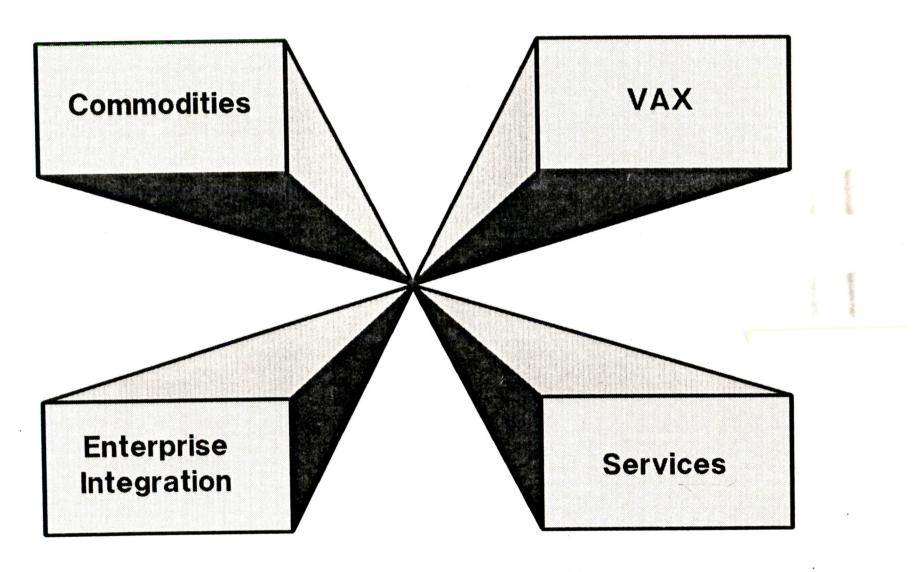
# **Competitive Business Models**



**Digital Restricted Distribution** 

# Competitive Business Models Table of Contents

#### I. BUSINESS OVERVIEW

Digital Business Environment Typical Products NMS Business Unit Structure **Key Characteristics** Dynamic Environment Competitors Competitive Business Models DuPont Model - 3 Business Models Functional Responsibility Best-in-Class Total Company Models Cost Structure Implications Continuation of Current Environment Industry Growth Future Scenarios by Business Total Company Industry Growth Scenario Key Messages Issues

#### II. BACKUP

Mix Assumptions
Open Systems/Client Server Leader Future Scenarios
by Business
Total Company Open Systems/Client Server Leader
Scenario
Growth Scenario Summary
Digital Business Envrionment - FY90
FY90 Revenue
Digital Results vs. Composite Model
Competitor Profiles

Digital Restricted Distribution

# Business Overview

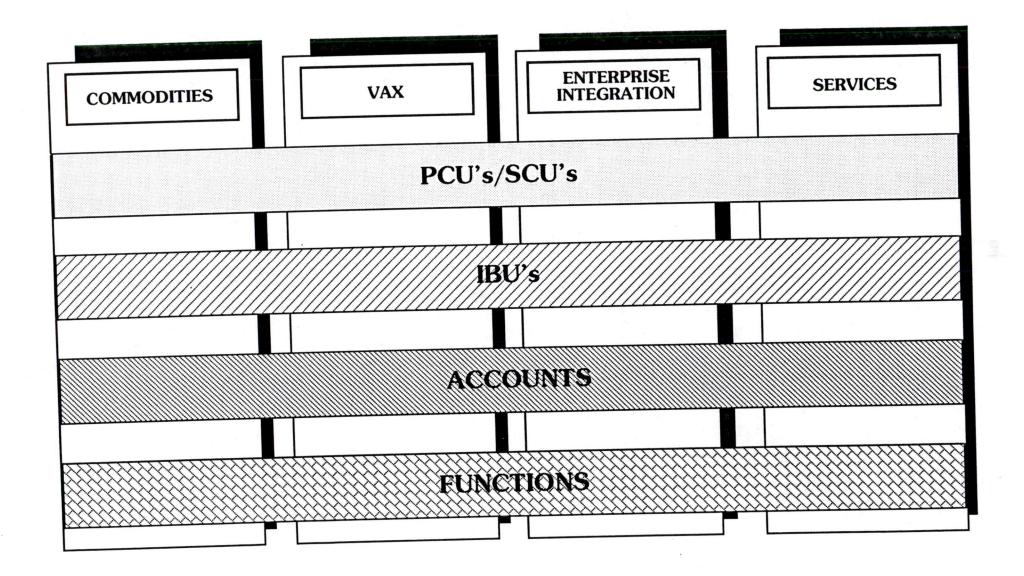
#### Overview

#### Digital Business Environment

- O The objective of this work is to provide a framework which bridges a total Company view and a view of our business unit structure to help in understanding and evaluating business unit models, plans and proposals.
- O Digital works in three or four different businesses with different business models. Each business has hardware, software and service components that must be understood in context. The businesses are:
- OCOMMODITY: This is Hardware, Software and Service businesses focused on low cost, high performance products where delivery tends to be through indirect channels. We have several commodity businesses.

  Examples of these include the Small Business Systems Group, PC and PCI, RISC workstations, UNIX, and Ethernet.
- O <u>VAX/VMS</u>: This is a higher functionality business which must be priced appropriately for the level of added functionality. It includes pre-configured systems which may also require some moderate level integration or customization.
- 0 ENTERPRISE INTEGRATION: Here we work with the customer's senior management in our vertical markets to provide a complete solution to a major business problem or a unique solution to a specific business problem.
- O TRADITIONAL SERVICES: It is critical to keep in mind that the traditional service businesses span all three basic business models. The delivery vehicles, sales tools and cost structures for services will vary with the business model with which they are most closely aligned. These businesses will be measured with operational and financial metrics benchmarked against their best-in-class competitors for functional excellence.
- 0 Within NMS, this is a way to simplify our profit management and cost analysis of the Company.
- O The key is profit maximization how can we get profit back from our customers for the value we have put in our products and services. We need to understand that the profit model will vary in each of the four major businesses.

## Digital Business Environment



#### Digital Business Environment - Typical Products

- O These are the types of businesses/products that fall into each of the types of businesses
- O Notice that UNIX systems and software are considered commodity products as well as PC's and peripherals
- 0 The VAX box includes VAX systems and software
- O Here we work with the customer's senior management in our vertical markets to provide a complete solution to a major business problem or a unique solution to a specific business problem. The Enterprise Integration box includes the vertical marketing units selling integrated solutions.
- O The Services category includes primarily traditional, price book services which are also implicit in each of the other three categories

# Digital Business Environment - Typical Products

**COMMODITIES** 

**UNIX Systems** 

**UNIX Software** 

Personal Computer

PC Integration

**Terminals** 

Ethernet

Storage

Maintenance

VAX

**VAX** Systems

**VAX** Software

Solutions

Maintenance

Networking

ENTERPRISE INTEGRATION

Banking

Insurance

Retail

Education

Healthcare

Government

Science

Professional Services

Telecommunications

**SERVICES** 

Traditional Cutomer Services

Maintenance

**Customer Training** 

Special Systems

Digital Restricted Distribution CFG:JC:BUSMOD-CURRENT-Rev2

#### Business Unit Structure

- 0 We have placed each PCU/SCU and Marketing business unit into one of the major types of businesses.
- O There are many issues raised here:
  - Can any business unit fit in only one box
  - What are the levels of value-add from box to box and within boxes
  - Should software have a vertical box of its own
  - Should Networking hardware and software be shown horizontally
- O The key here is to understand how Digital should be getting value from its products and services.
- 0 It may be that a PC sold as a commodity should be priced differently from one sold as part of a VAX network which would be different from one sold as part a Healthcare system which might be different from one sold as part of a banking system. Price must reflect value add.
- O The services vertical box is shown as a memo item since we offer these services across the entire product line. It is still important to realize that the service cost of delivery should reflect the business model from which the hardware was sold.

## NMS Business Unit Structure

#### **COMMODITIES**

#### PRODUCT CREATION UNITS

#### **HARDWARE**

Intel/SCO INT DecStation PCS Disks &Subsystems Group DSG Tapes & Optical Products
Process Technology
Electronic Storage Dev.
Video & Hardcopy **TOPS** PTG **ESD VIPS** PCI PC Integration RISC Business Low-End Networks LENAC & Communications

#### **SOFTWARE**

OSG Open Systems Software Grp.

#### SERVICE CREATION UNITS

DTS Desktop Services

#### VAX

#### PRODUCT CREATION UNITS

#### **HARDWARE**

**VAX 9000** Fault-Tolerant Systems Mid-Range Systems Business **MSB** Entry Systems Business **VAX Workstations Business** WST Semiconductors Microsystems Development CBG Continuing Products Bus. Grp.

#### SOFTWARE

VMS VMS Open Network Systems ONS NAS Transaction Services NTS NAS Security Services NAS User Frameworks NSS NUF NAS Concurrent Eng. NAS Languages & Tools NAS Presentation/Comm. NAS Information Services NIS NAS Distributed Computing NAS Transaction Services Corporate Backbone Ntwk. NDC NTS CBN Local Area Access LAA Local Area Network CLS Clusters Image/Voice/Human Interface

#### SERVICE CREATION UNITS

Hardware Product Services Software Product Services **Customer Training** 

#### **ENTERPRISE** INTEGRATION

#### MBU's/IBU's

Healthcare Environmental Banking & Investment Insurance Media Telecommunications Utilities Wholesale/Retail Travel/Transportation Engineering
Education/Science
State & Local Government U.S. FederalGovernment Small to Meduim Enterprise Professional Services
CIM M&PD
Sales & Distribution
Research & Development Systems Component Business Group Finance & Accounting Office Electronic Publishing Application Development Systems Multi-Vendor Integration Corporate Information Systems Departmental Information Systems Software Development Depts. CALS/CE Systems Integration Massively Parallel Systems Workstations Information Systems Business IS/Operations Management Technical OEM Business

#### SERVICE CREATION UNITS

DCS Digital Consulting Service NWSS Network & Site Services Operations & Site Services OSS Application Project Services Computer Special Systems

#### **SERVICES**

#### SERVICE CREATION UNITS

Desktop Services Hardware Product Services **HPS** Software Product Services

Computer Special Systems CSS

**Customer Training** CT

APS

Source: FY92 New Management System Submissions

#### Key Characteristics

- O This is a simplification of the very complex components of the businesses. We have tried to distill the factors for success of each model into several major items.
- O For instance, the commodity business should be characterized by low cost, high volume, indirect channels, and undifferentiated products. We expect low profit coupled with high asset turns.
- O The "VAX" business's characteristics would include higher complexity, higher functionality products distributed through direct sales channels. Higher profit with lower asset turns is expected.
- O The EIS business is characterized by high value add, focus on customer definition of the problem, high costs coupled with high levels of expertise. The expectation is for medium profit with higher asset turns.
- O The services businesses require high customer satisfaction and customer perceived value in terms of quality. They tend to have a lower asset base and higher labor base than the products business.

## **Key Characteristics**

#### **COMMODITIES**

Low cost in all areas
Indirect channels
Price competitive
Low customer support
High volume/Low cost mfg.
Time to market
Undifferentiated
Primarily desktop &
peripherals
High velocity
Short cycle times
Short product lifecycles
Value through perceived
differentiation
Low complexity
Standard components

#### VAX

Strong customer relationship
Significant value add
High availability
Ease of information
management
Direct sales channels
Value through functionality
Higher complexity
Work group solutions
Medium sales cycle
Mass customization

### **ENTERPRISE INTEGRATION**

Customer defines product Labor intensive Requires high expertise High fixed costs Long delivery cycle Low assets Information delivery High value add Market pull Leadership applications Highest complexity Long sales cycle Unique enterprise wide solutions Long term contracts Full customization as perceived by customer Project management imperative

#### **SERVICES**

Labor intensive Quick response essential Lower asset base than poduct business Remedial

- large annuity business
- sales cycle tied to hardware

Standardization imperative Excellent logistics key to lowest cost of delivery

#### Dynamic Environment

- O The environment within which Digital operates has undergone rapid change in the last several years.
- O These changes in the industry have required us to look at our business as several different models rather than as one totality.
- O The economy has weakened since 1987 with forecasts of improvement by FY94. We also expect inflation to moderate by 1994. The forecasts are based on surveys by Consensus Economics, Blue Chip, and DRI.
- O Industry growth will slow by 1994 but the size of the industry will have more than doubled, from \$197B in 1987 to \$422B in 1994 according to Infocorp.
- O Digital had a 4.8% market share in 1987 which fell to 4.5% in FY90. We expect it will bottom out at 4.1% in FY92, begin recovery, and grow to 4.3% by FY94.
- O The revenue mix is changing dramatically. Software and Services have become a much larger part of the business and we are becoming more internationalized. The low end and RISC segments have grown more rapidly than the high and mid range segments. Distribution has shifted towards indirect channels. Unit volume has increased rapidly while revenue growth has slowed.
- O The industry environment and the changes in the industry have made our business much more complex. The rapid rate of these changes forces us to look at our business in new and different ways to take advantage of future growth opportunities.

## Dynamic Environment

	FY87	FY90	FY94*	
Economy Worlwide GNP Growth Inflation	Strong 3.4% 2.6%	Weak 2.5% 4.7%	Strong 3.1% 3.3%	
Industry Size Growth	\$197 B 13%	\$287 B 12%	\$422 B 9%	
Style of Computing	Proprietary	Commoditization	Open Systems	
Digital Estimated: Market Share**	4.8%	4.5%	4.3%	
Revenue Mix Hardware/Software U.S./International Products/Services	80/20 53/47 67/33	70/30 45/55 63/37	60/40 40/60 57/43	
Product Mix % Over \$500 KASV VAX/RISC Hardware High-Mid/Low	44% 100/0 60/40	0% 95/5 48/52	10% 60/40 40/60	
Distribution Channels Direct/Indirect	70/30	72/28	333	
Price/Performance	High volume increase High price/unit increase	High volume increase Decreasing price/unit	High volume increase Decreasing price/unit	
Company View	Single Model	Single Model	Four Model	

<sup>\*</sup> Estimated Outlook

<sup>\*\*</sup> Estimated based on Infocorp Market Data

#### Competitors

- O Given that we have decided to manage ourselves as three or four businesses and we have identified what they are, the next step is to understand the business models in each of these areas.
- O In order to understand these business models, we analyzed vendors in each of these areas.
- O These are some of the most successful companies in each of these areas portrayed in the category most reflective of their major line of business.
- 0 Virtually all of these competitors cut across several business model types.
- O These are niche competitors, major systems vendors like IBM and HP are excluded purposefully. The business models of these vendors should be comparable to Digital's total company model.
- O This does not necessarily imply that we are in these businesses today (e.g. the commodity software category).

# Niche Competitors in each Business Area

**COMMODITIES** 

#### **HARDWARE**

Sun Compaq Dell 3 Com Conner Seagate

#### **SOFTWARE**

Lotus Microsoft VAX

#### **HARDWARE**

Amdahl Silicon Graphics Stratus

#### **SOFTWARE**

Oracle Novell ASK ENTERPRISE INTEGRATION

Computer Sciences Corp.

**EDS** 

**SERVICES** 

Bell Atlantic Grumman

Digital Restricted Distribution CFG:JC:BUSMOD-CURRENT-Rev2

#### Competitive Business Models

- 0 We developed four business models based on the latest three year average results for each group of competitors.
- O In order to keep these consistent with Digital's business mix we weighted our competitor's results based on our own product mix. The weighting assumptions were based on FY90 PBU reporting, FY91 OTD forecasts and preliminary FY92 BUP from NMS. See "Mix Assumptions" backup schedule for detail.
- O As expected, operating income for the commodities business is low (8%) with low R&D and SG&A and higher cost of sales. Asset turns are high (inventory turns are 5.5X, DSO of 55) and revenue is growing fastest. The cost structure is driven by low cost of manufacturing and engineering coupled with the high level of discounts associated with indirect sales channels. The asset turns and growth is evidence of the requirement for high velocity across all facets of this type of operation.
- O The VAX business is characterized by the highest profit, with higher R&E and SG&A with lower cost of sales. Asset turns are lower (inventory turns are 3.6X, DSO of 101) and revenue growth of 28%. In this business there are higher costs across the board and a higher asset base than in the commodities model. The key is whether or not customers perceive enough value in the products to allow recovery of higher costs associated with the direct sales resources, sophisticated manufacturing and engineering, and marketing investments we make here.
- O Enterprise integration has profitability in between the two with very high cost of sales and moderate SG&A. The business is characterized by high asset turns primarily driven by a relatively low asset base. There are a number of varied business models within enterprise integration. Some of the businesses include: pure consulting; unique enterprise solutions consisting of hardware, software and services; industry specific solutions, and outsourcing.
- O The Services business demonstrates a relatively high profit margin with moderate asset turns. Each of the other models includes a service component. For example, the level of service provided by Sun, Dell, Compaq, Seagate, Conner and 3COM as part of their business is reflected in the commodity business model. The same is true in the VAX business model where the services provided by Amdahl, Stratus, and Silicon Graphics are accounted for. Additional levels of consulting or customized service should fall into the Enterprise Integration model.
- O These models are intended primarily to point our major differences between each type of business. The assumptions upon which the models are based must be dynamic. As product mix shifts or the industry environment changes the models must change as well.

# Aggregate Competitive Business Models

#### **COMMODITIES**

	100%
Revenue	
Cost of Sales	70
Sales, Gen &Admin.	15
Research & Devlpmt.	7
Operating Income	8
Revenue/Employee (\$K)	\$136
ROA	8%
Inventory Turns	5.5x
DSO	55
PP&E Turns	7.9x
Operating Asset Turns	2.4x
Asset Turns	1.6
ROOA	13.0%
Leverage	2.2
ROE	18%
Optg. Assets/Empl(\$K)	\$ 54
Revenue Growth	469
Optg. Profit/Empl(\$K)	\$ 13
- P-3,	

#### VAX

Revenue	100%
Cost of Sales	38
Sales, Gen &Admin.	36
Research & Devlpmt.	11
Operating Income	15
Revenue/Employee (\$K)	\$185
ROA	13%
Inventory Turns	3.6x
DSO	101
PP&E Turns	8.1x
Operating Asset Turns	2.0x
Asset Turns	1.3x
ROOA	21%
Leverage	1.5
ROE	21%
Optg. Assets/Empl(\$K)	\$ 96
Revenue Growth	28%
Optg. Profit/Empl(\$K)	\$ 27

## ENTERPRISE INTEGRATION

١	Revenue	100%
	Cost of Sales	78
	Sales, Gen &Admin.	11
	Research & Devlpmt.	N/A
	Operating Income	11
	Revenue/Employee (\$K)	\$ 97
	ROA	11%
	Inventory Turns	54x
	DSO	45
	PP&E Turns	5.4x
	Operating Asset Turns	3.0x
	Asset Turns	1.5
	ROOA	23%
	Leverage	2.3
	ROE	26%
	Optg. Assets/Empl(\$K)	\$ 32
	Revenue Growth	13%
	Optg. Profit/Empl(\$K)	\$ 11

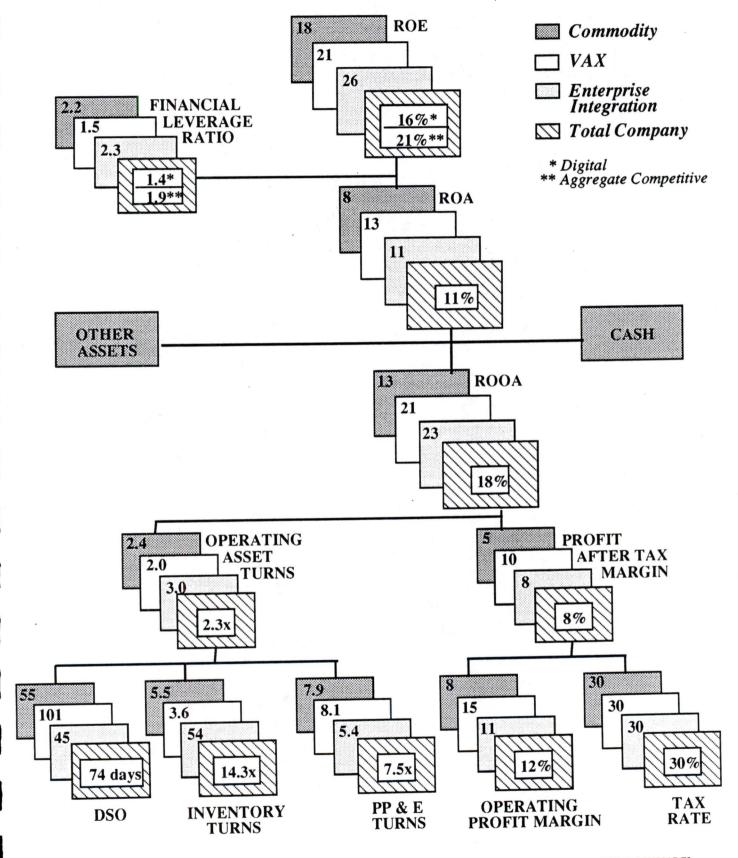
#### **SERVICES**

Inventory Turns 42.3x DSO 50 PP&E Turns 4.5x Operating Asset Turns 2.2x Asset Turns 1.3 ROOA 19% Leverage 2.6 ROE 30% Optg. Assets/Empl(\$K) \$ 72 Revenue Growth 10%		
Sales, Gen & Admin.       14         Research & Devlpmt.       N/A         Operating Income       15         Revenue/Employee (\$K) \$ 108         ROA       12%         Inventory Turns       42.3x         DSO       50         PP&E Turns       4.5x         Operating Asset Turns       2.2x         Asset Turns       1.3         ROOA       19%         Leverage       2.6         ROE       30%         Optg. Assets/Empl(\$K)       \$ 72         Revenue Growth       10%	Revenue	100%
Research & Devlpmt. Operating Income Revenue/Employee (\$K) \$ 108 ROA Inventory Turns DSO PP&E Turns Operating Asset Turns Asset Turns Asset Turns ROOA Leverage ROE Optg. Assets/Empl(\$K) \$ 72 Revenue Growth I5 N/A 12% 4.5x 42.3x 50 42.3x 50 45.5x 2.2x 4.5x 2.2x 4.5x 2.2x 4.5x 3.3 4.5x 2.2x 4.5x 3.3 4	Cost of Sales	71
Operating Income         15           Revenue/Employee (\$K)         \$ 108           ROA         12%           Inventory Turns         42.3x           DSO         50           PP&E Turns         4.5x           Operating Asset Turns         2.2x           Asset Turns         1.3           ROOA         19%           Leverage         2.6           ROE         30%           Optg. Assets/Empl(\$K)         \$ 72           Revenue Growth         10%	Sales, Gen &Admin.	14
Revenue/Employee (\$K)         \$ 108           ROA         12%           Inventory Turns         42.3x           DSO         50           PP&E Turns         4.5x           Operating Asset Turns         2.2x           Asset Turns         1.3           ROOA         19%           Leverage         2.6           ROE         30%           Optg. Assets/Empl(\$K)         \$ 72           Revenue Growth         10%	Research & Devlpmt.	N/A
ROA   12%	Operating Income	15
Inventory Turns 42.3x DSO 50 PP&E Turns 4.5x Operating Asset Turns 2.2x Asset Turns 1.3 ROOA 19% Leverage 2.6 ROE 30% Optg. Assets/Empl(\$K) \$ 72 Revenue Growth 10%	Revenue/Employee (\$K)	\$ 108
DSO 50 PP&E Turns 4.5x Operating Asset Turns 2.2x Asset Turns 1.3 ROOA 19% Leverage 2.6 ROE 30% Optg. Assets/Empl(\$K) \$ 72 Revenue Growth 10%	ROA	12%
PP&E Turns 4.5x Operating Asset Turns 2.2x Asset Turns 1.3 ROOA 19% Leverage 2.6 ROE 30% Optg. Assets/Empl(\$K) \$ 72 Revenue Growth 10%	Inventory Turns	42.3x
Operating Asset Turns         2.2x           Asset Turns         1.3           ROOA         19%           Leverage         2.6           ROE         30%           Optg. Assets/Empl(\$K)         \$ 72           Revenue Growth         10%	DSO	50
Asset Turns  ROOA  Leverage  ROE  Optg. Assets/Empl(\$K) \$ 72  Revenue Growth  1.3  1.3  1.3  1.3  1.3  1.3  1.3  1.	PP&E Turns	4.5x
ROOA 19% Leverage 2.6 ROE 30% Optg. Assets/Empl(\$K) \$ 72 Revenue Growth 10%	Operating Asset Turns	2.2x
Leverage 2.6  ROE 30%  Optg. Assets/Empl(\$K) \$ 72  Revenue Growth 10%	Asset Turns	1.3
ROE 30% Optg. Assets/Empl(\$K) \$ 72 Revenue Growth 10%	ROOA	19%
Optg. Assets/Empl(\$K) \$ 72 Revenue Growth 10%	Leverage	2.6
Revenue Growth 10%	ROE	30%
Tievende Grewar	Optg. Assets/Empl(\$K)	\$ 72
	Revenue Growth	10%
Optg. Profit/Empl(\$K) \$ 18	Optg. Profit/Empl(\$K)	\$ 18

#### AGGREGATE COMPETITIVE BUSINESS MODEL

- O This format portrays the dynamic interaction of P&L management and Asset management activities as they influence Return on Assets (ROA), Return on Operating Assets (ROOA), and Return on Equity (ROE).
- O The format also portrays the differences between these interactions among the commodity, VAX and Enterprise Integration businesses. For example while the commodity business has the lowest ROOA (13%) based on profit after tax of 5% and operating asset turns of 2.4, the enterprise integration business, with the second lowest profitability of 8%, actually has the highest ROOA due to significantly higher asset turns.
- O The total company ROE will differ depending upon capital structure assumptions. The leverage derived from the aggregate competitive business model gives a 21% ROE while the current Digital capital structure would result in a 16% ROE.

### AGGREGATE COMPETITIVE DUPONT MODEL



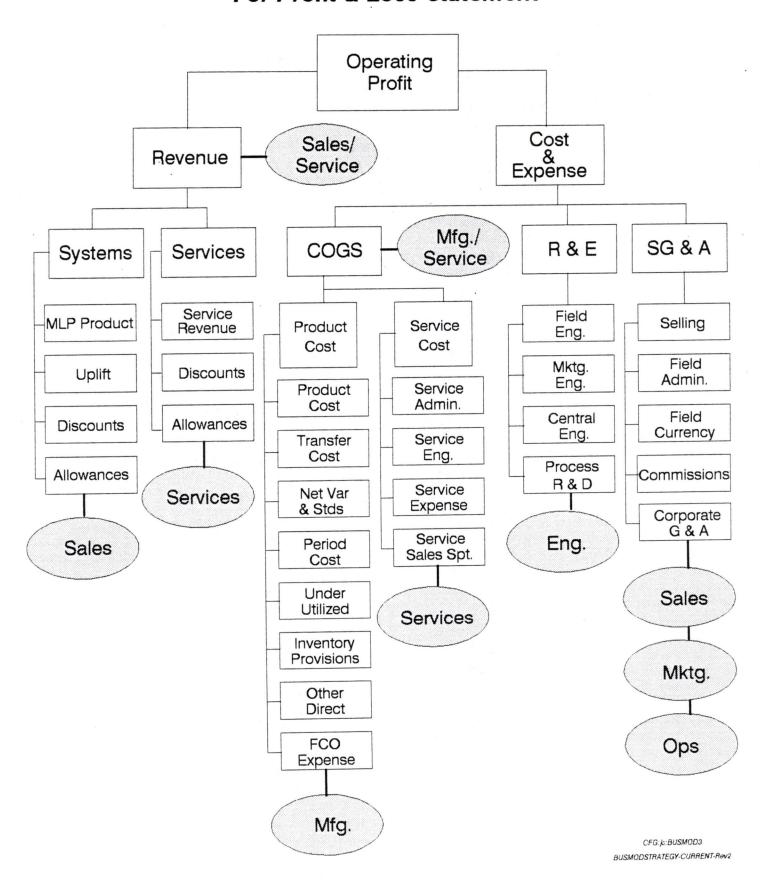
Digital Confidential

CFG:jh:BUSMODEL

#### FUNCTIONAL RESPONSIBILITY FOR PROFIT AND LOSS

O This chart identifies functional organizations responsible for the various P&L components of the models.

# Functional Responsibility For Profit & Loss Statement



#### "Best-in class"

O This slide depicts the outcome if we choose the highest operating income and ROA from each group of competitors. ROE is simply the ROA assuming Digital's capital structure. The companies reflected are Compaq and Microsoft in the commodities space, Stratus and Novell in the VAX area, and EDS in EIS.

## Competitive Business Model Best-in-Class

COMMODITIES	VAX	ENTERPRISE INTEGRATION	SERVICES
Revenue 100%	Revenue 100%	Revenue 100%	Revenue 100%
Optg. Profit 18%	Optg. Profit 15%	Optg. Profit 11%	Optg. Profit 22%
ROA 20%	ROA 15%	ROA 12%	ROA 9%
ROE 27%	ROE 21%	ROE 16%	ROE 13%
Compaq Hardware Microsoft Software	Stratus Hardware Novell Software	EDS	Bell Atlantic

Note: ROE @ Digital's Capital Structure

Digital Restricted Distribution CFG:JC:BUSMOD-CURRENT-Rev2

#### Total Company Models

- 0 When applying this methodology to the total company, it was necessary to weight each box based on the estimated percent of Digital's revenue in each of these areas (35% Commodity, 45% VAX and 20% EI).
- O This slide outlines several different business models against which we compared our results.
- O This demonstrates the differences between our actual results given our current business model and what our results could have been had we fully integrated the cost structure and profit generating lessons from the four business models.
- O Column three is the aggregate competitive business model outlined previously, Column four is the outcome of choosing the highest operating income and ROA from each group of competitors.
- O Columns five and six represent our current Digital business model and an alternative model with equal ROE based on lower profits and better asset management.

# Digital FY91 YTD and FY90 Results\* Compared with Alternative Business Models

	Q3 YTD FY91 Actual	FY90 Actual*	Aggregate Competitive Bus. Model	Best in Class Bus. Model	Current Digital <u>Bus. Model</u>	Alternative Digital <u>Bus. Model</u>
Revenue	100%	100%	100%	100%	100%	100%
Cost Of Sales	53	53	57			
Sales, Genral & Admin.	32	31	23			
Research & Development	12	12	8			
Operating Profit	3	4	12	15	17	10
Net Income	3%	4%	8%	11%	12%	7.5%
Asset Turns	1.1x	1.2x	1.4x	1.5x	1.3x	2.1x
ROA	2.9%	4.7%	11.2%	16%	16%	16%
Digital Leverage**	1.4	1.4	1.4	1.4	1.4	1.4
ROE	4.1%	6.5%	16%	22%	22%	22%
Aggregate Competitive Le	everage		1.9			
ROE			21%			

\*Excludes Restructuring

<sup>\*\*</sup> Leverage = Average Assets/Average Equity

#### Cost Structure Implications

O By running our estimated 1992 results through the competitive business model resulting from a mix of the commodity, VAX and Enterprise Integration business models we can start to get a feel for how much excess overhead might be in our cost structure. Based on 1992 estimates for continuation of our current environment, we have close to \$950 million in excess costs. Some of these costs are labor related and some are process related.

#### Assumptions for 1992 Outlook:

- o Revenue 1% product growth, 10% service growth, 5% total growth
- o Cost Growth 3.2 % (Transfer Cost up 5%, Service COD up 13%, Functional expenses up 7%, Currency down 146%).
- o Operating Profit Margin at 5.3%
- o Employment FY91 end 116,900 with 8,000 more out by FY92 end

#### Assumptions for 1992 at Model Structure:

- o 92 product mix based on combined 92 BUP, 91 OTD, May WW Business Plan
- o 92 business mix: 45% commodity, 44% VAX, 11% EIS
- o Same revenue assumptions as in outlook
- o Cost structure created by flowing revenue through the aggregate competitive business models at the product and business mix indicated above
- o Employment based on the revenue per person from the aggregate competitive business model (\$154).

## Competitive Business Models Cost Structure Implications (\$ Mils)

	FY92 Outlook	FY92 Outlook at <u>Model Structure</u>	FY92 Outlook B/(W) <u>Model</u>
Revenue			
Products Services Total Revenue	\$ 8,219 <u>6,174</u> \$14,393	\$ 8,219 <u>6,174</u> \$14,393	\$ \$ <del></del>
Total Expense	\$13,632	\$12,686	\$(946)
Operating Profit	\$ 761	\$ 1,707	\$(946)
Profit Margin	5.3%	11.8%	(6.5)%
Headcount	108,900	93,900	(15,000)
Asset Turns Average Assets	1.2 \$11,700	1.4 \$10,287	(0.2) \$(1,419)
ROA	4%	11%	(7)

#### Scenario A - Continuation of Current Environment

- O This scenario is based on simple trending off of FY91 growth.
- O Through FY91, Digital is expected to have implemented significant staffing reductions and cost controls. This analysis assumes continuations of those activities at about the same rate.
- O This does not assume any significant changes in business planning derived from the issues outlined in this presentation.
- O The result is a gradual improvement in operating profit margin from 4% of revenue in 1991 to 11% in 1994. The increased levels of profitability combined with asset management improvements drive an increase in ROA from 4% in 1991 to 9% in 1994.

#### Assumptions:

% Growth	92	93	94
Product NOR Service NOR Total	1% 10 5	1% 10 5	2% 11 6
Transfer Cost Svc COD Functional Exp Currency Total	5 13 7 (152) 3	5 9 (3) - 2	2 6 - 2
Operating Profit	44	59	52

# Scenario A Continuation of Current Environment\* (\$ Mils)

	<b>FY87</b>	FY	<u> 190</u>	F	<u>Y91</u>	<u>F</u>	<u> 192</u>	<b>FY93</b>	<b>FY94</b>
Revenue Products Services Total Revenue	\$ 6,254 3,135 \$ 9,389	_4	3,146 4 <u>,797</u> ,943		8,136 5,602 3,738	_6	3,200 5,200 4,400	\$ 8,300 6,800 \$15,100	\$ 8,500 7,500 \$16,000
% Growth	23.7%		1.6%		6.1%		5%	5%	6%
Operating Profit (\$)	\$ 1,612	\$	13	\$	528	\$	750	\$ 1,200	\$1,800
% of Revenue	17.2%		0.1%	1	3.8%		5%	8%	11%
ROA	14.6%	- - -	0.7%	: 	3.5%		4%	6%	9%
ROE	18.9%	)	0.9%	)	4.9%		6%	8%	11%

<sup>\*</sup> Continued cost control and headcount reductions

#### Future Scenario for Industry Growth by Business Model

- 0 We can use this approach in order to model the future. If we understand each basic business model in which we operate, we can then run revenue assumptions through each model to assess the impact of revenue mix on total company financials.
- O If our revenue in each of these businesses increases at the expected rate for that particular part of the industry, this is what our each business would look like in 1993 and 1994. Industry growth rates by business model were developed based on Infocorp data.

#### Assumptions:

#### Revenue:

o 90 Based on PBU Reporting (detailed schedule in backup "FY90 Revenue" o 91 and 92 ties to current forecast/outlook by product and service based on the following mix assumptions:

% of Total R	Revenue	91	92
Product	Commodity H/W Commodity S/W VAX H/W VAX S/W	43% 2 34 21	48% 4 26 22
Service	Maintenance EIS	75 25	72 28

o 93 and 94 based on expected market growth rates derived from Infocorp data:

% Growth	91	92
Commodity H/W Commodity S/W VAX H/W VAX S/W EIS	16% 13 3 13	11% 12 6 12 10
Total Company	12	10

o All cost structures developed by flowing the revenue derived from the assumptions above through the aggregate competitive business model for each business.

## Competitive Business Models Industry Growth - (\$ Mils)

	COMMODITIES						
	<u>FY93</u>	<u>FY94</u>					
Revenue	\$7720	\$8647					
Optg Profit	\$ 664	\$ 772					
%	9%	9%					
ROA	9%	9%					
ROE	12%	12%					

VAX			
<u>FY93</u>	<u>FY94</u>		
\$6594	\$7059		
\$1033	\$1112		
16%	16%		
14%	14%		
19%	20%		

ENTERPRISE INTEGRATION				
<u>FY93</u>	<u>FY94</u>			
\$1769	\$1941			
\$ 189	\$ 208			
11%	11%			
11%	11%			
16%	16%			

TOTAL					
<u>FY93</u>	<u>FY94</u>				
\$16183	\$17647				
	40000				
\$ 1886	\$2092				
12%	.12%				
11%	11%				
15%	16%				

Digital Restricted Distribution CFG:JC:BUSMOD-CURRENT-Rev2

#### Total Company Industry Growth Scenario

- O This scenario assumes that we manage the company in the context of the four business models we have discussed. This is the total company look at the scenario outlined by business model on the previous slide. The results are increased levels of profitability in 1992 and 1993, and greater levels of profitability in 1994. Revenue growth is assumed to equal industry growth
- 0 By understanding the profit levels associated with each of our business models we should be able to better manage the total company cost structure. We should be able to plan for instead of react to major shifts in our business mix.
- O The whole industry is being affected by the "shift to the desktop". Digital's commodity business is expected to grow from 26% of the business in 1990 to 49% of the business in 1994. Even though intuitively this should decrease our profitability, in both industry growth scenarios we improve to 12% operating profit and 11% ROA by 1993.

## Scenario B Industry Growth (\$ Mils)

	<u>FY87</u>	FY!	<u>90</u>	FY	91	F	<u> 192</u>	<u>FY93</u>	<b>FY94</b>
Revenue Products Services Total Revenue	\$ 6,254 3,135 \$ 9,389	\$ 8, 4, \$12,	797	<u>5</u>	,136 ,602 ,738	. (	8,200 6,200 4,400	\$ 9,200 6,900 \$16,100	\$10,100 <u>7,500</u> \$17,600
% Growth	23.7%	3 a -	1.6%		6.1%		5%	12%	9%
Operating Profit	\$ 1,612	\$	13	\$	528	\$	750	\$ 1,900	\$ 2,100
% of Revenue	17.2%	ó	0.1%		3.8%	):	5%	12%	12%
ROA	14.6%	ó	0.7%		3.5%	Ò	4%	11%	11%
ROE	18.9%	6	0.9%	i	4.9%	ó	6%	15%	16%

Note: FY93 and 94 based on industry growth from Infocorp.

#### Key Messages

O This work is intended to stimulate discussion and help understand how to operate in this environment, not to set specific goals. The current organizational structure does not necessarily match this conceptual framework.

O Digital must recover value from our customers at each level of value add. We must not add value in research, product development, manufacturing complexities, partnering, marketing, solutions development, sales incentives, solution or service delivery if a customer does not perceive added value from the activity. This means understanding the total profit picture from MLP to operating income in each of our businesses. The value we put in will increase as we move from commodities to EIS.

O In order to compete in the current industry environment it is critical to understand the three or four businesses in which we operate. It is also crucial to understand the differences between each business model and the interdependences which determine total company results.

O In order to be successful within this framework we must fundamentally change the way we manage our business. Improvements in product development, manufacturing, strategy and planning processes; partnering; pricing and product strategy are necessary. We must do more than reduce our overall costs and employment levels.

#### Issues

#### O Organizational

- o Who owns each "box"?
- o Certain products bridge across business
- o There are no "base case" actuals. Therefore there is no real sense for what is goodness or badness in this context through current reporting/measurements systems.
- o How does this tie into current organizational and reporting structures?

#### O Product

o What is a VAX and is this an appropriate heading?
(given ALPHA might be our future)
o What is UNIX (i.e. Sun's AT&T vs. SCO vs. ULTRIX)
o Is all hardware now "commodity" with different levels of perceived customer value?
o What is EIS? Is it a channel, a unique solution, an industry specific solution, outsourcing? Should it include just the consulting piece of unique solutions or the hardware and software sold as well?
o Product strategy for the future will have a major impact on the mix assumptions contained in the models.
o Should we take it down another level (i.e. an ESB system is much different than a 9000 than a 6000 in market maturity, level of value add, etc.)

#### O Mechanical

o Are we examining the right group of competitors?
(i.e. is it fair to include only "higher-value add niche players only in the "VAX" space)
o Where are IBM, HP and the Japanese vendors? (Should we attempt to approximate their business models in each of these areas?)
o Should we attempt to estimate the business model for the EIS business of Arthur Anderson, EDS, etc. due to lack of "pure" companies in this space?
o Should we use "timeless" models, 3 year averages, best-in-class, etc.?
o What is the impact of off balance sheet financing and leverage activities on ROE?

# Backup

# Competitive Business Model

Mix Assumptions

**COMMODITIES** 35%

HARDWARE - 96%

19% Sun 3 Compaq

10 Dell

3 Com

17 Conner 44 Seagate

100%

**SOFTWARE - 4%** 

50% Lotus 50 Microsoft

100%

100%

VAX 45%

**HARDWARE - 60%** 

Amdahl 9%

48 Stratus

Silicon <u>43</u> Graphics

100%

**SOFTWARE - 40%** 

50% Novell

40 Oracle

10 **ASK** 100%

100%

**ENTERPRISE** INTEGRATION 20%

10% Computer

Sciences

90 **EDS** 100%

100%

**SERVICES** 

20% Computer Sciences

40 **EDS** 

Bell Atlantic 40 100%

100%

Digital Restricted Distribution CFG:JC:BUSMOD-CURRENT-Rev2

## Future Scenario for Open Systems/Client Server Leader by Business Model

O If our revenue in each of these businesses above the expected rate for that particular part of the industry, this is what our each business would look like in 1993 and 1994. Industry growth rates by business model were developed based on Infocorp data.

#### Assumptions:

#### Revenue:

o 90 Based on PBU Reporting (detailed schedule in backup "FY90 Revenue" o 91 and 92 ties to current forecast/outlook by product and service based on the following mix assumptions:

% of Total	Revenue	91	92
Product	Commodity H/W Commodity S/W VAX H/W VAX S/W	43% 2 34 21	48% 4 26 22
Service	Maintenance EIS	75 25	72 28

o 93 and 94 based on higher than expected market growth rates derived from Infocorp data:

% Growth	93	94
Commodity H/W Commodity S/W VAX H/W VAX S/W EIS	18% 15 5 15	13% 14 8 14 10
Total Company	13	11

o All cost structures developed by flowing the revenue derived from the assumptions above through the aggregate competitive business model for each business.

# Competitive Business Models Open Systems/Client Server Leader

	COMMO	DITIES
Revenue	<u>FY93</u> \$ 7,794	<b>FY94</b> \$ 8,822
Optg Profit	\$ 670	\$ 788
%	9%	9%
ROA	9%	9%
ROE	12%	12%

V	AX
<u>FY93</u> \$16,238	<u>FY94</u> \$18,005
\$ 1,403 16%	\$ 1,134 16%
14%	14%
19%	20%

ENTE	RPR	
<u>FY93</u>	<u><b>F</b></u>	<u>Y94</u>
\$16,238	\$18	3,005
\$ 191	\$	212
11%		11%
11%		11%
16%		16%

то	TAL
<i>FY93</i> \$16,238	<b>FY94</b> \$18,005
\$ 1,904	\$ 2,134
12%	12%
11%	11%
15%	16%

Digital Restricted Distribution CFG:JC:BUSMOD-CURRENT-Rev2

Scenario C Open Systems/Client Server Leader (\$ Mils)

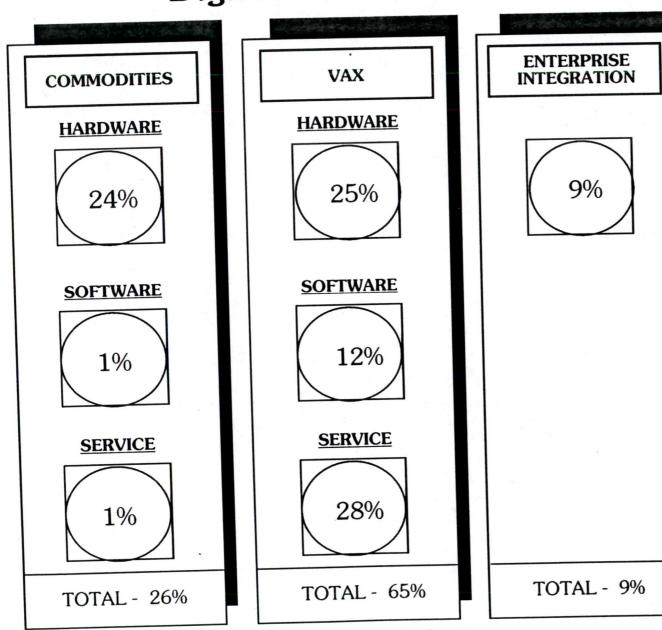
	<b>FY87</b>	F	<u> 190</u>	<u>FY</u>	<u> 191</u>	FY	<u> 192</u>	<b>FY93</b>	<b>FY94</b>
Revenue Products Services Total Revenue	\$ 6,254 3,135 \$ 9,389		8,146 <u>4,797</u> 2,943	.5	3,136 5,60 <u>2</u> 3,738	6	3,200 6,200 1,400	\$ 9,400 6,900 \$16,300	\$10,500 <u>7,500</u> \$18,000
% Growth	23.7%	,	37.9%		6.1%		5%	12%	11%
Operating Profit	\$ 1,612	\$	13	\$	528	\$	750	\$ 1,900	\$ 2,100
% of Revenue	17.2%	<b>.</b>	0.1%		3.8%	•	5%	12%	12%
ROA	14.6%	ó	0.7%		3.5%	)	4%	11%	11%
ROE	18.9%	6	0.9%	)	4.9%	ò	6%	15%	16%

Note: FY93 and 94 reflect growth higher than industry

# Growth Scenarios (\$ Mils)

	<b>FY87</b>	<b>FY90</b>	<b>FY91</b>	<b>FY92</b>	<b>FY93</b>	<b>FY94</b>
REVENUE						
Traditional Total Company	\$ 9,389	\$12,943	\$13,738	\$14,400	\$15,100	\$16,000
Industry Growth					16,100	17,600
Open Systems/Market Leader					16,300	18,000
OPERATING PROFIT						4 4 000
Traditional Total Company % of Revenue	\$1,612 17.2%	\$ 13 0.1%	\$ 528 3.8%	\$ 750 5%	\$1,200 8%	\$ 1,800 11%
Industry Growth					\$1,900 12%	\$2,100 12%
% of Revenue Open System/Market Leader % of Revenue					\$1,900 12%	\$2,100 12%
ROA				5 ct	601	9%
Traditional Total Company	14.6%	0.7%	3.5%	5%	6%	11%
Industry Growth					11%	
Open systems/Market Leader					11%	11%
ROE			4.00	6%	8%	11%
Traditional Total Company	18.9%	0.9%	4.9%	070	15%	16%
Industry Growth					15%	16%
Open Systems/Market Leader					13 /0	1070

# Digital Business Environment -FY90



**SERVICES** 30% TOTAL - 30%

Source: FY90 Product Financial Performance Reporting and Service Reports

Digital Restricted Distribution
CFG:JC:BUSMOD-CURRENT-Rev2

# FY90 Revenue

_	
	COMMODITIES
	<b>HARDWARE</b>
	LED \$ 460 M MLDS 1184 TOPS 484 Video 325 PC 83 Hardcopy 364 RISC 309 \$ 3209 M  SOFTWARE TOPS \$ 4 M Hardcopy 4 OSG75 \$ 83 M
	SERVICE DTS \$ 6 M
	TOTAL \$ 3298 M 26 %

1	
	VAX
H	IARDWARE
CPU NAC Cluster Memoria	\$ 1352 M 823 115 28 <u>983</u> \$ 3273 M
SSEM DBS SDT TP/AP NAC	\$ 905 M 33 256 109 274 \$ 1577 M
	<u>SERVICE</u>
HPS SPS DAS	\$ 2637 M 837 <u>204</u> \$ 3678 M
тот	AL \$ 8528 M 65%

440		545
	RPRISE RATION	I
PSS	\$ 559 M	I
DCSS NWSS RCS	32 M 245 32 \$ 309 M	
FMS	\$ 12 M	45
ES	\$ 237 M	
1.7		
,		
TOTAL	\$ 1117 M 9%	

#PS \$ 2637 M #PS 837 PAS 204 PTS <u>6</u> \$ 3684 M
FMS \$ 12 M
S \$ 237 M

Source: FY90 Product Financial Performance Reporting and Service Reports

Digital Restricted Distribution CFG:JC:BUSMOD-CURRENT-Rev2

# Digital Results vs. Composite Model

(\$ Millions)

Latost 4 Quarters

				Lai	est 4 Qu	larters		
	F	FY91 Q3 YTD			(Q490, Q191, Q291, Q391			
	Actual*	<u>Model</u>	B/(W) Model	Actual*	<u>Model</u>	B/(W) Model		
Revenue	\$ 9966	\$ -	\$ —	\$13,331	\$	\$ —		
Cost of Sales	5254	5701	447	7073	7625	552		
Sales, Gen & Admin	. 3191	2312	(879)	4247	3093	(1154)		
Research & Devlpmt	. 1204	737	(467)	1617	986	(631)		
Operating Profit	318	1216	(898)	394	1626	(1232)		
Net Income	254	781	(527)	337	1045	(708)		
Average Assets	\$11,788	\$ 7119	\$(4669)	\$11,690	\$9,522	\$(2,168)		
Asset Turns	1.1x	1.4x	(.3)x	1.1x	1.4x	(.3)x		
ROA	2.9%	11.1%	(8.2)%	2.9%	11.1%	(8.2)%		
Leverage	1.4	1.9	.5	1.4	1.9	.5		
ROE	4.1%	21.2%	(17.1)%	4.0%	21.2%	(17.2)%		

<sup>\*</sup> Excludes Restructuring Charge

# **TOTAL SOLUTION VENDORS**

% OF	DIGITAL	<u>IBM</u>	HEWLETT PACKARD
REVENUE (\$M)	\$12,943	\$69,018	\$13,233
Latest Year Revenue (\$M)	100%	100%	100%
Revenue	50	44	51
Cost Of Sales	29	32	28
Sales, Gen. & Admin.	12	10	11
Research & Develpmt.	9	14	10
Operating Income		3.0	3.7
Inventory Turns	4.1	104	70
Dso	81	2.5	4.2
Pp&E Turns	4.1	1.2	1.5
Operating Asset Turns	1.7	9.7%	10.1%
Rooa	11.3%	0.8	1.2
Asset Turns	1.2		8.1%
Roa	8.2%	6.7%	1.7
Leverage	1.4	1.9	14.0%
Roe	11.3%	12.6%	\$ 74
Optg Assets/Employee (\$K)	\$ 59.1	\$ 139	
Revenue/Employee (\$K)	\$ 100.9	\$ 168	\$ 130
Revenue Growth	6%	8%	16%
Optg Profit/Employee (\$K)	\$ 8.1	\$ 23	\$ 13
Cost/Employee (\$K)	\$ 90.6	\$144.3	\$117.3
PAT %	7%	8%	7%

TICHHI CTT

### **HARDWARE VENDORS**

% of Revenue	<u>Amdahl</u>	Compaq	<u>Sun</u>	Silicon Graphics	<u>Stratus</u>	<u>Seagate</u>	Conner	Dell*	3Com
Latest Year Revenue	\$ 2101	\$ 3599 \$	2466	\$ 420	\$ 404	\$ 2413	\$ 705	\$ 389	\$ 419
Revenue	100%	100%	100%	100%	100%	100%	100%	100%	100%
Cost of Sales	57	59	56	47	40	83	76	70	49
Sales, Gen. & Administrative	16	19	24	32	32	7	9	20	29
Research & Development	13	5	13	12	13	4	5	4	10
Operating Income	14	17	7	9	15	6	10	6	12
Inventory Turns	3.4	4.1	7.3	2.3	2.8	4.7	5.5	4.9	6.4
DSO	89	56	64	97	94	47	75	44	48
PP&E Turns	4.5	5.3	7.8	9.1	7.3	4.8	7.3	21.4	12.5
Operating Asset Turns	1.6	2.0	2.6	1.7	1.9	1.9	2.1	3.2	3.5
ROOA	15.1%	25.1%	11.8%	11.5%	18.7%	7.5%	14.2%	9.8%	25.4%
Asset Turns	1.1	1.6	1.5	1.2	1.4	1.3	1.5	2.8	1.8
ROA	10.5%	19.3%	6.9%	7.9%	14.5%	4.9%	10.4%	8.6%	13.5%
Leverage	2.0	1.6	2.0	1.6	1.4	2.6	2.3	2.1	1.2
ROE	20.6%	30.9%	13.6%	12.6%	20.4%	12.6%	24.3%	17.9%	16.7%
Operating Assets/Employee (\$K)	\$ 145	\$ 206	\$ 72	\$ 103	\$ 108	\$ 26	\$ 52	\$ 93	\$ 62
Revenue/Employee (\$K)	\$ 228	\$ 422	\$ 190	\$ 177	\$ 200	\$ 50	\$ 109	\$ 302	\$ 214
Revenue Growth	18%	32%	53%	66%	23%	38%	150%	56%	29%
Operating Profit/Employee (\$K)	\$ 33	\$ 74	\$ 14	\$ 16	\$ 30	\$ 3	\$ 11	\$ 17	\$ 25
Cost/Employee (\$K)	\$194.3	\$347.7	\$176.1	\$160.6	\$170.2	\$ 46.6	\$ 97.8	\$226.8	\$187.9
PAT %	10%	12%	5%	7%	10%	4%	7%	3%	7%

<sup>\*</sup>Two year average

# SOFTWARE VENDORS

% of Revenue	<u>Lotus</u>	<u>ASK</u>	<u>Oracle</u>	Microsoft*	Novell* \$ 498
Latest Year Revenue (\$ M)	\$ 556	\$ 208	\$ 971	\$ 1183	100%
Revenue	100%	100%	100%	100%	34
Cost of Sales	19	50	17	24	
Sales, General & Administrative	48	35	53	31	35
Research & Development	16	8	9	14	10
Operating Income	17	7	21	31	21
Inventory Turns	5.9	18.9	N/A	5.6	6.4
DSO	52	96	169	50	65
PP&E Turns	5.5	20.0	6.2	4.3	8.3
Operating Asset Turns	2.8	3.1	1.6	2.4	2.8
ROOA	39.4%	16.9%	21.1%	54.3%	40.1%
Asset Turns	1.2	1.3	1.3	1.2	1.4
	16.3%	6.8%	17.3%	27.4%	19.1%
ROA	2.1	1.5	2.0	1.2	1.3
Leverage	33.8%	10.0%	34.3%	33.0%	23.9
ROE	\$ 69	\$ 122	\$ 85	\$ 62	\$ 58
Operating Assets/Employee (\$K)*	\$ 193	\$ 379	\$ 136	\$ 153	\$ 165
Revenue/Employee (\$K)*	19%	21%	86%	42%	20%
Revenue Growth	\$ 32	\$ 28	\$ 28	\$ 49	\$ 34
Operating Profit/Employee (\$K)*	\$160.8	\$176.0	\$108.8	\$103.8	\$129.9
Cost/Employee (\$K)	14%	6%	13%	22%	14%
PAT %	14%	0 /0			

<sup>\* 2</sup> year average

### **SERVICE VENDORS**

% of Revenue	Bell <u>Atlantic</u>	Computer Sciences Corp.	EDS	Grumman
Latest Year Revenue	\$11449	\$ 1500	\$ 6022	\$ 3506
Revenue	100%	100%	100%	100%
Cost of Sales	59	82	78	91
Sales, General & Administrative	19	10	11	6
Research & Development*	N/A	N/A	N/A	N/A
Operating Income	22	8	11	3
Inventory Turns	45.7	N/A	60.0	3.9
DSO	40	91	40	68
PP&E Turns	1.2	10.6	4.8	6.6
Operating Asset Turns	1.0	2.9	3.0	1.8
ROOA	11.2%	11.9%	24.7%	3.2%
Asset Turns	0.8	1.7	1.4	1.5
ROA	9.2%	7.1%	11.7%	2.8%
Leverage	3.1	2.0	2.3	1.8
ROE	28.2%	14.5%	27.1%	5.0%
Operating Assets/Employee (\$K)	\$ 135	\$ 23	\$ 33	\$ 63
Revenue/Employee (\$K)	<b>\$ 136</b>	\$ 66	\$ 100	\$ 111
Revenue Growth	5%	14%	13%	3%
Operating Profit/Employee (\$K)	\$ 30	\$ 6	\$ 11	\$ 4
Cost/Employee (\$K)	\$105.9	\$ 60.1	\$ 88.9	\$107.2
PAT %	11%	4%	8%	2%

<sup>\*</sup> Research & Development included in Cost of Sales

### **CONNER**

o Designs, manufactures, and markets high performance 3 1/2" and 2 1/2" Winchester Disk Drives

Primary business approach is to sell, design, and then build to customer specifications;
 They will not design, build, or try to sell disk drives until they have a high level of confidence in future orders from a major customer

o Fastest growing start up in U.S. history; First to reach \$1B in four years

o Simplify everyday operations in order to protect against bureaucracy

o Compaq owns 21% of stock; In 1986 Compaq accounted for 90% of revenue; in 1990 25% of revenue

o Reduce product costs through improved designs rather than increased volumes or vertical integration

o Manufacturing strategy is to rely principally on outside vendors to supply high level subassemblies. Volume production takes place overseas after R&D and initial production in the U.S.; Vendors are in Asia and the U.S.

o In June 1990, 6% of the 6,900 employees were in R & D, 3% in sales, 3% in F & A, 60% in direct labor. 80% of the employees are outside the U.S. with 60% in Singapore

Sales offices in California, Massachusetts, Texas, Japan, England, France, Germany,
 South Korea, Taiwan

o The sell, design, build approach allows Conner to avoid some R & D risks and allows for flexibility and fast product changes; Products improve in small steps

### **SUN MICROSYSTEMS**

- o Leader in worldwide workstation market
- Strategy: Retain leadership in price, performance, and technical innovation while establishing new industry standards
- o 15% owned by AT&T, Fujitusu has equity stake as well
- o 52% of revenues from U.S. and Canada
- O Core technology is spare microprocessor architecture which is being widely licensed to expand SPARC compatible base and encourage software development
- Motorola based products have been transitioned to SPARC
- SPARC Compliance Definition compliant systems range from portable (Toshiba) to minicomputer (ICL) to supercomputer (FPS)
- Recent reorganization formed SunSoft software sub-division and SunTech "tools development" sub-division

### SILICON GRAPHICS

- o Primary product line is "super workstations and servers"
- o International sales 39% of 1990 total
- o Direct sales force expanding
- o Setting standards developed IBM compatible PC graphics board
- Silicon Graphics was #5 in workstations market in 1989 with a 5% share according to Dataquest
- o Manufacturing capacity in Europe meets international demand
- o Equity investment from NKK of Japan, will act as distributor in Japan
- o CDC owns 5% of the company
- Strategy: low-cost, high performance products; broaden software base; expand potential markets

### **AMDAHL**

- Focus on IBM compatible mainframes
- o Timely, lower-priced clones
- Fujitsu owns 49.5%, markets Amdahl products in Far East, provides components at discount prices, participates in joint development
- o Distributes primarily through indirect channels
- o 51% of 1989 revenue was domestic
- o CPU prices are being cut while high-end storage prices are increasing

### **STRATUS**

- o Primary product line: Mid-range computer systems for fault-tolerant mission critical applications
- o Offer UNIX overlay option
- o Average system value \$500K
- o Hardware/software split is 85%/15%
- o 90% of 1989 revenue from U.S.
- o IBM resells equipment and accounted for 35% of product revenue and 31% of service revenue in 1989; This percent is expected to decrease over time
- Distribution channels include direct sales force; growing number of distributors; OEM relationships with IBM and Olivetti
- o Aggressive international expansion strategy
- o ISDN integration development efforts, AT&T alliance

### **COMPAQ**

- Position PC products as highest quality IBM clone
- o Aggressive European strategy
- Multi-vendor open systems strategy
- o Use of standards allows lower Reserach & Development spending
- o Have broadened product breadth to include higher-end PC's, Servers, Workstations
- o Aggressive pricing at low-end, premium at high-end
- o Primary channels distributors, VAR's

### **DELL**

- o 1990 Sales: 48% small business/individuals; 41% national accounts, 11% VAR's
- Focus on high quality, high performance, custom-configured products at "reasonable" prices
- o Emphasis on customer staisfaction
- o Concentrate on mainstream PC products early to market
- o Distribution primarily through mail order and resellers
- o 77% domestic
- o Offer service contracts through Xerox

### **NOVELL**

- Primary lines of business: software and hardware for PC LANs
- o Strategy is to get out of hardware business and license out technology
- o Multiple reseller agreements with large hardware vendors
- Joint venture with Softbank Japan for adaptation to Japanese market;
   Alliance includes development partnerships with: Sony, Toshiba, Canon,
   Fujitsu and NEC
- o Expanding direct sales force the primary focus on Fortune 500
- o Restructured sales organization from goegraphic to market focus
- o Strategy to run on all platforms currently UNIX, Apple, MS/DOS, OS/2
- o Export sales were 35% in 1989 vs. 24% in 1987
- o XBridge poduct will allow access to WAN market
- o Novell fought off a takeover attempt by Lotus last spring

### COMPUTER SCIENCES CORP.

- Pimary lines of business prepackaged software; computer management consulting, data processing and credit reporting
- o Historically over 60% of business in federal government sector
- Goal move into commercial consulting
- o Expertise is in developing software
- Recently sold off credit reporting and telecom units
- o Aggressive acquisition and alliance campaign in Systems Integration business, includes acquisition of 6 domestic and European companies to date

### **ELECTRONIC DATA SYSTEMS (EDS)**

- An information and communicatins services company providing information processing, consulting, systems management, systems integration, and communication services.
- o Acquired by General Motors in 1984; operates as an independent subsidiary of GM; GM accounted for 53% fo revenue in 1990, down from 59% in 1988. Most services EDS provides for GM is paid for by fixed price, multi-year agreements

o In 1989 it is estimated 85% of business was domestic, 15% international. There are operations in 28 countries.

o EDS believes there's a widening gap between the technology curve and IS directors ability to use that curve. That gap is EDS's marketplace.

- EDS has positioned itself to cash in on the outsourcing trend and is building a national network of data centers and acquiring considerable vertical market expertise.
- Breakout of % of NOR in 1989:

- System management
- Systems integration
- Development
- Consulting

78%
11%
10%

 Buys many smaller businesses that fit or expand its systems expertise; own shares of businesses that contract out work to EDS

o Follows a strategic business unit strategy with each unit having authority, responsibility and control of its own strategy. The SBU's are focussed on specific markets, customers and products.

### **LOTUS**

o Primary product line - application software packages for use with PC's

o Expanding product offerings to lessen reliance on spreadsheet package revenue

o In the last year has acquired CC:Mail for \$25M, Samna for \$65M, and owns 15% of Sybase with an option to buy another 10%. CC:Mail allows Lotus to move into the electronic mail market; Samna gives a presence in the graphical word processing market; Sybase is in the RDB segment

o Lotus 1-2-3 is estimated to have captured 64% of the \$660M 1990 spreadsheet

market

o Microsoft and Lotus will jointly develop high level links between their products, allowing more of a single standard

o Lotus channels include distributors and direct sales

 Sales strategy is changing in that individual account representation will be stressed less and resources will be aimed at mid-tier and smaller businesses

o Slowing sales growth and expansion into new markets has resulted in implementation of cost controls and consolidations. In August 1990 they eliminated 40 positions via layoffs and absorption of work, and aimed for a 50% reduction in travel and entertainment

### **ORACLE**

- Develops and markets computer software products used for database management, applications development, decision support and computer network communication
- o Strategy is to increase the breadth and quality of its products
- o International revenue was 49% of total in 1990 and management expects to see continued improvement in foreign business, particularly Europe and the pacific
- o License revenue has declined while service revenue has grown. Unix applications license revenue increased to 36% of license revenue in 1990 from 27% in 1988. VMS applications license revenue has fallen to 42% of license revenue from 47% in 1988. Service revenues have risen to 29% of total revenue in 1990 from 27% in 1988.
- Oracle's direct sales method has a high level of cost associated; With its change of focus, much attention will be paid to large customer sites including offering on-site support.
- o Hewlett-Packard and Oracle agreed to sell each other's products in October 1990.
- Oracle said they are increasing emphasis on quality and casting off its prior history of "win at any cost" sales strategy
- Restructured in September 1990 when 10% of the U.S. work force was laid off and 2 of it's 5 level sales heirarchy were eliminated; Savings are estimated to be at least \$24M a year.

### **BELL ATLANTIC**

- Engaged in providing communication services such as Cellular Mobile communication products; Distributing, servicing and repairing computers; Marketing and maintaining customer premises equipment to originate, route, or receive telecommunication; and providing software for telecommunication and computer networking
- o Bell Atlantic is the parent company for a diversified group of subsidiaries.
  - Seven telephone operating companies provide voice and data communications services
  - Other communications and related services, including Bell Atlantic Mobile systems, and the Business Systems group.
  - Financial and Real Estate services will no longer be a mainstream business and will not grow significantly
- o Revenue mix:
  - 86% telephone operating companies
  - 8% business systems group/Mobile systems
  - 6% financial/real estate services
- o International operations will become an increasing source of revenue and growth beginning in 1991. Bell's stated goal is to achieve \$1.5B in revenue contributions from international operations by 1995. Currently estimated at \$650M in international operations

### 3COM

 Designs, builds, sells and supports network systems based on industry standards on open system architecture

o New strategy will concentrate on internetworking hardware and they will drop out of the LAN operaing system business. They will remain a LAN Manager OEM, but will stop marketing 3+ open for other PC servers

o In implementing the strategy 3Com laid off 12% of its 1,953 employees and assigned its LAN Manager 2.0 products to Microsoft in return for cancellation of a \$25M licensing fee. 3Com is also looking to sell its file server, network station, and gateway operations

Introduced a distribution channel in 1990 that resulted in improved sales from the reseller channel. Q4 FY90 saw 76% of sales via resellers, up from 20% in Q1 FY90.

o International sales made up 40% of revenue in 1909 versus 33% in 1988. International sales is the fastest growing segment of the business.

o R & D was 10% of revenue in 1990 and was used primarily for new products; Redesign of existing products resulted in lower manufacturing ccosts.

o Working with IBM to develop new specificatins for network management that will manage equipment on Mixed Token-Ring and Ethenet networks while preserving memory on the desktop.

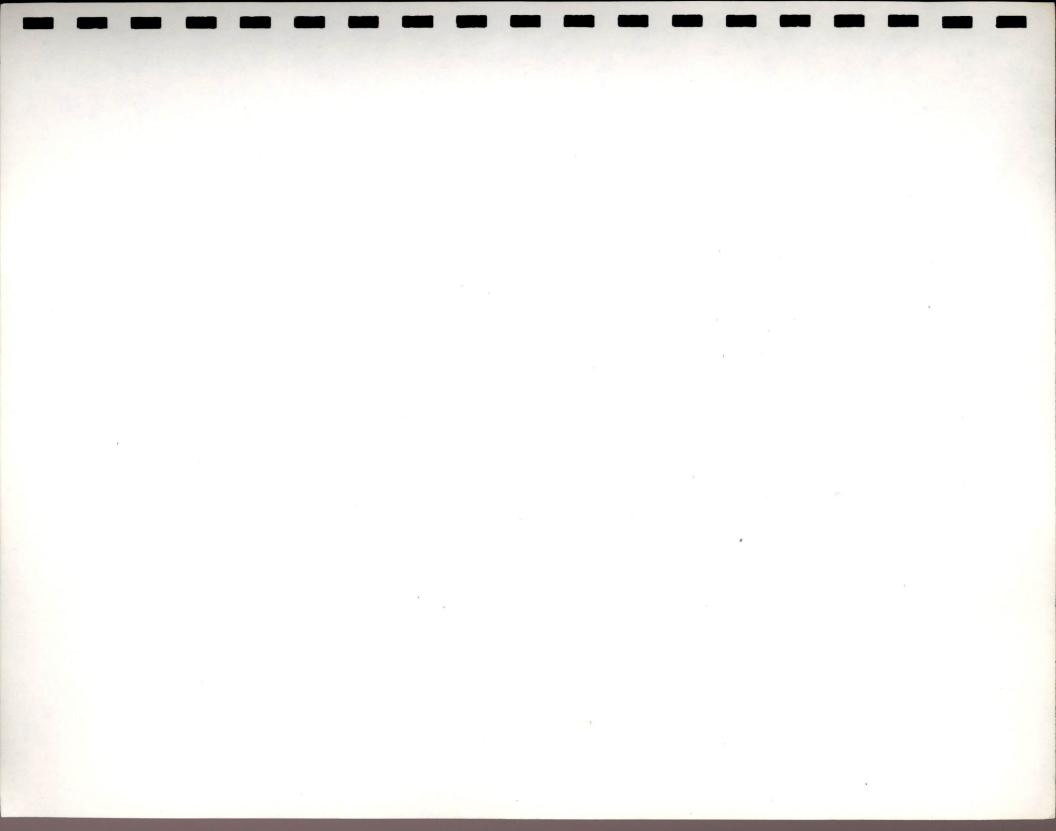
o Hewlett-Packard owns 5% of 3Com in a joint development and marketing alliance

### **SEAGATE**

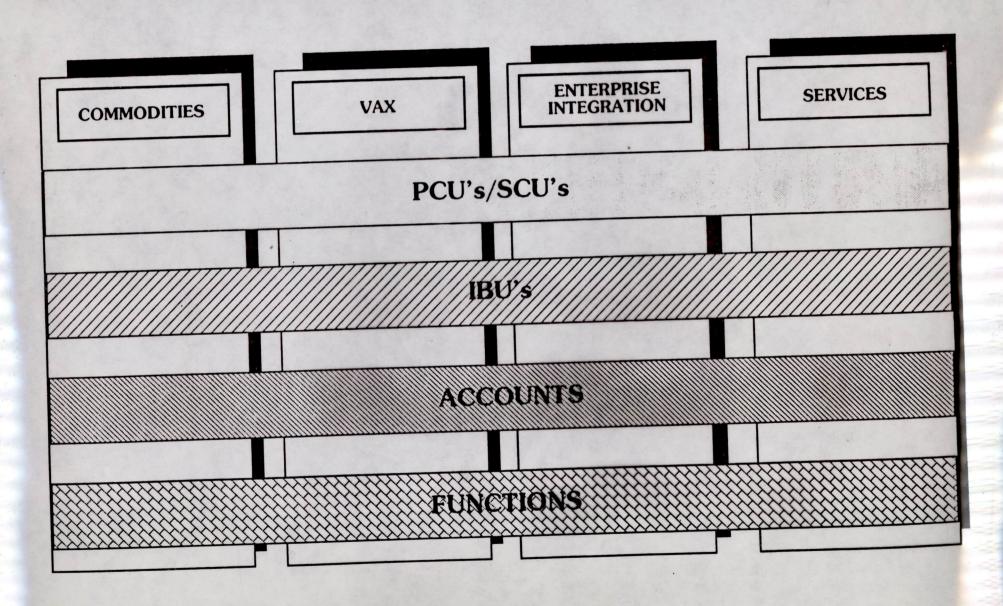
- Leader in \$7B market for compact disk drives
- o Focus on quality, time-to-mrket, low-cost volume production
- o Follow pioneering smaller firm's technology
- o 1989 acquisition of Imprimes from CDC doubled revenue
- o International sales in 1989 were 48% of total
- o Only 29% of workforce in U.S. worldwide manufacturing capacity
- o Target market high-end for data intensive users
- o Broad product line, laptop to supercomputer (14 new products introduced in November 1990)
- o Alliances with NCR and Cray

### **MICROSOFT**

- Cross-licensing agreements with IBM
- o Primary product line: Systems and Applications microcomputer software for business (40 different product oferings)
- o Have entered Systems Integration market
- o Estimated 20% market share in PC spreadsheets
- o Revenue increases attributed to volume, not price
- Expanding sales and support staff in 1990
- Experiencing shift in mix towards higher margin software applications
- o International revenue comprised 55% of 1990 total
- o Aggressive incentive campaign to transition to Windows which comprised 7% of 1990 revenue
- Target markets for 1990's: Networks and Graphics
- o Currently under investigation for potential anti-trust violations in MS/DOS market



# Digital Business Environment



# Digital Business Environment - Typical Products

### COMMODITIES

**UNIX Systems** 

**UNIX Software** 

Personal Computer

PC Integration

**Terminals** 

Ethernet

Storage

Maintenance

VAX

**VAX Systems** 

**VAX Software** 

Solutions

Maintenance

Networking

**ENTERPRISE INTEGRATION** 

Banking

Insurance

Retail

Education

Healthcare

Government

Science

Professional Services

Telecommunications

**SERVICES** 

Traditional Cutomer Services

Maintenance

**Customer Training** 

Special Systems

Digital Restricted Distribution
CFG:JC:BUSMOD-CURRENT-Rev2

# NMS Business Unit Structure

### COMMODITIES

### PRODUCT CREATION UNITS

#### **HARDWARE**

Intel/SCO INT DecStation PCS DSG TOPS PTG Disks & Subsystems Group Tapes & Optical Products Process Technology Electronic Storage Dev. Video & Hardcopy **VIPS** PC Integration PCI RISC Business Low-End Networks LENAC & Communications

#### SOFTWARE

OSG Open Systems Software Grp.

### SERVICE CREATION UNITS

DTS Desktop Services

#### VAX

### PRODUCT CREATION UNITS

#### HARDWARE

**VAX 9000** Fault-Tolerant Systems Mid-Range Systems Business MSB ESB Entry Systems Business
WST VAX Workstations Business Semiconductors Microsystems Development Continuing Products Bus. Grp.

### SOFTWARE

VMS VMS ONS Open Network Systems NAS Transaction Services NTS NAS Security Services NAS User Frameworks NAS Concurrent Eng. NAS Languages & Tools NAS Presentation/Comm. NAS Information Services NAS Distributed Computing NAS Transaction Services Corporate Backbone Ntwk. Local Area Access NDC CBN Local Area Network CLS Image/Voice/Human Interface

### SERVICE CREATION UNITS

Hardware Product Services Software Product Services SPS Customer Training

### **ENTERPRISE** INTEGRATION

#### MBU's/IBU's

Healthcare Environmental
Banking & Investment
Insurance
Media Telecommunications Utilities Wholesale/Retail
Travel/Transportation
Engineering
Education/Science
State & Local Government U.S. FederalGovernment Small to Meduim Enterprise Professional Services
CIM M&PD
Sales & Distribution
Research & Development Systems Component Business Group Finance & Accounting Office Electronic Publishing Application Development Systems Multi-Vendor Integration Corporate Information Systems Departmental Information Systems Software Development Depts. CALS/CE Systems Integration Massively Parallel Systems Workstations Information Systems Business IS/Operations Management Technical OEM Business

### SERVICE CREATION UNITS

DCS Digital Consulting Service NWSS Network & Site Services Operations & Site Services OSS Computer Special Systems CSS

### **SERVICES**

### SERVICE CREATION UNITS

DTS Desktop Services Hardware Product Services Software Product Services HPS SPS

Computer Special Systems

Customer Training CT

Application Project Services

# **Key Characteristics**

### COMMODITIES

Low cost in all areas Indirect channels Price competitive Low customer support High volume/Low cost mfg. Time to market Undifferentiated Primarily desktop & peripherals High velocity Short cycle times Short product lifecycles Value through perceived differentiation Low complexity Standard components

#### VAX

Strong customer relationship
Significant value add
High availability
Ease of information
management
Direct sales channels
Value through functionality
Higher complexity
Work group solutions
Medium sales cycle
Mass customization

# **ENTERPRISE INTEGRATION**

Customer defines product Labor intensive Requires high expertise High fixed costs Long delivery cycle Low assets Information delivery High value add Market pull Leadership applications Highest complexity Long sales cycle Unique enterprise wide solutions Long term contracts Full customization as perceived by customer Project management imperative

#### **SERVICES**

Labor intensive
Quick response essential
Lower asset base
than poduct business

Remedial

- large annuity business
- sales cycle tied to hardware

Standardization imperative Excellent logistics key to lowest cost of delivery

# Dynamic Environment

Strong 3.4% 2.6%	Weak 2.5% 4.7%	Strong 3.1%
		3.3%
\$197 B 13%	\$287 B 12%	\$422 B 9%
Proprietary	Commoditization	Open Systems
4.8%	4.5%	4.3%
80/20 53/47 67/33	70/30 45/55 63/37	60/40 40/60 57/43
44% 100/0 60/40	0% 95/5 48/52	10% 60/40 40/60
70/30	72/28	???
High volume increase High price/unit increase	High volume increase Decreasing price/unit	High volume increase Decreasing price/unit
Single Model	Single Model	Four Model
	4.8%  80/20 53/47 67/33  44% 100/0 60/40  70/30  High volume increase High price/unit increase	4.8%  80/20 53/47 67/33  44% 100/0 60/40  70/30 45/55 63/37  0% 95/5 48/52  70/30  72/28  High volume increase High price/unit increase Decreasing price/unit

<sup>\*</sup> Estimated Outlook

<sup>\*\*</sup> Estimated based on Infocorp Market Data

# Niche Competitors in each Business Area

COMMODITIES

### **HARDWARE**

Sun Compaq Dell 3 Com Conner Seagate

### SOFTWARE

Lotus Microsoft VAX

### HARDWARE

Amdahl Silicon Graphics Stratus

### SOFTWARE

Oracle Novell ASK **ENTERPRISE INTEGRATION** 

Computer Sciences Corp.

**EDS** 

**SERVICES** 

Bell Atlantic Grumman

Digital Restricted Distribution CFG:JC:BUSMOD-CURRENT-Rev2

# Aggregate Competitive Business Models

### COMMODITIES

Revenue	100%
Cost of Sales	70
Sales, Gen &Admin.	15
Research & Devlpmt.	7
Operating Income	8
Revenue/Employee (\$K)	\$136
ROA	8%
Inventory Turns	5.5x
DSO	55
PP&E Turns	7.9x
Operating Asset Turns	2.4x
Asset Turns	1.6
ROOA	13.0%
Leverage	2.2
ROE	18%
Optg. Assets/Empl(\$K)	\$ 54
Revenue Growth	46%
Optg. Profit/Empl(\$K)	\$ 13

### VAX

Revenue	100%
Cost of Sales	38
Sales, Gen & Admin.	36
Research & Devlpmt.	11
Operating Income	15
Revenue/Employee (\$K)	\$185
ROA	13%
Inventory Turns	3.6x
DSO	101
PP&E Turns	8.1x
Operating Asset Turns	2.0x
Asset Turns	1.3x
ROOA	21%
Leverage	1.5
ROE	21%
Optg. Assets/Empl(\$K)	\$ 96
Revenue Growth	28%
Optg. Profit/Empl(\$K)	\$ 27

# **ENTERPRISE** INTEGRATION

Revenue	100%
Cost of Sales	78
Sales, Gen &Admin.	11
Research & Devlpmt.	N/A
Operating Income	11
Revenue/Employee (\$K)	\$ 97
ROA	11%
Inventory Turns	54x
DSO	45
PP&E Turns	5.4x
Operating Asset Turns	3.0x
Asset Turns	1.5
ROOA	23%
Leverage	2.3
ROE	26%
Optg. Assets/Empl(\$K)	\$ 32
Revenue Growth	13%
Optg. Profit/Empl(\$K)	\$ 11

### **SERVICES**

Revenue	100%
Cost of Sales	71
Sales, Gen &Admin.	14
Research & Devlpmt.	N/A
Operating Income	15
Revenue/Employee (\$K)	\$ 108
ROA	12%
Inventory Turns	42.3x
DSO	50
PP&E Turns	4.5x
Operating Asset Turns	2.2x
Asset Turns	1.3
ROOA	19%
Leverage	2.6
ROE	30%
Optg. Assets/Empl(\$K)	\$ 72
Revenue Growth	10%
Optg. Profit/Empl(\$K)	\$ 18

# Competitive Business Model Best-in-Class

COMMODIT	TIES
COMMODIA	
Revenue	100%
Optg. Profit	18%
ROA	20%
ROE	27%
Compaq Ha Microsoft Sc	

VAX	
Revenue 1	100%
Optg. Profit	15%
ROA	15%
ROE	21%
Stratus Harde Novell Softu	

ENTERPRISE INTEGRATION		
Revenue	100%	
Optg. Pro	fit 11%	
ROA	12%	
ROE	16%	
ED	S	

SERVICES		
Revenue	100%	
Optg. Profit	22%	
ROA	9%	
ROE	13%	
Bell Atlantic		

Note: ROE @ Digital's Capital Structure

Digital Restricted Distribution CFG:JC:BUSMOD-CURRENT-Rev2

Digital
FY91 YTD and FY90 Results\*
Compared with Alternative Business Models

Revenue	Q3 YTD FY91 Actual 100%	FY90 Actual* 100%	Aggregate Competitive Bus. Model 100%	Best in Class Bus. Model 100%	Current Digital Bus. Model 100%	Alternative Digital Bus. Model 100%
Cost Of Sales	53	53	57			
Sales, Genral & Admin.	32	31	23			
Research & Development	12	12	8		17	10
Operating Profit	3	4	12	15	12%	7.5%
Net Income	3%	4%	8%	11%	1270	7.570
Asset Turns	1.1x	1.2x	1.4x	1.5x	1.3x	2.1x
	2.9%	4.7%	11.2%	16%	16%	16%
ROA	1.4	1.4	1.4	1.4	1.4	1.4
Digital Leverage** ROE	4.1%	6.5%	16%	22%	22%	22%
Aggregate Competitive Le	verage		1.9			
ROE			21%			

<sup>\*</sup>Excludes Restructuring

<sup>\*\*</sup> Leverage = Average Assets/Average Equity

# Competitive Business Models Cost Structure Implications (\$ Mils)

	FY92 Outlook	FY92 Outlook at <u>Model Structure</u>	FY92 Outlook B/(W) Model
Revenue			
Products	\$ 8,219	\$ 8,219	\$
Services	6,174	6,174	_ =
Total Revenue	\$14,393	\$14,393	\$
Total Expense	\$13,632	\$12,686	\$(946)
Operating Profit	\$ 761	\$ 1,707	\$(946)
Profit Margin	5.3%	11.8%	(6.5)%
Headcount	108,900	93,900	(15,000)
Asset Turns	1.2	1.4	(0.2)
Average Assets	\$11,700	\$10,287	\$(1,419)
ROA	4%	11%	(7)

Scenario A
Continuation of Current Environment\*
(\$ Mils)

	FY87	FY	90	FY	91	FY92	2 <u>F</u>	Y93	FY94
Revenue Products Services Total Revenue	\$ 6,254 3,135 \$ 9,389		3,146 ,797 ,943	_5	3,136 5,602 ,738	\$ 8,20 6,20 \$14,40	0 _	8,300 6,800 15,100	\$ 8,500 7,500 \$16,000
% Growth	23.7%		1.6%		6.1%		5%	5%	
Operating Profit (\$)	\$ 1,612	\$	13	\$	528	\$ 7!	50	\$ 1,200	\$1,800
% of Revenue	17.2%	ó	0.1%	6	3.8%		5%	8%	11%
ROA	14.6%	6	0.79	6	3.5%	)	4%	6%	6 9%
ROE	18.99	6	0.99	%	4.9%	6	6%	89	6 11%

Continued cost control and headcount reductions

# Competitive Business Models Industry Growth - (\$ Mils)

	COMMODITIES		
	<u>FY93</u> <u>FY93</u>		
Revenue	\$7720	\$8647	
Optg Profit	\$ 664	\$ 772	
%	9%	9%	
ROA	9%	9%	
ROE	12%	12%	

VAX	
<u>FY93</u>	<u>FY94</u>
\$6594	\$7059
\$1033	\$1112
16%	16%
14%	14%
19%	20%

ENTERPRISE INTEGRATION		
<u>FY93</u>	<u>FY94</u>	
\$1769	\$1941	
\$ 189	\$ 208	
11%	11%	
11%	11%	
16%	16%	

TOTAL		
FY93	<u>FY94</u>	
\$16183	\$17647	
\$ 1886	\$2092	
12%	.12%	
11%	11%	
15%	16%	

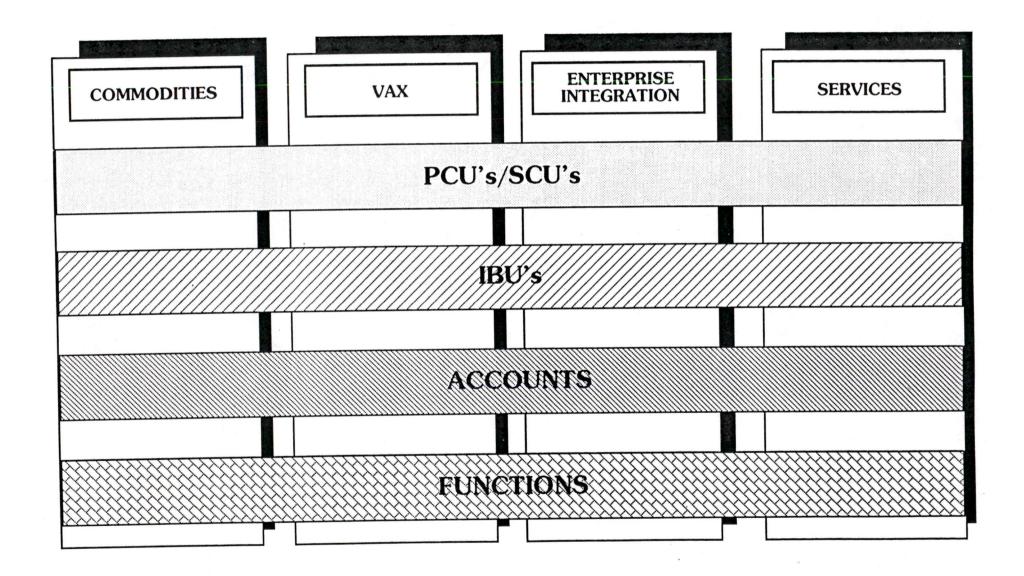
Digital Restricted Distribution CFG:JC:BUSMOD-CURRENT-Rev2

## Scenario B Industry Growth (\$ Mils)

	FY87	<u>FY</u>	90	FY	91	<u>FY</u>	92	<u>FY93</u>	FY94
Revenue Products Services Total Revenue	\$ 6,254 3,135 \$ 9,389	4	3,146 4,797 2,943	5	3,136 5,602 3,738	6	5,200	\$ 9,200 6,900 \$16,100	\$10,100 <u>7,500</u> \$17,600
% Growth	23.7%	ó	1.6%		6.1%		5%	12%	9%
Operating Profit	\$ 1,612	\$	13	\$	528	\$	750	\$ 1,900	\$ 2,100
% of Revenue	17.29	%	0.1%	6	3.8%	6	5%	12%	12%
ROA	14.69	%	0.79	6	3.5%	6	4%	, 11%	11%
ROE	18.99	%	0.99	%	4.99	%	6%	6 15%	16%

Note: FY93 and 94 based on industry growth from Infocorp.

## Digital Business Environment



## Digital Business Environment - Typical Products

**COMMODITIES** 

**UNIX Systems** 

**UNIX Software** 

Personal Computer

PC Integration

**Terminals** 

Ethernet

Storage

Maintenance

VAX

VAX Systems

**VAX** Software

Solutions

Maintenance

Networking

ENTERPRISE INTEGRATION

Banking

Insurance

Retail

Education

Healthcare

Government

Science

Professional Services

Telecommunications

**SERVICES** 

Traditional Cutomer Services

Maintenance

Customer Training

Special Systems

Digital Restricted Distribution

CFG:JC:BUSMOD-CURRENT-Rev2

### NMS Business Unit Structure

#### **COMMODITIES**

#### PRODUCT CREATION UNITS

#### **HARDWARE**

INT Intel/SCO **PCS** DecStation DSG Disks & Subsystems Group Tapes & Optical Products Process Technology TOPS PTG Electronic Storage Dev. **ESD** Video & Hardcopy **VIPS** PC Integration PCI RISC Business RSC LENAC Low-End Networks & Communications

#### SOFTWARE

OSG Open Systems Software Grp.

#### SERVICE CREATION UNITS

DTS Desktop Services

#### VAX

Profession of the profession of

#### PRODUCT CREATION UNITS

#### **HARDWARE**

**VAX 9000** Fault-Tolerant Systems FTS **MSB** Mid-Range Systems Business Entry Systems Business VAX Workstations Business WST Semiconductors Microsystems Development Continuing Products Bus. Grp.

#### **SOFTWARE**

VMS VMS ONS Open Network Systems **NAS Transaction Services** NTS NAS Security Services NAS User Frameworks NSS NUF NAS Concurrent Eng. NAS Languages & Tools NAS Presentation/Comm. NPC NIS NAS Information Services NDC NAS Distributed Computing NAS Transaction Services Corporate Backbone Ntwk. NTS CBN Local Area Access LAA Local Area Network CLS Clusters Image/Voice/Human Interface

#### SERVICE CREATION UNITS

Hardware Product Services Software Product Services Customer Training

#### **ENTERPRISE** INTEGRATION

#### MBU's/IBU's

Healthcare Environmental Banking & Investment Insurance Media Telecommunications **Utilities** Wholesale/Retail Travel/Transportation Engineering
Education/Science
State & Local Government U.S. FederalGovernment Small to Meduim Enterprise Professional Services
CIM M&PD
Sales & Distribution
Research & Development Systems Component Business Group Finance & Accounting Office Electronic Publishing Application Development Systems Multi-Vendor Integration Corporate Information Systems Departmental Information Systems Software Development Depts. CALS/CE Systems Integration Massively Parallel Systems Workstations Information Systems Business IS/Operations Management Technical OEM Business

#### SERVICE CREATION UNITS

DCS Digital Consulting Service NWSS Network & Site Services Operations & Site Services OSS APS CSS Application Project Services

#### **SERVICES**

#### **SERVICE CREATION UNITS**

Desktop Services Hardware Product Services **HPS** Software Product Services

Computer Special Systems CSS

CT Customer Training

Digital Restricted Distribution

Computer Special Systems

Source: FY92 New Management System Submissions

## **Key Characteristics**

#### **COMMODITIES**

Low cost in all areas Indirect channels Price competitive Low customer support High volume/Low cost mfg. Time to market Undifferentiated Primarily desktop & peripherals High velocity Short cycle times Short product lifecycles Value through perceived differentiation Low complexity Standard components

#### VAX

Strong customer relationship
Significant value add
High availability
Ease of information
management
Direct sales channels
Value through functionality
Higher complexity
Work group solutions
Medium sales cycle
Mass customization

## **ENTERPRISE INTEGRATION**

Customer defines product Labor intensive Requires high expertise High fixed costs Long delivery cycle Low assets Information delivery High value add Market pull Leadership applications Highest complexity Long sales cycle Unique enterprise wide solutions Long term contracts Full customization as perceived by customer Project management imperative

#### **SERVICES**

Labor intensive
Quick response essential
Lower asset base
than poduct business
Remedial

- large annuity business
- sales cycle tied to hardware

Standardization imperative Excellent logistics key to lowest cost of delivery

## Dynamic Environment

	<u>FY87</u>	FY90	FY94*
Economy Worlwide GNP Growth Inflation	Strong 3.4% 2.6%	Weak 2.5% 4.7%	Strong 3.1% 3.3%
Industry Size Growth	\$197 B 13%	\$287 B 12%	\$422 B 9%
Style of Computing	Proprietary	Commoditization	Open Systems
Digital Estimated: Market Share**	4.8%	4.5%	4.3%
Revenue Mix Hardware/Software U.S./International Products/Services	80/20 53/47 67/33	70/30 45/55 63/37	60/40 40/60 57/43
Product Mix % Over \$500 KASV VAX/RISC Hardware High-Mid/Low	44% 100/0 60/40	0% 95/5 48/52	10% 60/40 40/60
Distribution Channels Direct/Indirect	70/30	72/28	???
Price/Performance	High volume increase High price/unit increase	High volume increase Decreasing price/unit	High volume increase Decreasing price/unit
Company View	Single Model	Single Model	Four Model

<sup>\*</sup> Estimated Outlook

<sup>\*\*</sup> Estimated based on Infocorp Market Data

# Niche Competitors in each Business Area

**COMMODITIES** 

#### **HARDWARE**

Sun Compaq Dell 3 Com Conner Seagate

#### SOFTWARE

Lotus Microsoft VAX

#### **HARDWARE**

Amdahl Silicon Graphics Stratus

#### **SOFTWARE**

Oracle Novell ASK **ENTERPRISE INTEGRATION** 

Computer Sciences Corp.

**EDS** 

**SERVICES** 

Bell Atlantic Grumman

Digital Restricted Distribution CFG:JC:BUSMOD-CURRENT-Rev2

## Aggregate Competitive Business Models

#### **COMMODITIES**

Revenue	100%
Cost of Sales	70
Sales, Gen &Admin.	15
Research & Devlpmt.	7
Operating Income	8
Revenue/Employee (\$K)	\$136
ROA	8%
Inventory Turns	5.5x
DSO	55
PP&E Turns	7.9x
Operating Asset Turns	2.4x
Asset Turns	1.6
ROOA	13.0%
Leverage	2.2
ROE	18%
Optg. Assets/Empl(\$K)	\$ 54
Revenue Growth	46%
Optg. Profit/Empl(\$K)	\$ 13
1	

#### VAX

38 36 11 15
36 11
11
15
185
13%
3.6x
101
8.1x
2.0x
1.3x
21%
1.5
21%
96
96 28%

## ENTERPRISE INTEGRATION

Revenue	1	100%	Ó
Cost of Sales		78	
Sales, Gen &Admin.		11	
Research & Devlpmt.	]	N/A	
Operating Income		11	
Revenue/Employee (\$K)	\$	97	
ROA		11%	Ó
Inventory Turns		54x	
DSO		45	
PP&E Turns		5.4x	
Operating Asset Turns		3.0x	
Asset Turns		1.5	
ROOA		23%	Ó
Leverage		2.3	
ROE		26%	ó
Optg. Assets/Empl(\$K)	\$	32	
Revenue Growth		13%	ó
Optg. Profit/Empl(\$K)	\$	11	

#### **SERVICES**

	100%
	71
	14
	N/A
	15
\$	108
	12%
4	2.3x
	50
	4.5x
	2.2x
	1.3
	19%
	2.6
	30%
\$	72
	10%
\$	18
	\$ 4

# Competitive Business Model Best-in-Class

COMMODITIES	VAX	ENTERPRISE INTEGRATION	SERVICES
Revenue 100%	Revenue 100%	Revenue 100%	Revenue 100%
Optg. Profit 18%	Optg. Profit 15%	Optg. Profit 11%	Optg. Profit 22%
ROA 20%	ROA 15%	ROA 12%	ROA 9%
ROE 27%	ROE 21%	ROE 16%	ROE 13%
Compaq Hardware Microsoft Software	Stratus Hardware Novell Software	EDS	Bell Atlantic

Note: ROE @ Digital's Capital Structure

Digital Restricted Distribution CFG:JC:BUSMOD-CURRENT-Rev2

Digital
FY91 YTD and FY90 Results\*
Compared with Alternative Business Models

	Q3 YTD FY91 Actual	FY90 Actual*	Aggregate Competitive Bus. Model	Best in Class Bus. Model	Current Digital <u>Bus. Model</u>	Alternative Digital <u>Bus. Model</u>
Revenue	100%	100%	100%	100%	100%	100%
Cost Of Sales	53	53	57			
Sales, Genral & Admin.	32	31	23			
Research & Development	12	12	8			10
Operating Profit	3	4	12	15	17	10
Net Income	3%	4%	8%	11%	12%	7.5%
	1.1x	1.2x	1.4x	1.5x	1.3x	2.1x
Asset Turns	2.9%	4.7%	11.2%	16%	16%	16%
ROA	1.4	1.4	1.4	1.4	1.4	1.4
Digital Leverage**	4.1%	6.5%	16%	22%	22%	22%
ROE		0.070	1.9			
Aggregate Competitive Le	verage		21%			
ROE			2170			

<sup>\*</sup>Excludes Restructuring

<sup>\*\*</sup> Leverage = Average Assets/Average Equity

### Competitive Business Models Cost Structure Implications (\$ Mils)

	FY92 Outlook	FY92 Outlook at <u>Model Structure</u>	FY92 Outlook B/(W) <u>Model</u>
Revenue			
Products	\$ 8,219	\$ 8,219	\$
Services	6,174	6,174	
Total Revenue	\$14,393	\$14,393	\$
Total Expense	\$13,632	\$12,686	\$(946)
Operating Profit	\$ 761	\$ 1,707	\$(946)
Profit Margin	5.3%	11.8%	(6.5)%
Headcount	108,900	93,900	(15,000)
Asset Turns	1.2	1.4	(0.2)
Average Assets	\$11,700	\$10,287	\$(1,419)
ROA	4%	11%	(7)

Scenario A
Continuation of Current Environment\*
(\$ Mils)

	<b>FY87</b>	F	Y	<u>90</u>	F	<u> 191</u>	<u>FY</u>	<u> '92</u>	<b>FY93</b>	<b>FY94</b>
Revenue Products Services Total Revenue	\$ 6,254 3,135 \$ 9,389	_	4,	146 797 943		8,136 5,602 5,738	6	3,200 ,200 ,400	\$ 8,300 <u>6,800</u> \$15,100	\$ 8,500 7,500 \$16,000
% Growth	23.7%			1.6%		6.1%		5%	5%	6%
Operating Profit (\$)	\$ 1,612	9	\$	13	\$	528	\$	750	\$ 1,200	\$1,800
% of Revenue	17.2%	)		0.1%		3.8%		5%	8%	11%
ROA	14.6%	)		0.7%		3.5%		4%	6%	9%
ROE	18.9%	Ò		0.9%		4.9%		6%	8%	11%

<sup>\*</sup> Continued cost control and headcount reductions

## Competitive Business Models Industry Growth - (\$ Mils)

[	COMMO	DITIES
	<u>FY93</u>	<u>FY94</u>
Revenue	\$7720	\$8647
Optg Profit	\$ 664	\$ 772
%	9%	9%
ROA	9%	9%
ROE	12%	12%

V	AX
<u>FY93</u>	<u>FY94</u>
\$6594	\$7059
\$1033	\$1112
16%	16%
14%	14%
19%	20%

ENTERPRISE INTEGRATION					
<u>FY93</u>	<u>FY94</u>				
\$1769	\$1941				
\$ 189	\$ 208				
11%	11%				
11%	11%				
16%	16%				

TOTAL				
FY93	<u>FY94</u>			
\$16183	\$17647			
\$ 1886	\$2092			
12%	12%			
11%	11%			
15%	16%			

Digital Restricted Distribution CFG:JC:BUSMOD-CURRENT-Rev2

Scenario B Industry Growth (\$ Mils)

	<u>FY87</u>	FY	<u>90</u>	FY	<u>'91</u>	FY	<u> 192</u>	<u>FY93</u>	<u>FY94</u>
Revenue Products Services Total Revenue	\$ 6,254 3,135 \$ 9,389	\$ 8, 4, \$12,	797	· <u>5</u>	5,136 5,602 5,738	. <u>(</u>	3,200 6,200 4,400	\$ 9,200 6,900 \$16,100	\$10,100 7,500 \$17,600
% Growth	23.7%		1.6%		6.1%		5%	12%	9%
Operating Profit	\$ 1,612	\$	13	\$	528	\$	750	\$ 1,900	\$ 2,100
% of Revenue	17.2%	)	0.1%		3.8%		5%	12%	12%
ROA	14.6%	ó	0.7%	,	3.5%	)	4%	11%	11%
ROE	18.9%	ó	0.9%	)	4.9%	ó	6%	15%	16%

Note: FY93 and 94 based on industry growth from Infocorp.