

Welcome

to Transformation and Innovation 2007

The Business Transformation Conference

Paul A. Strassmann

Professor

George Mason University

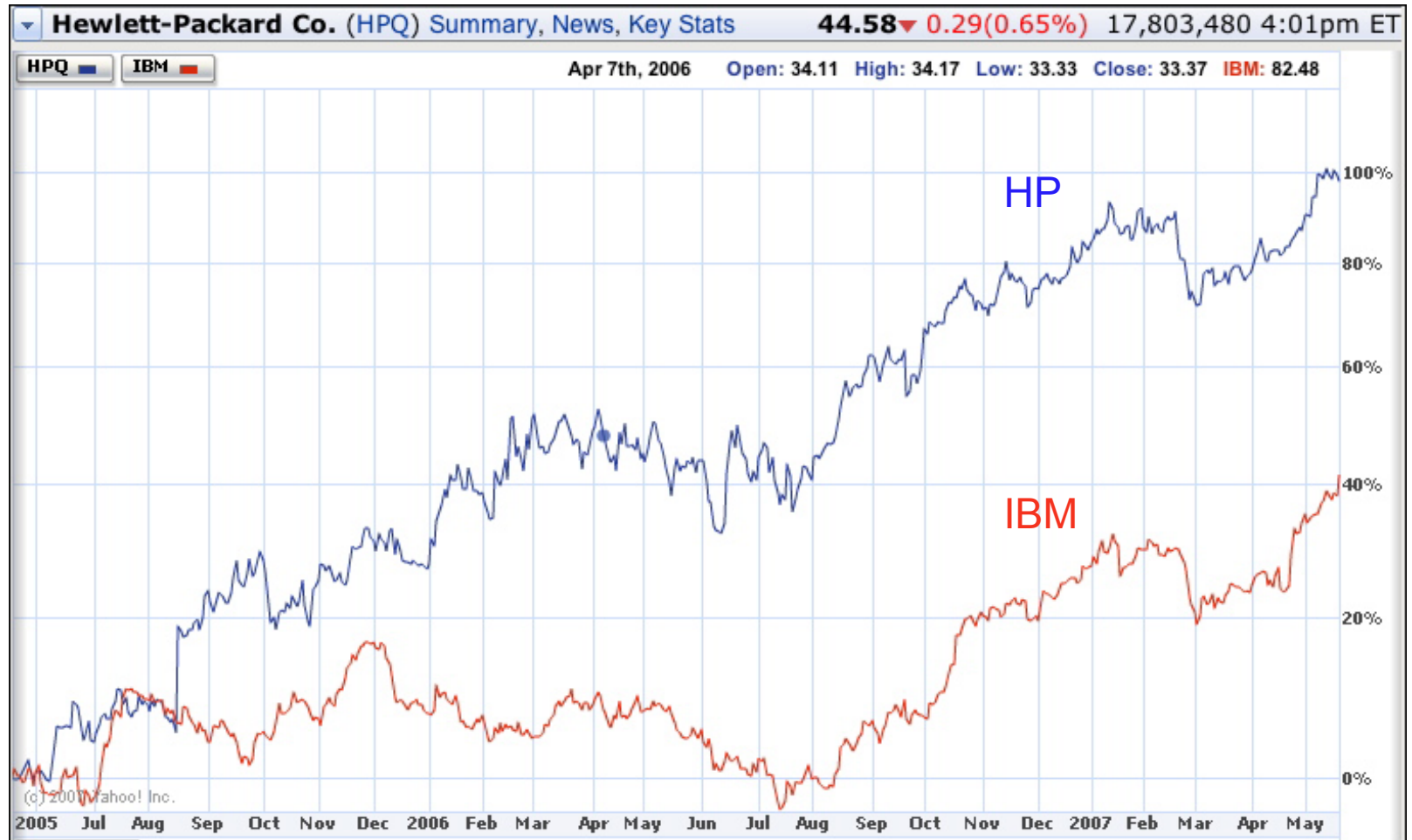
Session Title:

Transformation of HP Information Technologies

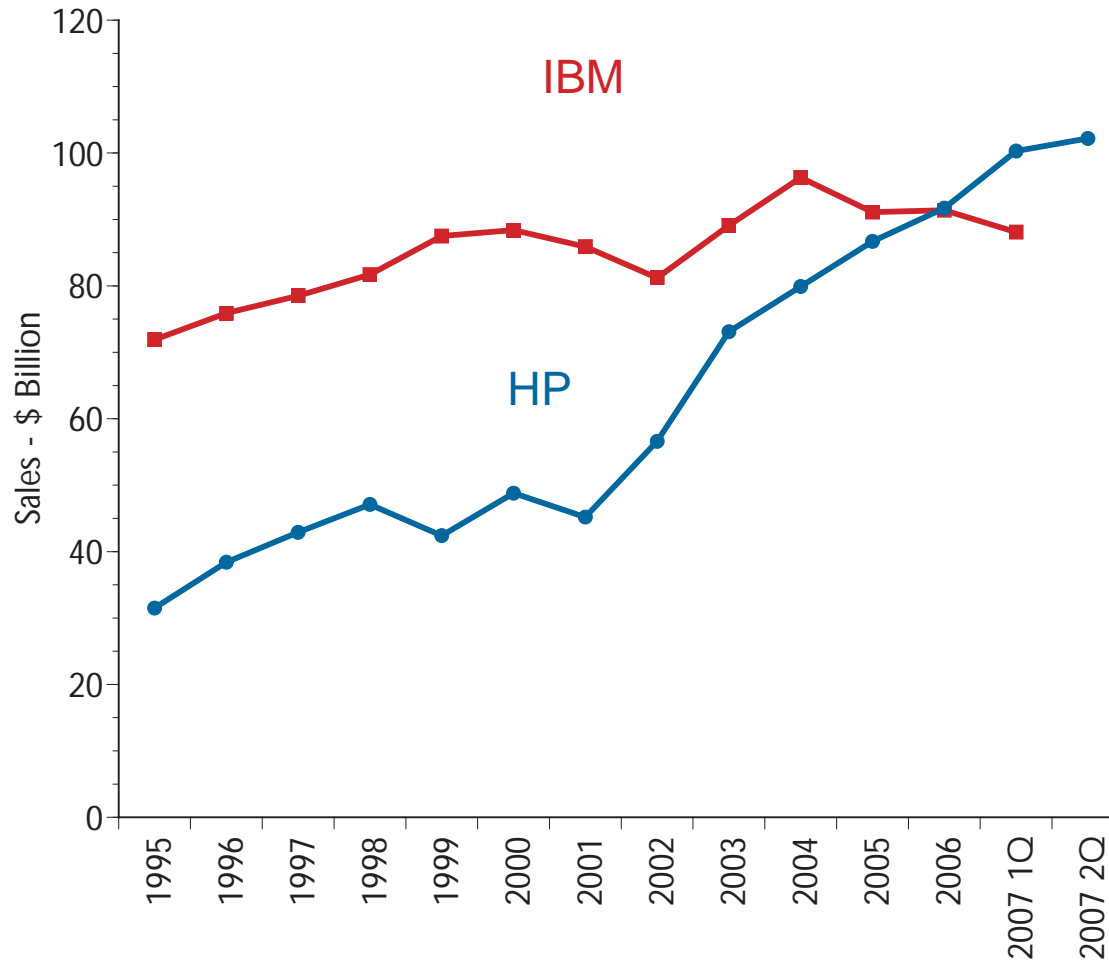
HP Transformation Program

- Reduce number of applications from 5,000 to 1,500.
- Reduce the number of servers from 19,000 to 10,000.
- Increase server utilization from 20% to 80%.
- Consolidate 100 world sites for IT development to 29.
- Consolidate 85 data centers to six.
- Build a data warehouse to be SOA accessible.
- Reduce I.T. workforce from 19,000 to 8,000.
- 80% of staff on new projects, 20% on maintenance.

HP vs IBM Share Prices



HP vs. IBM Revenues

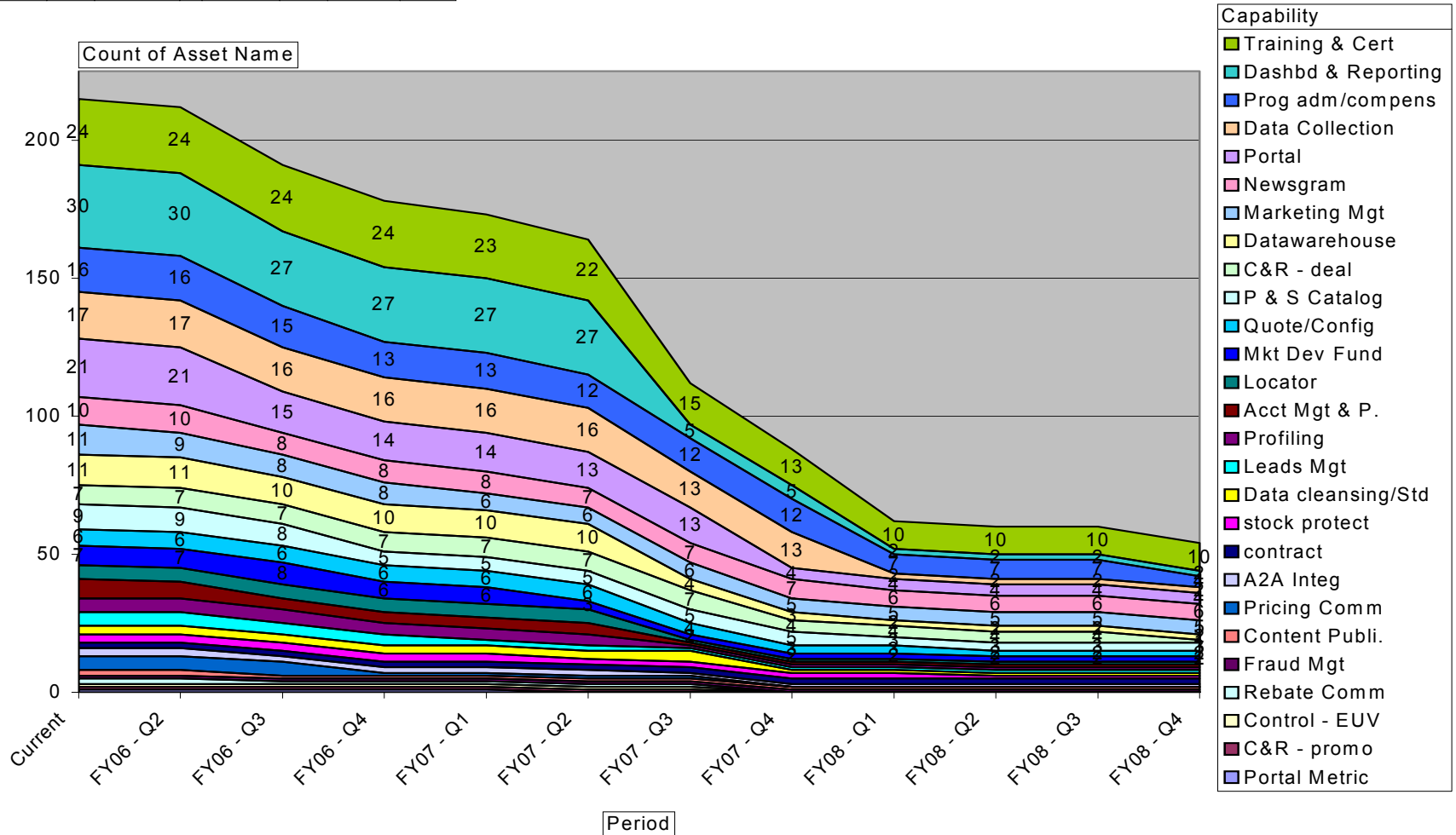


Reduce Applications

Application Simplification

Example of Application Simplification

Domain (All) Primary Y Region (All) Owner GCP



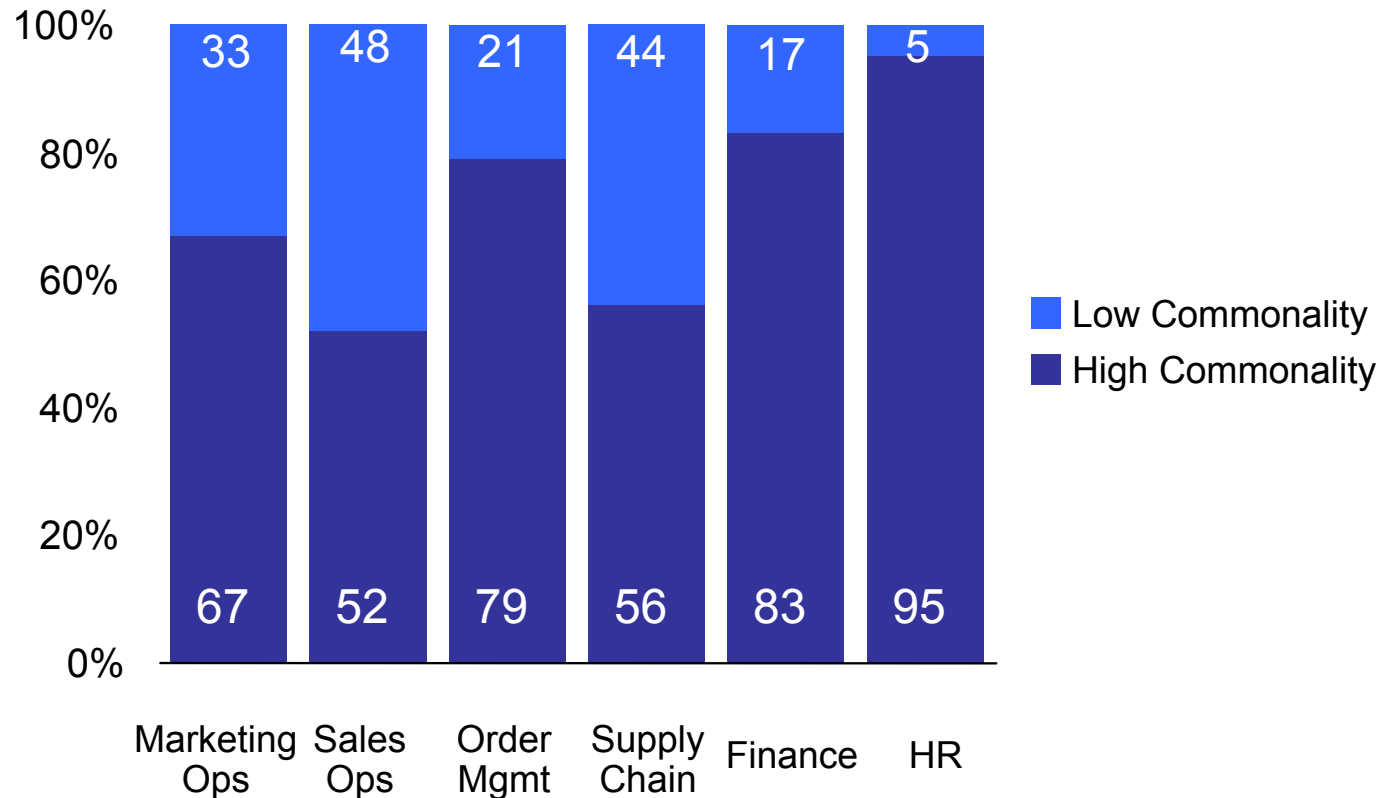
Examples of Application Reduction

Consolidate personnel information systems into a single data base to be accessible from a portal.

Retire 84 procurement transaction systems into five.

HP portal offers capabilities for user-initiated inquiries.

Standardize, Consolidate, Integrate



Improve the IT Infrastructure

Reorganize the Information Infrastructure

Data Center Consolidation

85 locations to three geographical zones;

Two sites per zone with total space ~400,000 sq ft;

Lower cost structure – eliminate redundant costs;

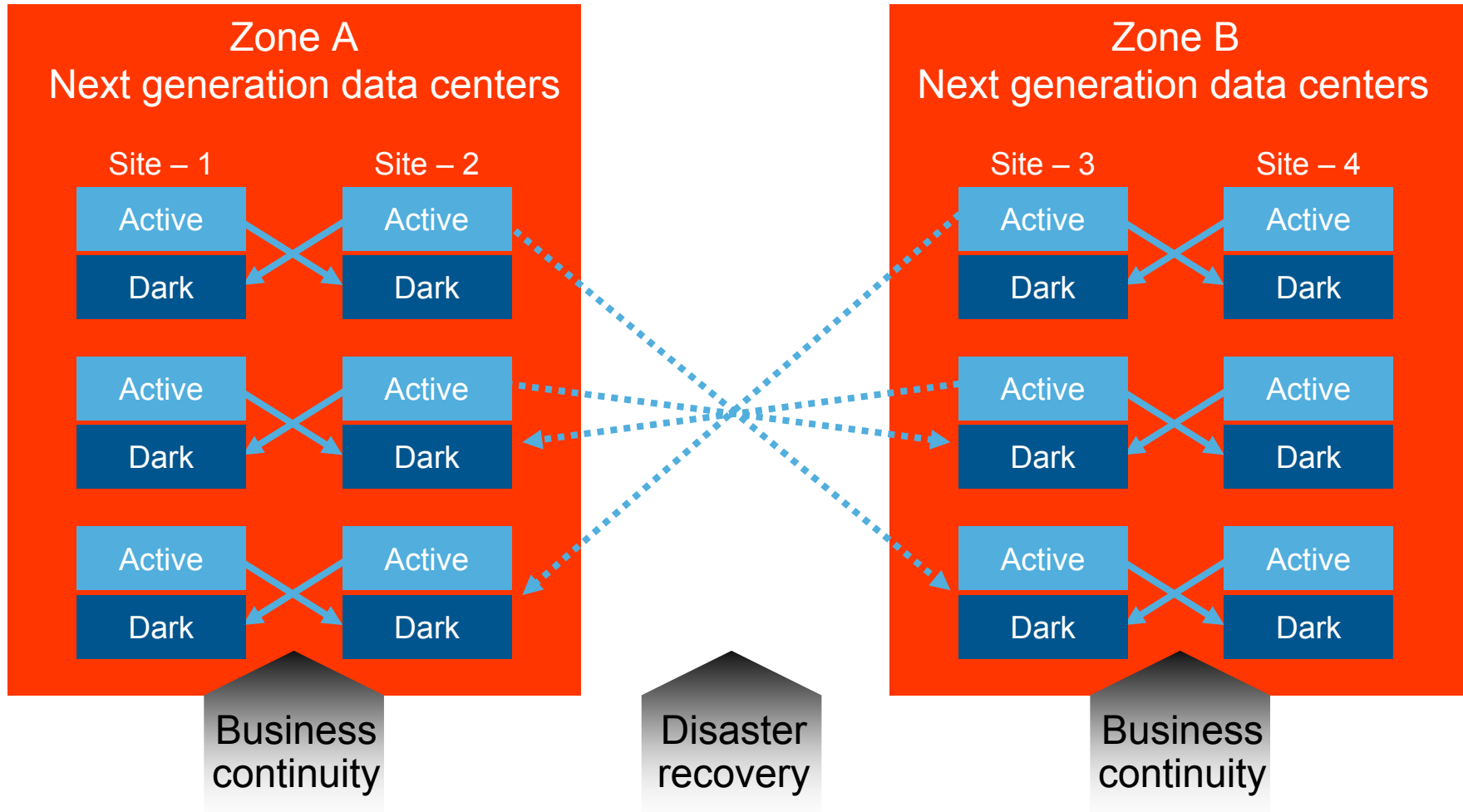
Each site designed for high availability, disaster recovery and business continuity;

Refresh to current technology.

Data Center Consolidation

Reductions	Increases
60% retirement of legacy applications	global applications
30% fewer servers	80% more processing power
decrease in cost of storage	double the storage
half the cost of networking	30% more bandwidth
less HP IT cost	more capability

Continuity and Disaster Recovery



Backbone Network

Servers connect to the network at 1 Gbps;

Network edge switches interconnect at 10 Gbps;

Routing handled at network level rather than at the host layer

- No need for host routing tables;
- E-service networks will have a direct routed path to internal networks;
- Host will be connected to either internal or external networks;

Intrusion Detection System in front of e-services environment;

Intrusion Prevention System in front of internal networks.

Infrastructure Policies

No dedicated IP addresses; everything is Direct Addressing

Standard naming conventions used for all servers

All storage is shared; No dedicated storage

Business Continuity and Disaster Recovery is standardized

No regional application.

40% increase in use of shared services

Development and Testing in shared environments

Equipment provisioning to plan, not to future.

Applications transformed to operate globally and centrally

Database Administration

Current

Planned

Process

- 20+ ways to manage databases
- 20,000 database incidents/month
- Dozens of weak monitoring methods
- Global and standardized processes
- <850 database incidents/month
- Two global monitoring solutions

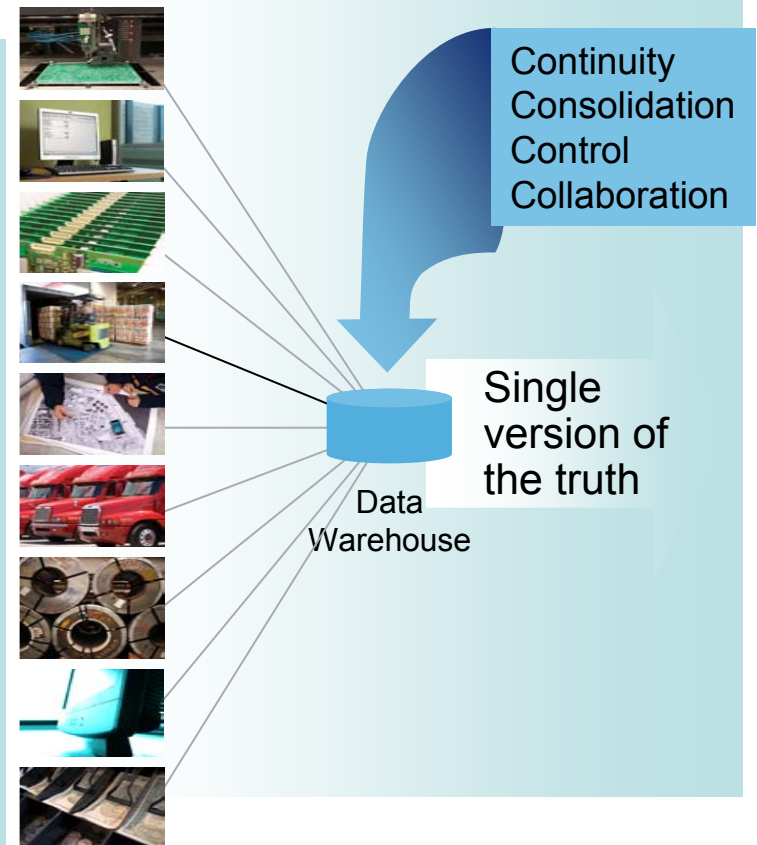
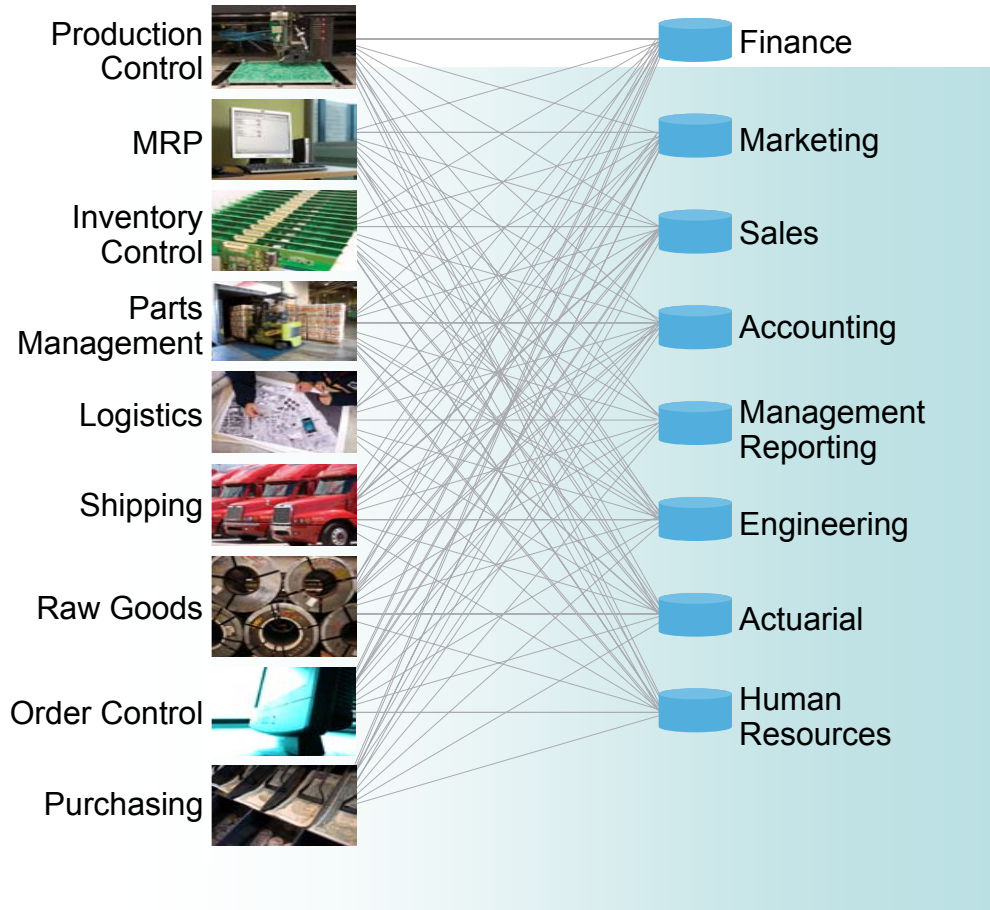
Technology

- 17+ database technologies
- 150+ point releases/year
- 5,830 database failures
- 14,292 databases
- Standalone servers & storage
- 3 database technologies
- 6 releases/year
- <1,500 database failures
- <4,000 databases
- Pooled/virtualized IT resources

Enterprise Data Warehouse

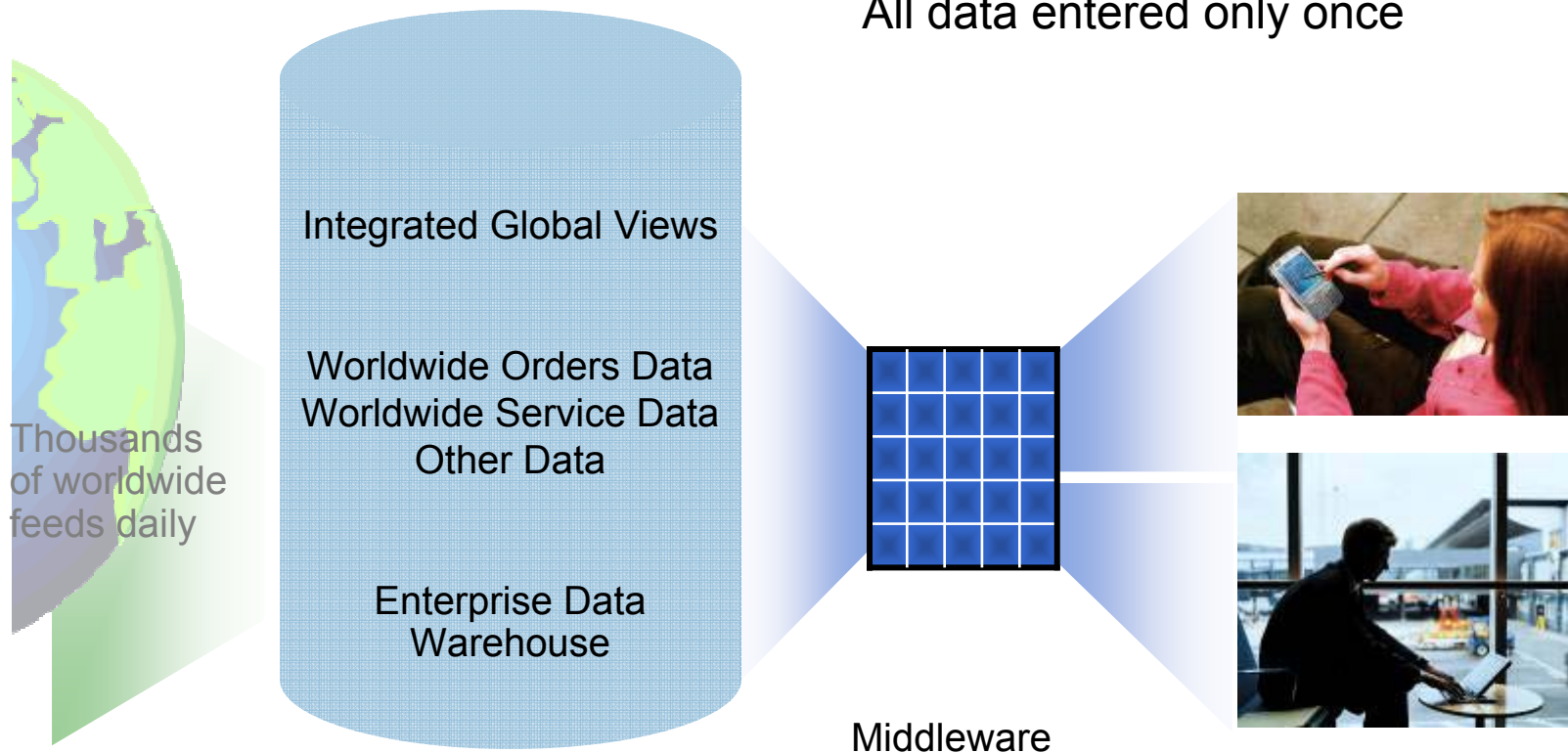
Legacy applications = chaos

Enterprise data warehouse = order



Global Data

Data is complete and detailed
Define, model and map all data
Ensure all data has integrity
Provide complete access
Flexibility and scale
All data entered only once



Standards

Standard servers and storage

Technology Standardization

Technology version harmonization

Increased virtualization

Load balancing, clustering, database mirroring

Deliver Improvements

Measure Progress in Transformation

IT Budget

	HP - 2004	HP - 2008
I.T. Spending - \$ Billions	\$3.04	\$2.11

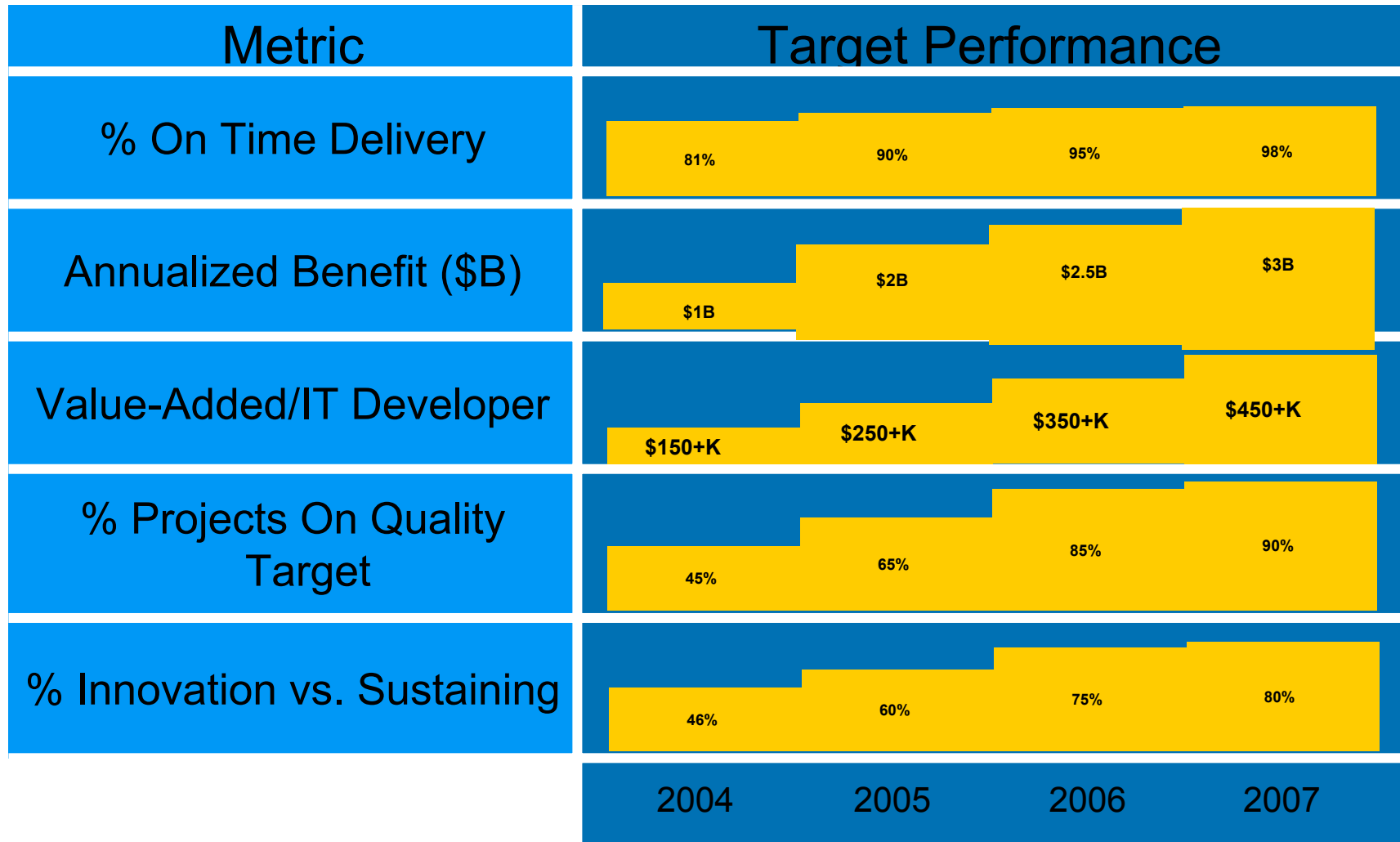
Example of Project Savings

\$1 billion + annual cost savings machine



(\$M)	First year	Second year	Annual target '05-'07
Direct material leverage*	459	420	300 – 400
Indirect procurement	309	215	200 – 250
Product redesign	339	293	300 – 350
Subtotal procurement	1,107	928	800 – 1,000
Supply Chain	329	380	200 – 250
Sales Operations	115	117	60 – 80
Subtotal Operations	444	497	260 – 330
Grand total Operations	1,551	1,425	1,060 – 1,330

IT Portfolio Scorecard



Workforce Directions

- Build world-class IT workforce
 - Predominately HP workforce with increased productivity;
 - Reduce contractors from 11,000 to < 5,000;
 - New skill-sets based on shift from sustaining to innovation focus;
 - Increased collaboration;
 - Increased co-location from 100 to < 29 sites.

Summary

HP Business Transformation case offers an opportunity to study performance improvement while costs are cut severely.

Cutting the number of applications becomes the driver for delivering performance and cost reductions.

Gains are primarily in freeing resources to shift from maintenance to innovation.

Case demonstrates the advantages of planned centralization.