

RO3:

Enterprise Resource Planning (ERP)+FM

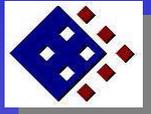


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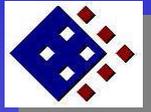




Agenda

- Definition and Overview
- ERP FM Applications
- FM Technology ERP Applications
- Case Study: Pioneer Hi-Bred

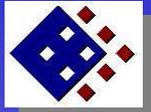




Definition of ERP

- Enterprise Resource Planning ties together manufacturing, inventory control, distribution, engineering, human resources, project management, FM services and maintenance.





ERP Functions

- Sales
- Engineering
- Inventory Mgmt.
- Purchasing
- Production
- Accounting
- Planning
- Production
- Quality Management
- Transportation



In-House
Core
Compe-
tencies

Rigid
Infrastruc-
ture
Processes

Products
and
Services

Channels

Customers

Traditional Business Process

Customers
Needs

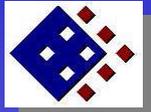
Integrated
Channels

Products
and
Services

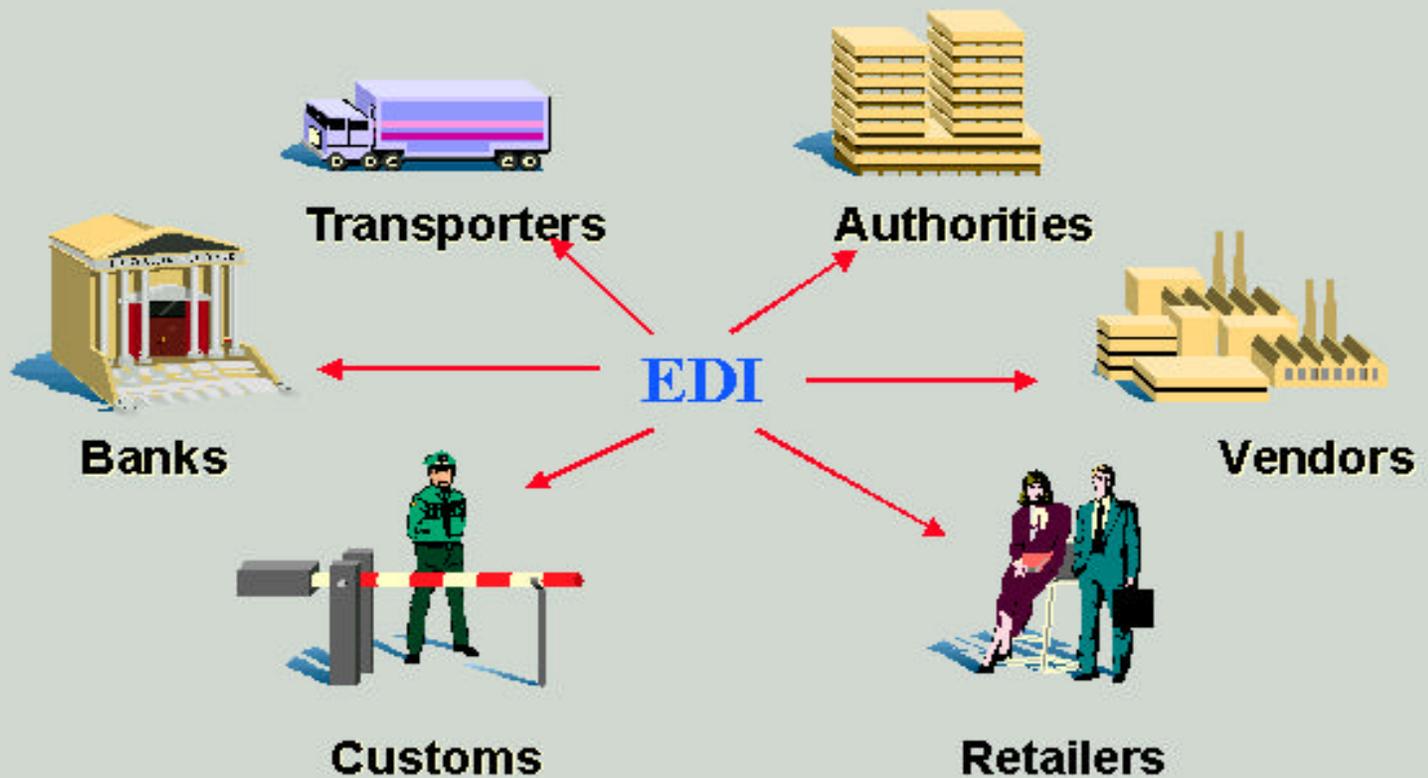
Flexible
Infra-
structure
Processes

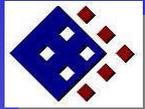
Outsourced
In-House
Core
Competencies

E-Business Design

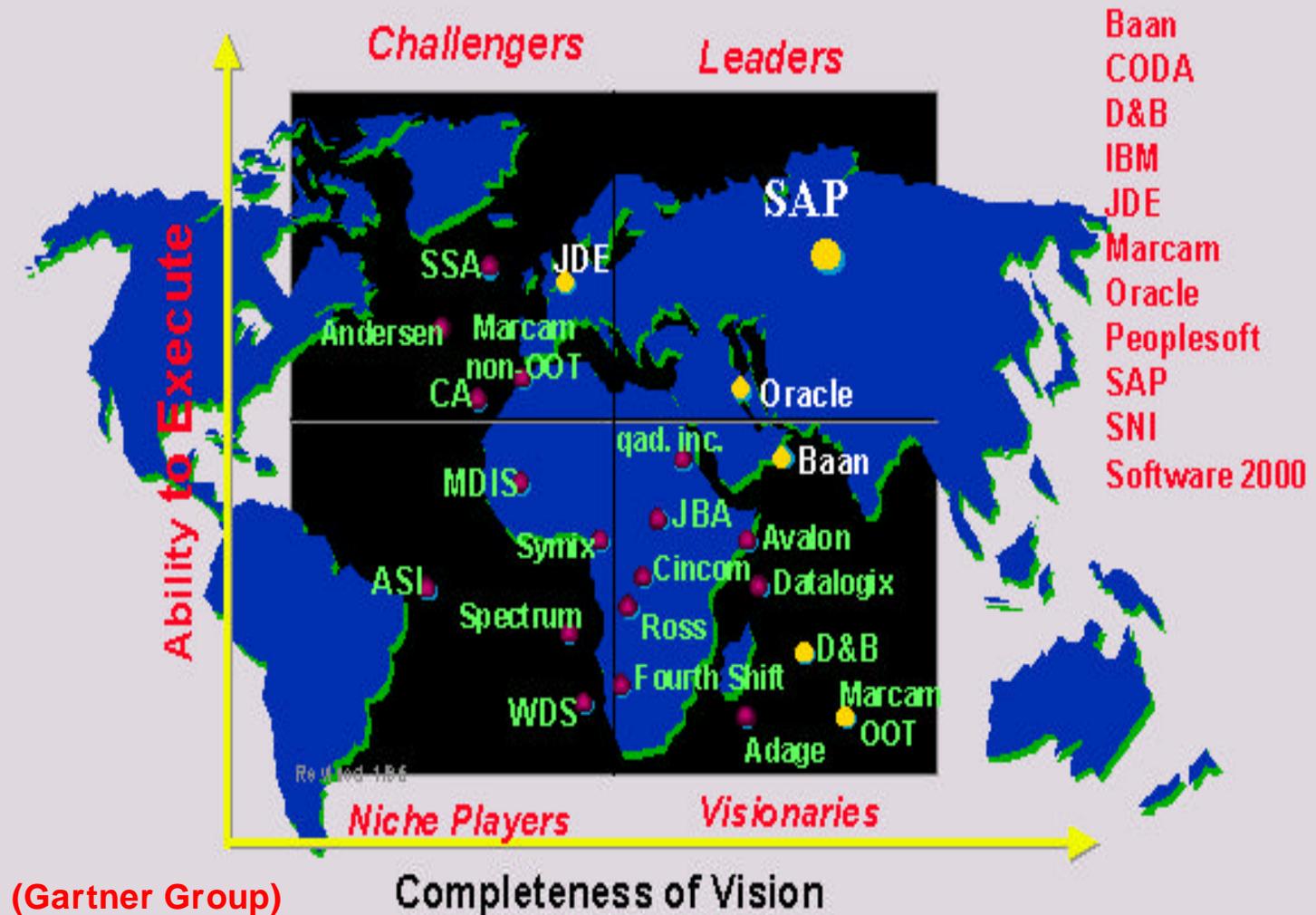


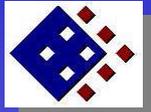
Electronic Data Interchange (point-to-point) vs. Internet





ERP SUPPLIERS





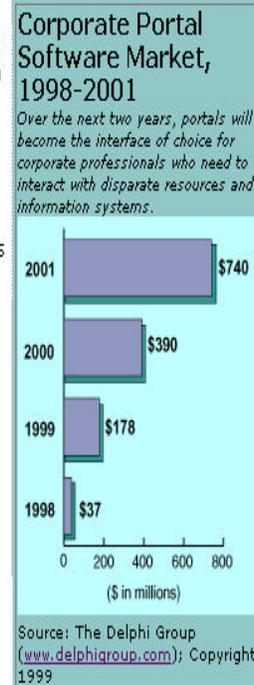
Portal Exchanges

Delphi Group projects corporate portal software market at \$740 million in 2001

More than half of companies surveyed already have portal projects under development

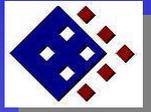
During 1999, the number of software products targeting the emerging market for corporate portals has exploded, with offerings currently available from over four dozen vendors. According to research by The Delphi Group, these software offerings will represent a market of \$178 million by the end of 1999. Projecting ahead, Delphi forecasts compound annual growth in excess of 100% through 2001, to a total of \$740 million.

"Over the next two years corporate portal sites will rapidly become the interface of choice for professionals to interact with previously disparate corporate information and processes, with the Internet, and with extranet partners, customers, and suppliers," explains Hadley Reynolds, director of Research at the Boston-based firm. "Portal development is a necessary stage both in the maturing of corporate intranets and increasingly in the development of business-to-business commercial networks..



- ERP and Portal Software
- ASP Model
- Portal as B-B link with service providers, suppliers, customers
- Portal Offerings
 - Applications (single point of access for multi-source integration)
 - Tools (search engines, visualization interfaces, ..)
 - Application Portals (FM ERP)

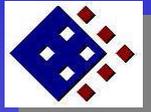




ERP and BPR

- Business Process Re-Engineering (BPR) study must be done before ERP
- BPR defines deficiencies of existing systems
- BPR tries to maximize productivity through re-structuring and re-organizing the human resources as well as the divisions and departments within an organization

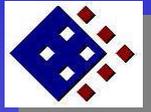




Potential FM Implications

- Tracking physical /spatial assets of a corporation (including depreciation)
- Infrastructure management and IT implications
- Work management implications
- CAFM implications (current/future)

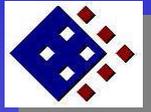




ERP + FM

- What is the impact of ERP on the FM Business?
 - Greater visibility on how you are spending your resources
 - Greater accountability on how you are spending your resources
 - No Longer will you be able to massage your reports - quarterly - annual to patch over the cracks
 - Justifications for resources will not be guesses - facts and figures will be visible online and will be real time
 - Result - you will be working with an Open Book (DynCorp)

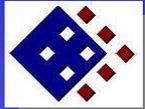




How did we get there?

- History
 - Facilities Information Systems - tools for managing
 - Islands of data - merging
 - Plate Tectonics - as plates rub up - Earthquakes
 - era of Smart Buildings
 - Internet Time
 - Need to tie the Islands without the fractures



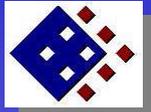


Spectrum of Applications

- Range of tools for the FM
- From Space Management - Early CAFM applications
- ERP - Integrated solutions



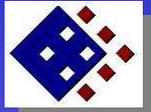
	ERP SUITES											
	INFRASTRUCTURE MANAGEMENT						WORK MANAGEMENT - CMMS					
							SPACE MANAGEMENT - CAFM					
ACT 1000												
Aperture												
ARCHIBUS												
AssetWorks												
Avantis.Pro												
Baan												
Champs												
Cogz												
Empire												
EPIX												
Facility Center												
Famis												
FIS												
Foresight												
GP MaTe												
Hansen												
IMMpower												
Indus												
Innovus FM1												
Ivara EAM												
JDE AMM												
Maincor												
MainSaver												
Maintenance Director												
Maintimizer												
Maximo												
MegaMation												
MIMS												
MP2												
MP5												
MS2000												
Oracle												
OZ												
PeopleSoft												
PlannSoft												
Proteus												
SAP												
Synergen												
TabWare												
Visio												
WOW												
YORVIK												



Integration with ERP - Benefits

- Integrating facilities data with corporate data
 - Greater depth of information available
 - Improved consistency of data
 - Improved accuracy of information
 - Enter Data once and share

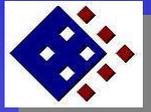




Can it work for FM?

- Yes But....
 - You need to be organized in your FM group
 - Internet Speed can result in hitting the Brick Wall at higher speeds
 - Need to define consistent standards for your data similar to your space and workstation standards
 - Your applications must be open - API's

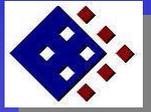




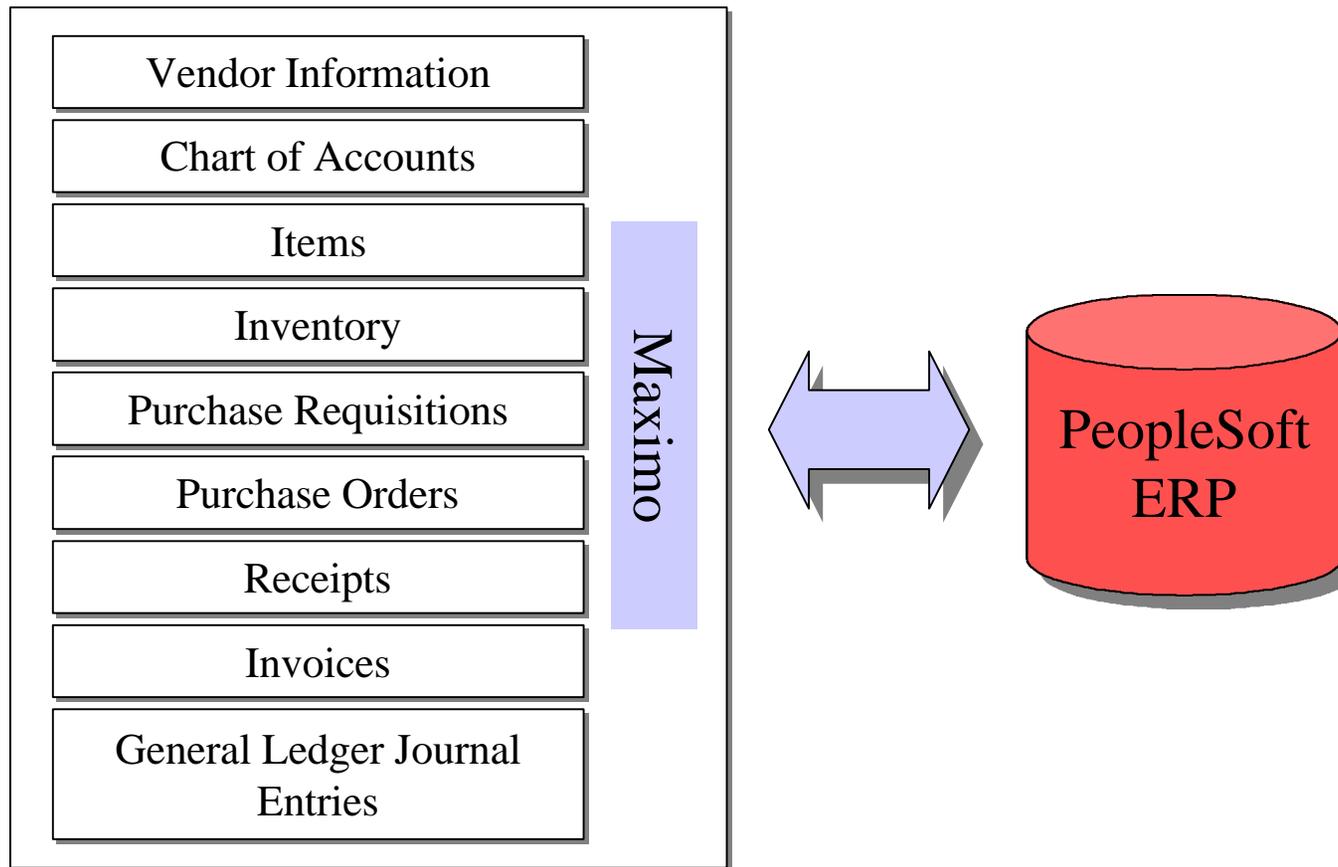
What are the FM Vendors doing?

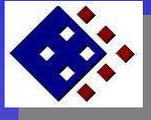
- Maximo - PSDI
- MP2 - DataStream
- FAMIS - Prism
- AssetWorks - CSI MAXIMUS
- FIS - CAFM





What are the FM Vendors doing - Maximo?

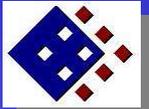




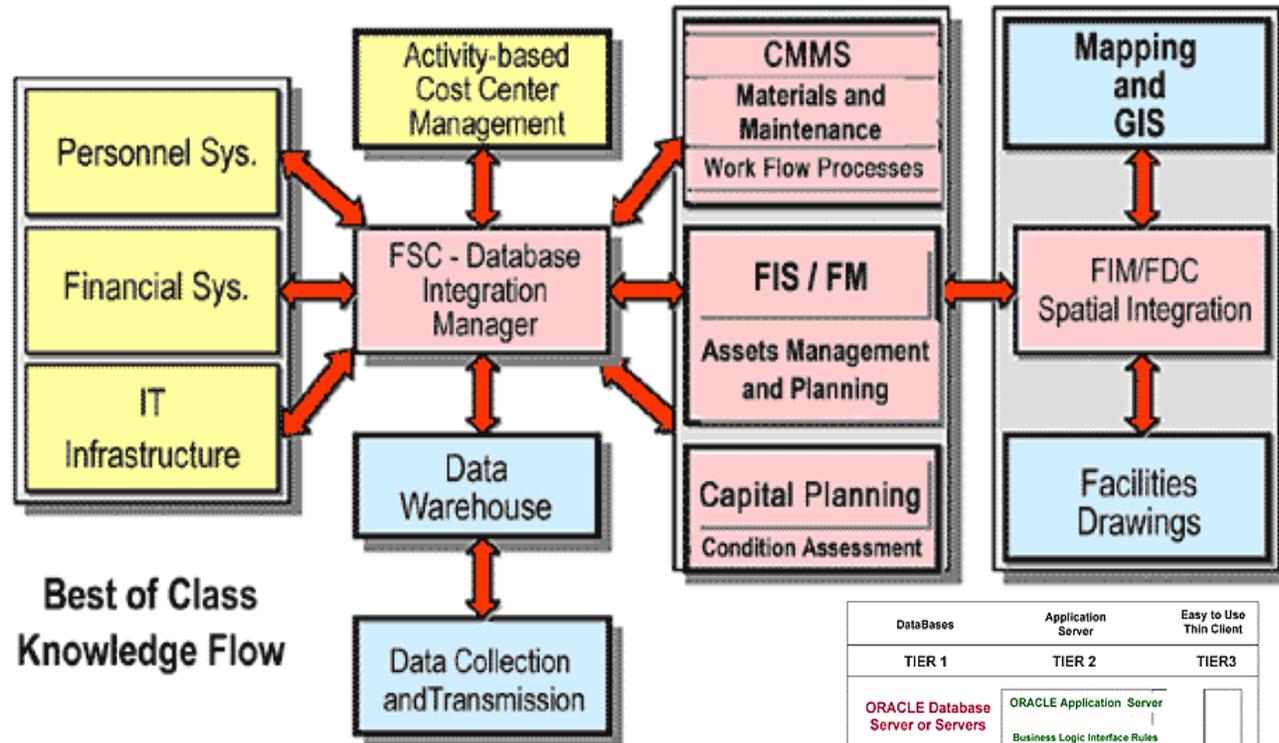
Prism's FAMIS & Oracle Financials

- Links at the database level
- Procedure Libraries trigger actions based on business rules
- Pure Oracle solution

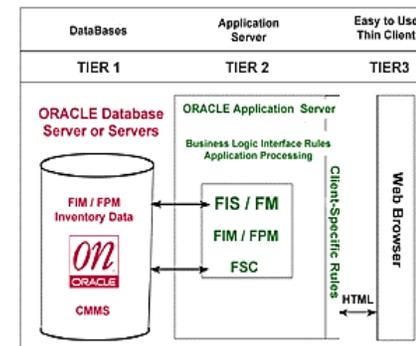


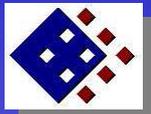


FIS and Integration

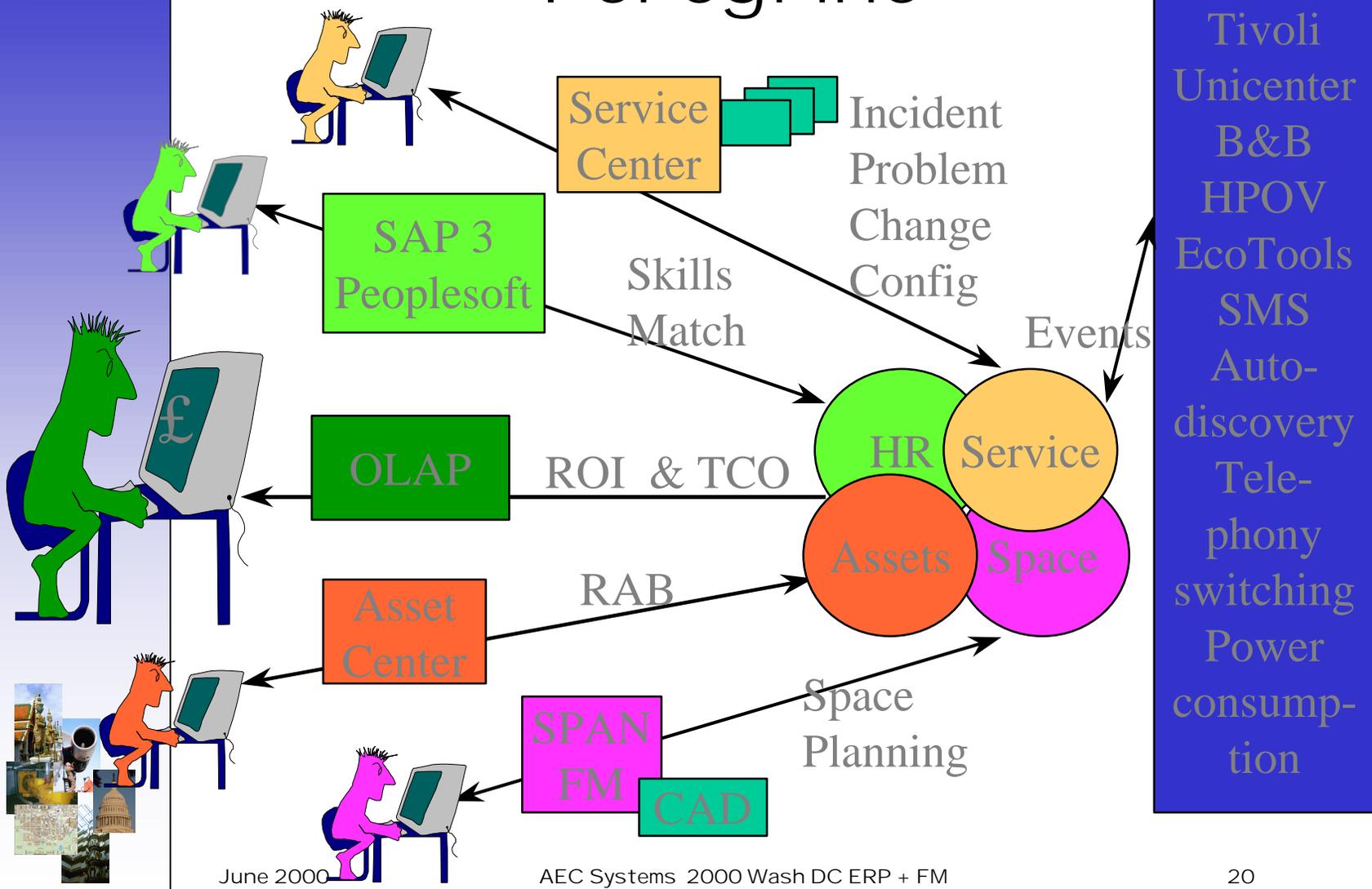


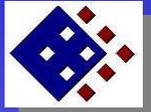
**Best of Class
Knowledge Flow**





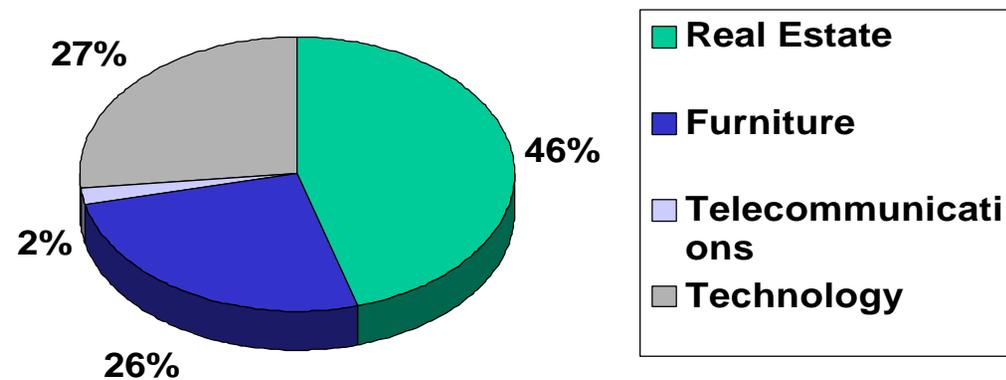
Peregrine





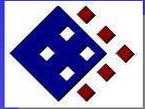
Cost of Ownership

Typical Office Environment- Cost Breakdown
(percent of total annual cost)



In-progress survey being conducted by GSA, 1999





ERP Vendors JD Edwards

Logistics/Distribution Suite
Forecasting
Requirements Planning
Enterprise Facilities Planning
Sales Order Management
Advanced Pricing
Procurement
Work Order Management
Inventory Management
Bulk Stock Management
Quality Management
Advanced Warehouse Management
Equipment Management
Transportation Management
Job Cost
Service Billing

Energy and Chemical Suite
Agreement Management
Advanced Stock Valuation
Sales Order Management
Bulk Stock Management
Load and Delivery Management

Payroll Suite
Payroll
Time Accounting

Human Resources Suite
Human Resources

Customer Service Management Suite
Customer Service Management

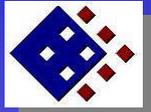
Financial Suite
General Accounting
Accounts Payable
Accounts Receivable
Fixed Assets
Financial Modeling and Budgeting
Multi-Currency Processing
Cash Basis Accounting
Time Accounting
Canadian Payroll

Services Suite
Contract Billing
Subcontract Management
Change Management
Property Management

Manufacturing Suite
Configuration Management
Cost Management
Product Data Management
Capacity Planning
Shop Floor Management
Advanced Maintenance Management

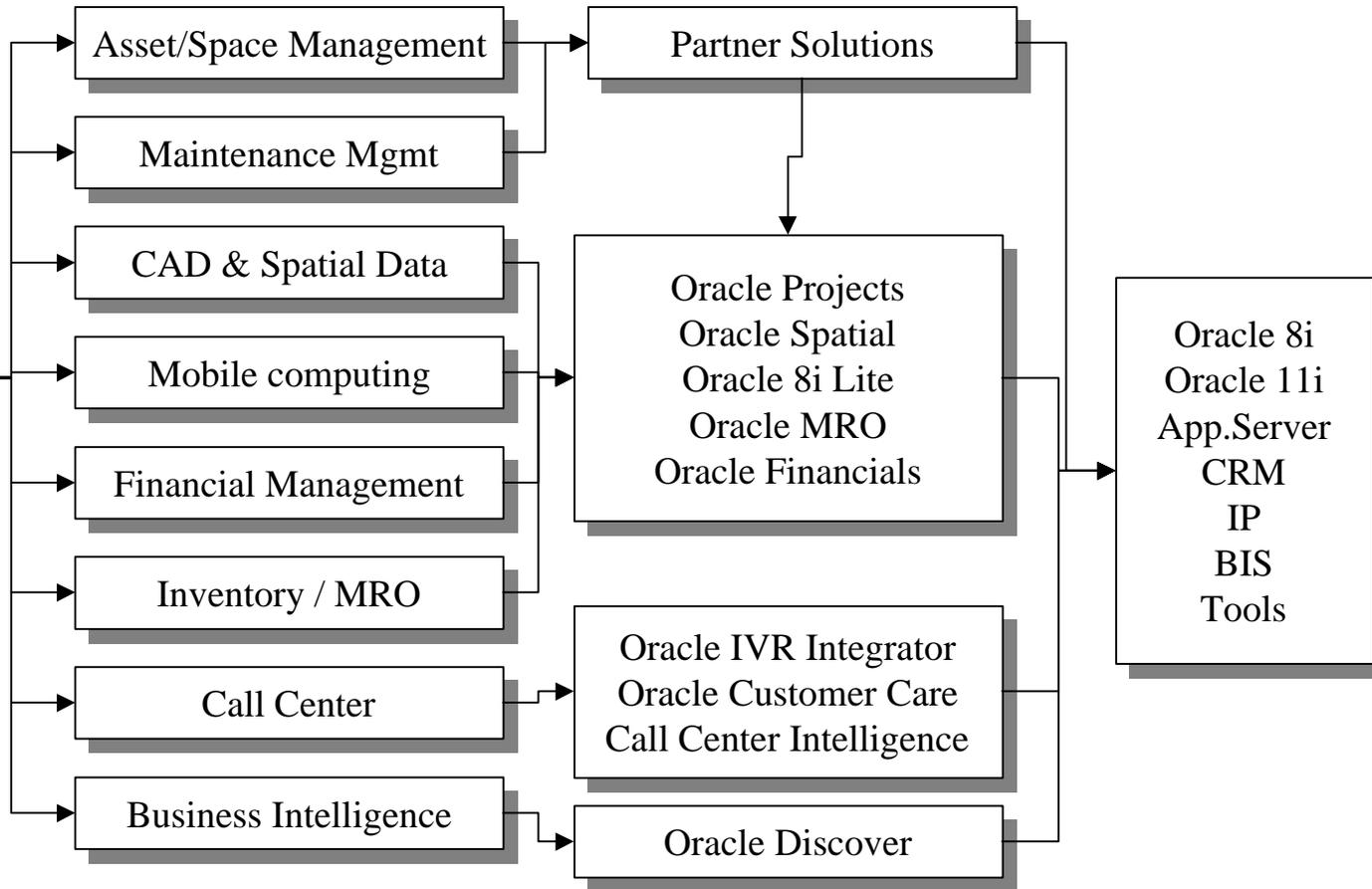
Project Management Suite
Procurement
Inventory Management
Equipment Management
Job Cost
Work Order Management
Subcontract Management
Change Management
Contract Management
Contract Billing
Service Billing
Property Management

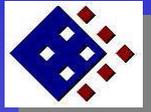




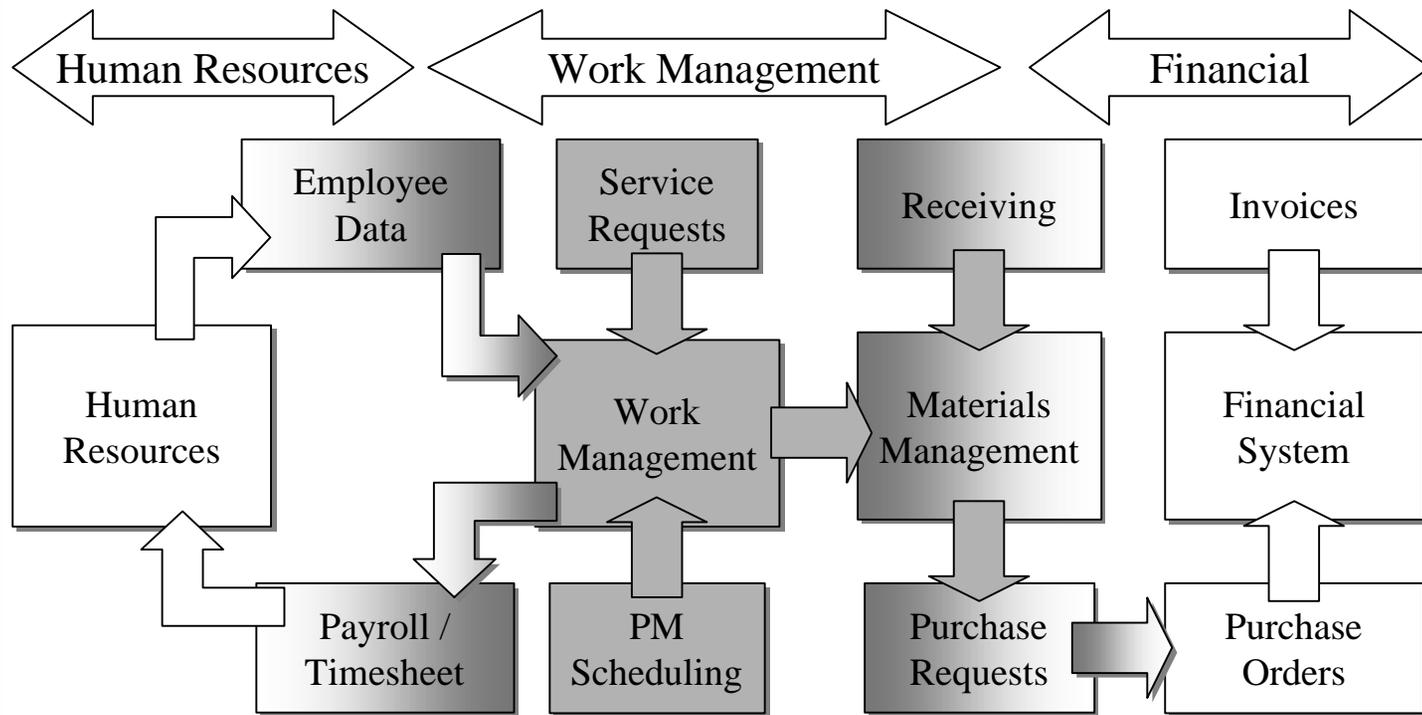
ERP Vendors - Oracle e?

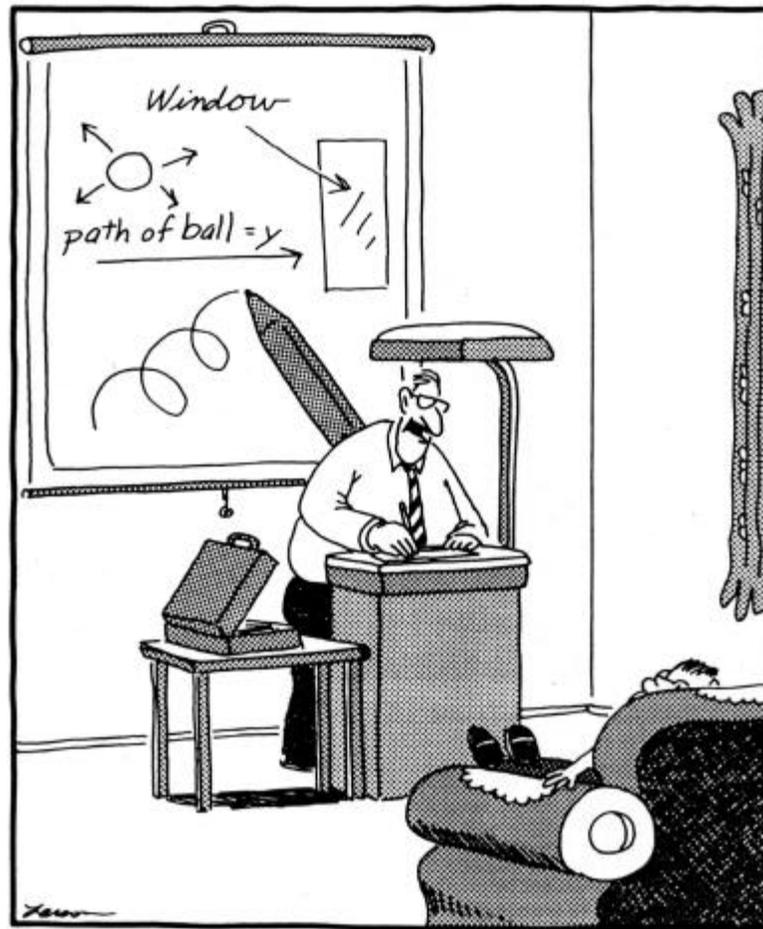
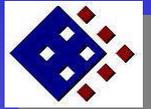
Facilities Management



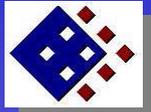


Areas of Functional overlap





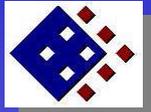
Eventually, Billy came to dread his father's lectures over all other forms of punishment.



June 2000

AEC Systems 2000 Wash DC ERP + FM

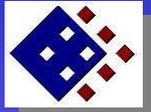
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Pioneer and FM

- Implemented first CAFM system in 1990
- Implemented FM:Space in 1994
- Have REMWeb-facilities website
- Produced Report on US Properties Fall 1999

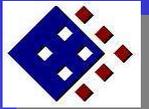




SAP Implementation

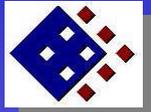
- Why ERP?
- "QUEST" Project
- My Involvement





SHOE





What's Up Now...

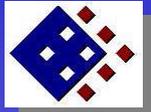
The Good



June 2000

AEC Systems 2000 Wash DC ERP + FM

30



What's Up Now...

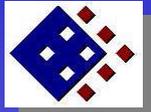
The Bad



June 2000

AEC Systems 2000 Wash DC ERP + FM

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What's Up Now...

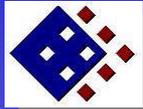
The Ugly



June 2000

AEC Systems 2000 Wash DC ERP + FM

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Display Asset: General data

Asset Edit Goto Extras Environment Settings System Help

Asset values Depreciation areas

Asset: 208015 0 DELL LATITUDE CPx LAPTOP PC - WESTLK
Class: 7100 Computer Equipment Company code: US10

General data

Description: DELL LATITUDE CPx LAPTOP PC - WESTLK

Asset main no. text: DELL LATITUDE CPx LAPTOP PC - WESTLK

Account determ.: U140500A M&E-Machinery & Equipment

Serial number: []

Inventory number: []

Quantity: 0.000 []

Manage historically:

Inventory

Last inventory on: [] Inventory Ind.

Inventory note: []

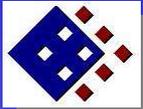
Posting information

Capitalized on: [] Deactivation on: []

First acquisition on: [] Plnd. retirement on: []

Acquisition year: 0 000 Ordered on: []

PR2 (1) (150) sw09 OVR 04:36PM



Display Asset: Time-dependent data

Asset Edit Goto Extras Environment Settings System Help

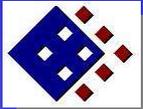
Asset values History... Intervals ... New interval Depreciation areas

Asset 200015 0 DELL LATITUDE CPx LAPTOP PC - WESTLK
Class 7100 Computer Equipment Company code US10

Time-dep. data from 01/01/1900 to 12/31/9999 / Single interval

		History
Cost center	70101000	Capital Investment <input type="checkbox"/>
Resp. cost center		<input type="checkbox"/>
Activity type		<input type="checkbox"/>
Int. order		<input type="checkbox"/>
Maintenance order		<input type="checkbox"/>
Plant	JH02	Des Moines-US-Capital Square <input type="checkbox"/>
Location		<input type="checkbox"/>
Room		<input type="checkbox"/>
Tax jurisdiction cde	1615303201	<input type="checkbox"/>
License plate no.		<input type="checkbox"/>
Personnel number	0	<input type="checkbox"/>
Shift factor	0.00	<input type="checkbox"/>
Asset shutdown	<input type="checkbox"/>	<input type="checkbox"/>

PR2 (1) (150) sw09 OVR 04:38PM



Display Asset: Origin data

Asset Edit Goto Extras Environment Settings System Help

Asset values Depreciation areas

Asset: 200015 0 DELL LATITUDE CPx LAPTOP PC - WESTLK
Class: 7100 Computer Equipment Company code: US10

Origin data

Supplier: [] []
Manufacturer: []
Asset purchased new:
Purchased used:
Trading partner: []
Country of origin: []
Type name: []

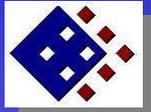
Internal specifications

Original asset: [] [] Acq. on: []
Org. acquisition year: 0
Original value: 0.00
In-house prod. perc.: 0.00

Account assignment for investment

Capital inv. order: []
WBS element: 00ADCOMPA001-F Admin Computers-Finance

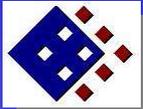
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What We've Learned

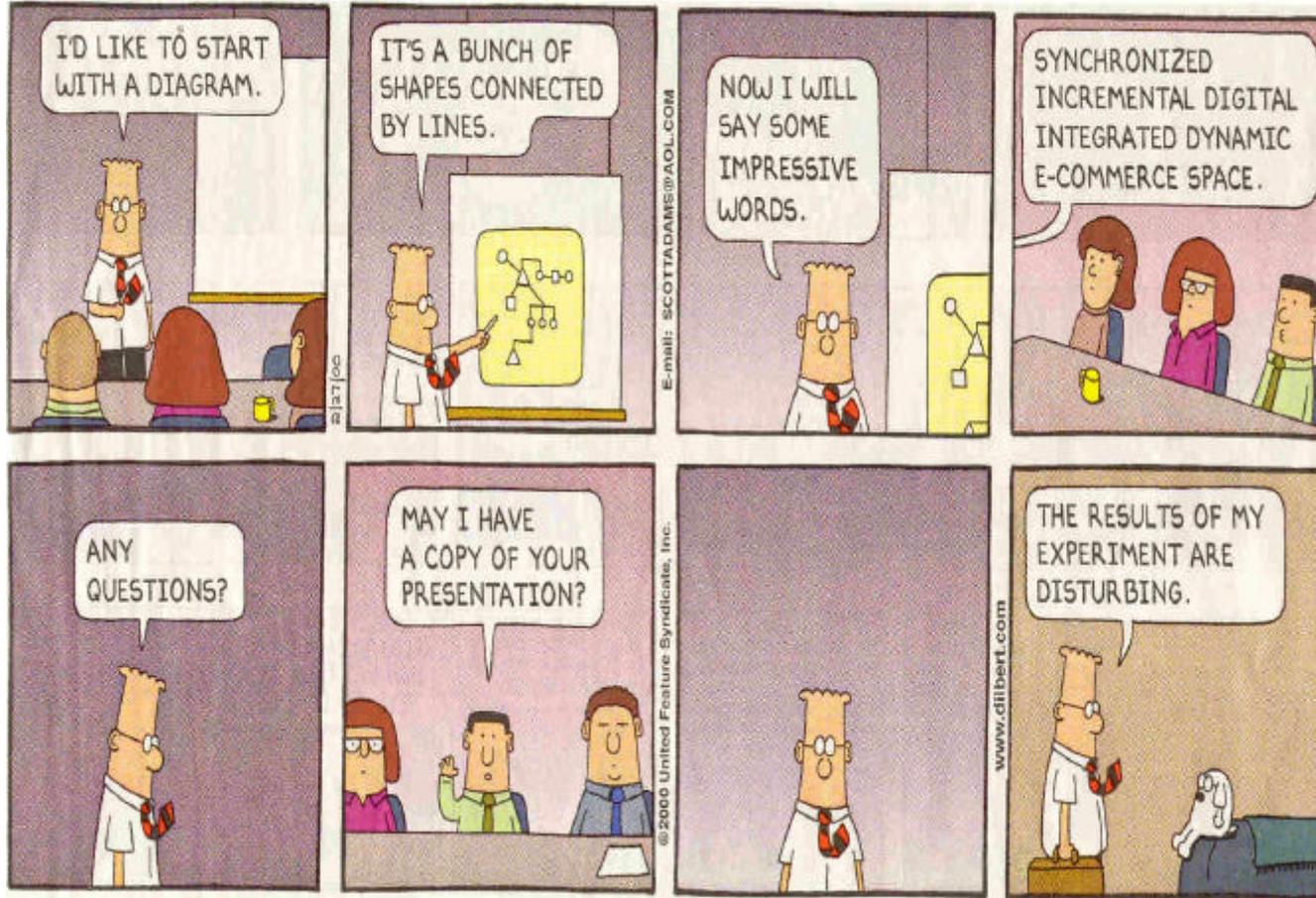
- Keep data in appropriate location/on system that works best
- Technology problems are easy; the tough ones are business process problems (which are the majority)
- Keep close to your HR Department; you need their data and they need yours
- Use of the Web will continue to grow
- The only thing constant is change; deal with it.

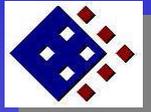




DILBERT

BY SCOTT ADAMS





The End or Just a Beginning?

- Questions and some Answers!

