



e-business

COBOL Modernization

Your road to e-business!

VM/VSE Technical Conference 2000
Session E25

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E25_COBMOD /10APR00

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Agenda

- Make Your Business an e-business
- Where You are today!
- Solutions

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The Story

Make Your Business an e-business

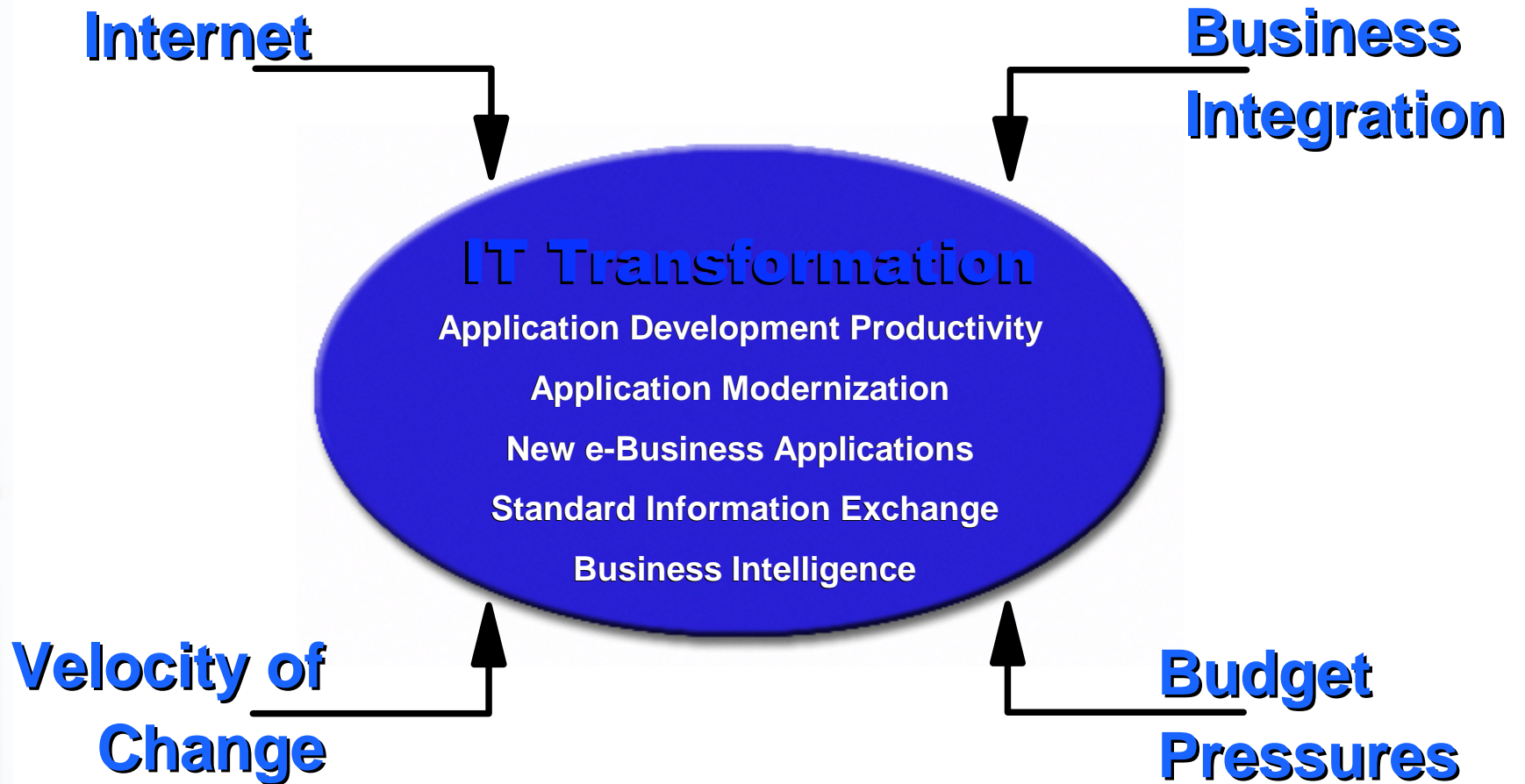


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Business Transformation



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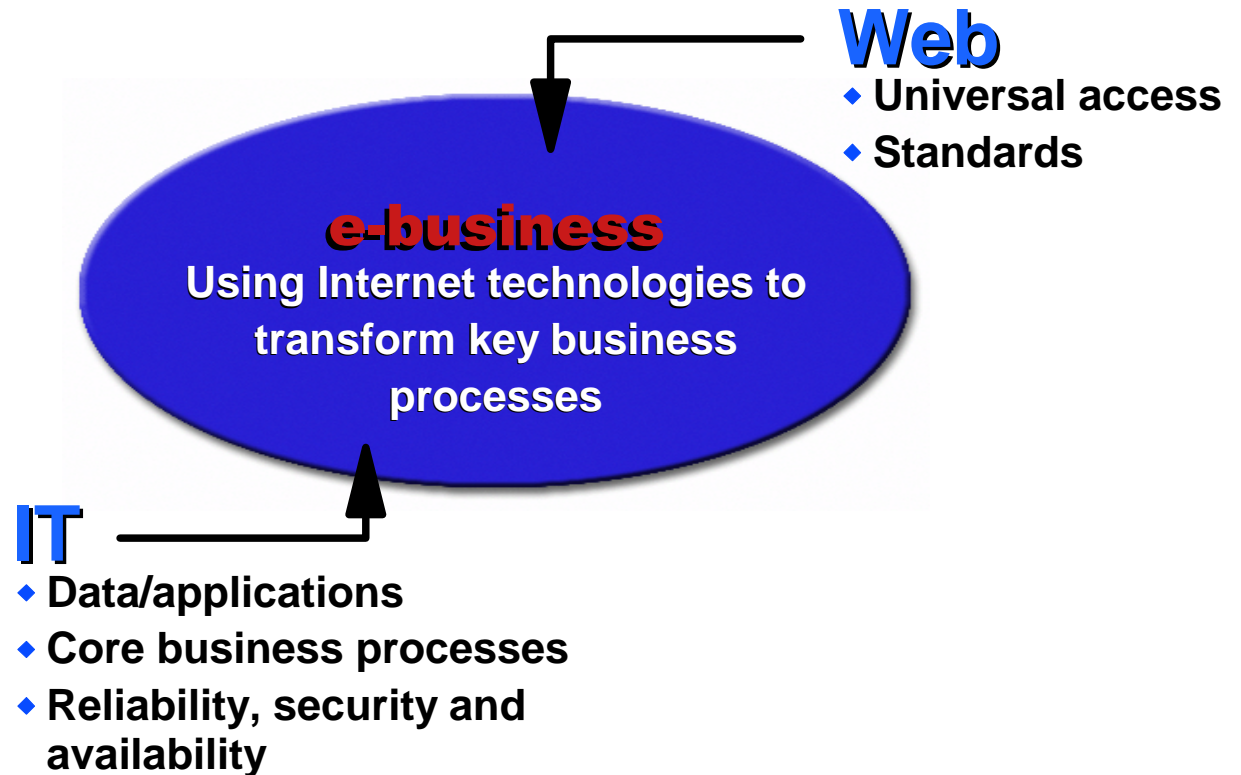


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The Emergence of e-business

What is e-business?

- ◆ Web-enabling core business processes
- ◆ Transforming the way you do business
- ◆ Combining Web technology with existing enterprise applications and data



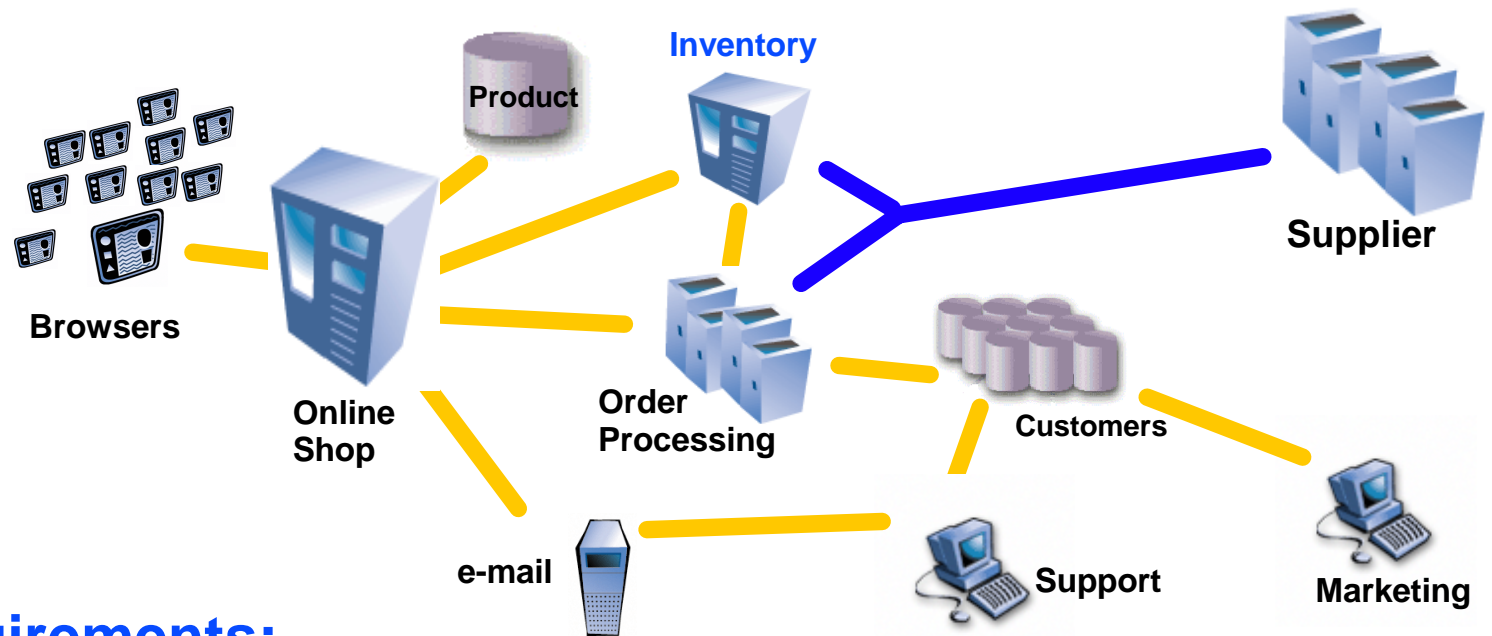
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Start Simple ... Grow fast



Requirements:

1. From static to interactive site
 - Easy development
 - Dynamic Web pages
2. Start online shop
 - Access to product DB
3. Add inventory check
 - Realtime link to inventory
4. Add order processing
 - Link to order processing & customer DB
5. Maintain inventory level
 - Link to Supplier
6. Add customer support
 - Integrate e-mail & workflow system
7. One-to-one marketing
 - Business intelligence solution
8. Accommodate growth
 - Deploy on scalable system





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The e-business cycle: Getting There by a Reliable Route

Leverage
knowledge and
information

Transform
core business
processes

Run
a scalable,
available, safe
environment

Build
new
applications

*Becoming an e-business,
growing as an e-business*

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Transform core business processes

Suppliers

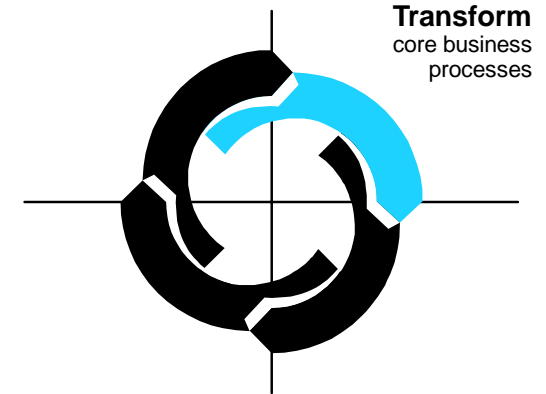


*From independence
to interdependence*

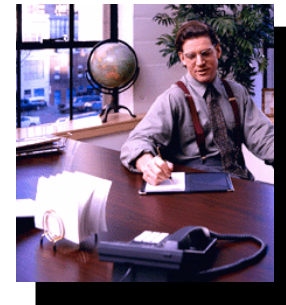
Customers



*From a transaction
to lifetime loyalty*



Employees



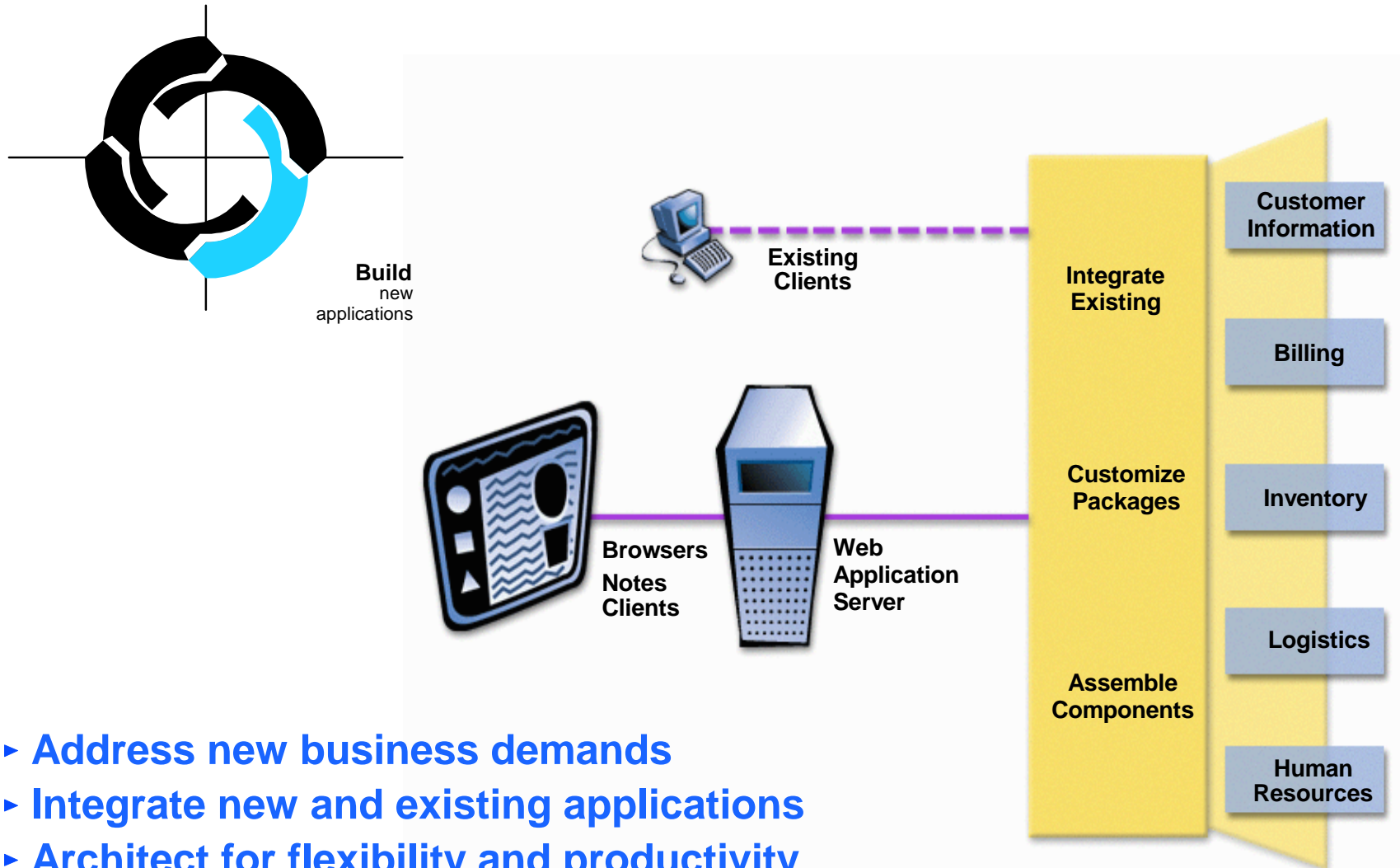
*From competent
to responsive*

- Focus on priority processes
- Exploit the reach of the Web
- Extend existing applications

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Build Next Generation Applications Fast

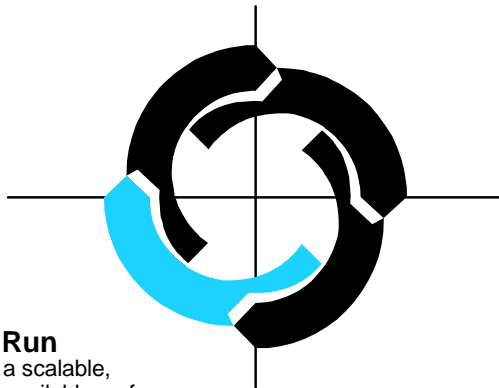


- ▶ Address new business demands
- ▶ Integrate new and existing applications
- ▶ Architect for flexibility and productivity
- ▶ Use an open, standards-based approach
- ▶ Add new users



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Run a scalable, available safe environment

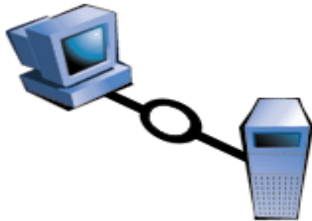


Run a scalable, available, safe environment

- ▶ Maximize deployment flexibility
- ▶ Secure network platform
- ▶ Single-action management

PC Servers

97% availability



- Preferred development platform
- Lowest cost for work groups

Scalable Midrange

99.97% availability



- Scales seamlessly for high-volume applications
- Increased storage capacity

Enterprise Servers

99.999% availability



- Highest level of availability
- Lowest cost- per-unit of work



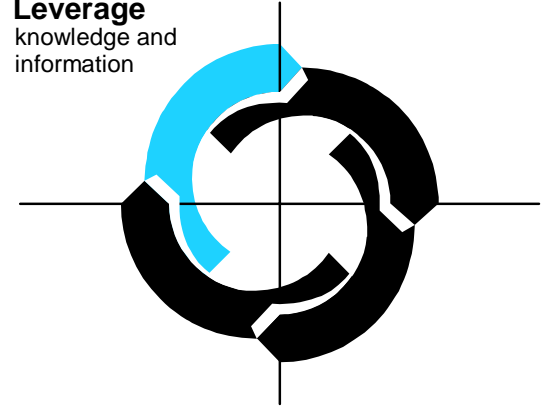


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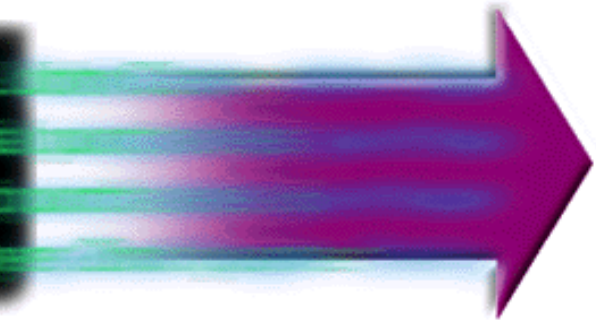
Leverage Knowledge and Information

- ▶ Use Business Intelligence to sharpen decision making
- ▶ Increase responsiveness through knowledge management

Leverage knowledge and information



Customer: John Casey
 4 sequential purchases
 associated purchases: 6
 cyclical buyer: 2nd quarter



Data

- Transaction
- Operational
- Financial

Discovery

- Customer segmentation
- Product and customer profitability

Action

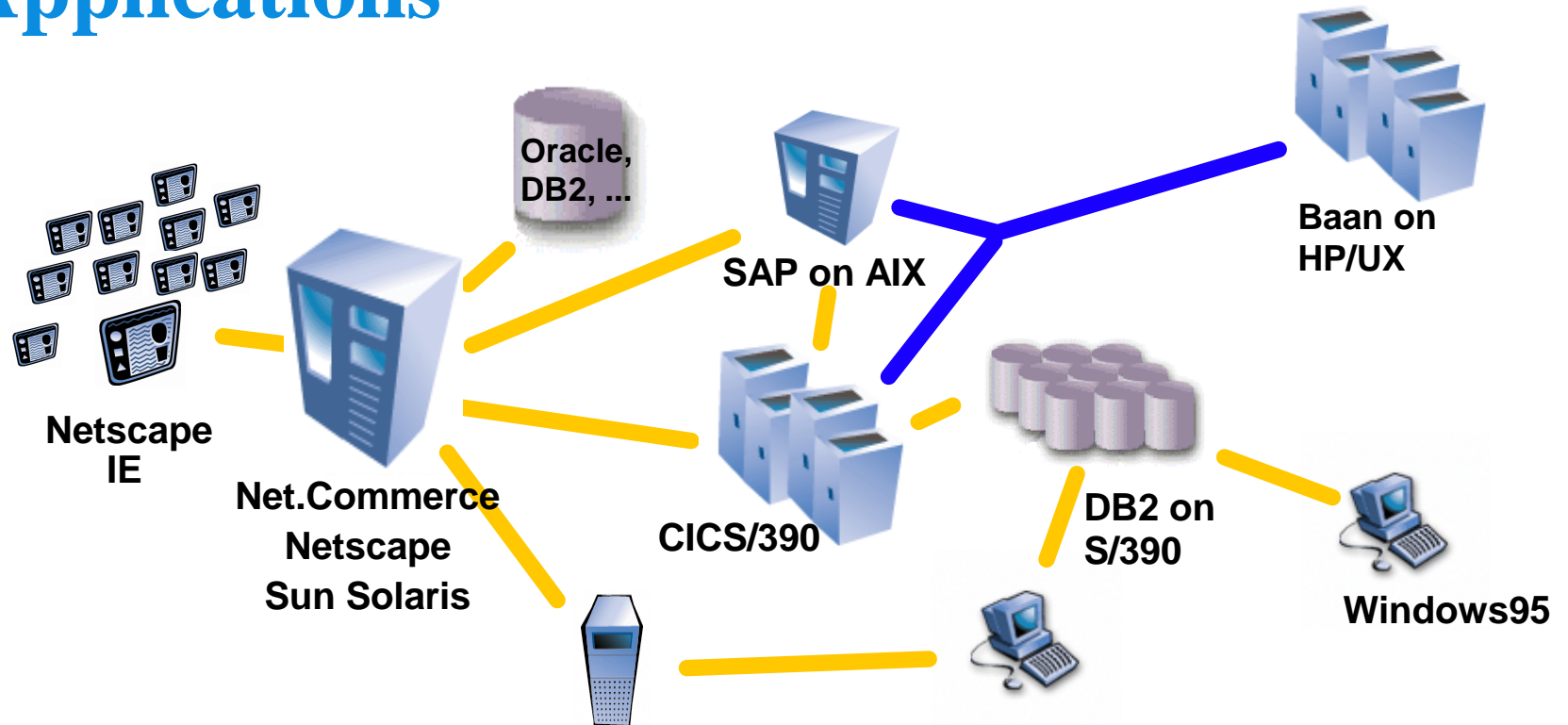
- Retention programs
- Targeted advertising
- Cross-product marketing





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Building Successful e-business Applications



- ◆ Standards-based
- ◆ Server-centric
- ◆ Leverage core systems
- ◆ Scalable
- ◆ Quick to deploy, easy to use
- ◆ Manageable & Secure

The Application Model You Choose Matters

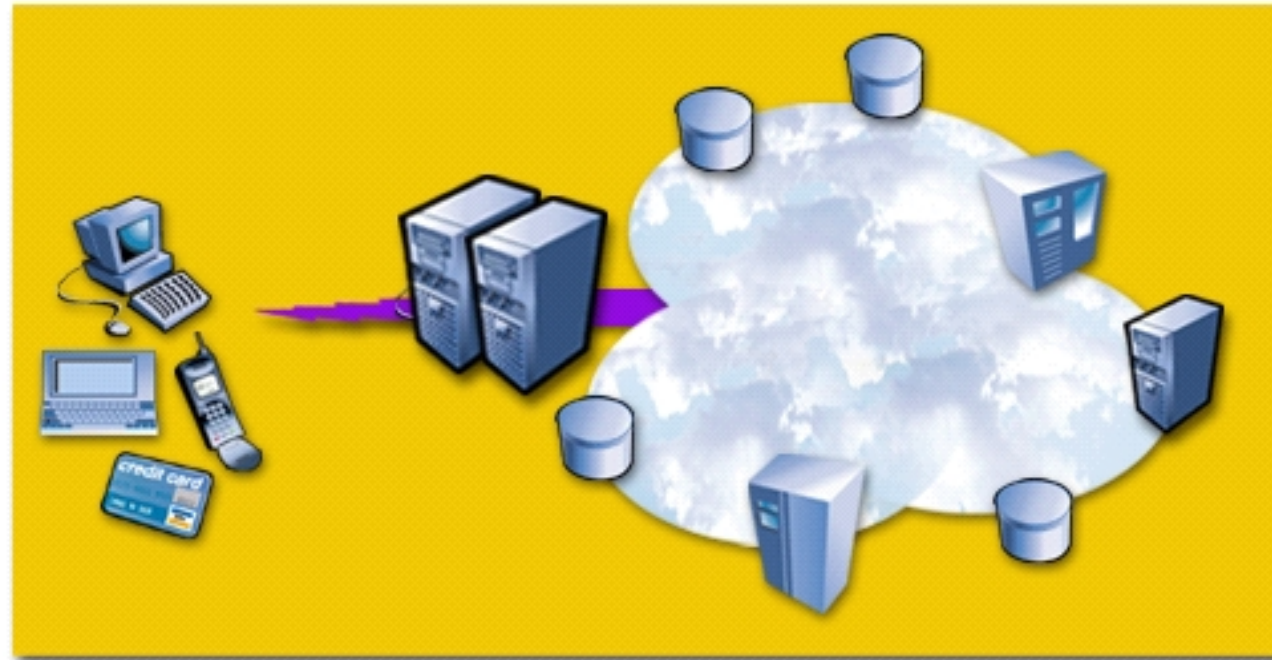
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e-business Application Model



- ▶ Supports any client device
- ▶ Applications are built independent of the client device and server deployment platform
- ▶ Provides universal access to data and services across all types of networks
- ▶ Workload can be optimized across servers

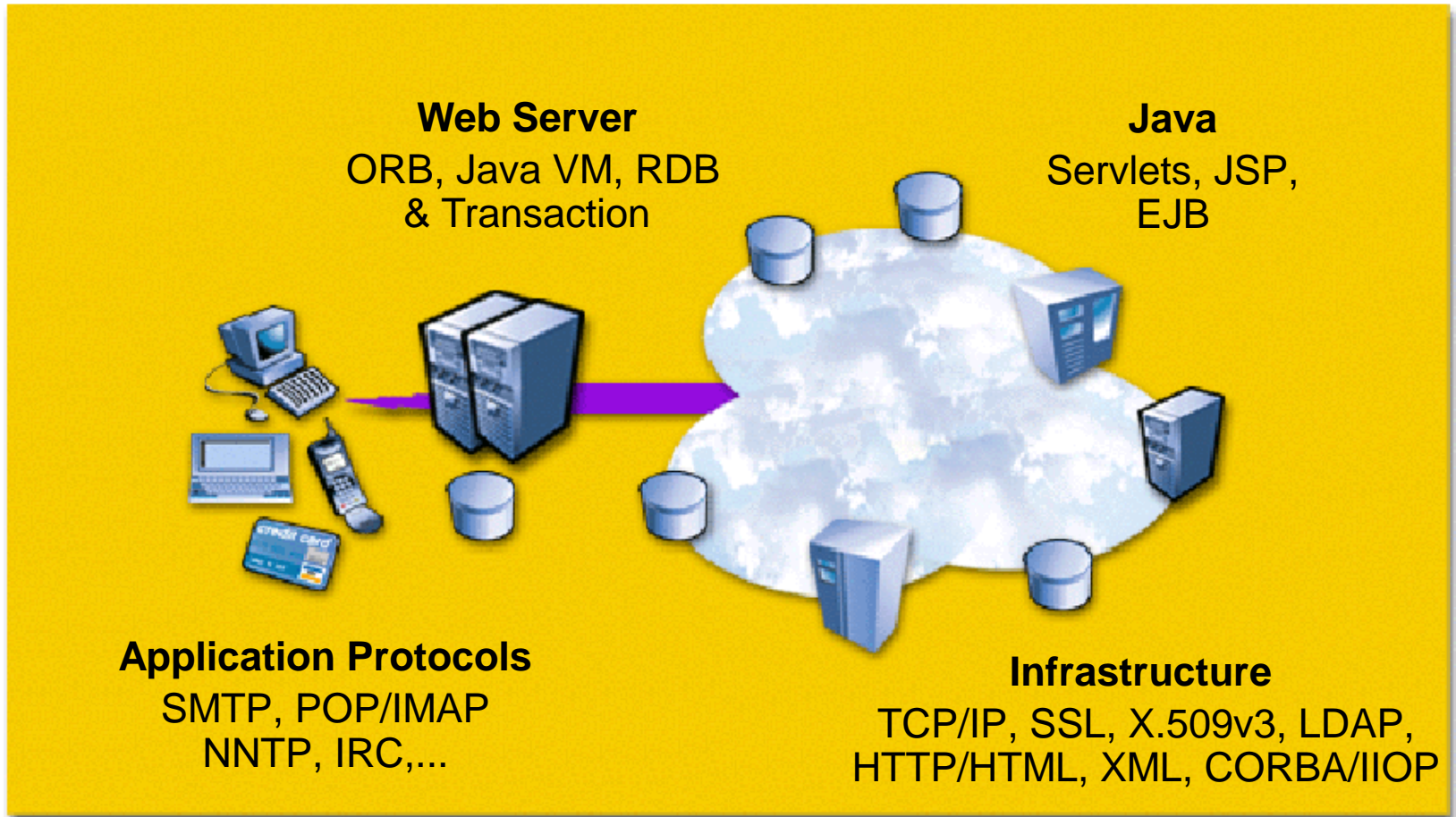
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Standards Make it Possible

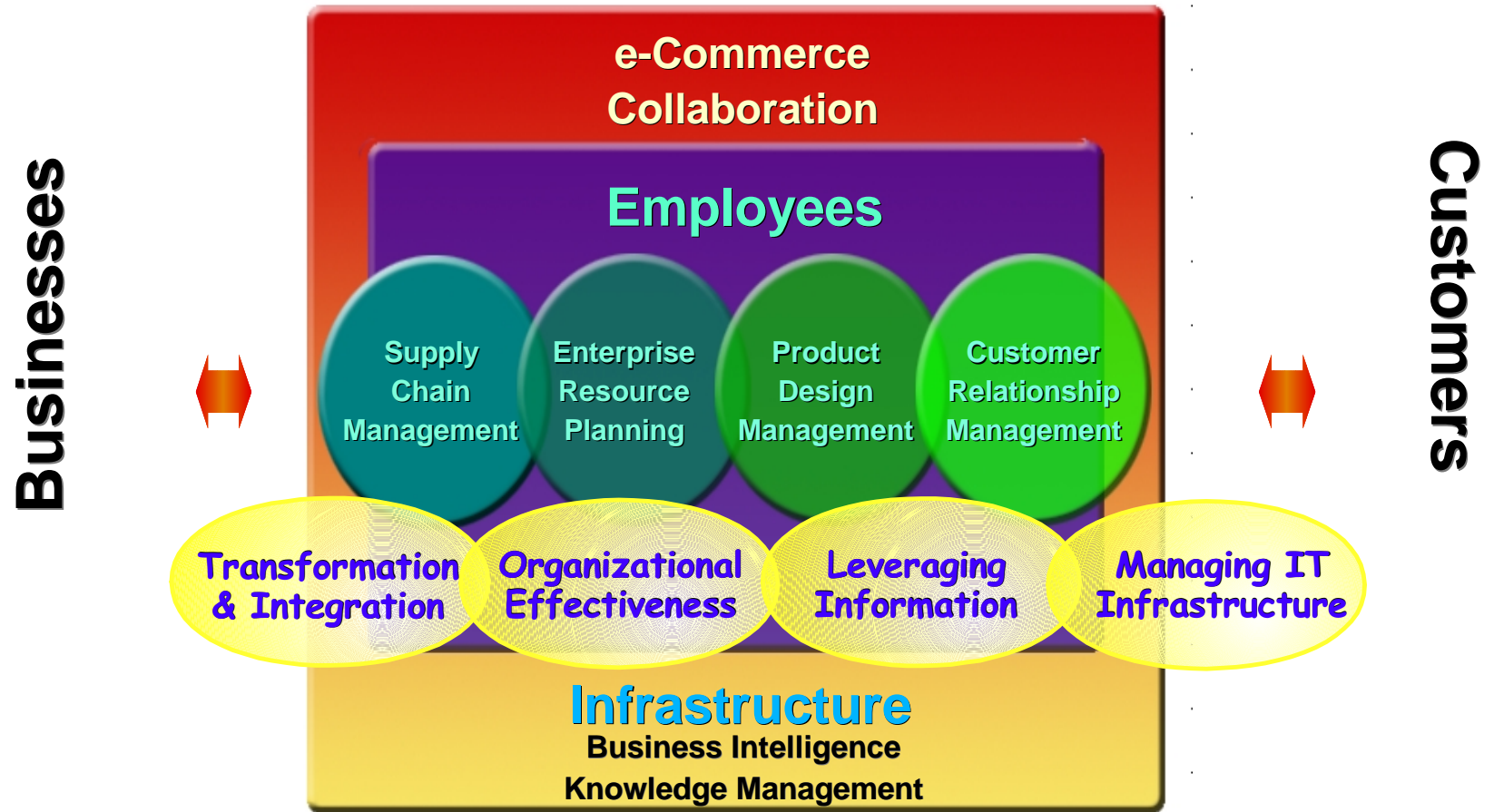


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e-business is about integration ...



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... and transformation ...

Transformation and Integration



Organizational Effectiveness

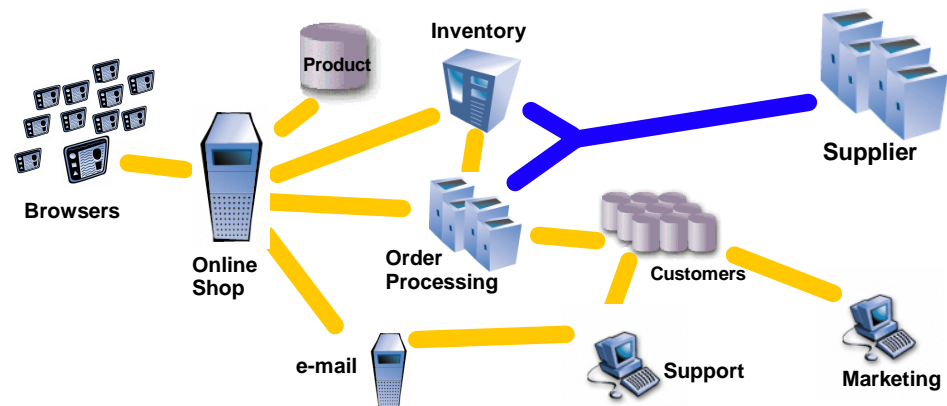
Leveraging Information



Managing Technology

Requirements:

1. From static to interactive site
2. Start online shop
3. Add inventory check
4. Add order processing
5. Maintain inventory level
6. Add customer support
7. One-to-one marketing
8. Accommodate growth





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... with Qualities of Service

S/390

SCALABILITY

1K	10K	100M
TRANSACTIONS / DAY		

SECURITY

\$1K	\$2M	\$20M+
RISK OF BREACH		

AVAILABILITY

\$1K	\$200K	\$20M
COST OF OUTAGE / HR		

FLEXIBILITY

5%	10%	75%
% OF DATA REQUIRED		

INTEGRATION

2	4-8	8-16
# OF PARTICIPANT- APPLICATION TYPES		

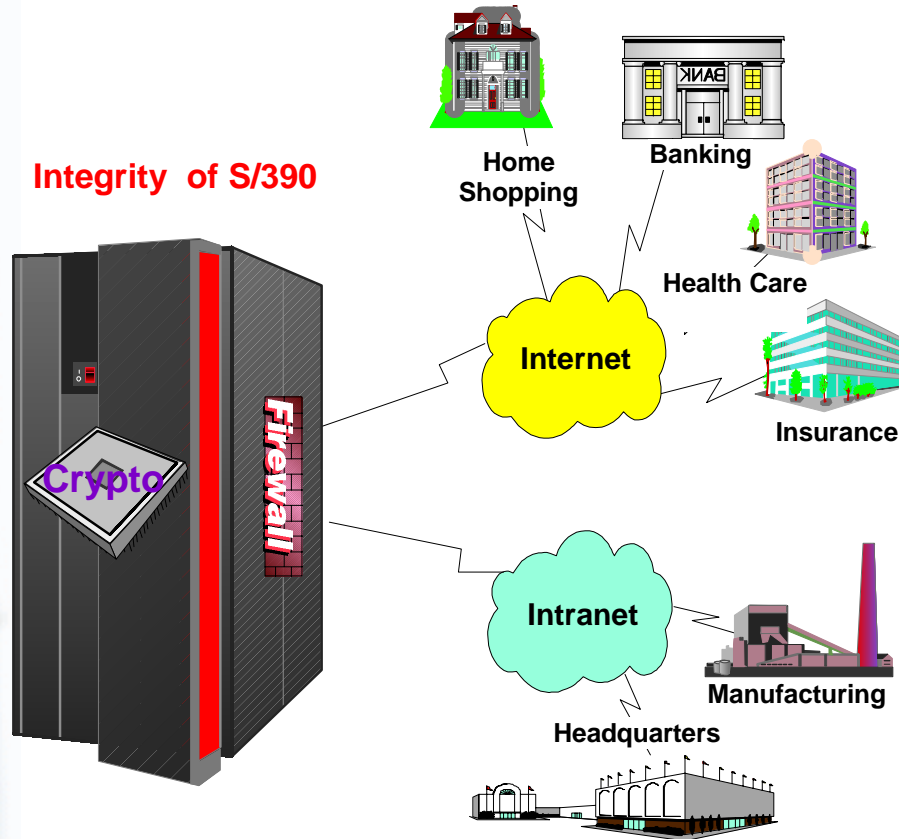




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S/390 for e-business!

Integrity of S/390



- access to legacy systems data and core business applications for rapid deployment of self-service solutions
- scaleable
- highly available
- workload balanced
- operational simplicity
- recovery
- throughput
- peak power on demand
- low operational cost
- integrated security
- Internet standards





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The Real World Makes it Hard ...

It requires
balancing ...



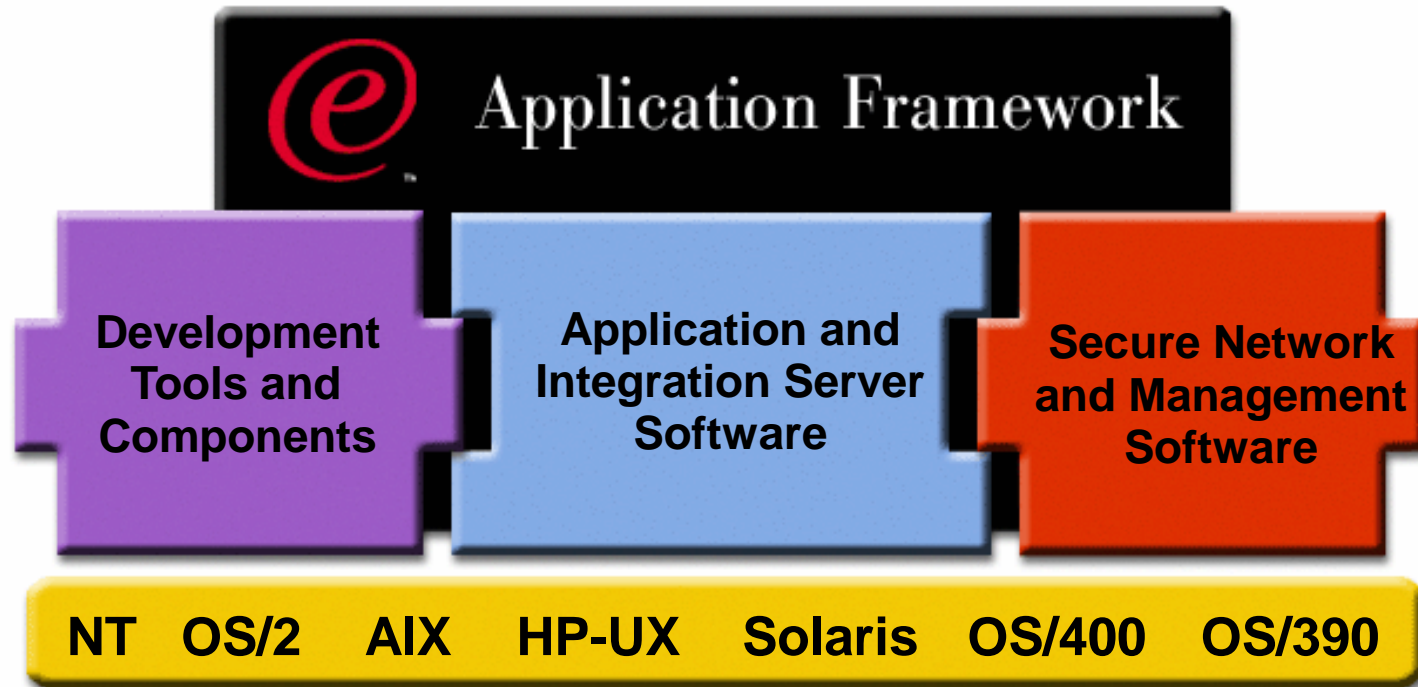
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The Application Framework Makes it Happen



- ▶ Supports business and application transformation
- ▶ A proven methodology for building e-business applications
- ▶ Rich product portfolio supports simple to sophisticated applications
- ▶ Leverages existing skills
- ▶ Multi-platform, standards-based

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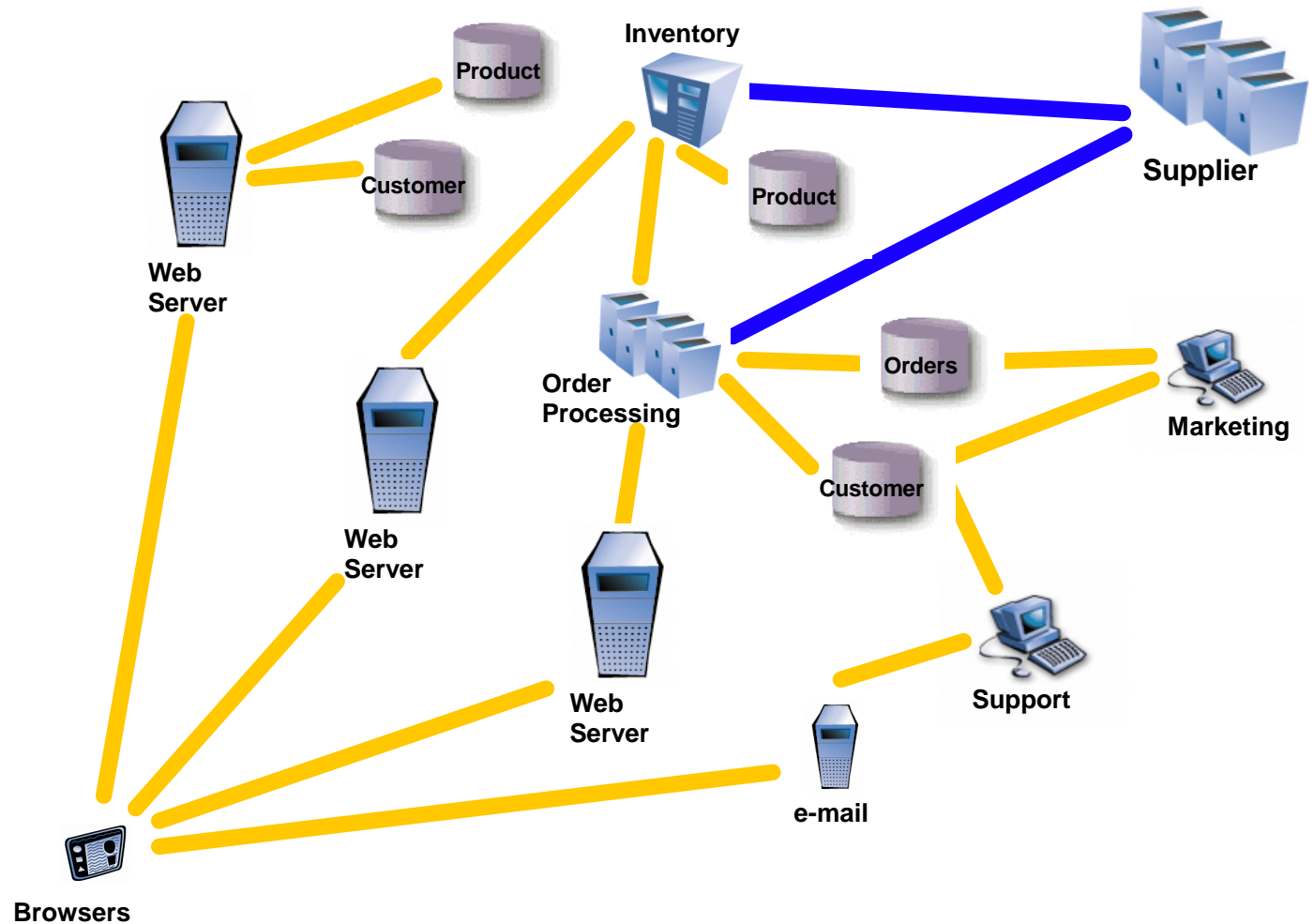
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e-business Growth Pattern

the real world ...



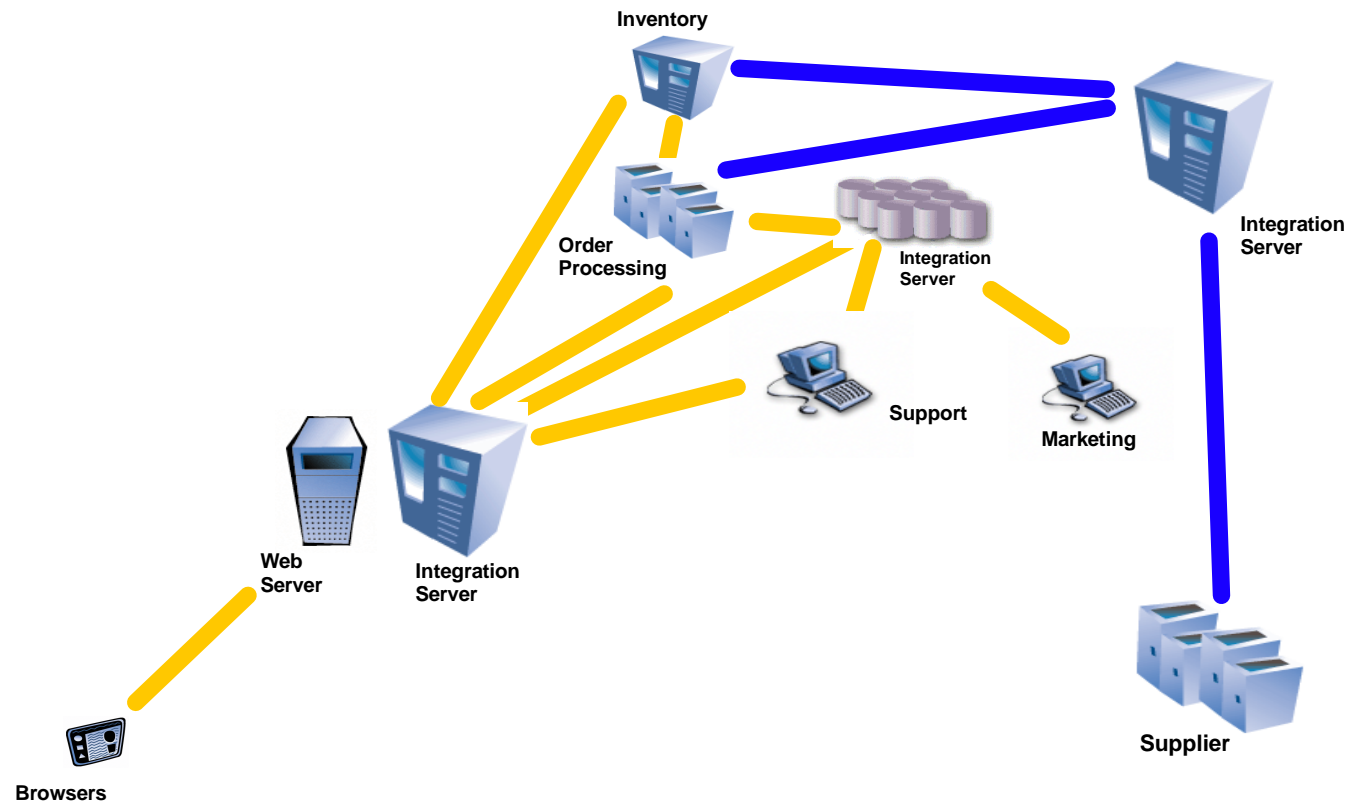
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Application Integration

- Simplify the connection topology
- Consolidate the business process
- Enhance Business-to-Consumer and Business-to-Business efforts



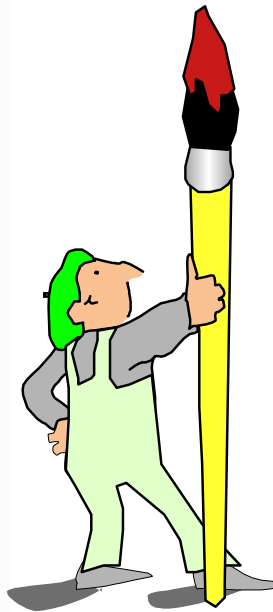
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Business Evolution ... not Revolution!



- Preserve the best of what there is!
- Ensure existing programming assets continue to provide existing business value
- Speed up traditional S/390 application development
- Reuse legacy assets for the Internet world
- Reduce Time to Market!



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The Story Where You are Today!



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What's happening today with COBOL programmers?

- COBOL programmers feel ...

- ▶ they're in a dead end job!
- ▶ no new features / functions to learn
- ▶ no career path;
no marketable skills
- ▶ colleagues involved in
new technology projects
are learning new skills!





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Your people are vital today and tomorrow

■ Your COBOL, CICS, DB2 Developers understand ...

- ▶ your business, your assets, your policies,
your customers
- ▶ system security, scalability, workload management
- ▶ your data and existing applications
- ▶ unit of work, quality of service
- ▶ production level systems
 - ◆ workload management
 - ◆ resource deployment

... and the S/390!



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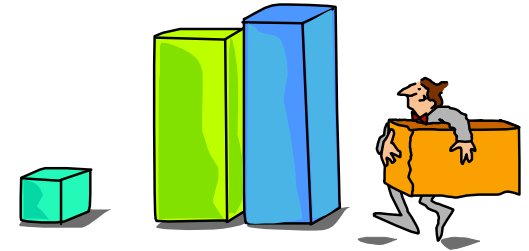


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Business Systems Issues

- **Very few business systems are static**

- ▶ Many occasional bug fixes
- ▶ New business requirements
 - ◆ New products, Removal of old products
- ▶ External factors
 - ◆ Euro, Year 2000, e-Commerce



- **Program logic has become convoluted with business function intertwined**

- **Data structures no longer map to the underlying business**

- **Documentation is either incomplete or nonexistent**



- **Competition**

- ★ Today's development is tomorrow's maintenance!

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Business Systems Positives

- **Legacy code is solid and proven!**
 - ▶ mission critical applications work

- **Processing is efficient and good**
 - ▶ applications running for years are well tuned
 - ▶ applications are often highly integrated with other business processes

- **Few surprises with ...**
 - ✓ legacy code
 - ✓ business system applications

... and it is possible to leverage it effectively!

- ★ **Your people are vital today and tomorrow!**



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What to do with Your Legacy Code!

Year 2000

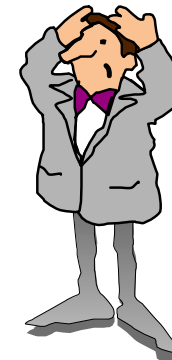


Did you leave your legacy code behind?

NO!

Do you leave your legacy code behind?

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NO!

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The Story Solutions!



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Business Issues

- Need to be more cost efficient
- Quick response to competitive pressures
- Address resource skills
- Offload development environment
- Leverage business assets while positioning to e-business



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It's the Next Step! e-business



- ▶ Be competitive!
- ▶ Internet / Intranet / Extranet

Evolution (of the old)

- Enhance existing applications
- Increase traditional programmer productivity
- Upgrade version-to-version
- Enhance development and testing environments

Revolution (to the new)

- Web-enable 3270 applications
- Modernize CICS interface
- Create new e-business applications with WebSphere
- Reuse existing resource skills

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How to Transition to e-business

■ Return on Investment for back office applications

- ▶ reduce cost of maintenance
- ▶ reduce cost of writing new applications
- ▶ reduce cost of development and testing
- ▶ increase reuse of back office applications
- ▶ increase reuse of programmer skills



■ Take Charge / Take Control

- ▶ 80% of all your development / testing resources are in back office applications
- ▶ Need to be competitive!

■ Control Evolution to get to Revolution!

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How and Why of Evolution

- Use modern workstation-based development tools to reduce migration effort
 - ▶ Position your company to
 - ◆ take advantage of new technologies
 - ◆ simplify and reduce the cost of maintenance

- Add new function to existing S/390 COBOL applications
 - ▶ Reduce development cycle time by using a safe development environment

- Tools:
 - IBM OPTI-AUDIT
 - CCCA/VSE
 - COBOL for VSE/ESA
 - Language Environment
 - Debug Tool
 - VisualAge COBOL

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How and Why of Revolution

- Extend existing S/390 applications to the internet with minimal effort
 - ▶ Expand access to your existing legacy applications
- Create new functions for the internet
 - ▶ Make it available to a wide audience
 - ▶ Simplify distribution and reduce cost of new function
 - ▶ Enter new market for B2C
 - ▶ Provide new links with suppliers and customers for B2B
- Modernize S/390 CICS transactions without modifying the host application
 - ▶ Provide wider access to your CICS applications
 - ▶ Provide a modern interface to CICS
- Tools:
 - VisualAge Generator
 - VisualAge for Java
 - VisualAge COBOL
 - VisualAge CICS

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How to Get to the Next Step!



★ Solutions ...

... grounded with

- ◆ customized services
 - consulting services
... You name it!
 - mentoring programs
- ◆ education

★ **Contact IBM VisualAge Services who offer customized services, mentoring programs, and education to support Application Development and Modernization!**

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DOS/VS COBOL Facts

- **DOS/VS COBOL went out of service December 31, 1999**
- **If your DOS/VS COBOL programs link and execute with the DOS/VS COBOL run-time library, then your programs are not supported by IBM after December 31, 1999**
- **If your DOS/VS COBOL programs link and execute with the Language Environment run-time library, then your programs are supported by IBM**
- ★ **Think run-time migration, then selective source conversion!**

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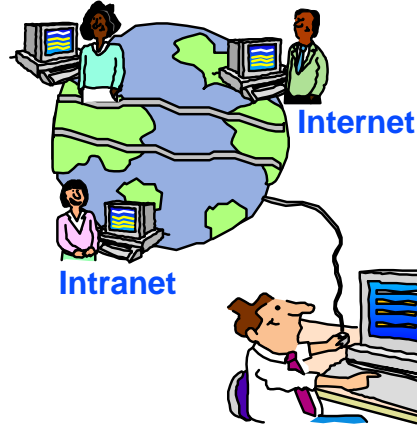
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IBM e-business!

Extranet



■ Integration ... Transformation ... Qualities of Service

- ◆ new business functions
- ◆ e-business tasks
- ◆ enterprise back office application maintenance

■ Accelerate your transition to e-business!

IBM is here with ...

- ◆ products,
services,
mentoring, and more

Be on your way to e-business!



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