Using Management Tools to Manage Your Services Providers
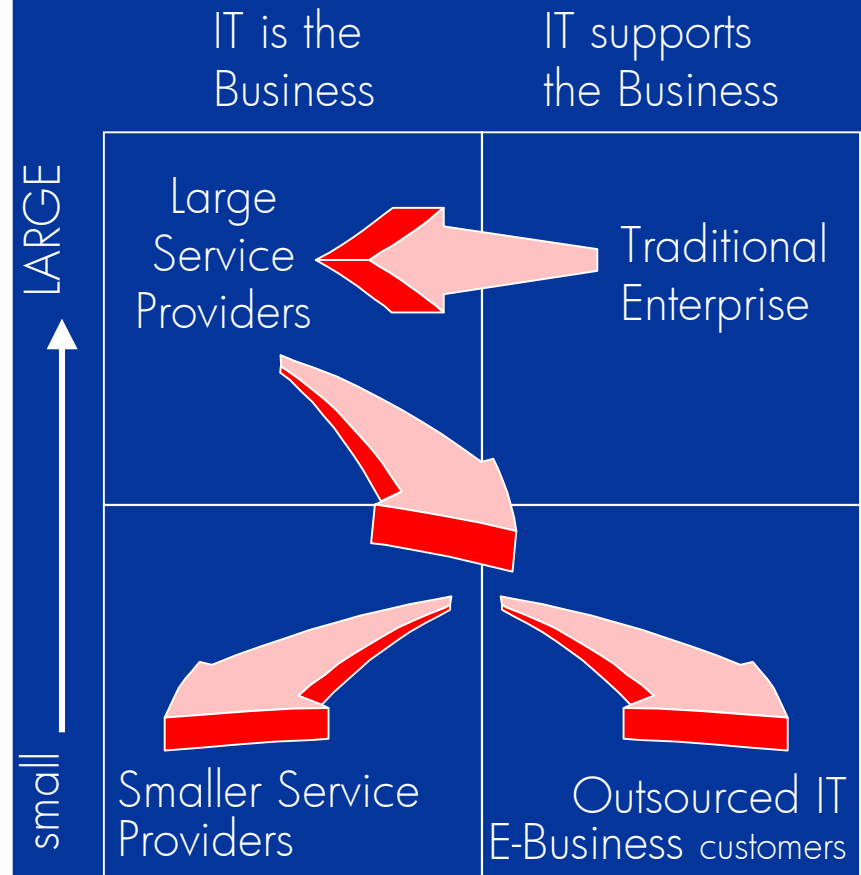
Eric Buatois

General Manager
HP Communications Solutions

The Changing Enterprise e-

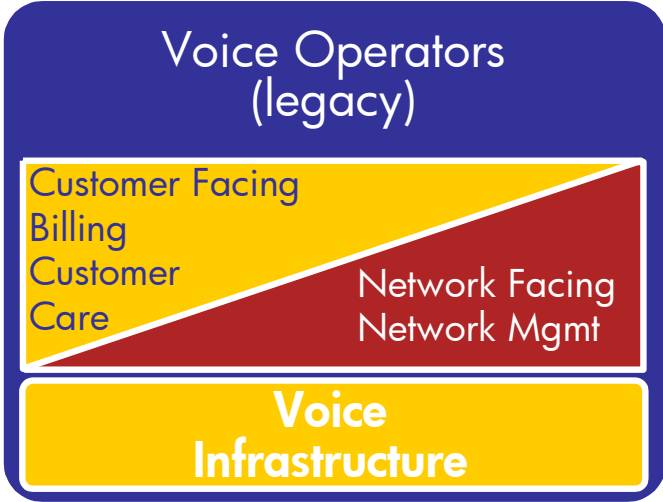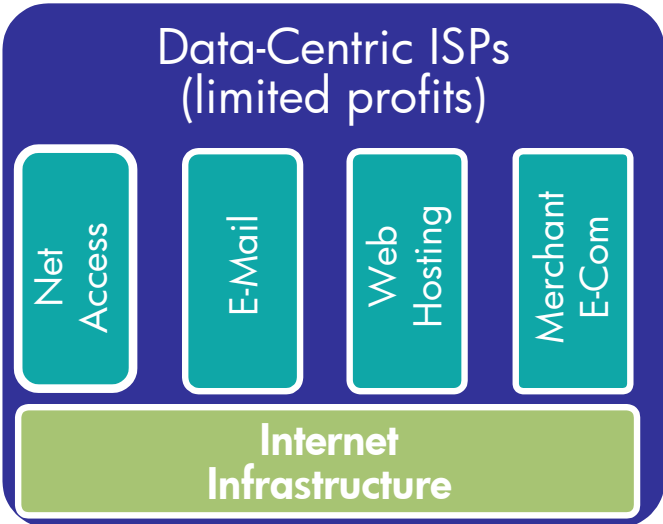**Yesterday's enterprises invested in IT to support their business**

Today, those enterprises are providing that IT as a service to smaller enterprises and end customers

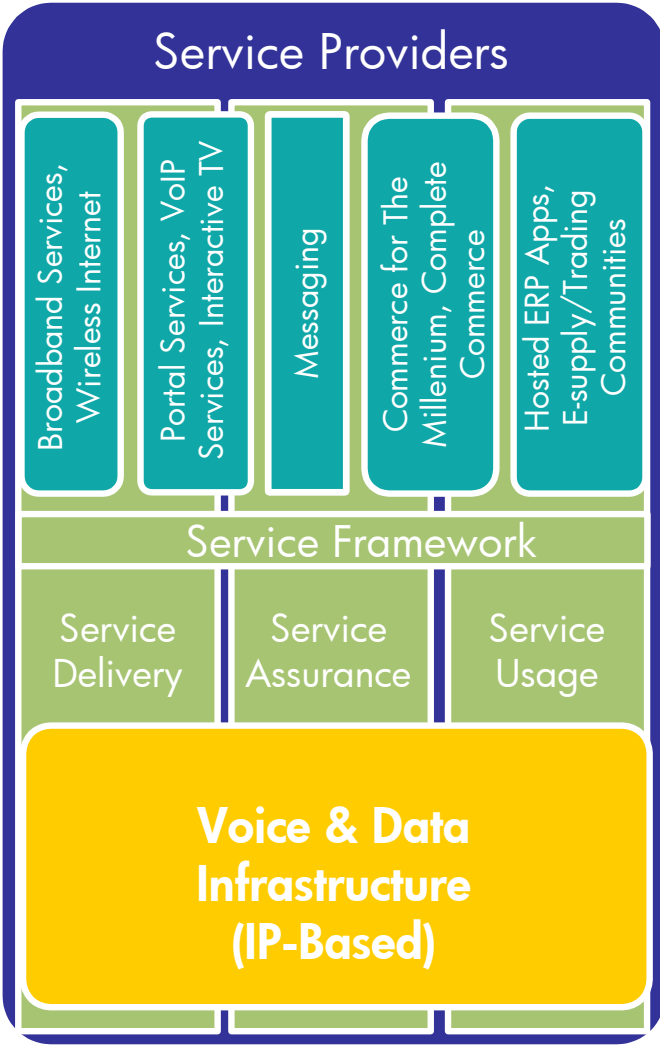**Today's enterprise management information will be offered as a service**

IT is the Business | IT supports the Business

LARGE

Large Service Providers

Traditional Enterprise

small

Smaller Service Providers

Outsourced IT E-Business customers

How are Service Provider offerings Changing?

Today…

Data-Centric ISPs (limited profits)

- Net Access
- E-Mail
- Web Hosting
- Merchant E-Com

Internet Infrastructure

Voice Operators (legacy)

Customer Facing
Billing
Customer Care

Network Facing
Network Mgmt

Voice Infrastructure

Drivers

- Telecos moving voice NWs to IP & broadband
- Rapid emergence of new independent IP-based service providers
- Enterprise moving to internal SP model
- Enterprises outsourcing applications & business processes to Application and Business SPs
- Continuing evolution of ISVs to ASPs; mobile apps also emerging
- Sales and support for SP sol'ns to small-medium businesses
- Consumer appliances moving to a .net portal services model
- Wireless is a key driver

Re-engineering…

Service Providers

- Broadband Services, Wireless Internet
- Portal Services, VoIP Services, Interactive TV
- Messaging
- Commerce for The Millenium, Complete Commerce
- Hosted ERP Apps, E-supply/Trading Communities

Service Framework

- Service Delivery
- Service Assurance
- Service Usage

Voice & Data Infrastructure (IP-Based)

Who are Service Providers Serving?
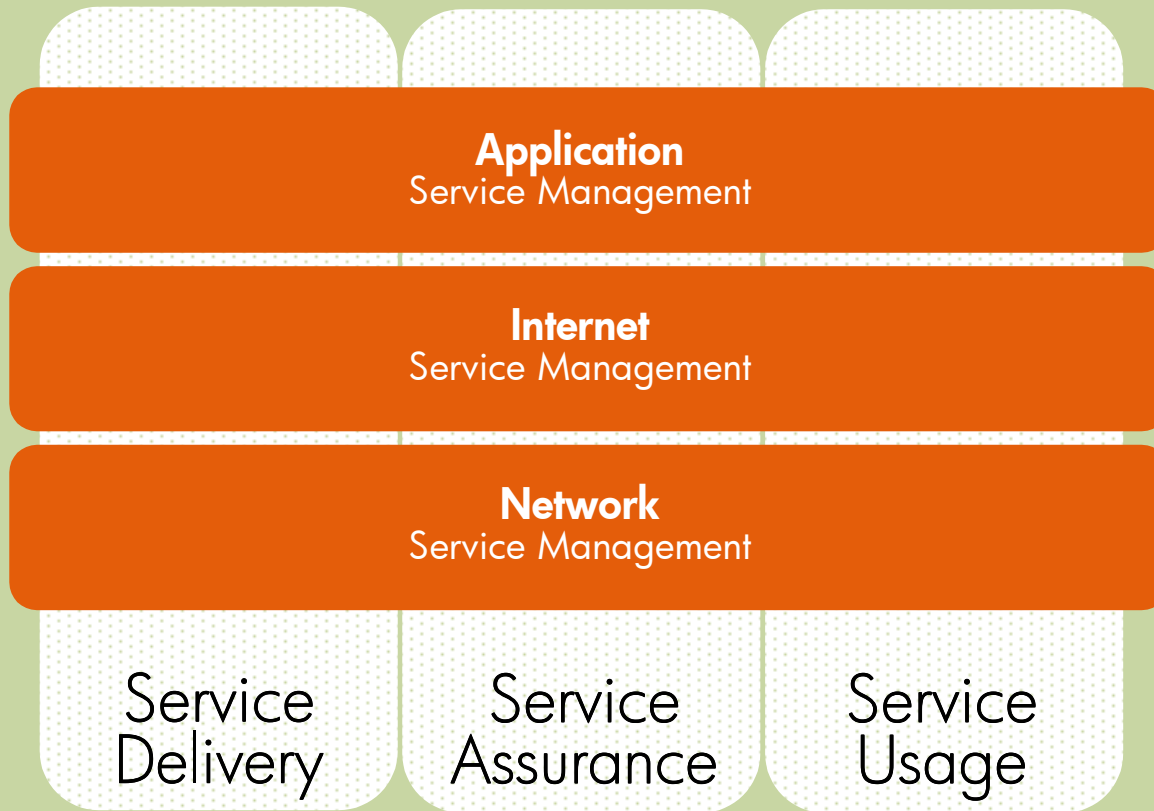
E-enterprises …

Consumers …

Other Service Providers …

and You

All who demand:
High Quality, Readily Available and Low Cost…

Services On Demand

Integrated Service Management

Application
Service Management

Internet
Service Management

Network
Service Management

Service Delivery

Service Assurance

Service Usage

Service Provider Types

- **Full** Service Providers
  - Provide services at all levels
  - Must provide a comprehensive, well-integrated management solution

- **Specialized** Service Providers
  - Provide focused solutions
  - Must provide integration with upstream and downstream providers

Application
Service Management

Internet
Service Management

Network
Service Management

Service Delivery

Service Assurance

Service Usage
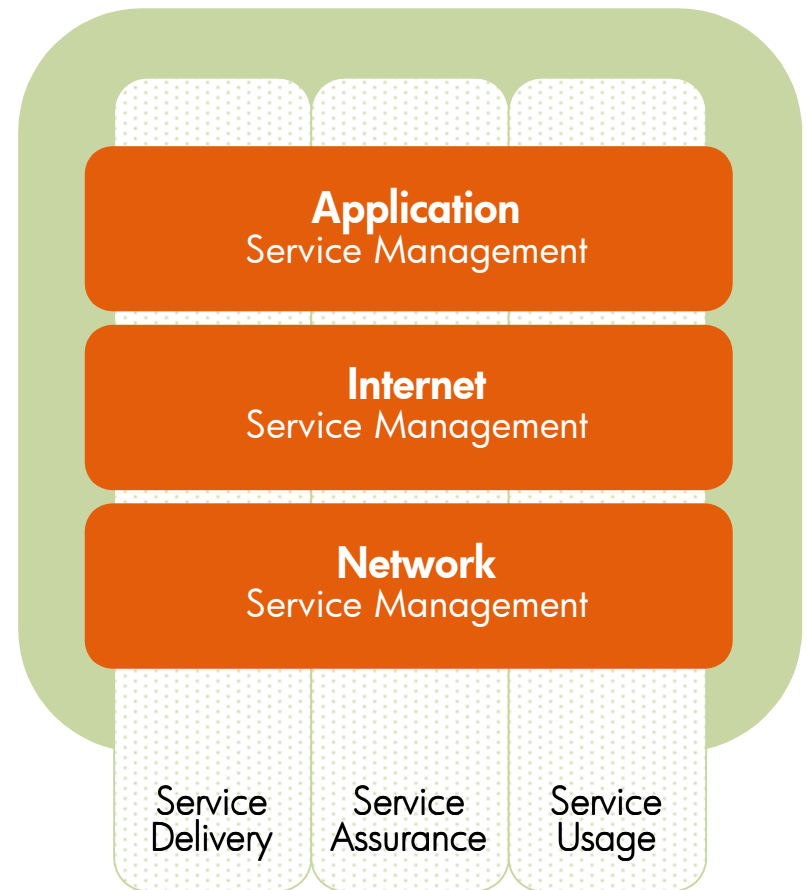
Integrated Service Management

Why Outsource Services?

Reduce costs

Increase offering

Outsourced Services Require …

High Reliability, Availability and Performance

… services need to be available for users and meet quality expectations

Outsourced e-Services Must Be Reliable

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300 MESSAGES DELETED

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On Sunday, February 20, 300 messages were inadvertently
deleted from a mail server.  Unfortunately, IT Services
was unable to identify or recover any of these messages.
The deleted messages had been sent Saturday evening or
Sunday morning.


We recommend that you resend any messages originally sent
between Saturday evening and Sunday morning, February 19-
20.  We apologize for any inconvenience this may have
caused.
```

Outsourced Services Require …

Visibility

A secure and customized view of an outsourced environment including …

- Secure and customized view of an outsourced environment
- Consolidated service monitoring information
- Information personalized for customers
- Branded and customizable look & feel

Visibility enables Service Providers to…

- Increase revenue growth and customer loyalty via service differentiation

- Establish new channels for customer care and communication
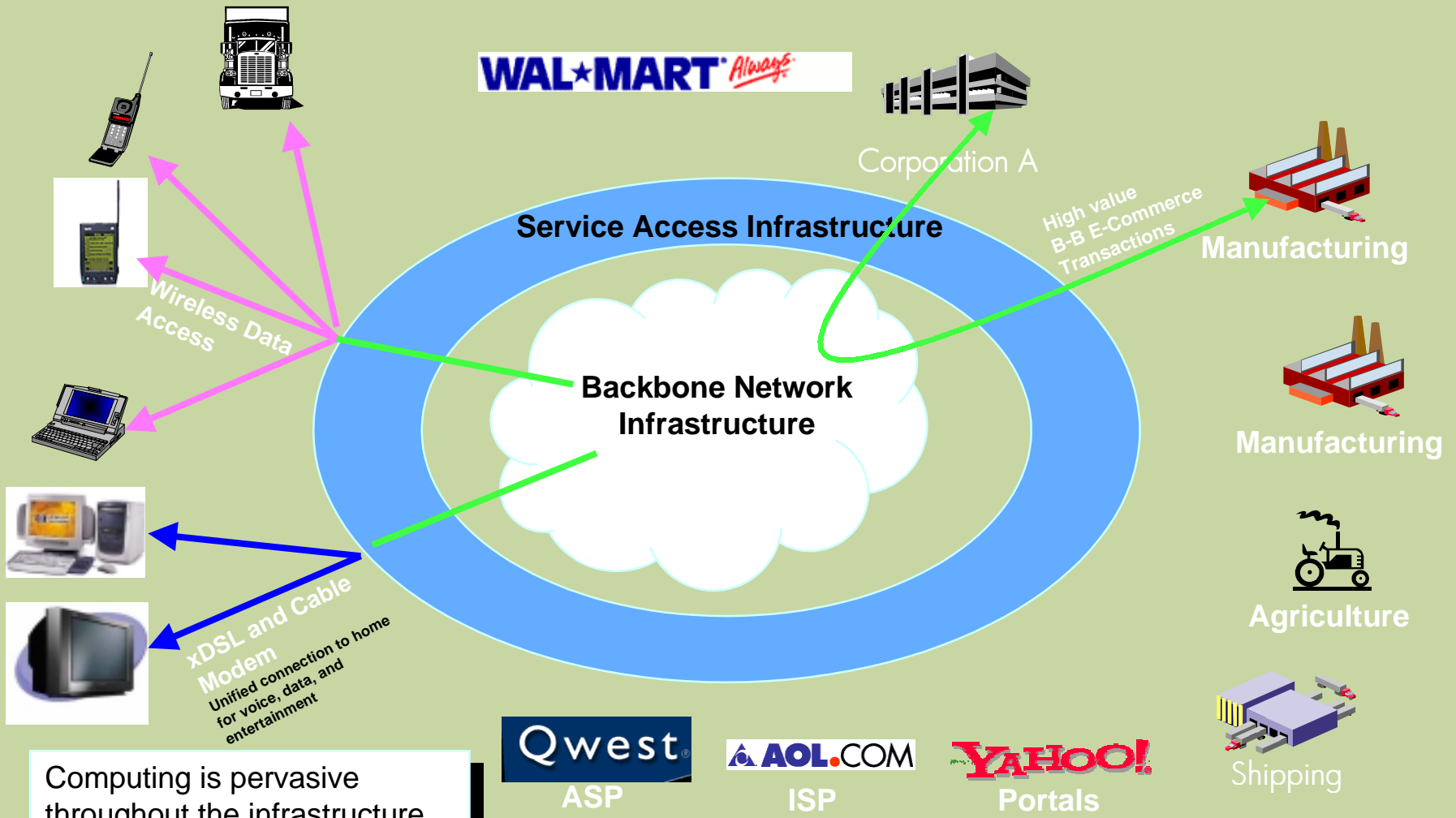
Visibility is a Key Concern
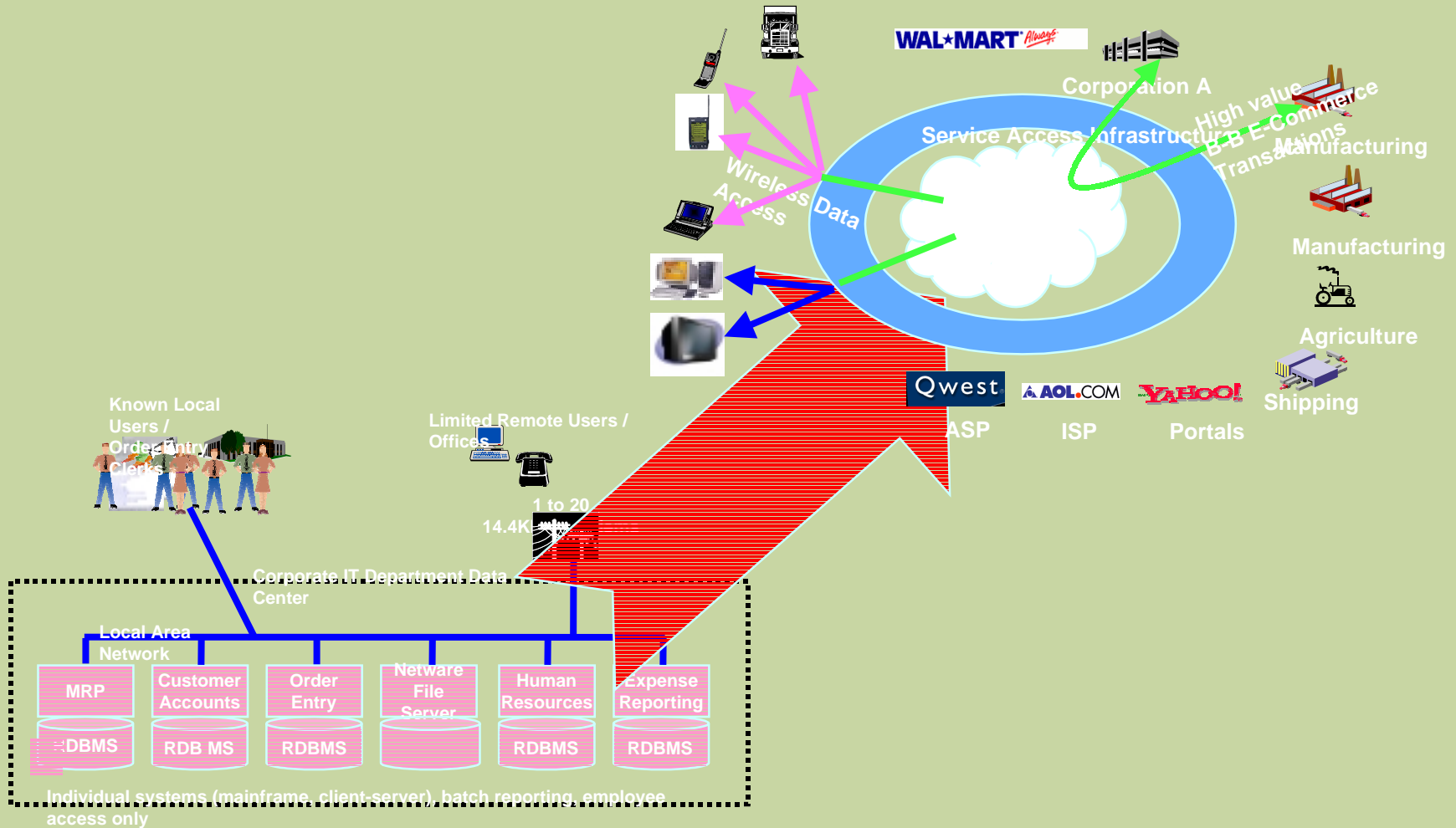
January 13th, 2000

"I found [my service provider] reliable, but I still thought our service went down more often than it should," said Mark Willhite, network engineer with Rollins Leasing Corporation in Wilmington, Delaware. Rollins recently switched its frame relay service [to another ISP], in part because they "didn't provide us the monitoring tools we needed," Willhite said. "Our concern was that if the circuit went down, we wouldn't be notified as quickly as we thought we should. We expected a phone call, but there would be no call."
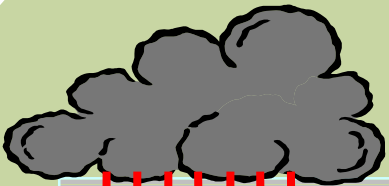
Full Article: http://www.internetwk.com/lead/lead011300.htm

e-Data Center 2003-2005

Service Access Infrastructure

Backbone Network Infrastructure

WAL★MART *Always*

Corporation A

High value
B-B E-Commerce
Transactions

Manufacturing

Manufacturing

Agriculture

Wireless Data
Access

xDSL and Cable
Modem
Unified connection to home
for voice, data, and
entertainment

Computing is pervasive
throughout the infrastructure.

Qwest
ASP

AOL.COM
ISP

YAHOO!
Portals

Shipping

Evolving the Enterprise Data Center to an e-Data Center

XSP e-Service Data Center

Access (Infrastructure)

T1 to OC3 from multiple ISPs

| Router | Level 3 Switch | Intrusion Detect. | DNS |

| Load Balancer | Reverse Cache | Wireless GW | Authentication | VPN GW |

Basic ISP e-Services

NNTP	SMTP	. . .
News	POP3, IMAP	. . .
	E-Mail	

News "e-Service" e-Mail "e-Service" Other e-Ser.
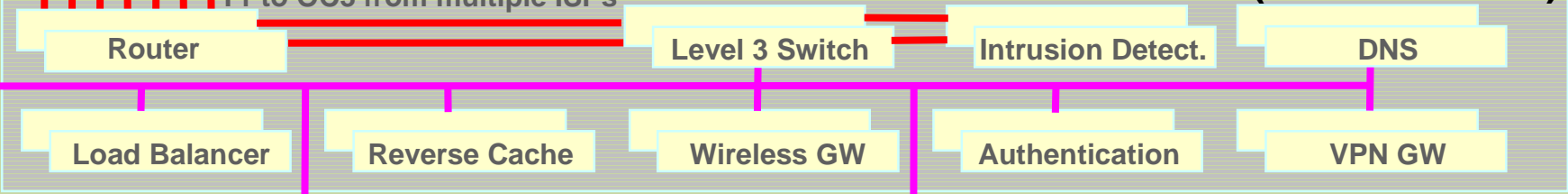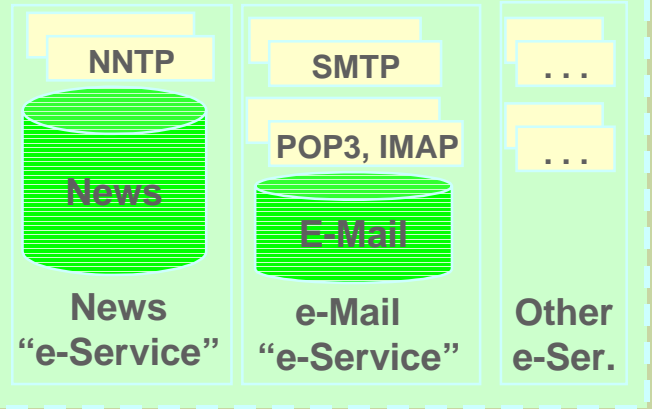
Hosted Applications (e-Services)

Apps. Cust. A	Apps. Cust. B	Apps. Cust. C	Apps. Cust. N
Firewall	Firewall	Firewall	Firewall
Load Bal.	Load Bal.	Load Bal.	Load Bal.
SSL Web	SSL Web	SSL Web	SSL Web
App. FE	App. FE	App. FE	App. FE
App. BE	App. BE	App. BE	App. BE
RDBMS	RDBMS	RDBMS	RDBMS

Firewall

Operations

| Operations Management | Advertising Management | User Authentication |

RDBMS RDBMS
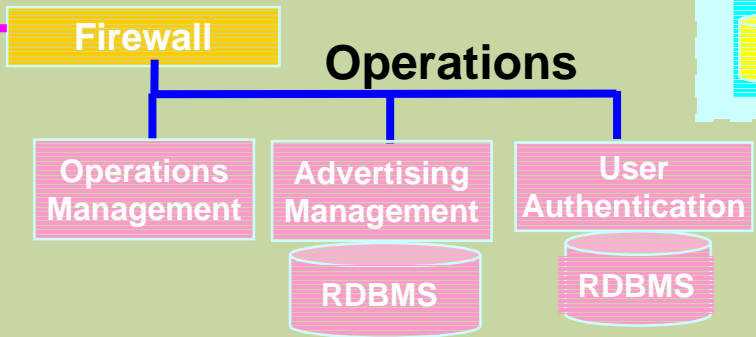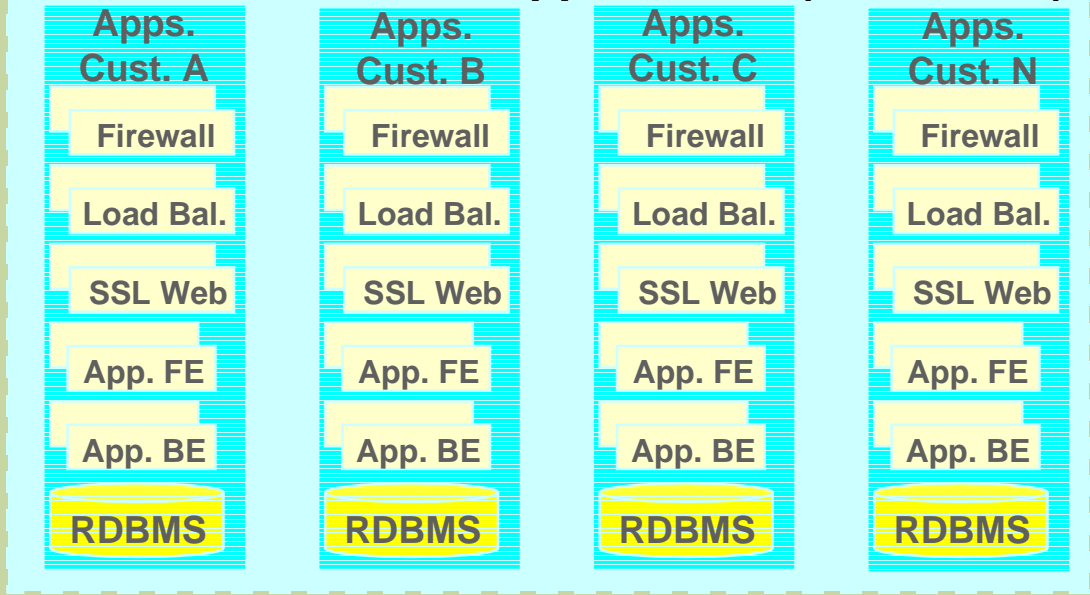
ISP Pop Data Center
Distributed: Located At Local Telco Exchanges

500 to 20,000
56K Modem
Users

2,000 to 50,000
64K Wireless
Users

500 to10,000
500K DSL/Cable Modem
Users

DS-3 to OC-48

| Router | Satellite "Push" Content Distribution | "Dial-Up" Modem Access | Wireless Access (Base Station) | DSL & Cable Modem Access |

| Transparent Web Cache | Rich Media Content Distribution | Internet Utility Servers | Wireless Gateway Servers | Remote Management Server |

Mobile Multimedia Services
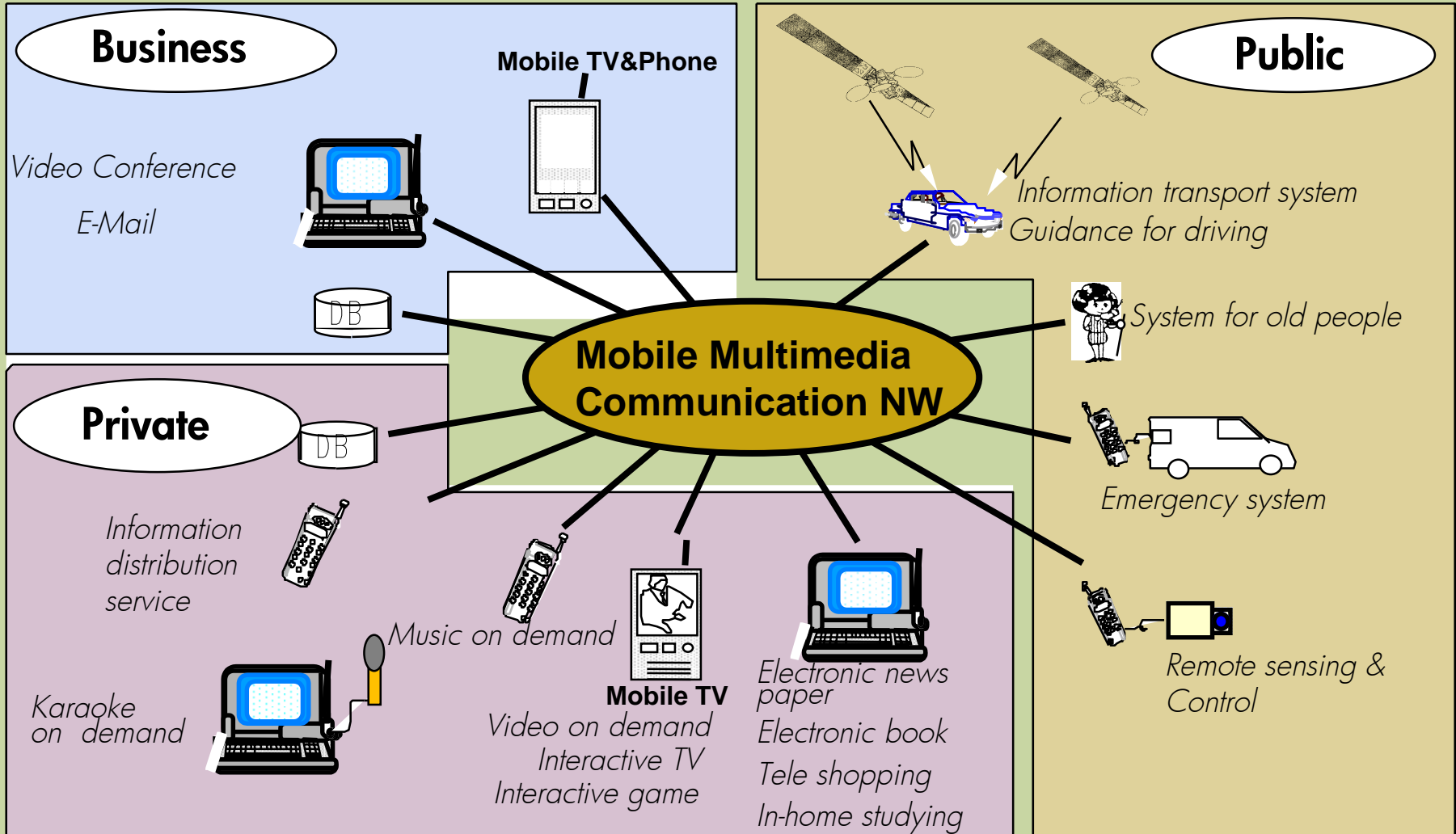
Disruptive Technologies
Key Inflection Points Driving e-Services Deployment

- 10X increase in last mile bandwidth
    - DSL or Cable Modem connections provide 500Kbps or greater
    - "Instant-On" features feasible because users are always logged on
    - On demand video news service reasonable for first time

- Backbone bandwidth costs drop by factor of 10
    - Parallel T3s replaced by parallel OC48 and beyond
    - Temporary glut in available WAN bandwidth

- E-Commerce sites mainstream retail distribution channel
    - Increased use of "Rich Content"
    - Increased use of JAVA for application development

- Mobile wireless access to Internet data commonplace
    - IMT2000 solutions will provide 64Kbps to 384Kbps

Disruptive Paradigms
Key Change Agents Other Than Technology

- **More mega-mergers such as AOL/Time-Warner**
  - **World's largest ISP now is World's largest Content Provider!**

- **Microsoft break-up generates ripples like AT&T did**
  - **Smaller parts of Microsoft able to re-merge with other companies in ways that Microsoft as a whole would not**

- **On-line multi-media content distribution (mp3s, CDs, DVDs) becomes primary channel and is commonplace**

- **Rapidly moving Internet evolution**
  - **Great sense of urgency!**
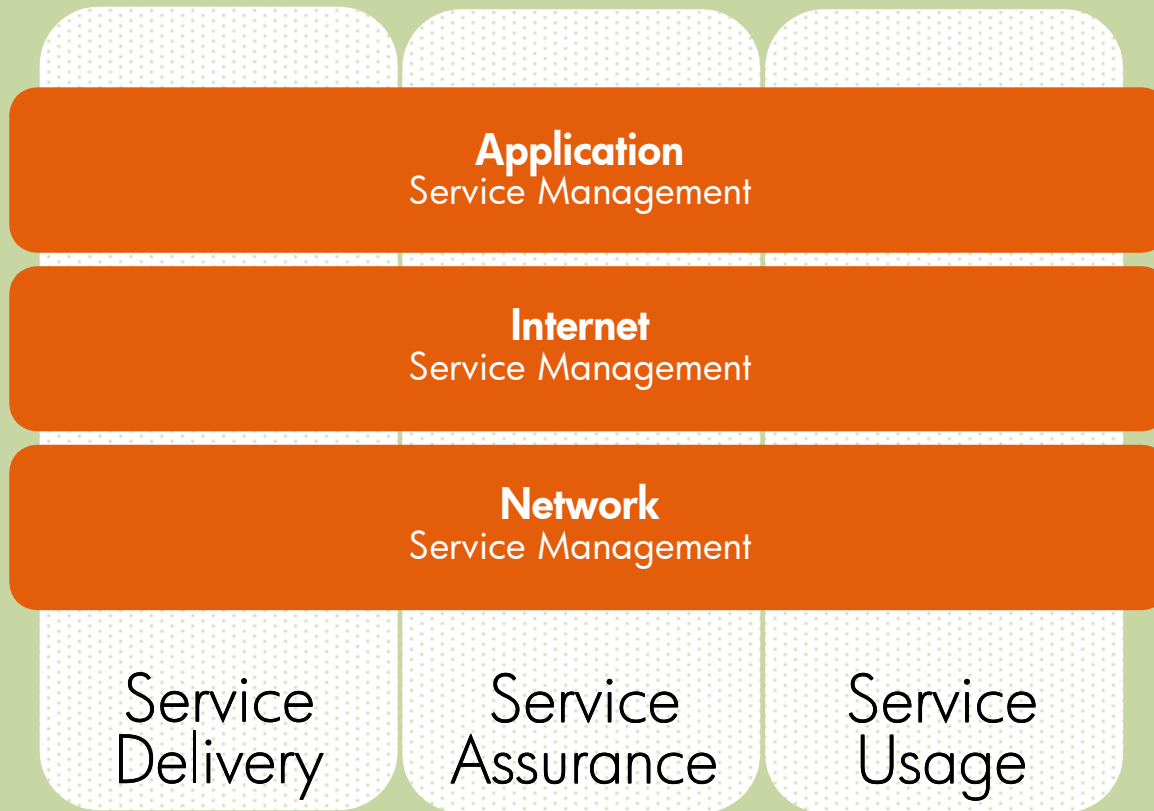
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