

Networks of the Future

Open Device Platform

Smart Chips/Smart Machines

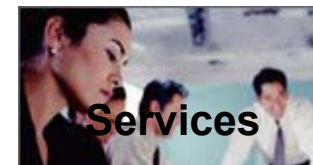
Value Chain Partners

Enterprises

Service Providers

Device Manufacturers

IBM and Business Partner Offerings



Application Software and Middleware



Hardware/Technology



New Industry Solutions



Mobile Office

- **Increases employee productivity by wireless remote access to Notes e-mail, calendars and directories**



Field Force Automation for Electronics Industry

- **Extends work management system to mobile field service workers and automates monitoring of remote sensors**



Field Force Automation for Utilities

- **Enables intelligent dispatch and scheduling, and remote ordering of equipment and parts**



Sales Force Automation for Pharmaceutical Companies

- **Provides field-based sales force access to back-end information on customer needs/wants and an intelligent alert capability**



Delivering Real Customer Value

Real-time Access ...

"Automatic data flow from the pipeline to the billing application provides speed and accuracy in a highly price competitive industry..."

Staff Engineer -SCADA, Chevron/Texaco Pipeline Company

ChevronTexaco

Intelligent Notification ...

"We reduced delays in parts turnaround by one day...to potentially save \$15M..by deploying a WebSphere Everyplace solution."

Information Technology and Systems Division Chief, Hill Air Force Base



Operational Efficiency ...

"Our process for claims handling in the field is streamlined and takes costs out of our business.."

Information Technology Manager, Progressive Insurance

PROGRESSIVE

Secure ...

"Seamless roaming provides anyplace, anytime access to information our officers depend on..."

Business Lead for the eCOPS Project, Toronto Police Service



Target Solutions

Horizontal Enterprise Solutions

Workforce Mobility Consulting

Wireless Enterprise Delivery Environment

Wireless Infrastructure Services (WLAN, Device Management)

Mobile Office

Worldwide financial services co. saves \$23,712 per salesperson w/ Mobile Office Solution

Industry Specific Solutions & Capabilities

Healthcare

- Pharma Sales Force Automation

Food distributor's salespeople took 2 more orders/day... increased sales by 10-20% w/ SFA Solution

Telco

- SPDE
- PWLAN
- Smart Home
- Field Force

- Handheld Device Management

Travel/Trans

- PWLAN
- Kiosks
- Airline Field Automation

Electronics

- Asset Management
- Field Force

Retail

- POS
- Vending
- Workforce

City government completed 20% more inspections/day; reduced repair wait time by 50% w/ FFA Solution

Automotive

- Analytics

Government

- Integrated Case Mgmt
- Emergency Services

Financial

- Claims
- Usage Base Insurance
- Smart Cards



Marketplace Momentum: Recent/Upcoming Announcements

Customer Wins

- **Danish Railroad:** Transportation solution
- **Metro AG Supermarkets:** RFID inventory solution
- **Cirque du Soleil:** e-mail, PIM and instant messaging
- **City of Waterbury Police:** Wireless roaming solution *from Cotelligent (RSI)*
- **Hertz:** Gold card registration solution *from Viacore*

New partnerships

- **Palm and QNX:** Integrating WebSphere Micro Edition embedded Java runtime
- **Nokia:** Embedded middleware tools
- **@hand:** Porting applications and tools to WEA and WECM
- **Symbian:** Device/Data Management cooperation
- **Scansoft:** ViaVoice distribution, WVAA enablement
- **InfoSpace:** Mobile Professional Solution
- **SupportSoft:** Device Management Solution
- **RIM:** Blackberry/WEA Integration

Awards

- From **Palm:** "Certificate of Excellence in Design" for interface design for WEA Client for Palm Handhelds
- From **Symbol:** Systems Integrator of the Year

Analyst acclaim

- **Yankee Group:** IBM is ranked "first among the enablers of enterprise mobile computing solutions...IBM is in the position to put all the pieces together"
- **Meta Group:** "IBM is a leader providing end-to-end solutions"
- **Gartner:** WEA "now supports more of the handheld operating systems worldwide than any other vendor"



Installed Customers - Americas

Voice

ATX	WVR/WVS	2002
Ameriquest	WVR	2002
Astra Zeneca	WVR	2002
Banco Mercantil	WVR	2002
BCBS Michigan	WVR/WVS	2002
Expresiv Technologies	WVS	2002
GE Capital	WTS	2002
KeyCorp	WVR	2002
MCI	UMWVR	2003
Miami Police	WVS	2002
MydocOnline	WVS	2002
Newport Wireless	WVS	2002
Ontario Hydro	WVR	2002
PFPC	WVR	2002
Plaza Associates	WVR	2002
Prudential Securities	WVR/WVS	2002
Sprint PCS	WVR	2002
St. of AZ	WTS	2002
T. Rowe Price	WVS	2002
Western CT State	WVS	2001
Xora	WVS	2002

Data

Bellsouth	WES	2001
Bullhead City Police	WECM	2001
Cirque du Soleil	WEA	2003
Commonwealth Builders	WEES	2003
Hill AF Base	WECM/WEA	2003
NY State Division of Parole	IMC	2002
TELUS	WECM	2002
Toronto Police	WECM	2002
Waterbury Police	WECM	2003



Installed Customers - EMEA

Voice

B2Win	WVR	2002
Belgacom	WVR	2002
Bright	WVS	2001
Deutsche Bank	WTS	2001
DictaNet	WVS	2002
First Direct	WVR/WVS	2001
Foreca	WVS	2001
ICR	WVR	2001
Inland Revenue	WVR	2001
Intrix	WVS	2002
Maritz	WVS	2001
Postbank	WVR	2002
Rabobank International	WVR	2002
Scottish Power	WVR	2003
Sikom	WVS	2001
T-Systems Nova	WVS	2001
Vodacom	WVR	2002
wetter.com	WVS	2002
wire-e plc	WVR/WVS	2001

Data

Bank of Scotland	WES	2001
Biowatti OY	WEES	2001
Bouyges Telecom	IMC	2002
BT Cellnet	WES	2001
Cenit AG Systemhaus	WEA	2002
City of Esslingen	WES	2001
Danone	IMC	2001
Dept Trade Industry	WEA/WVR/WVS	2003
Helsinki Wireless Villiage	WES	2001
JD William	IMC	2001
Korsisaari OY	WEES	2001
Orange France	WECM, WESSPO	2002
Pointer Solutions OY	WEES	2001
Ricoh	WTP	2001
Sirenic Ltd	WEA	2003
Telfonica Moviles	WESSOP	2002
Unixs Solutions	WTP/WES	2001
UPM	WEES	2001
Vehco	WEES	2002



Installed Customers - AP

Voice

Honda	eVV	2002
Impulse Japan	WTS	2002
Inland Revenue	WVR	2002
Movieline	WVR	2001
Shanghai GM	WVR	2001
St. George Bank	WVR	2002
Tom.com	WVS/WVR	2001

Data

Fraiser Securities	EWG	2001
GMCC	EWG	2001
HBrain Inc.	WEES	2002
Kaifeng Securitie	WTP	2002
KDDI Corporation	WEES	2002
Samsung	WEES	2001
Telstra	WESSPO	2002



Partner Value Proposition



*The pervasive computing marketplace is growing at 31% CGR
Projected to reach \$208 billion in 2005*

- Business Partners worldwide report that every dollar in sales of IBM middleware generates nearly \$8 in sales of their own services.
- For every dollar invested in IBM software-related education, training and certification, Business Partners generate \$345 in software and services revenue from their IBM practices.
- Business Partners investing in IBM middleware experience a 9-to-1 ratio of profit dollars to investment dollars.
- Every \$1 of IBM middleware generates an additional \$21 in sales of related software, hardware and services (services at an average 33% profit).

The ultimate winners in 2003 and beyond need to make investments now

Source: Reality Research Consulting
White Paper - 2002



Offerings and Solutions

- ***The End-to-End Solution***

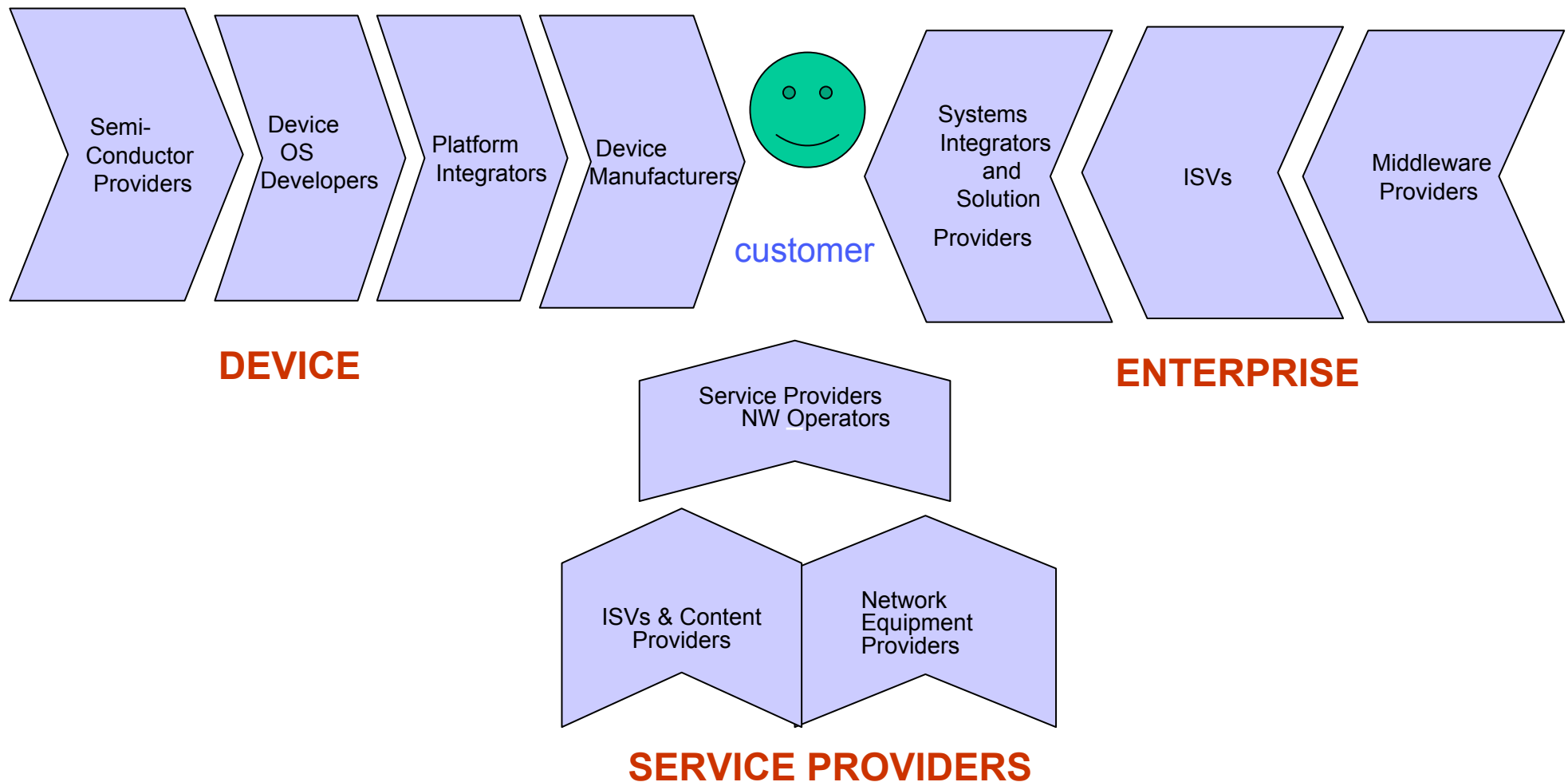
- ***Offerings for:***
 - ***Device-side***
 - ***Server-side***
 - ***Service Providers***
 - ***Components***
 - ***Voice Systems***
 - ***Development Tools***



Pervasive Solution Value Chain

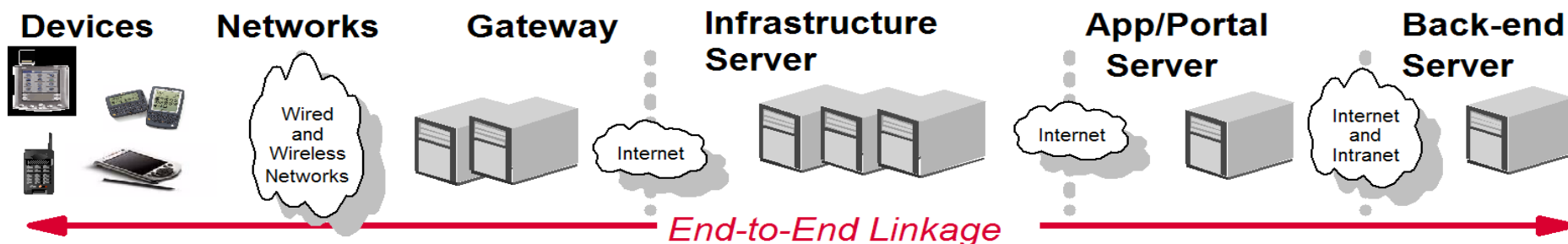
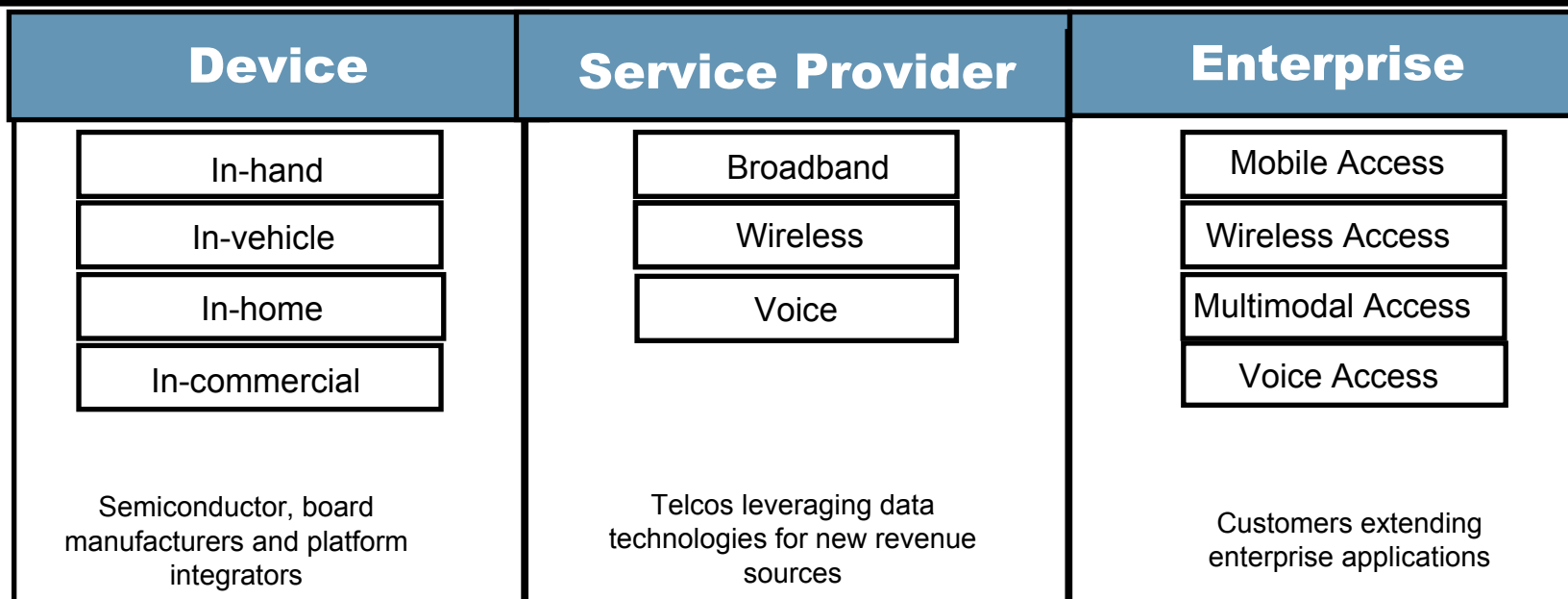
VALUE CHAIN PARTNERS

Working with a wide range of traditional and non-traditional partners...

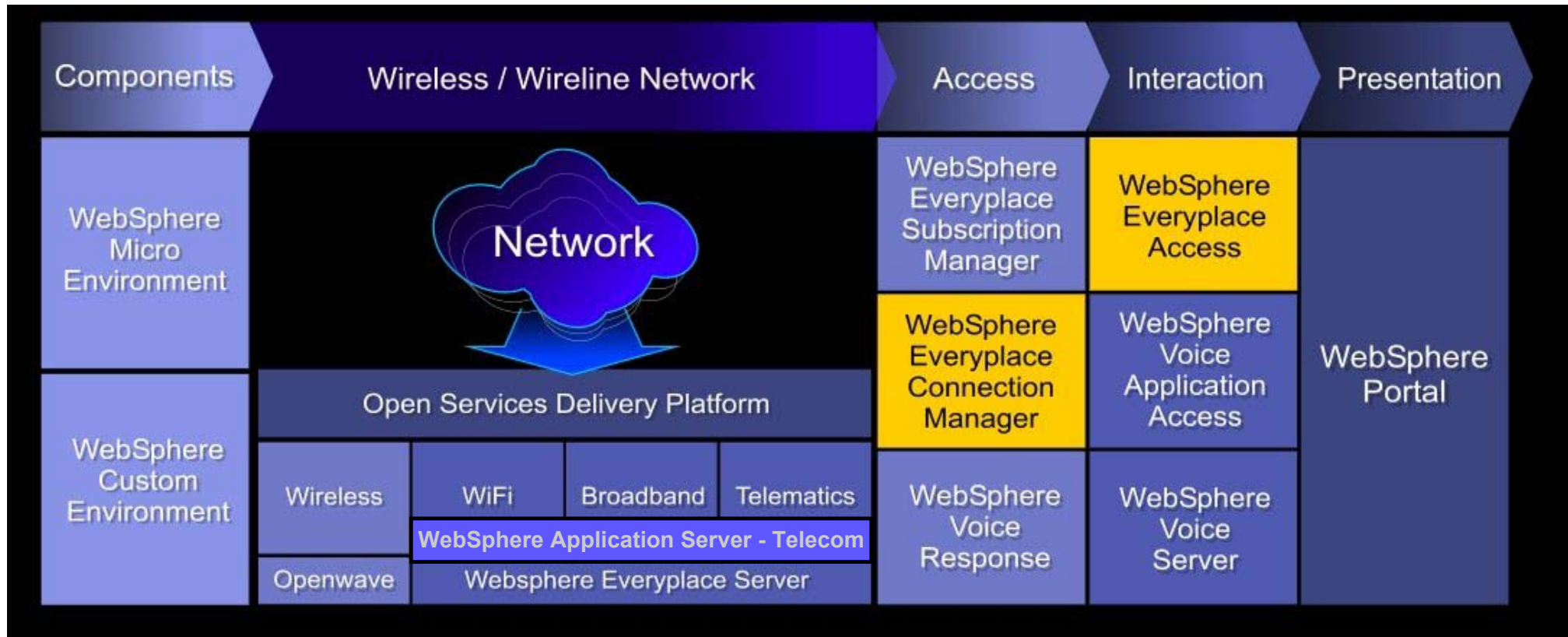


Required: An End-to-End Solution

The pervasive computing opportunity involves leveraging non-traditional embedded computing technologies – both wired and wireless – to enable, integrate and extend e-business and new applications.



A Mobile Application Software Platform



Offerings and Solutions

The End-to-End Solution

Offerings for:

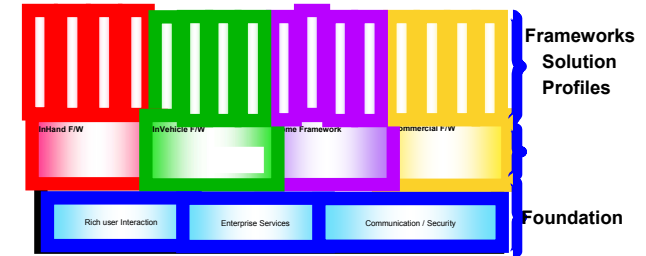
- **Device-side**
- **Server-side**
- **Service Providers**
- **Components**
- **Voice Systems**
- **Development Tools**



Device Software Family at a Glance

- Complete set of offerings; components to solutions
- Server and Portal connectivity services
- Affinity to WebSphere family

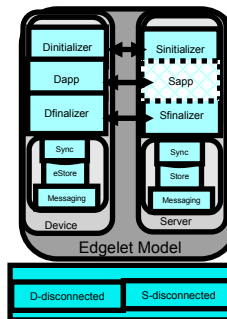
Fully Integrated Solutions



- RSG/STB SDK & RT
- PDA/WWP SDK & RT
- Mobile Phone SDK & RT
- Telematics SDK & RT

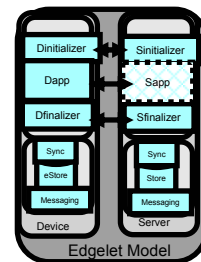
- One stop shopping
- WebSphere Everyplace embedded Foundation
- Device Specific frameworks
- Application & Platform development tools
- Industry specific solution profiles

Bridge Products



WME Enterprise Edition

- Device/Server bridge components
- Java Programming model
- Supports connected and disconnected modes
- Device management
- Data management
- Transaction management



Universal Client

- Device/Server bridge components
- Supports connected and disconnected modes
- Device management
- Data management
- Transaction management

Component Products

Smart Cards



WebSphere Micro Environment



Embedded Via Voice



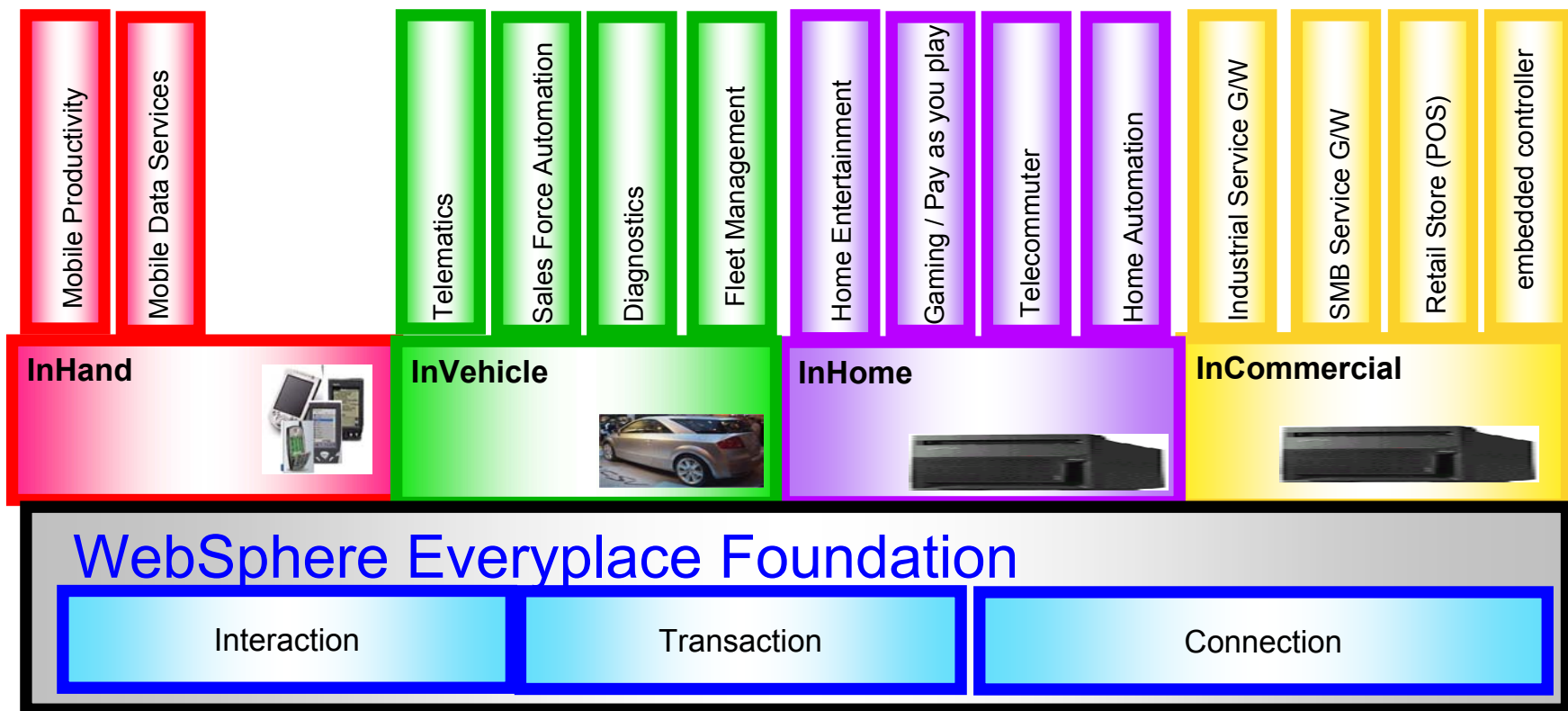
Availability - Reliability - Scalability - Security



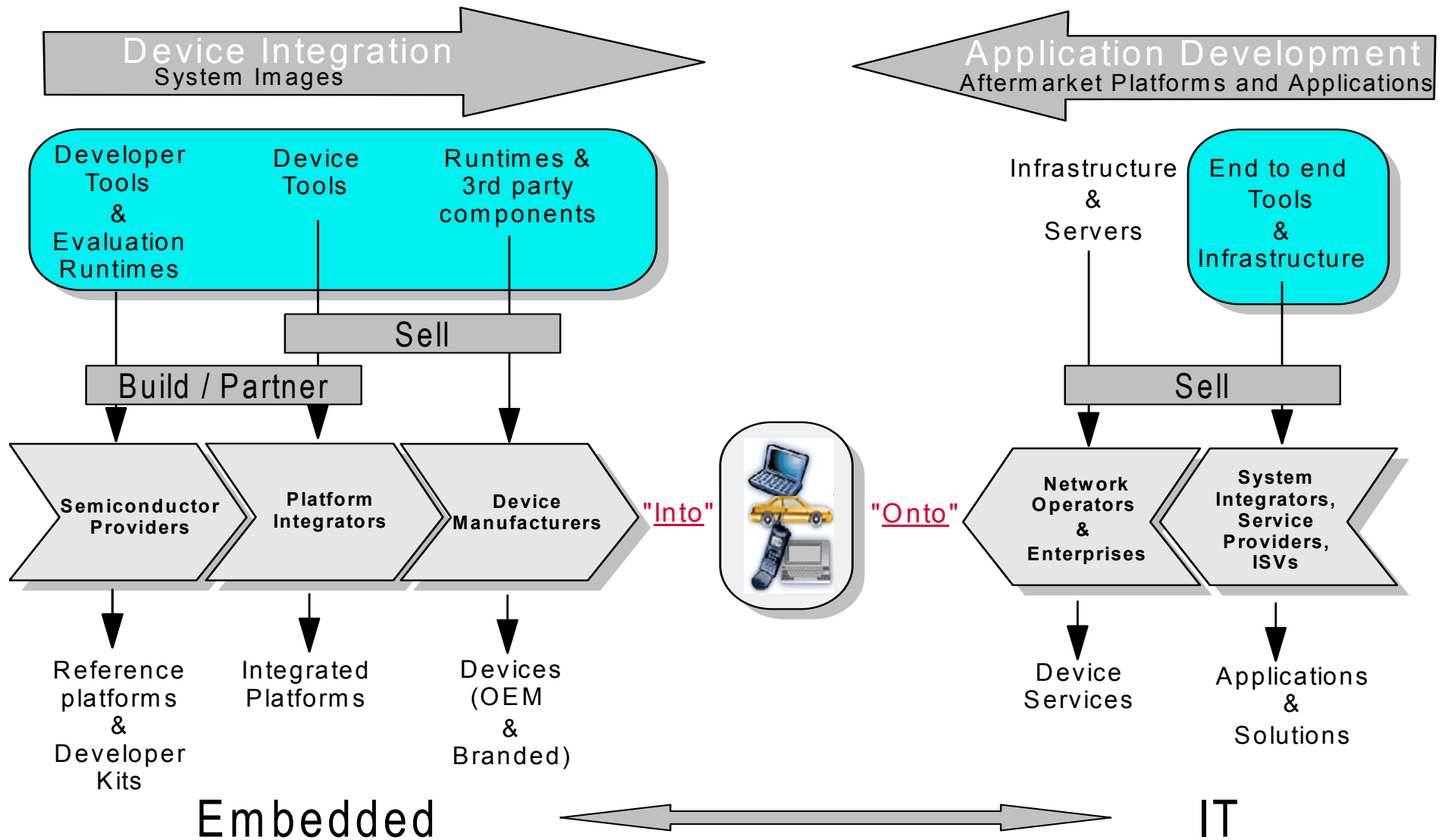
Device Software Family Strategy

Enable Device Manufacturers, Service Providers, Integrators to build the next generation of devices

- ✓ Open standards-based architecture allows Integrators to add value
- ✓ Devices become platforms for transactional e-business applications
- ✓ Higher value applications can be deployed



Device Software Value Chain



Offerings and Solutions

- *The End-to-End Solution*
 - *Pervasive Solution Example*

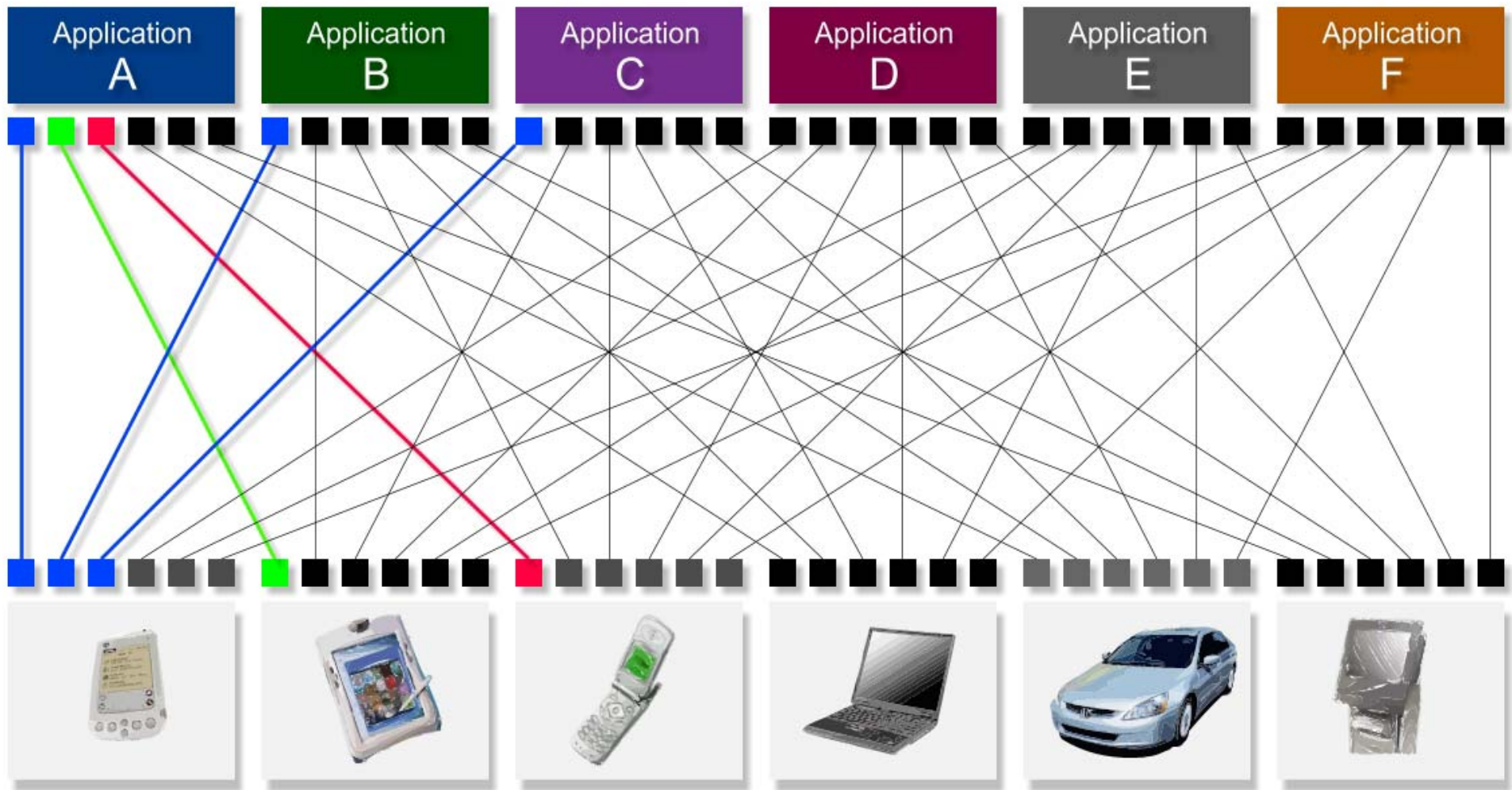
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The CIO's Dilemma

How do you solve an expanding "M x N" matrix?

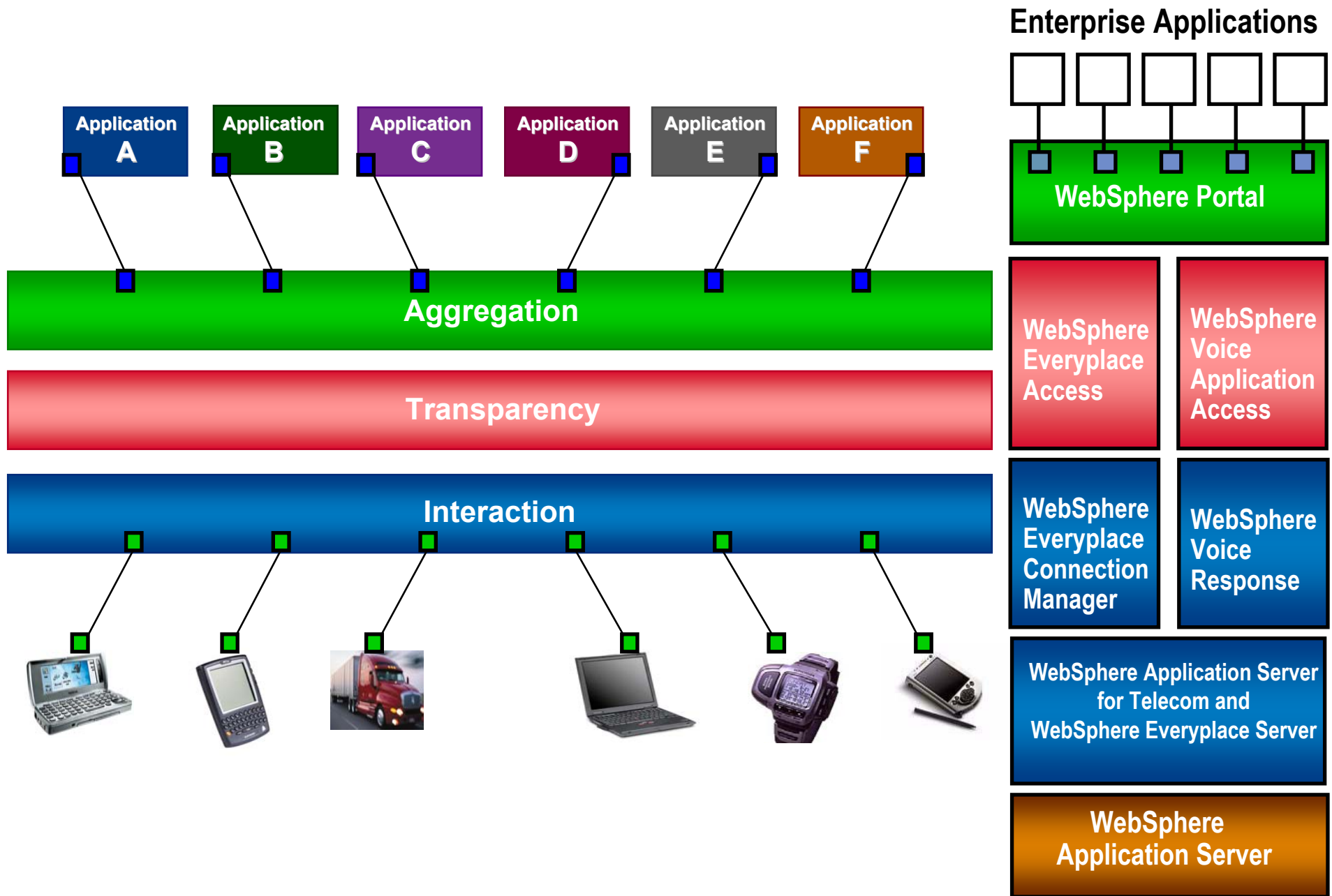
M applications...



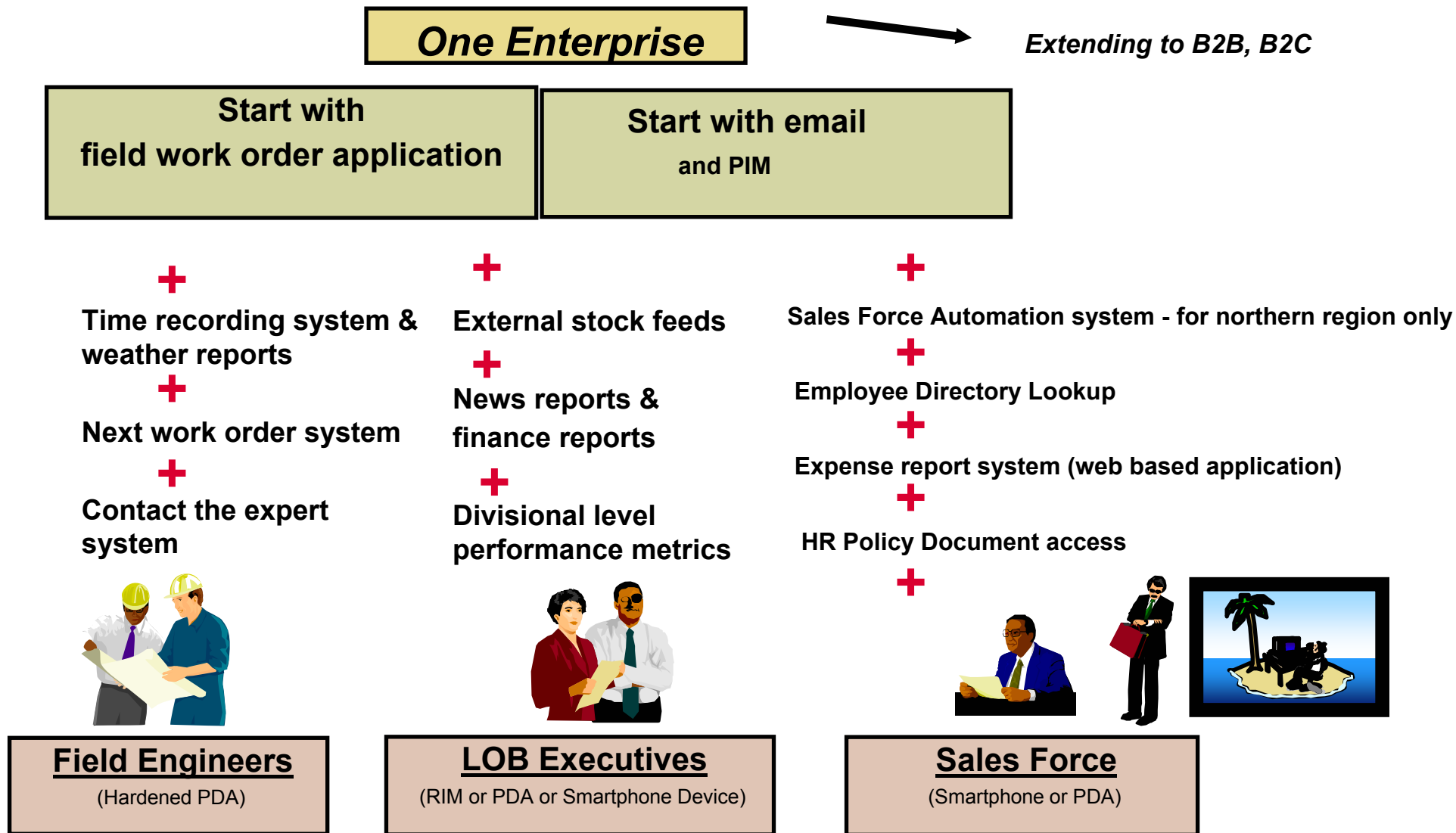
N devices



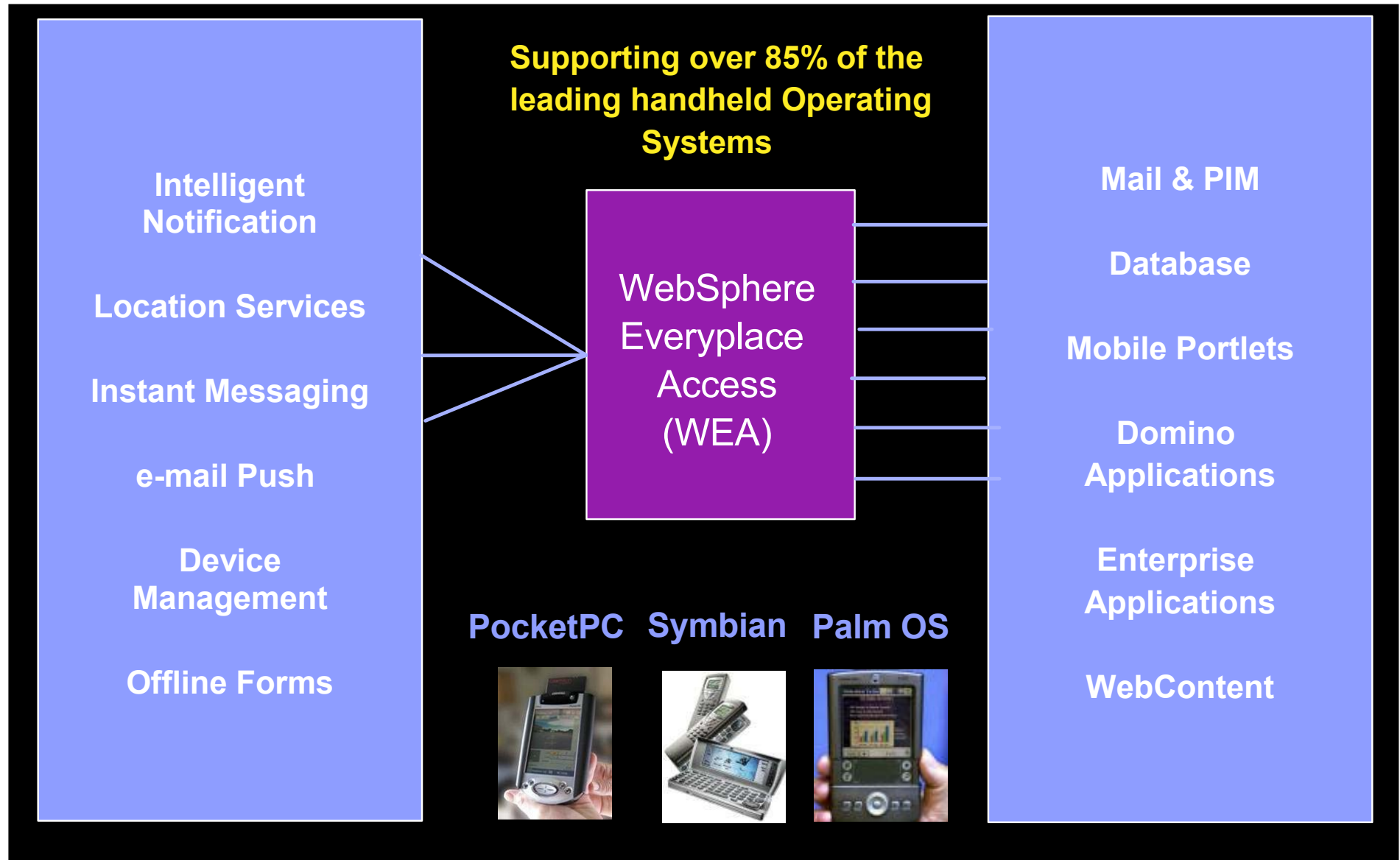
A Mobile Application Platform



Modular Structure Allows Enterprises to Start Simple and Grow



WebSphere Everyplace Access v4.3



Start Simple and Grow

A copier manufacturer and distributor

Employees: 300 technicians, 200 sales reps and 50 executives

Challenge: To improve efficiency of field service calls, and increase customer satisfaction

Solution: Field Force Automation -- provide field technicians with direct access to technical and billing data remotely

Implementation:
2001 - WebSphere Transcoding Publisher
2002 - IBM Mobile Connect
2003 - WebSphere Portal, WebSphere Everyplace Access

Benefits:

- Improved customer satisfaction
- Shifted balance of help desk calls from field reps to customers
- Increased field force productivity from 7 to 8 service calls per day



Start Simple and Grow

An actuary services company



Employees: 2000 mobile users needed high value, highly secure data

Scenario: Customer was making an application server decision and was curious about pervasive and wireless technology

Outcome: IBM won Application Server business vs. competition who could offer only pieces of the solution

Implementation: 2002 - WebSphere Application Server
2003 - WebSphere Portal, WebSphere Everyplace
Connection Manager, WebSphere Everyplace Access

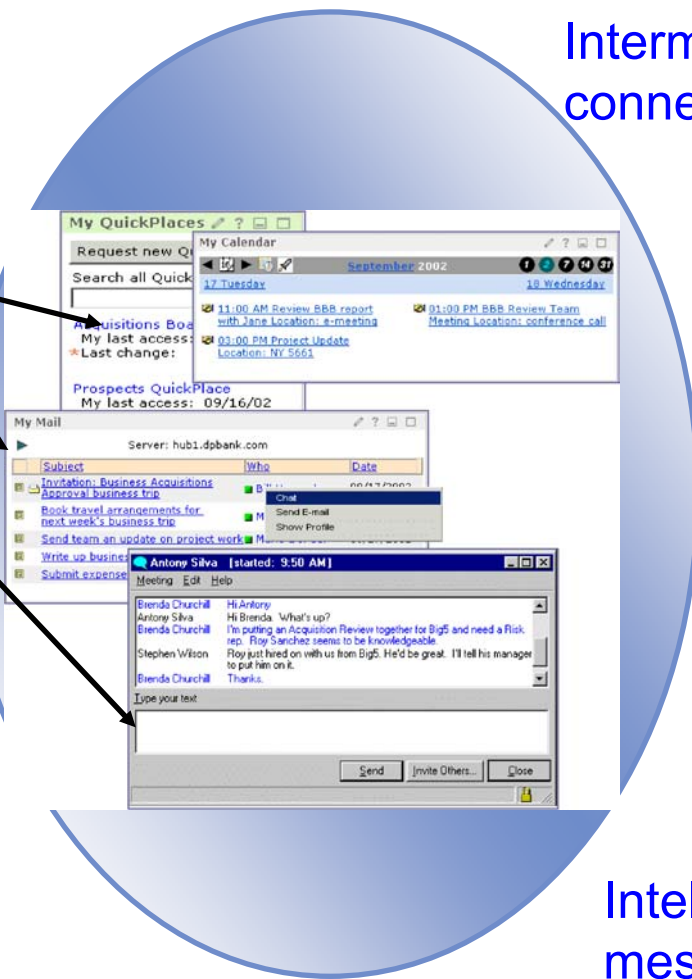
Benefits:

- Improve professionals' productivity
- Reduce administrative support costs
- IT department leveraged WebSphere skills



Extending the Portal Story to Mobile Devices

Connected and off-line access to Portal content

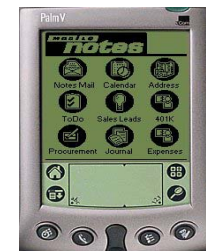
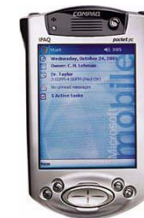


Intermittent connectivity

Mobilize data & processes

User context & intent

Intelligent messaging



Offerings and Solutions

- *The End-to-End Solution*

- *Offerings for:*
 - *Device-side*
 - *Server-side*
 - ***Service Providers***
 - *Components*
 - *Voice Systems*
 - *Development Tools*



Service Provider Offering

At a glance...

- Subscriber Management
- Scalability
- Intelligent Notification
- Instant Messaging
- Location Based Services Support
- Policy Director
- Domino Integration
- Integrated Directory
- MQe
- Device Mgmt
- Edge Server (load balancing & caching)
- Authentication
- Transcoding
- WAS-T

•Description:

- Service Providers can build/ launch data services for multiple devices & networks, wireline and wireless.
- Built on a secure, reliable, flexible & scalable infrastructure, reducing development risk and improves time-to-market.

•Key Differentiators:

- All functionality for value added services
- Scalability to millions of users/devices
- Predictable, subscriber-based, one-time-charge pricing
- Ability to integrate with existing accounting/billing systems & 3rd party gateways
- Supports all popular device/network options and End-to-End security
- Common management & delivery of applications, content & services

•Target Market:

- Wireless carriers, ISPs, ASPs
- Subscriber-based business model builders

•Components:

- Everyplace Intelligent Notification
- Everyplace Location Based Services
- Everyplace Authentication
- Everyplace Transcoding Publisher
- WebSphere Edge Server
- MQSeries Everyplace
- Lotus Sametime Everyplace
- Tivoli TPSM and Policy Director
- Secureway LDAP Directory
- DB2
- WebSphere Application Server
- WebSphere Everyplace Connection Manager
- WebSphere Application Server for Telecom
- Everyplace Synchronization (optional)
- WebSphere Voice Server (optional)



IBM-Openwave Alliance

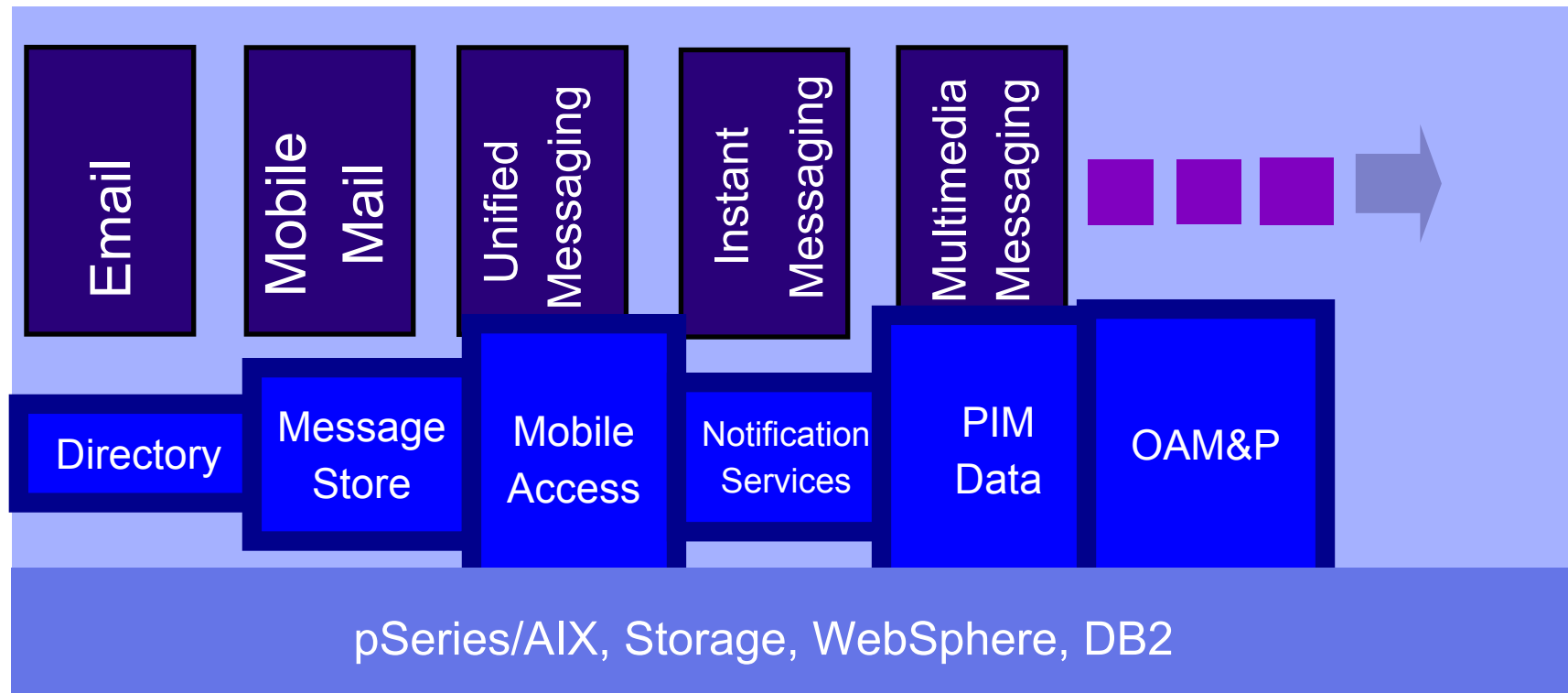


- A ten-year worldwide strategic alliance to deliver open, comprehensive, turnkey solutions to the wireless telecom industry
 - Combines IBM's leadership in e-business infrastructure with Openwave's strength in messaging and mobile software
 - Initial solution: Mobile Portal
 - New solutions every 3-6 months
- Already collaborating on an open, joint reference architecture
 - Leading components of IBM's Service Provider Delivery Environment (SPDE)
 - Installed in demo centers worldwide
- Service provider benefits:
 - Grow revenue through rapid introduction of innovative data services
 - Reduce cost of managing an increasingly complex operational environment



Why Openwave?

Messaging on a Proven, Carrier-Scale, Open Platform



- **Lower cost with pSeries Servers and Shark Storage**
- **Rapid deployment by simply adding new applications and services**
- **Improved end user experience with integrated applications**

Offerings and Solutions

The End-to-End Solution

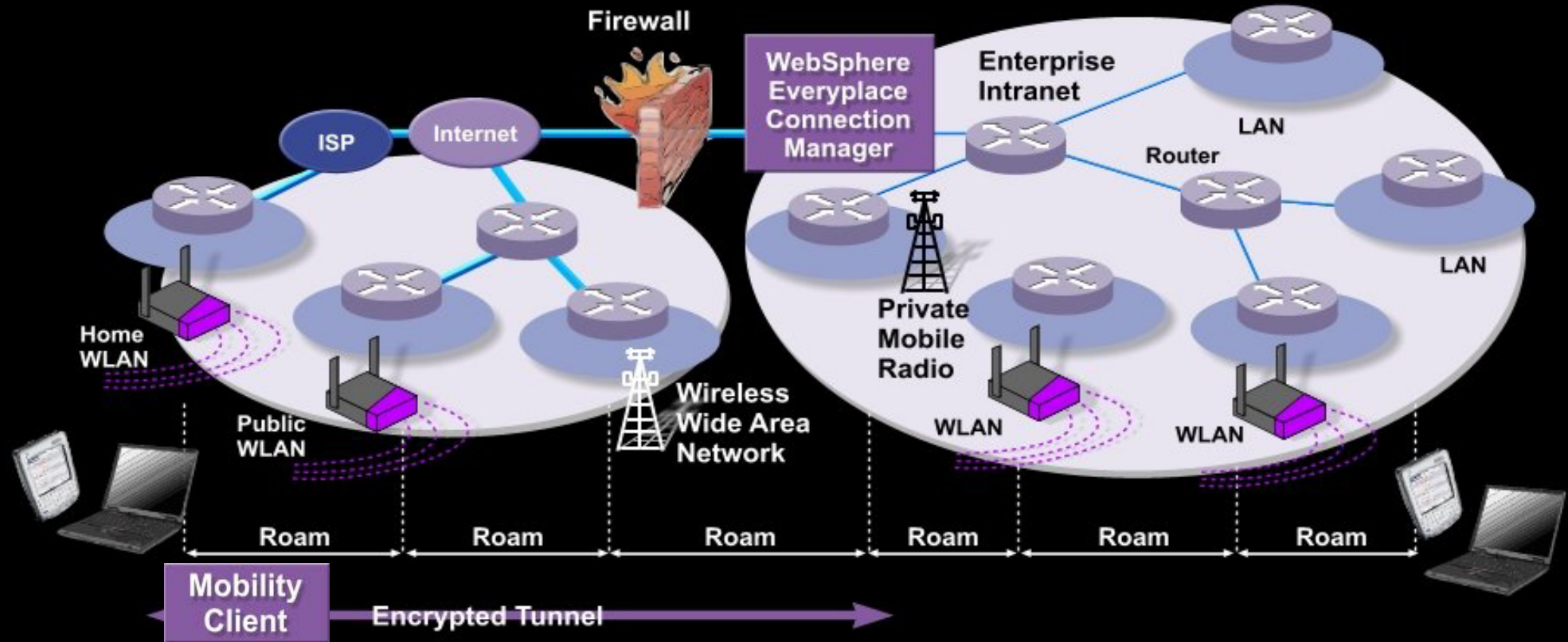
Offerings for:

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WebSphere Everyplace Connection Manager

Roaming and encryption across both IP and non-IP networks



Cellular Networks:

CDMA
 AMPS and N-AMPS
 GSM
 iDEN
 PCS 1900
 PDC (Japan)
 PHS (Japan)
 TDMA

Packet Satellite Network:

Norcom

SMS-C Connections:

SMPP
 SMTP
 SNPP
 UCP

LAN Connections:

Wireless LAN – 802.11
 Ethernet
 Token Ring

Internet Connections:

Cable Modem
 DSL
 ISDN
 ISP

Dial Connections:

DIAL/TCP
 ISDN
 PPP
 PSTN(POTS)

Public packet – Radio Networks:

GPRS (GSM Worldwide)
 CDPD and CS-CDPD
 DataTAC 4000 (US)
 DataTAC 5000 (Europe)
 Modacom (Germany)
 DataTAC 6000 (Asia)
 DataTAC/IP
 Mobitex (Worldwide)
 Mobitex/IP (US)
 PDC-Packet (Japan)



WebSphere Transcoding Publisher v4.0

Reaches more devices, transcodes across more formats and has improved flexibility and administration capability

	WTP 4.0
Operating Systems	<ul style="list-style-type: none">-AIX 4.3.3 and 5.1-Windows NT 4.0-Windows 2000-Solaris 7-Linux (Red Hat 7.1, SuSE 6.4, Turbo Linux 6.5, Caldera eServer 2.3)-iSeries 5.0
Tools	<ul style="list-style-type: none">-Annotation Editor-XSL Stylesheet Editor-Profile Builder-Request Viewer-Transform Tool
Deployment Options	<ul style="list-style-type: none">-Forward Proxy-Reverse Proxy-WAS servlet plug-in-Edge Server caching proxy plug-in-JavaBean transcoders
Transcoders	<ul style="list-style-type: none">-WML 1.x-iMode (compact HTML)-HDML-image-VoiceXML 1.0-ClipperML (Palm.net)-XML support thru stylesheets



Offerings and Solutions

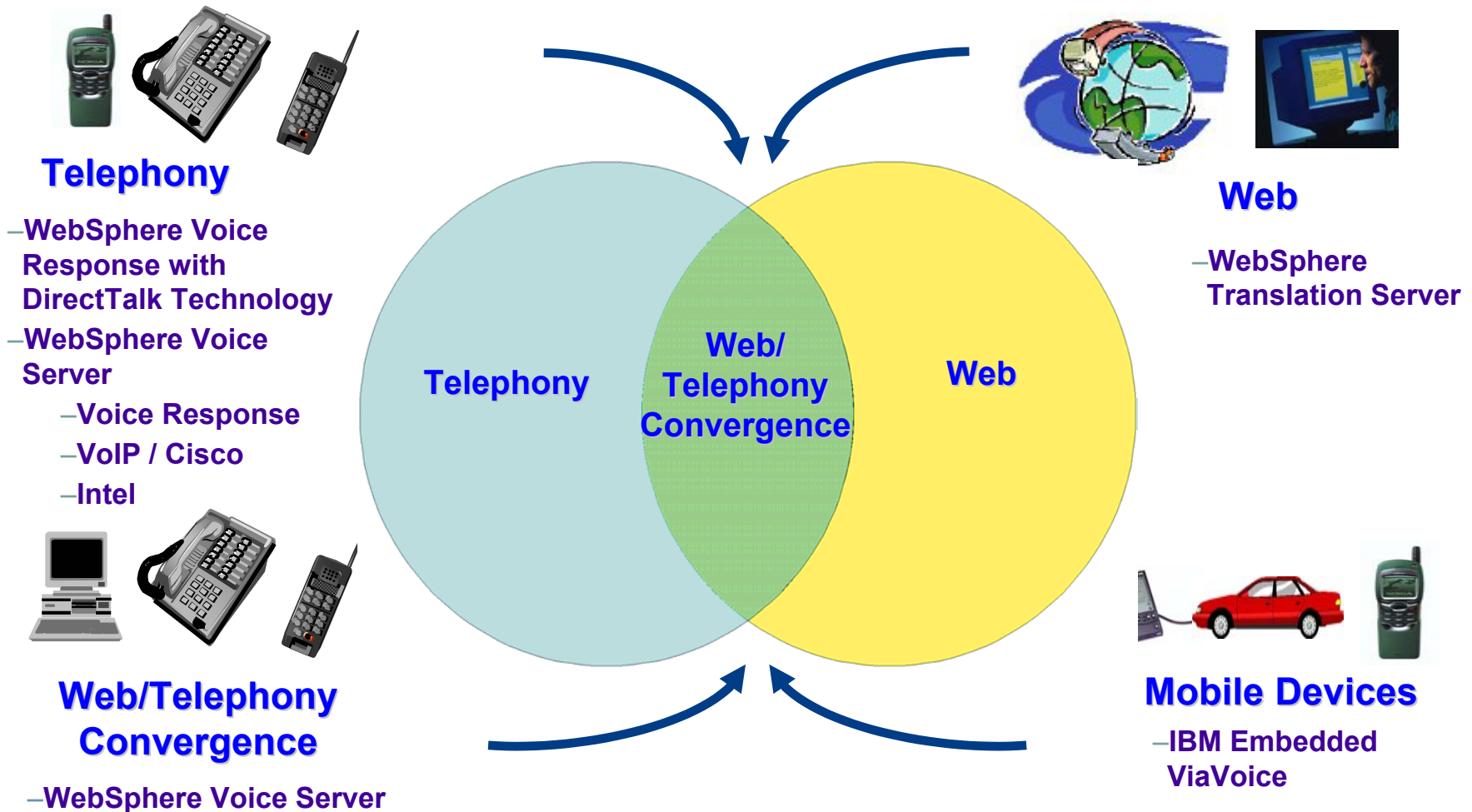
- *The End-to-End Solution*

- *Offerings for:*
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Voice Systems Solutions

Giving WebSphere multi-channel access



Voice Systems Solutions

IBM Strategy for Voice

- **Creating voice solutions to solve business problems**
 - Embedded offerings for automotive, mobile and PDA manufacturers
 - Offerings created to address contact centers, service providers, and voice portals
 - Solutions developed by IBM and its network of business partners

- **Support of open standards; Leading industry to standards-based environment**
 - IBM is the founding member of the VoiceXML Forum
 - IBM is leading X+V activity in W3C

- **Infrastructure to provide a solid foundation to build integrated, innovative voice solutions**
 - The only end-to-end voice integrated solutions through the WebSphere platform



Voice Systems Offerings

Contact Centers

Self-service access to enterprise data through an IVR system. Callers can elect to transact through the IVR system or transfer to a live agent. A CTI gateway provides intelligent call routing & voice/data integration regardless of point of origin.

IBM Solution
WebSphere Voice Response & WebSphere Voice Server
Genesys CTI solutions
VoiceXML & Java

Voice Web Access

Voice access to web content from any device, anytime, anywhere, using speech processing software on a VoIP gateway or telephony platform.

IBM Solution
WebSphere Voice Server
WebSphere Everyplace Access
WebSphere Portal Server
VoiceXML & Java

Enhanced Telecom Services

Value-added network services such as 411, voice activated dialing or unified messaging to businesses or consumers using an IVR system and optional software components

IBM Solution
WebSphere Voice Response/Resource Mgr.
Message Center
WebSphere Application Server for Telecom
WebSphere Everyplace Suite SPE
VoiceXML & Java

Language Translation

Breaks the language barrier for enterprise by providing quick, inexpensive language translation of e-mail, web pages or chat content .

IBM Solution
WebSphere Translation Server

Key decision influencers:

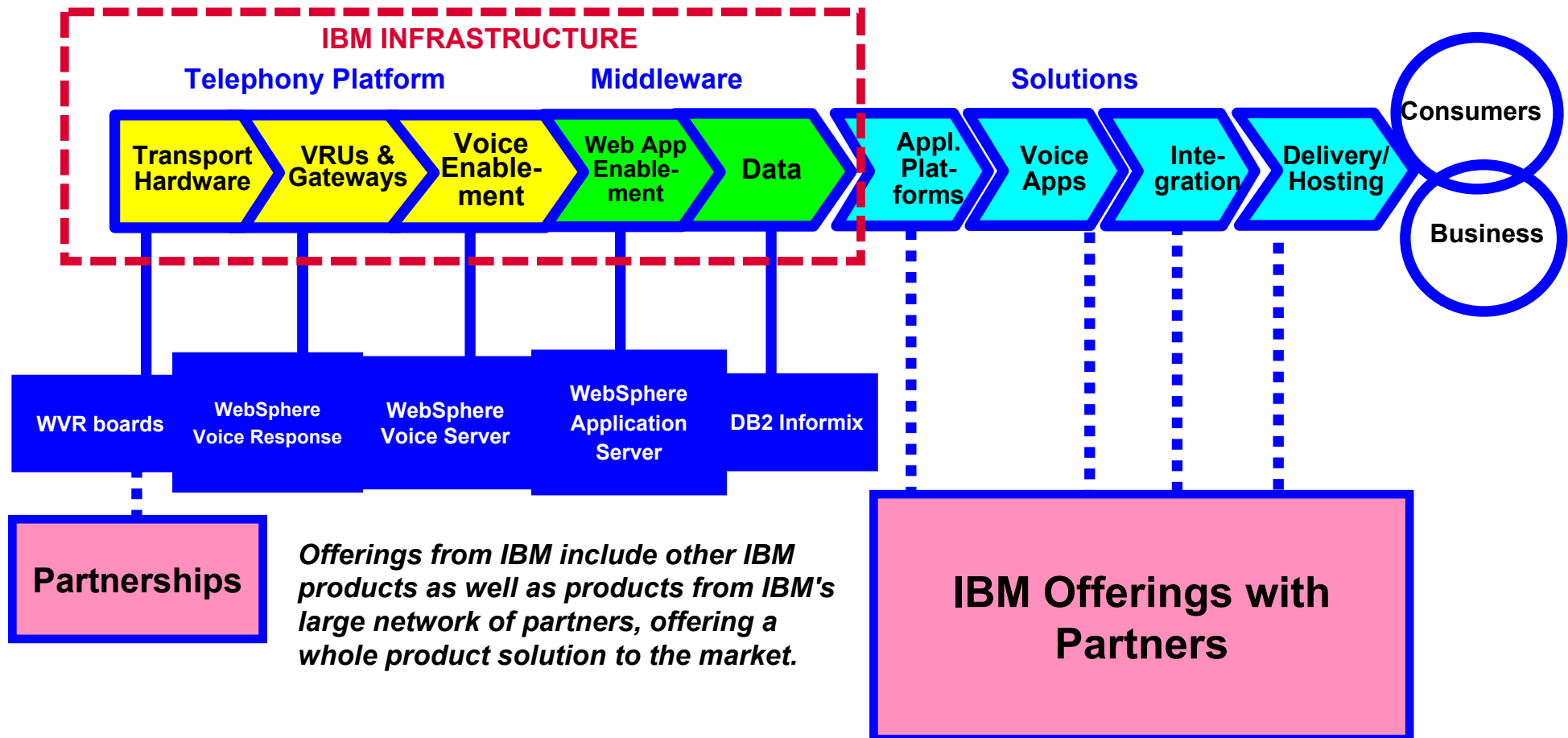
- ★ Line of Business Executive
- ★ CIO
- ★ Emerging Technology Executive
- ★ Contact Center Manager



Voice Systems Value Chain

A complete solution for this market is comprised of many components

- IBM is the only vendor providing the individual components and a solid foundation on which to build voice solutions.
- These solutions improve the reach and user experience for consumers and businesses.



Introduction to Pervasive Computing

Offerings and Solutions

The End-to-End Solution

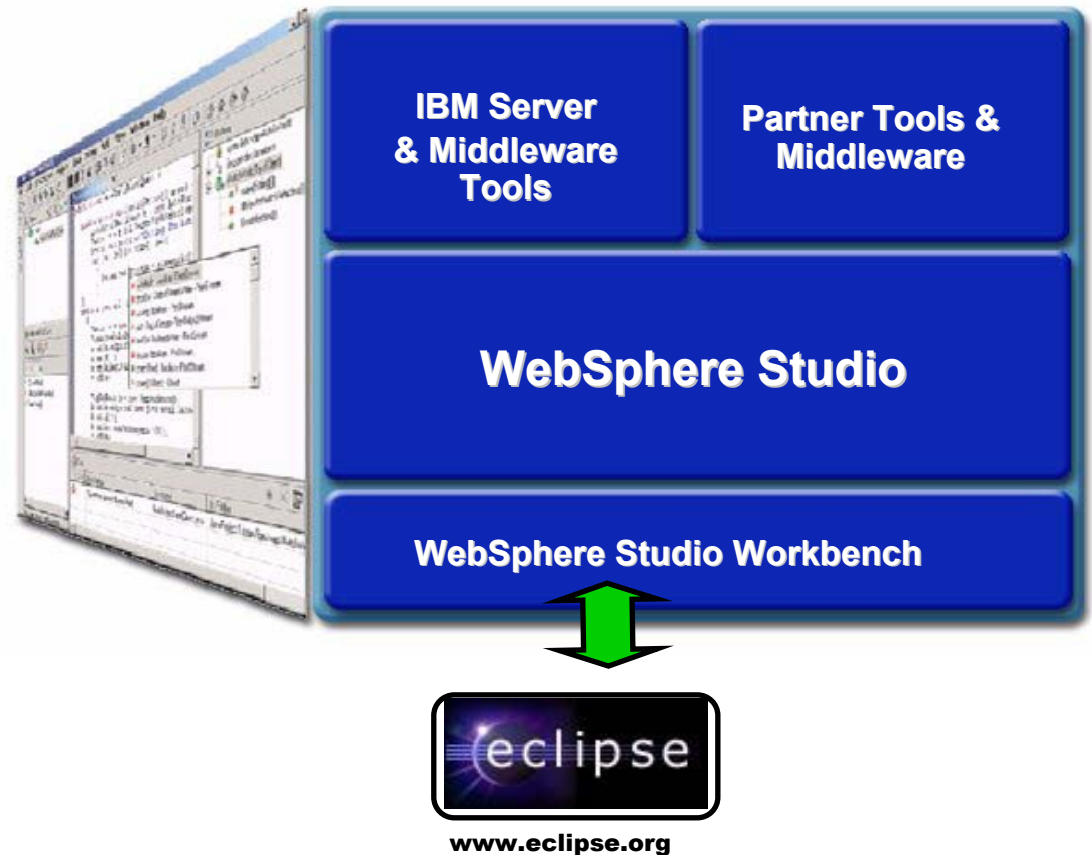
Offerings for:

- *Server-side*
- *Device-side*
- *Service Providers*
- *Voice Systems*
- ***Development Tools***



WebSphere Studio Family

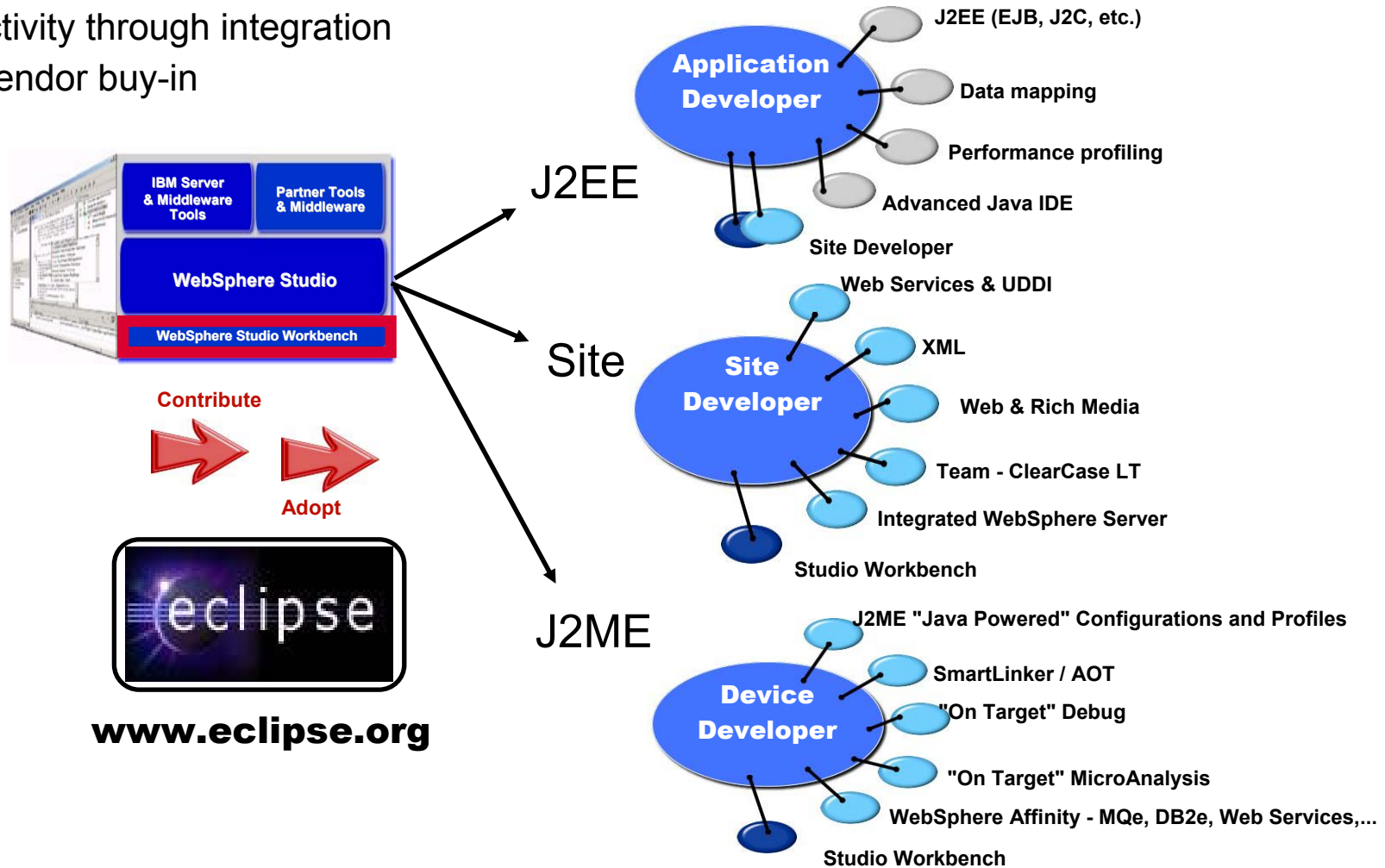
- Flexibility and extensibility
- Configuration for developer roles and application models
- Client and server side tools
 - ▶ Visual editor
 - ▶ Templates, samples and examples
 - ▶ Wizards
 - ▶ Client models: thin client, disconnected, sync'd data, etc.
- Value
 - ▶ Flexibility
 - ▶ Support for multi-modal / multi-channel development
 - ▶ Responsive to technology evolution challenges



WebSphere Studio

Application Development Product Positioning

- Open Standards / Open Community-based
 - Productivity through integration
 - Multi-vendor buy-in



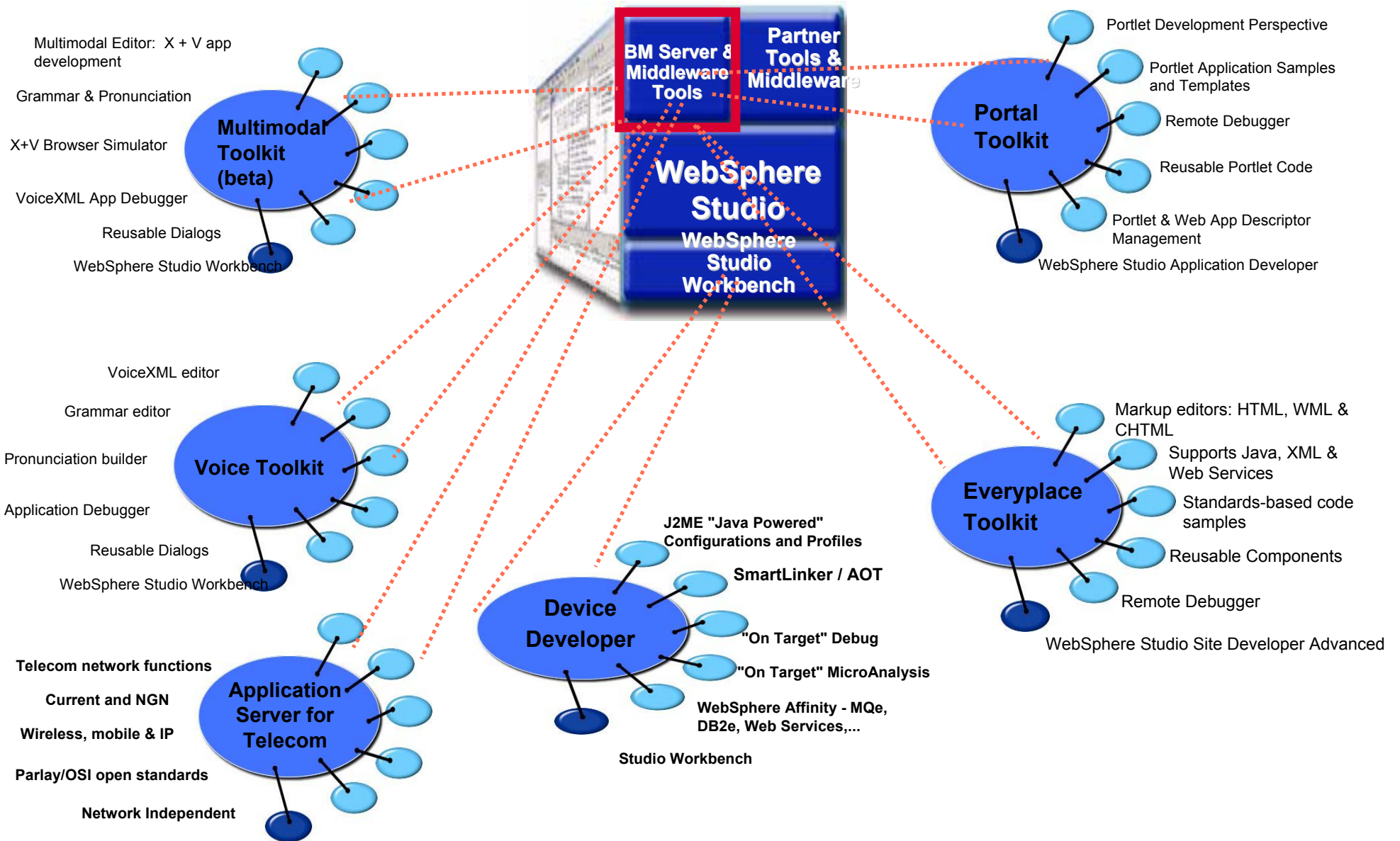
Pervasive Tools - Part of the WebSphere Family

Based on WebSphere Studio

- **WebSphere Studio Device Developer:** create, test and deploy applications to devices
- **Portal Toolkit:** create, test, debug and deploy Web applications as portlets
- **Everyplace Toolkit:** create wireless e-business applications and portlets with HTML, Wireless Markup Language (WML), and Compact HTML (CHTML)
- **Voice Toolkit:** write and debug voice applications by pinpointing where the VoiceXML code needs to be modified to match the required application flow
- **Multimodal Toolkit (beta):** create voice and data interactions within the same application to use with pervasive devices
- **WebSphere Application Server for Telecom Toolkit:** create applications that use telecom network functions (current and NGN networks – wireless, mobile and IP) - Application uses Parlay/OSA open standard to remain network independent

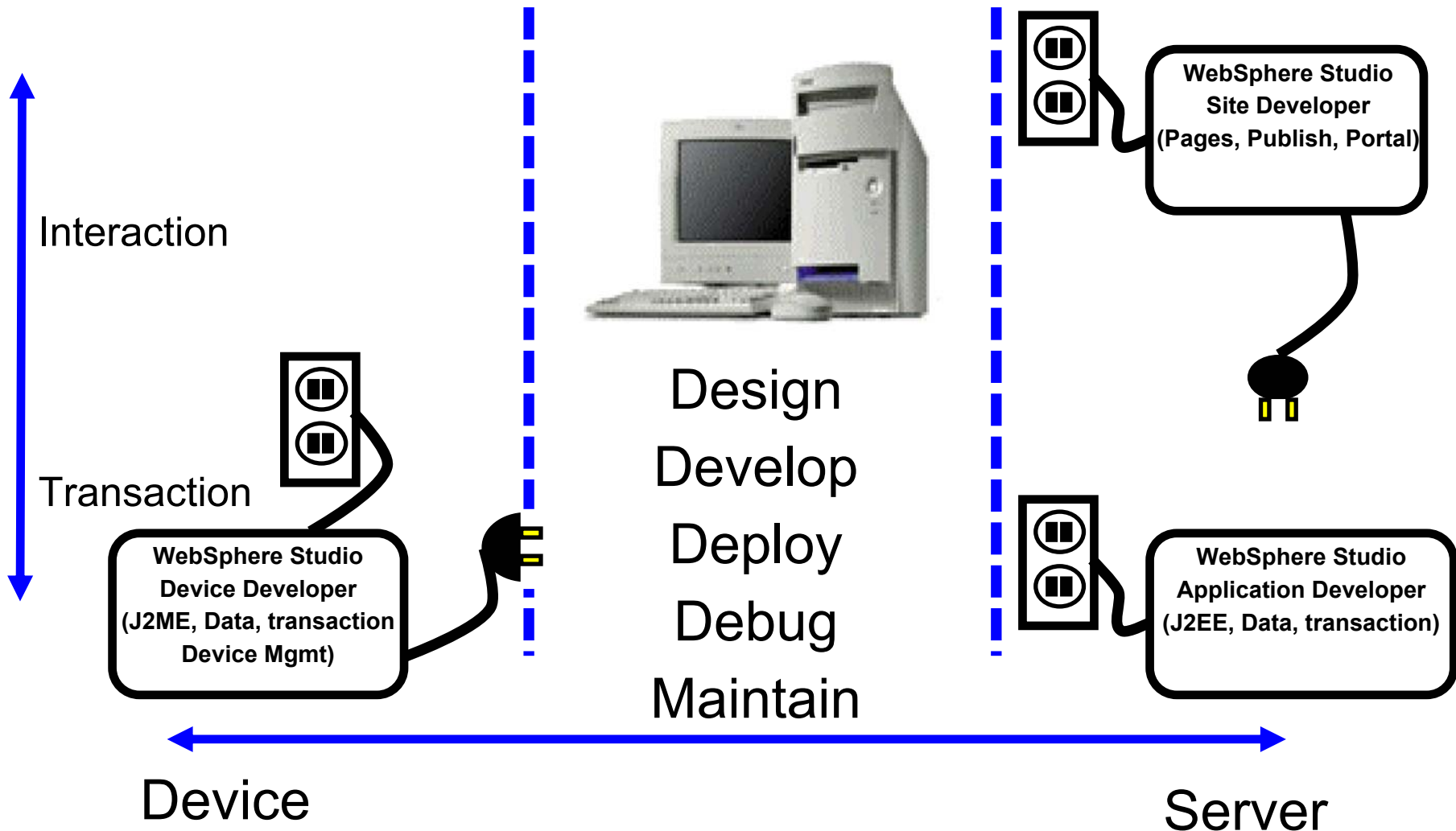


Pervasive Tools - Part of the WebSphere Family



The Right Tools - Productivity Through Integration

End-to-End Application Development / Deployment



Teaming with Pervasive Computing

- *Types of Relationships*
- *Services and Support*
- *Resources*
- *Next Steps*

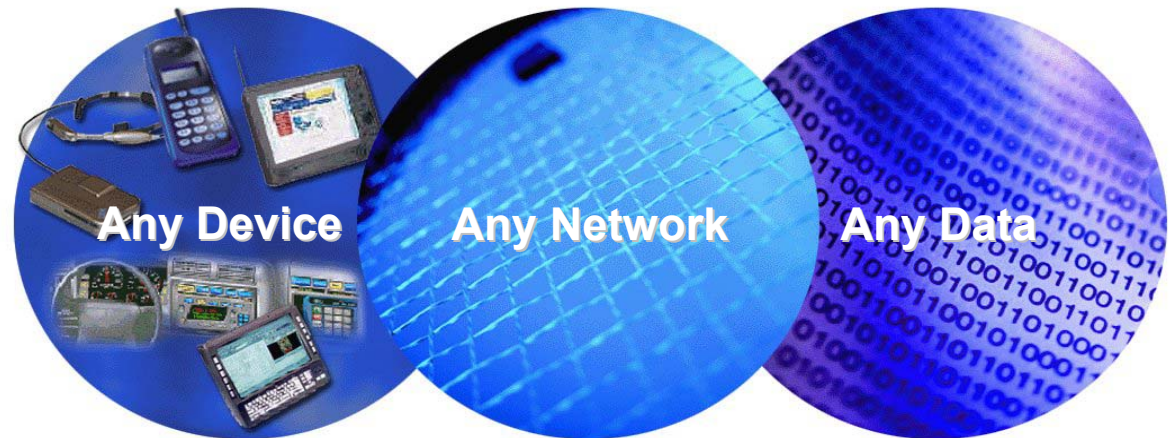


We're actively looking for...

ISVs, Integrators & Consultants, Resellers, Solution Providers, OEMs, Application Service Providers, Value Added Distributors

We are looking to develop relationships with companies who are:

- Experienced in wireless, mobile or voice technologies, and in helping customers implement solutions
- Developing solutions to extend e-business applications to wireless/pervasive devices
- Voice-enabling applications or web sites
- Developing mobile device hardware or software



Alliances with Strong Partners



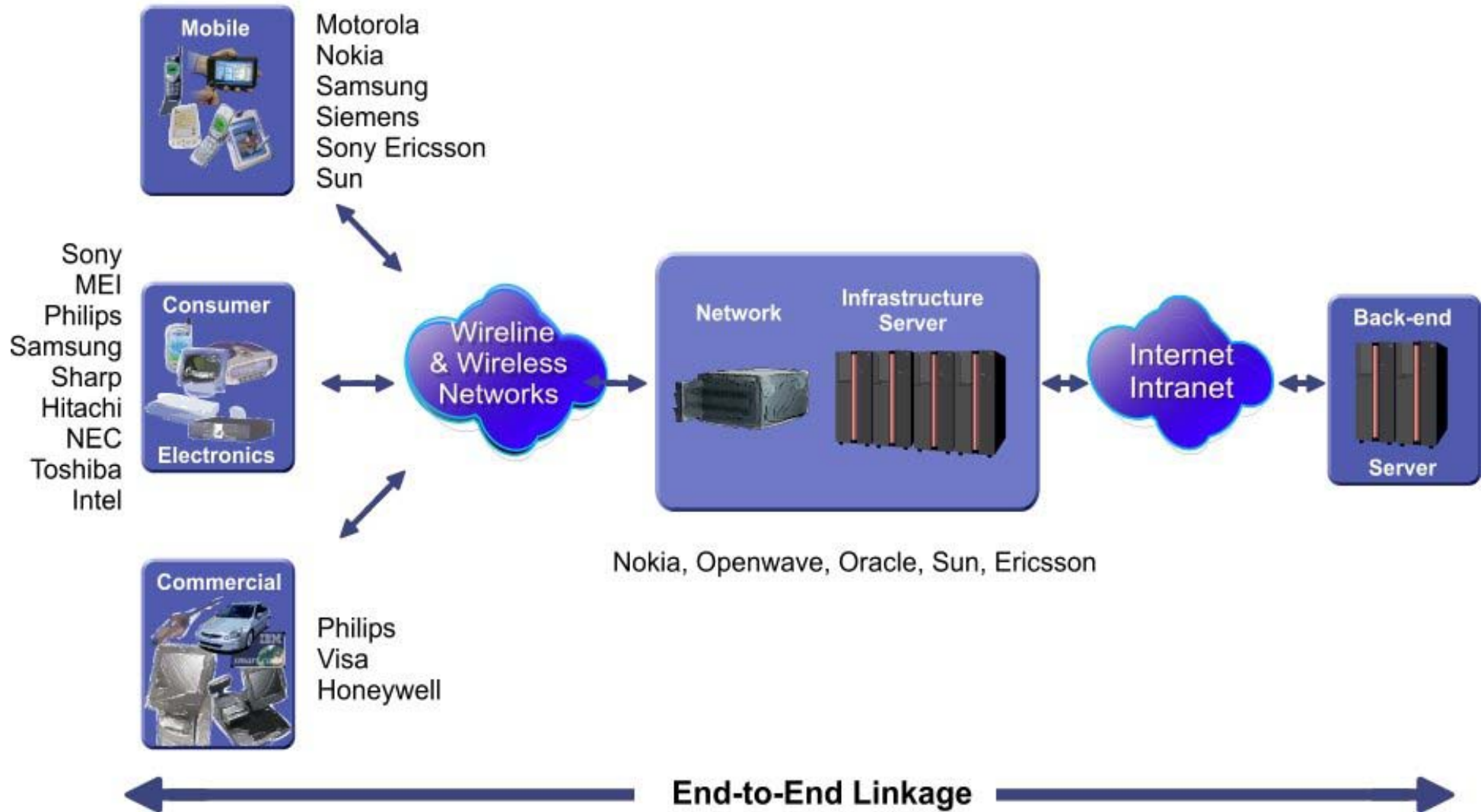
- Create & support an industry Ecosystem based on open standards
- Leverage Solutions Initiative to build partner momentum
- Recruit-Enable Business Partners across Value Chain



Partnerships for an Industry Ecosystem

Open Device Platform

Open Service Delivery Framework



New Offers - WEA & WECM Starter Editions

- **WebSphere Everyplace Access Starter Edition**
- **WebSphere Everyplace Connection Manager Starter Edition**
- **To help drive POC's, pilots, and LOB implementations with limited users**
- **Full product code and functionality**

	WEA	WECM
Version	4.3	5.0
Users	up to 50	up to 50
Electronic GA	5/29 - WIN2K & AIX 7/25 - Solaris	5/8 - AIX & Solaris
Target Level A Price	\$31,000	\$9,900
Upgrades to unlimited use	Add'l 25% off PPADV price	Add'l 25% off PPADV price



Mobile Office "Jump Start" offer

A turnkey 25-user solution for less than \$100,000 that includes:

- Configured e-server
- WebSphere Everyplace Access 4.3
- WebSphere Everyplace Connection Manager
- Palm Tungsten devices
- Laptop Air Card and 90 days of service
- Services: configuration, testing, support



"For just \$100K they can put the different pieces together and you can have something up and running. It's very compelling,"
- Yankee Group



Return on Investment

Enterprise example: Mobile access for remote employees

- 2000 users @ \$150K burden rate per employee = **\$300M cost**
- Increased productivity saves 1 hours/week = **1.25% productivity gain**
- Apply productivity gain to employee cost = **\$3.75M annual savings**
- Business Partner software and IBM middleware = **\$400,000**
- Hardware and implementation services = **\$1.2M**
- Cost of total mobile solution = **\$1.6M**
- Savings in the first year = **\$3.75M for \$1.6M in expense**



Programs & Services

PartnerWorld®



The umbrella marketing & technical program for IBM Business Partners that provides:

▪ Member Services:

- General Business Discounts
- Newsletter/Information via Web sites
- IBM Software Mall for Evaluation Software
- IBM Hardware Mall for IBM hardware discounts
- Global Solutions Directory listing

▪ Education:

- Fee and Free Technical/Sales Education
- Web lectures, classroom courses, hands-on
- Selected Tuition Discounts

▪ Certification Program:

- Product Certification for IBM Voice Products

▪ Technical Support and Services:

- IBM Technical Centers
- Developer Support Program
- Solution Partnership Centers
- Product Introduction Center

▪ Sales and Marketing:

- Sales Executive Relationship /Support
- Business Development Resources
- Pervasive Web Site Listing for IBM Business Partners
- Application Briefs for IBM Business Partner Installations
- Pervasive Market Development Funds
- IBM Business Partner Software Discounts
- PartnerInfo Data on the Web
- PartnerLine for Phone Access to PartnerWorld
- TechLine Pre-Sale Support
- Sales Leads

▪ Events and Conferences:

- PartnerWorld Conference
- Marketing Events Participation
- Business Show Invitations
- developerWorks Live! Conference

Note: Some programs have additional eligibility requirements



Build customer confidence and accelerate sales



Co-Marketing with WebSphere

Powered by WebSphere

- Brand awareness program
- Dedicated to Business Partner applications and solutions
- Leverage IBM brand recognition
- Campaign investments to promote solutions

“IBM has put the clout of a proven market leader behind our product name.”

—Ken Molay, director of product marketing for Brokat Software

<http://www.ibm.com/websphere/businesspartners>



5 steps to become Powered by WebSphere

- **Join PartnerWorld for Developers**

Free membership with access to additional technical and marketing support

www.develope.ibm.com/member/register/registration.html

- **Put your offering into the Global Solutions Directory**

Get world-wide exposure to 1000's of customers and business partners

www.software.ibm.com/solutions/isv/igssg.nsf/LanguageSelector

- **Nominate your Solution for Powered by WebSphere**

(within Global Solutions Directory)

Show your customers that you have enabled your offering to work with the market-leading IBM WebSphere software platform

- **Agree to provide 1 customer reference within 90 days**

Once nominated, we will send you a form for your reference

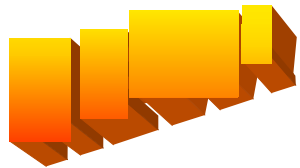
- **Electronically sign the license agreement**

Begin using the Powered by WebSphere logo

Qualify for additional marketing awareness programs

www.developer.ibm.com/websphere/pbw.html





Powered by WebSphere Benefits Limited offers

IBM WebSphere Partner Pack

- For a limited time, qualified partners with WAS-Express enabled solutions will have access to 5 free WAS Express licenses for their customer engagements.

IBM Express Incident Pack

- Free technical support to Powered by WebSphere partners .
- Includes 6 support incidents for software development and pre-sales support:
 - Helps ensure faster implementations for your customers

Echo Mail Campaigns

- Create customer co-marketing campaigns and access online reporting
- Exclusive offer for Powered by WebSphere partners

Teleweb Campaigns

- Demand generation with leads qualified for your solution
- Integrators linked up with ISV's for total solution marketing



Programs & Services

PartnerWorld®



for Developers

Remote Test Facility

- **No charge, internet accessible Facility**
- **Provides uncompromised access to fully operational systems with no overhead, maintenance, or costs**
 - **WebSphere Everyplace Access (WEA)**
 - **WebSphere Everyplace Connection Manager (Gateway)**
 - **WebSphere Portal**
 - **WebSphere Studio tools**
 - **WebSphere Voice Response**
 - **WebSphere Voice Server**
- **Benefits**
 - **Stable environment for porting of function/system testing**
 - **Any location worldwide**
 - **Complete, up-to-date Pervasive products**

*For complete instructions on using the Remote Test Facility, go to
<http://www.developer.ibm.com/spc/pvc/>*



Programs & Services

Enablement and Porting

- **17 Solution Partnership Centers (SPCs) worldwide**
 - **Easy access to tools, servers, middleware and technologies**
 - **North America:** Waltham, Chicago, San Mateo, Toronto
 - **Latin America:** Sao Paulo
 - **EMEA:** Hursley, Paris, Stuttgart, Budapest, Warsaw, Helsinki, Israel
 - **Asia Pacific:** Sydney, Bangalore, Shanghai, Tokyo, Seoul

- **Center within a center**
 - **Pervasive Computing Centers**
 - **Startup Studio for Developers**
 - **ASP Prime Solution Centers**

- **Increased support for Linux**
 - **New Developer Center for Linux**

- **New remote Netfinity ServerProven validation**

- **Enterprise Storage Server (ESS)**



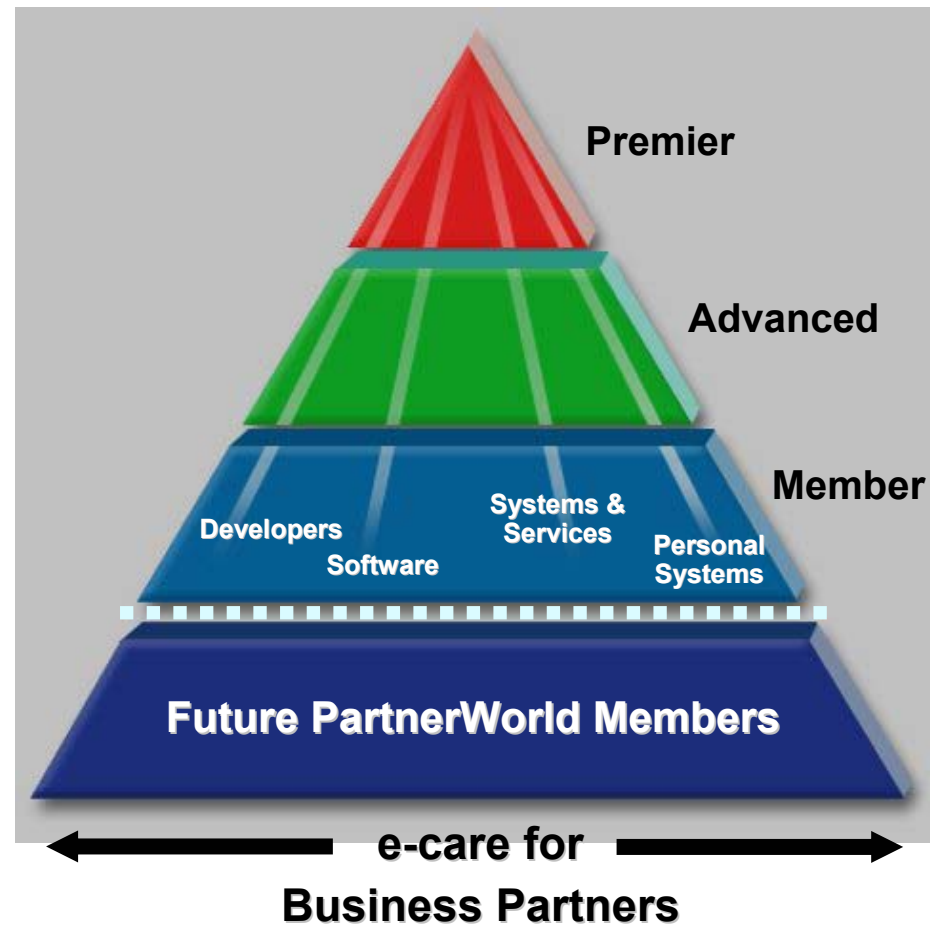
Differentiate investment and deliver benefits by level

IBM delivers...

- Education
- Financing
- Incentives
- Marketing & sales support
- Relationship management
- Member communications
- Technical support

Business Partner delivers...

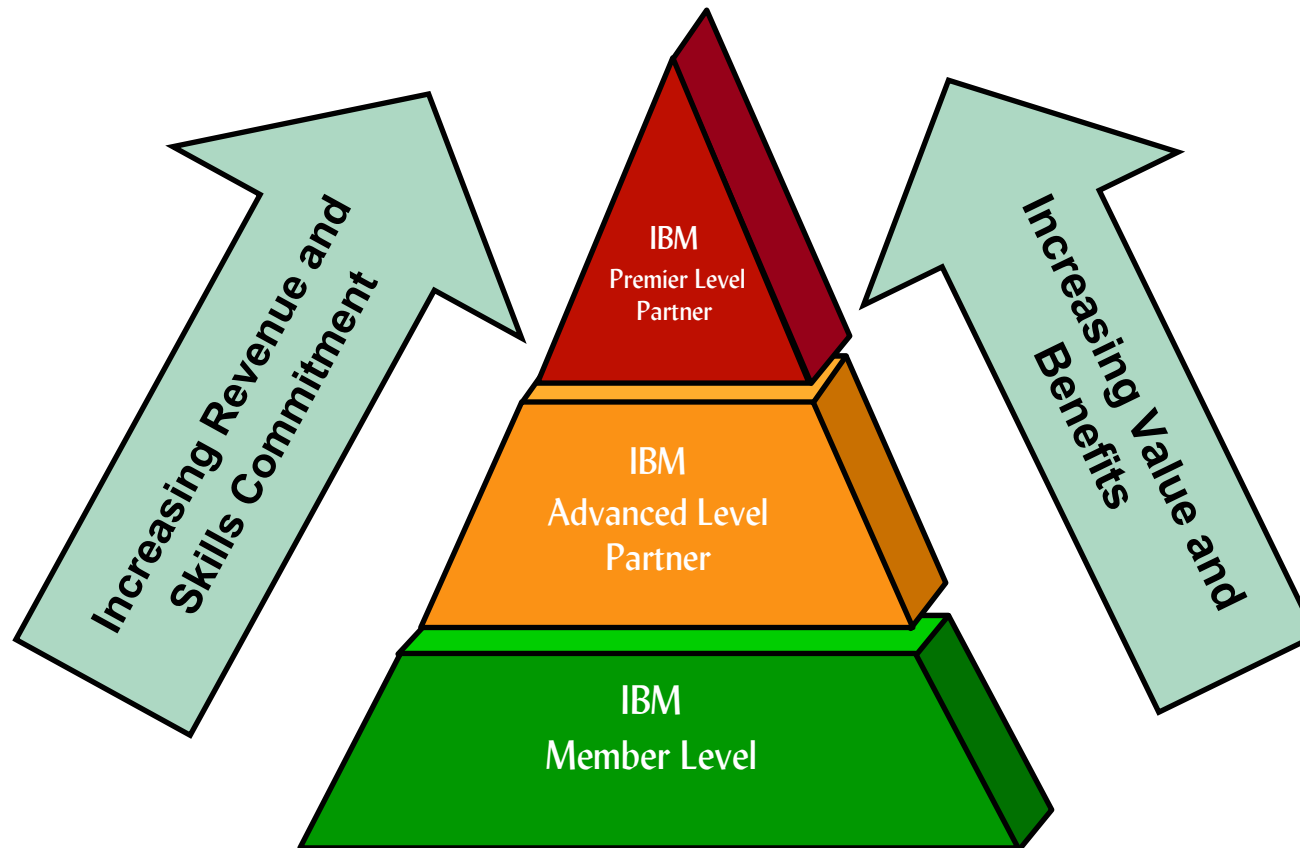
- Contribution
- Competency
- Commitment
- Customer satisfaction



IBM Business Partner Programs

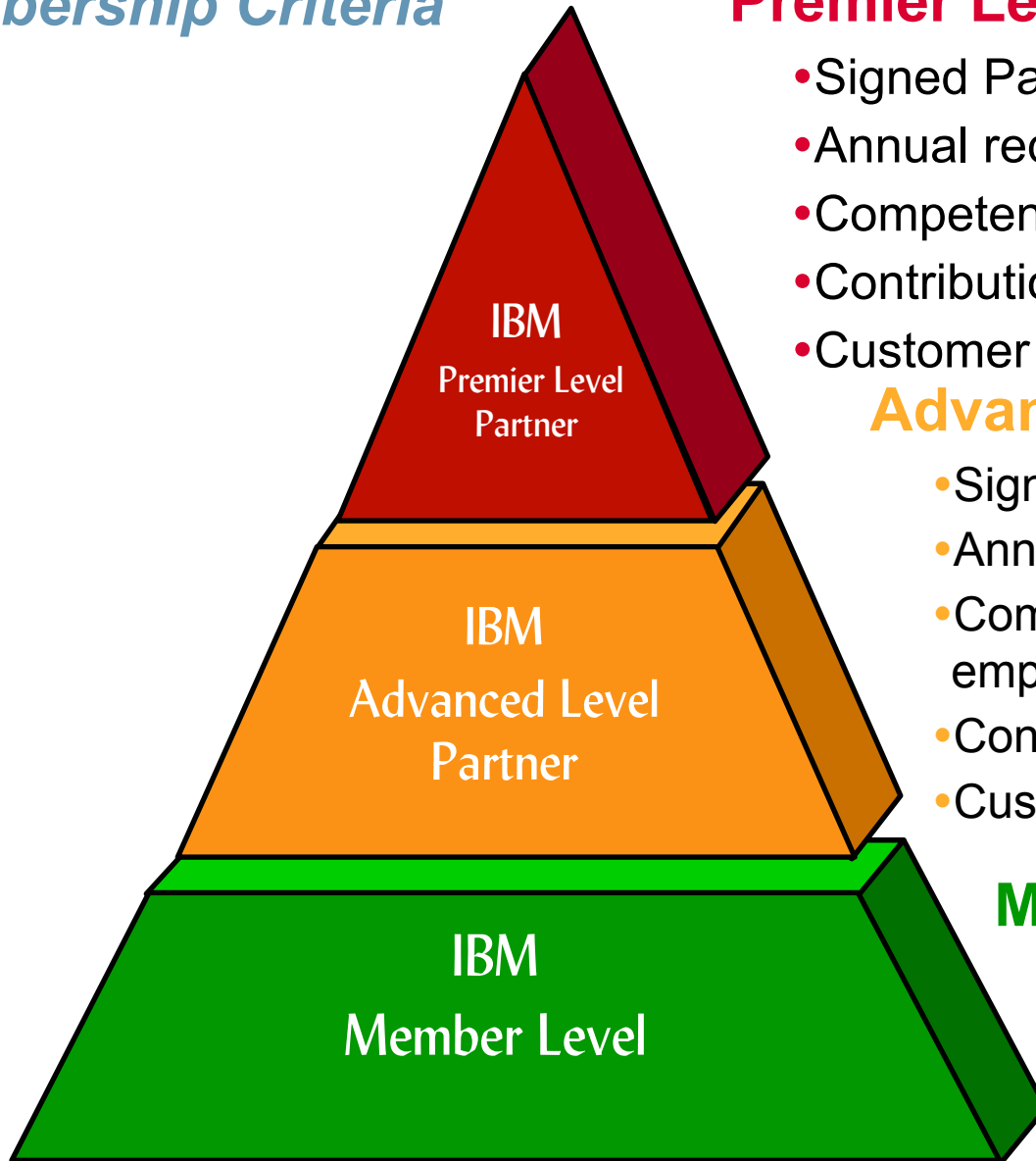
IBM Invests in Business Partners who:

- Are committed to IBM
- Deliver business results
- Maintain current skills
- Lead with IBM solutions



IBM PartnerWorld for Software

Membership Criteria



Premier Level:

- Signed PartnerWorld agreement
- Annual requalification
- Competency - Eight certified/skilled employees
- Contribution - \$150 K software revenue
- Customer Satisfaction

Advanced Level:

- Signed PartnerWorld agreement
- Annual requalification
- Competency - Three certified/skilled employees
- Contribution - \$100 K software revenue
- Customer Satisfaction

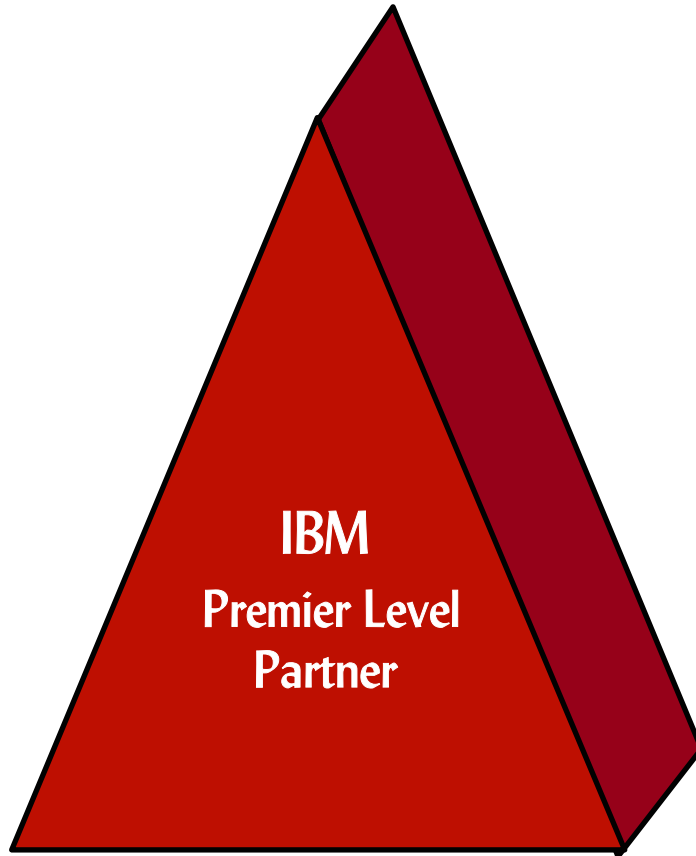
Member Level:

- Signed PartnerWorld agreement
- Annual requalification



IBM Business Partner Program

Membership Benefits



Premier Level:

- Sales executive support
- Sales Tools
- Marketing Tools
- Partner Directory
- Connecting Business Partners
- Access to Software
- Technical education and certification
- Tuition reimbursement
- Sales education
- Distance learning
- Business/executive education
- Technical support
- Sales Incentives
- Special Events
- Recognition

* Some benefits listed are available for a charge within the Value Package for Software offering (contents differ by level)



IBM Business Partner Program

Membership Benefits



Advanced Level:

- Sales executive support subset
- Sales Tools subset
- Marketing Tools subset
- Partner Directory
- Connecting Business Partners
- Access to Software
- Technical education and certification
- Tuition reimbursement
- Sales education
- Distance learning
- Business/executive education
- Technical support subset
- Sales Incentives
- Special Events
- Recognition

* Some benefits listed are available for a charge within the Value Package for Software offering (contents differ by level)



IBM Business Partner Program

Membership Benefits



Member Level:

- Sales Tools subset
- Marketing Tools subset
- Partner Directory subset
- Connecting Business Partners subset
- Access to Software
- Technical education and certification
- Tuition reimbursement
- Sales education
- Distance learning
- Business/executive education

* Some benefits listed are available for a charge within the Value Package for Software offering (contents differ by level)



Business Partner Education

Pervasive Computing Roadmap

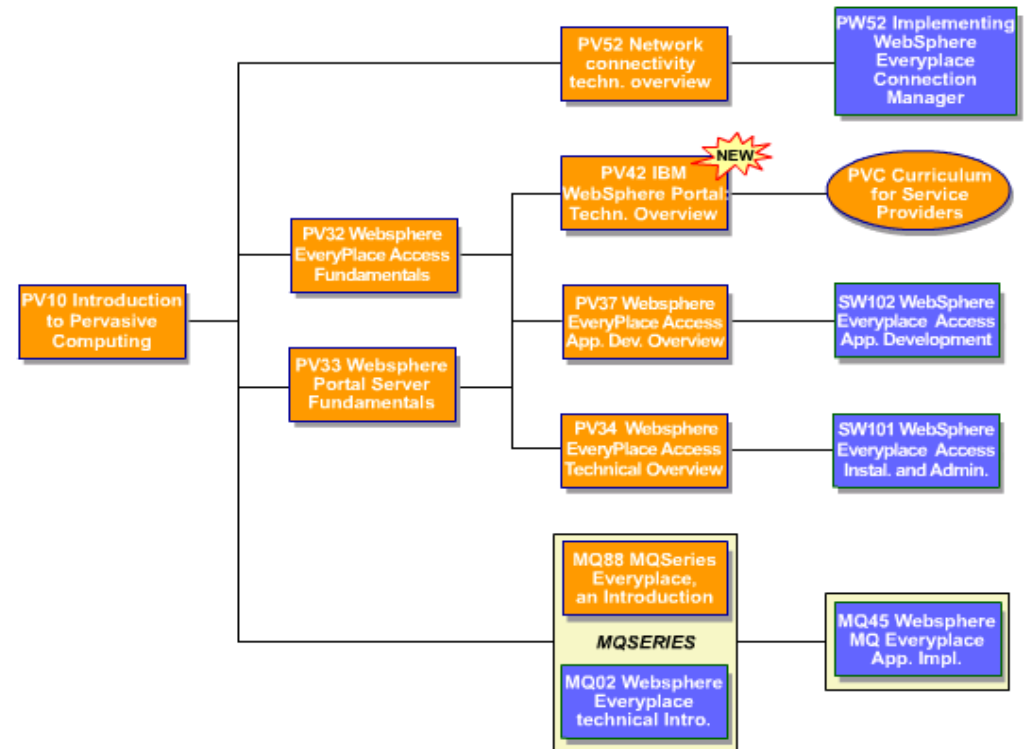
Wireless Networking Roadmap

Voice Roadmap

- Web Lecture Series of overview courses on IBM PvC offerings
- Free web-based audiovisual courseware
- Fee-based multi-day classroom courses
- Wireless/Device Workshops for architects, system integrators and developers
- Signature Selling Method (SSM) Workshops that teach proven sales techniques
- Skills Certification Program for Voice Products
- Web Lectures



Wireless e-business University Pervasive Computing for the Enterprise Roadmap



Pervasive Computing for the Enterprise Education



Enablement Workshops



- 3-day WebSphere Everyplace Access workshops
- 3-day WebSphere Everyplace Connection Manager workshops
- 3-day WebSphere Studio Device Developer workshops
- Intensive hands-on training and technical skill transfer
- Admission to qualified BPs
- No charge
- Available worldwide



Technical Enablement

- **Solution architecture support**
 - ◆ Design assistance
 - ◆ Skill transfer
- **On-line PvC community forum**
- **Access to Solution Partnership Centers for:**
 - Briefings
 - Consultation
 - Integration testing
- **Development copies of IBM products**
- **Electronic Technical Support**
- **Techline pre-sales telephone support to help you sell IBM solutions:**
 - Solution design, development of sales strategies
 - Technical recommendations
 - Product research and positioning
 - Configuration and pricing support
 - Upgrade alternatives
 - Benchmark data from published resources
- **Free and fee-based education offerings**



Start Now

- Completed: WEA 4.3, Extending Portals to Mobile Workforce
- In progress: WECEM



Mobile e-business

WINDOWS



IBM Start Now Solutions for e-business:
Wireless



WebSphere Portlet Provider Program

■ Benefits Provided by IBM at No Charge to Business Partners

- To help Business Partners build portlets for WebSphere Portal
 - ✓ Free IBM Portlet Development Class for 5 developers
 - ✓ 90 days no charge technical support from Developer Relations
 - ✓ Support from IBM Solution Partnership Centers
- Generate awareness with IBM customers
 - ✓ Portlet(s) will be posted in WebSphere Portlet Catalog
 - ✓ Partner frequently asked questions (FAQ) and sales kits posted online
 - ✓ Referenced in press releases, on Portal Business Partner page and in IBM presentations as a portlet provider

■ Business Partner Provides:

- At least 1 portlet on Portlet Catalog within 60 days of signing the attachment
- (May be packaged with other things such as services if desired)
- Hosting portlets on your website for customers to download



Pervasive Resources

IBM Pervasive Web sites

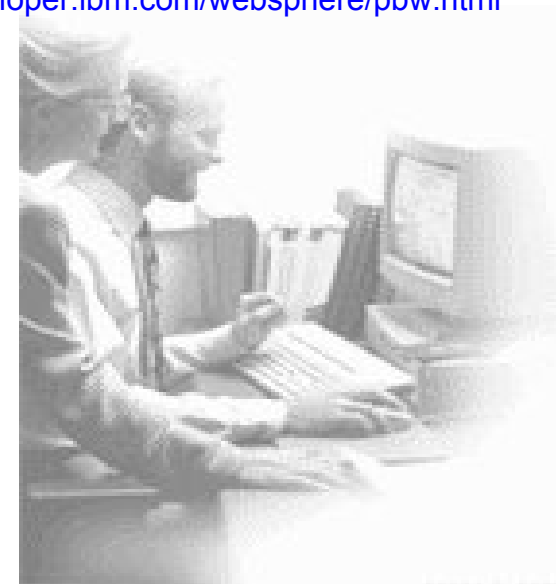
- Pervasive Computing Products, Education, & Business Partner Information
http://www-3.ibm.com/software/pervasive/business_partners/index.shtml
- Pervasive Resource Center
<http://www.developer.ibm.com/pvc>
- Pervasive public web site for Wireless Workshop registration
http://www-1.ibm.com/partnerworld/pwhome.nsf/news/news_feature_stories_wireless.html
- Pervasive Newsgroup
<news://news.software.ibm.com/ibm.software.websphere.everyplace>

Support Lines

- IBM PartnerWorld Member Services Line
[1-800-426-9990](tel:1-800-426-9990)
- IBM Voice Systems Software Defect Support
[1-888-624-6875](tel:1-888-624-6875)

Other Web sites

- IBM PartnerWorld for Software Criteria and Benefits
<http://www-100.ibm.com/partnerworld/software/pwswpub1.nsf>
- IBM PartnerWorld Resources and Enrollment
<http://www.ibm.com/partnerworld>
- IBM Tools and Education
<http://www.ibm.com/developerworks>
- IBM Technical Redbooks
<http://www.redbooks.ibm.com/>
- IBM Software License Agreement Information
<http://www-3.ibm.com/software/sla/sladb.nsf/viewbla>
- Emerging Technology Tools and Information
www.alphaworks.ibm.com
- VoiceXML Forum
www.voicexmlforum.org
- Powered by WebSphere
<http://www.developer.ibm.com/websphere/pbw.html>



IBM Business Partner Sales Contacts

Business Partner Sales Managers:

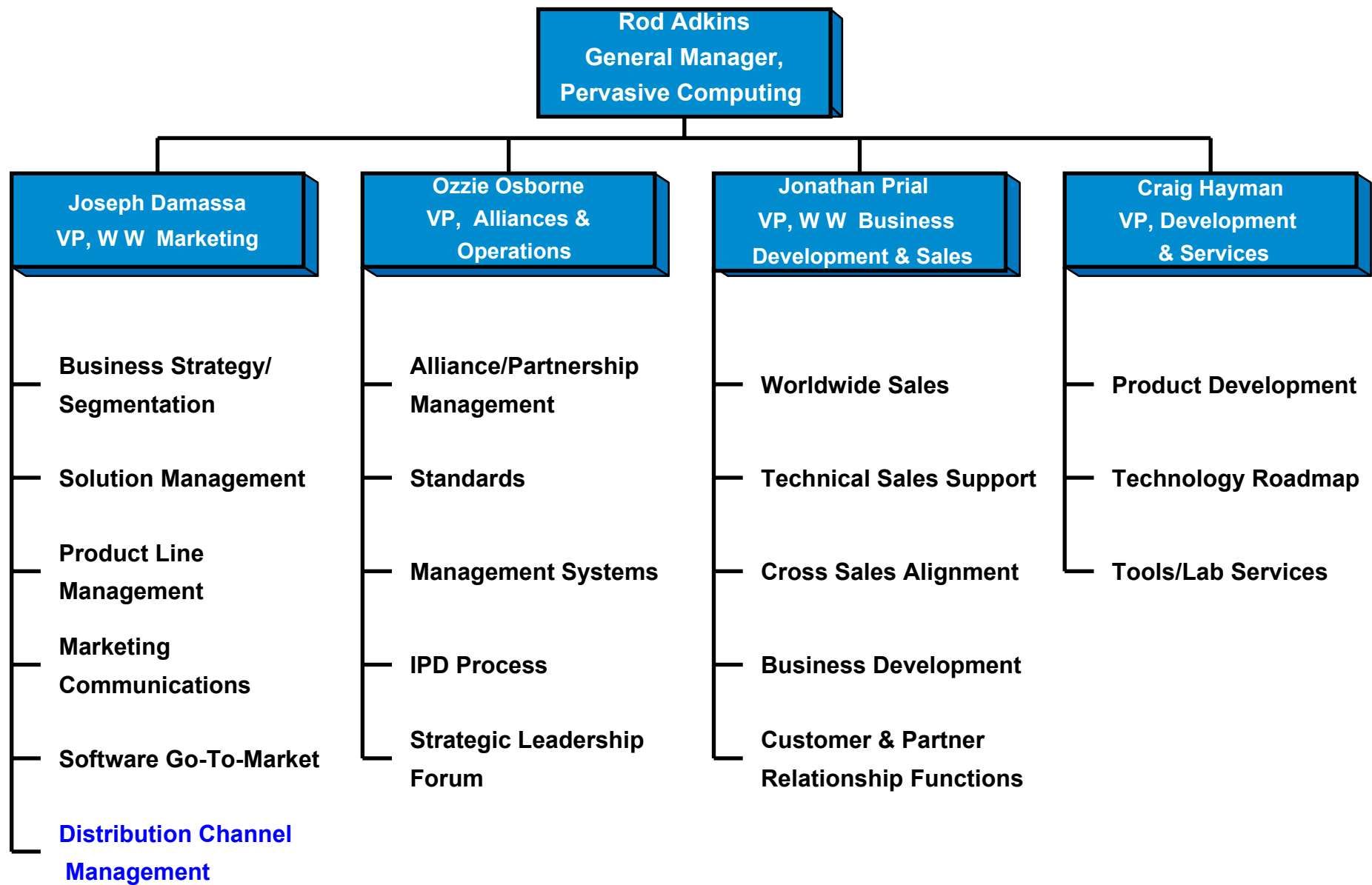
Mark Guss - Americas	203-938-5221	guss@us.ibm.com
Derek Sanders - EMEA	44 20 88184884	derek_sanders@uk.ibm.com
Lawrence Sellin - EMEA WeB Alliance	358-40-5013784	lawrence.sellin@fi.ibm.com
Jason Lau - Asia Pacific	852-2825-6002	laujason@hk1.ibm.com
Michael Garbett - WW Technology Sales	714-438-5332	mgarbett@us.ibm.com

Sales Situation Contacts: (both Voice and Wireless)

Paula Hough - Americas	303-773-5559	pdhough@us.ibm.com
Sally Johnson - Americas	207-695-8996	sjohnson@us.ibm.com
Lynn Wise - Americas	561-463-0474	alwise@us.ibm.com
Pat Philips - Americas	305-442-3854	patrisa@us.ibm.com
Derek Sanders - EMEA	44 20 88184884	derek_sanders@uk.ibm.com
Jason Lau - Asia Pacific	852-2825-6002	laujason@hk1.ibm.com
Kevin Swiss - Americas	303-773-5722	swiss@us.ibm.com
Cynthia Davis - Americas	602-217-2655	crdavis@us.ibm.com



IBM Pervasive Computing - Who We Are



Next Steps

Becoming an IBM Business Partner

- **Tell us your business model:**
 - Providing solutions and/or devices that are enabled on Pervasive middleware or integrating, reselling or distributing Pervasive offerings
 - Early interest, still defining wireless opportunity or committed, with ability to meet IBM's partner selection criteria and jointly execute a business plan
- **Join the Pervasive team**
 - Enroll in IBM PartnerWorld for Developers and/or IBM PartnerWorld for Software
 - Submit an IBM External Submissions Questionnaire describing the relationship you'd like to pursue with IBM (optional)
- **Gain further knowledge of Pervasive offerings**
 - Attend wireless and/or voice classes
 - Attend a Wireless/Device Workshop
- **Get started**
 - Test/evaluate PvC product(s)
 - Begin enabling your applications and/or services
 - List your solution(s) in the IBM Global Services Directory





Backup Charts



Why IBM WebSphere Portal?

- The most complete Portal solution
- Portals have become critical system software components
 - IBM is leader in system software: Operating systems, Transaction systems, Database systems
- Integrated with WAS: Portal is a "well-behaved" WebSphere application
- Expertise across all elements of Portals
- IBM is leading standards efforts
 - OASIS, JCP, Web services
- Market momentum
- Addresses customers' key issues
 - Productivity, Cost reduction, Cost avoidance
- Framework for current and future development
- Enabling new initiatives



For More Information on Tools . . .

- **WebSphere Studio Information and Web Demo**
 - www.ibm.com/software/ad/adstudio
- **Application Developer Multimedia Tutorial**
 - <http://webspherecentral.com/> (will move to <http://www-3.ibm.com/software/ad/studioappdev/library/#demos>)
- **WebSphere Portal V4.1 Information is available on the Portal Website**
 - <http://www.ibm.com/websphere/portalfamily>
- **Additional portlet programming information is available on IBM DeveloperWorks**
 - <http://www.developerworks.ibm.com>
- **WebSphere Studio Developer Domain (WSDD)**
 - www.ibm.com/websphere/developer/zones/studio/transition.html
 - [Transitioning to the New WebSphere Studio Development Products](#)
- **Redbooks/Redpieces**
 - [Web Services Wizardry with WebSphere Studio Application Developer](#)
- **WebSphere Studio Partner Program**
 - www.ibm.com/partnerworld
- **Education**
 - <http://www.ibm.com/software/ad/studioappdev/education>
- **Eclipse**
 - www.eclipse.org



IBM Passport Advantage

Business Partner pricing structures are coordinated with the IBM Passport Advantage customer purchasing program.

Passport Advantage offers IBM customers the opportunity to leverage product purchases across a broad range of products to receive discounts.

Benefits to the customer of this program include:

- Aggregation of all IBM Passport Advantage products purchased
- Annual Revaluation of Relationship Suggested Volume Pricing Level (Based on Purchases)
- Point Values Assigned by Product
- Simplified Renewal Process
- Perpetual Agreement
- All Licenses include Software Maintenance (Subscription & Technical Support)



Top Contributor Qualifications - Resellers

Criteria	Advanced Level	Premier Level
Minimum Annual Revenue Attainment Target	\$100K (USD) of Midmarket Revenue Target in SMB	\$150K (USD) of Midmarket Revenue Target in SMB
Skills Attainment	<u>3 Skilled Individuals</u> 2 Accepted Technical Certifications 1 Accepted Sales Skill Certification	<u>8 Skilled Individuals</u> 5 Accepted Technical Certifications 3 Accepted Sales Skills Certification
Customer Satisfaction	Net Satisfaction Index (NSI) Customer Survey Participation	Net Satisfaction Index (NSI) Customer Survey Participation
Business Relationship	Approved Business and Marketing Plan Not participating in other IBM Alliance Program	Approved Business and Marketing Plan Not participating in other IBM Alliance Program

Top Contributor Initiatives for 2003 (Resellers):

Market Growth Fee Payments:

Based on level of attainment of Passport Advantage revenue targets

Fee Schedule: 8% Paid on revenue attainment range of 0 - 99.99% of target

13% Paid on revenue attainment range of 100% & above target



WEA Positioning Table

Product Portal

Buy "Other" Product

Buy Portal alone:

To provide online access to Business Applications, web content with a portal user experience, personalization, single-signon, search, collaboration

Have WEA - Buy Portal:

To provide the portal experience - collaboration, personalization, content management

Buy Everyplace Access

Buy WEA alone:

To provide online & offline/disconnected access to one or of the following - Email, PIM, any business applications and wireless access to web content.

Have Portal - Buy WEA:

To provide the pervasive portal experience, that means extend the portal experience - Offline and to non-PC devices.

DEES

To mobilize and synchronize your Notes/Domino Email, PIM and applications

To mobilize email, PIM, Domino application and Business applications that are not based on Notes/Domino as well as support for Offline Browsing, notification, etc.

DB2e

To mobilize and synchronize your Relational Database Application

To mobilize Email, PIM and applications beyond Relational Database applications as well as support for offline browsing, notification

WTP

To Provide Content adaptation only

To provide synchronization function in addition to transcoding

IMC

To provide rich synchronization function
User based pricing

To provide basic synchronization function
Processor based pricing



Web Services Cost-of-Deployment Leadership

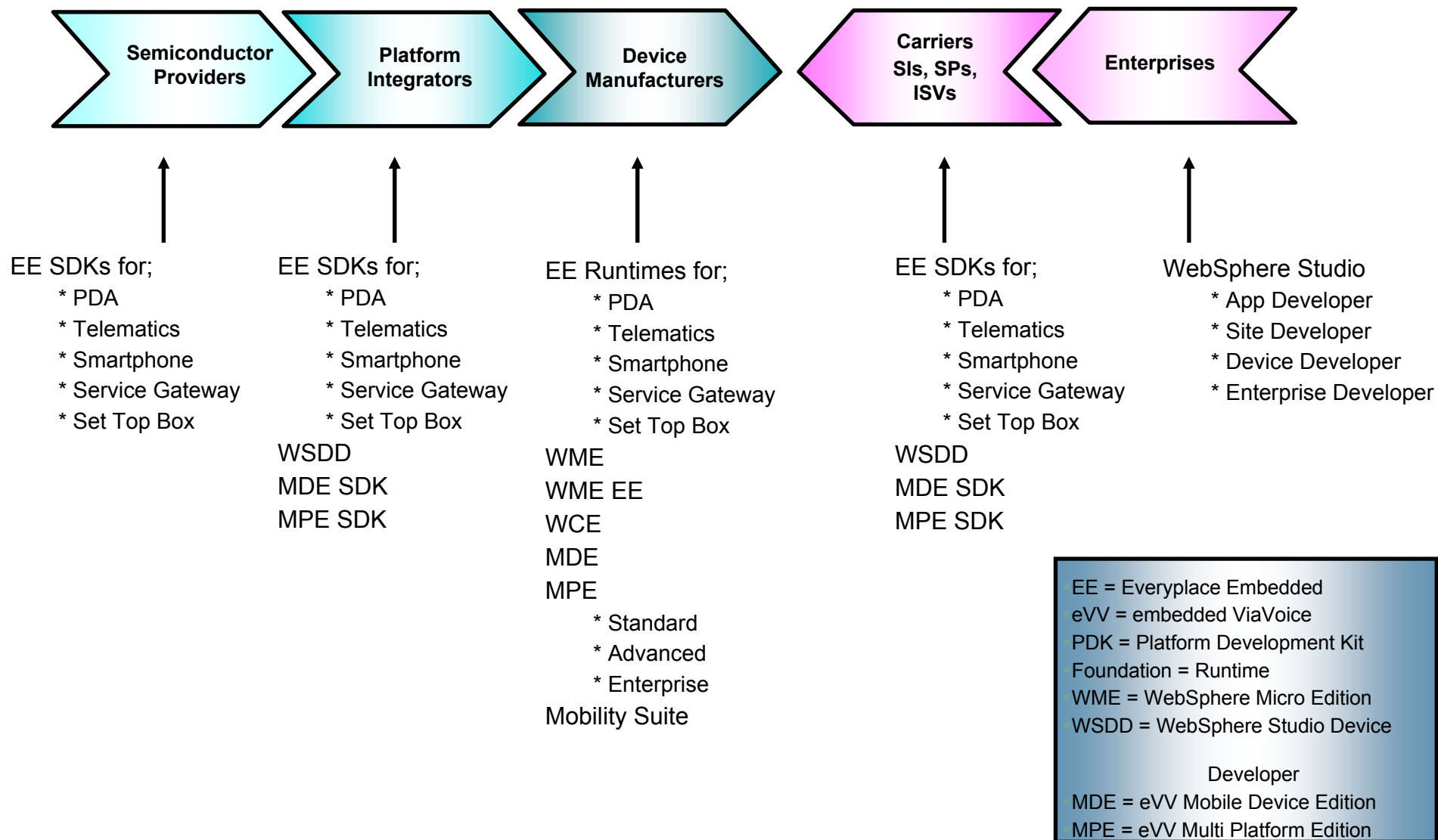
Core Differentiators

Capability	WebSphere	Microsoft.Net
Extend existing programming model, programming skills and tools	Yes Extends existing J2EE assets	No Need to rewrite existing assets
Multi-platform deployment, allowing you to preserve your existing infrastructure investments	Yes Windows NT/2000, Linux, AIX, HP/UX, Solaris, Os/400, z/OS	Deploy on Windows.net only
Deploy on current HW & OS platform	Yes	No Requires upgrade to Windows.net
Re-purpose legacy applications directly as web services	Yes	No
Secure & manageable service gateway with rules based routing and caching as part of system base	Yes Native WebSphere App Server	No Requires BizTalk addition. Biztalk is currently not enabled for .Net
Enables Web Services over multiple communications protocols	Yes Several network protocols	No Limited to HTTP & COM



Device Software Value Chain

Positioning IBM's Offerings



WebSphere Studio Family

Feature Bv Feature (for reference)

Key Feature/Function	Work-bench	Site Dev.	Appl. Dev.	Adv. App. Dev.	Ent. Dev.	Dev.Resource Portal	Asset Anal.	Versata WSS Plugin
Common User Interface	X	X	X	X	X			X
Project Management	X	X	X	X	X			X
Debugging Services	X	X	X	X	X			X
Plugin Services & tools	X	X	X	X	X			X
Desktop & help frameworks	X	X	X	X	X			X
Local & Team (CVS) Resource Management	X	X	X	X	X			X
Artistic (design) Tools		X	X	X	X			
DB Wizards		X	X	X	X			
Web Services Consumption		X	X	X	X			
Integrated WebSphere Server for testing		X	X	X	X			
Integrated Java		X	X	X	X			
Web (Java, JSP, HTML, etc.)		X	X	X	X			X
Full Web Services & UDDI support		X	X	X	X			X
XML		X	X	X	X			X
Rich Media		X	X	X	X			
Relational Schema Center		X	X	X	X			
Rational ClearCase LT OEM		X	X	X	X			
J2EE (EJB, etc.)			X	X	X			X
Java/EJB code generation			X	X	X			X
Performance tuning & QA			X	X	X			
WAS EE / zOS integration				X	X			
Webflow modeling & assembly for Adapters & Microflows				X	X			
Access Builders (EAB replacement)				X	X			
Java Connector Architecture (JCA)				X	X			
Remote E/C/Debug for host COBOL & PL/I Assets					X			
VA COBOL, VA PL/I, VA Generator, Versata Studio					X			
Enterprise Generation Language (EGL)					X			
Struts Support					X			
Enterprise AD Team Collaboration					X	X		
Analyze, isolate, reuse ent. business logic on the Web							X	
Development based on business rules								X



IBM's Leadership in Web Services

Broadest
Support
Across
Platform

Web services is a key element of the roadmap to on demand

- Leadership position in Forrester Wave Web Services Platform
- Positioned in Gartner Magic Quadrant for Web Services
- “The clear leader in this race to deliver Web services functionality is IBM ...” ZDNet, Dec. 2002

Value to
Your
Business

Solution providers can reduce costs and maximize opportunity

- Speed portlet development with IBM's Web services capabilities
- Accelerate portal application development and simplify business integration with web services
- Leverage existing assets and developer skills

Start Today
with IBM

What IBM announced this week

- General availability of the “Next Generation” development and deployment platform with leading support for Web services
 - WebSphere Application Server Enterprise V5
 - WebSphere Studio Application Developer Integration Edition V5
- 4 new IBM programs to enable skills and accelerate adoption



Programs & Services

Powered by WebSphere Mark - Usage Program



- Must be PartnerWorld for Developers member
- Use one or more IBM WebSphere software products as part of an e-business solution
- Qualify and use WebSphere mark on website, application, software or hardware
- Benefits
 - Lets your customers and partners know that your website or solution is using IBM WebSphere software
 - Gain exposure to other IBM Business Partner companies and qualified prospective customers
 - Gain cross-brand access to industry specific offerings for joint sales and marketing activities

For more information on the Powered by WebSphere Mark program, go to <http://www.developer.ibm.com/websphere/pbw.html>



Programs & Services

Powered by WebSphere

Objective:

- The “Powered by WebSphere” assurance mark program is targeted at application and solution developers to identify that their offerings have been qualified as compatible with WebSphere middleware and proven by customer references
- Powered by WebSphere achieves gains through brand awareness, reach and positioning
- Customers want assurance. Business Partners want endorsements

Benefits:

Business Partners

- Access to Powered by WebSphere mark logo for websites and collaterals
- Leverage IBM’s market reach and awareness campaigns for WebSphere
- Feature listing on external catalogs and databases (GSD, WIC, IBM.COM)

Customers

- Assurance that business partner solutions are using world-class middleware from IBM and that the offer is qualified through customer references
- Partner scenarios are documented and tested
- Shorter implementation cycles from proven providers

