Verbreitung von z/OS

- **95% der weltweit größten 2000 Unternehmen setzen z/OS als ihren zentralen Server ein.**

- **Zwischen 65 und 70 % aller geschäftsrelevanten Daten werden im EBCDIC Format auf Mainframe Rechnern gespeichert.**

- **60% aller geschäftsrelevanten Daten, auf die mittels des World Wide Web zugegriffen werden kann, sind in Mainframe Datenbanken gespeichert, hauptsächlich DB2, IMS und VSAM Datenbanken.**

- **Die Anzahl der weltweit pro Sekunde ausgeführten CICS Transaktionen liegt in der gleichen Größenordnung wie die Anzahl der Zugriffe auf das WWW.**

- **Von allen Servern hat System z den höchsten Marktanteil und die höchste Wachstumsrate.**

IBM Redbooks Series: "Java Application Development for CICS: Base Services and CORBA Client Support". IBM Form Nr. SG24-5275-00, April 1999. Ray Jones, IBM vice president Server Solutions, at Northern Illinois University, Workshop, July 11, 2000
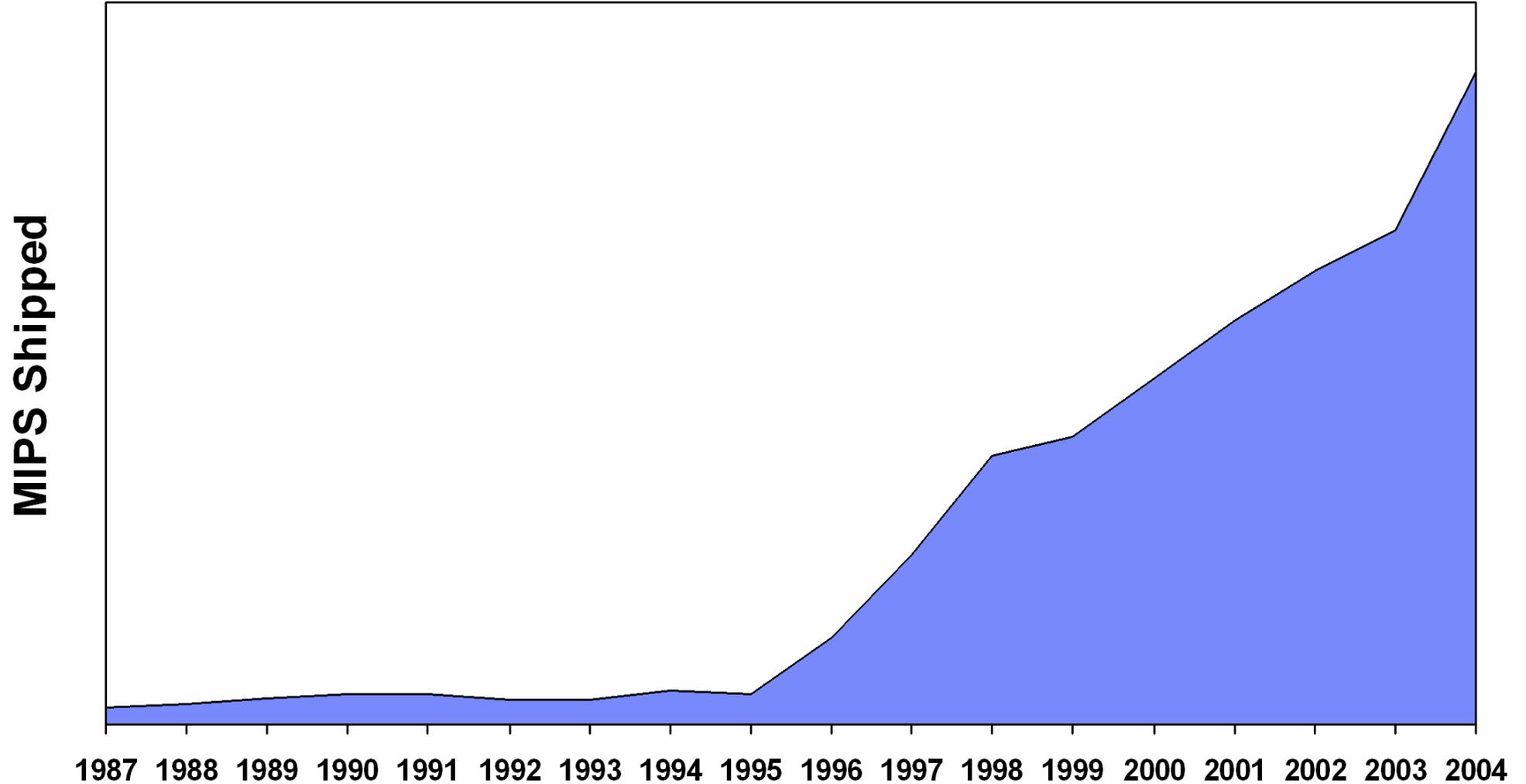
PRICEWATERHOUSE COOPERS 🄿

Statement der PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft, Frankfurt am Main

Eine Reihe unserer großen und größten Mandanten aus unterschiedlichen Branchen setzen derzeit Mainframes und vor allem bzw. hauptsächlich das Betriebssystem z/OS ein. Sie werden dies aus heutiger Sicht auch zukünftig weiter tun. Großrechner insbesondere Rechner mit dem Betriebssystem z/OS werden typischerweise dann eingesetzt, wenn folgende Aspekte relevant sind:

- Hoch verfügbare Systemumgebung

- Hoher Sicherheitsstandard

- Umgebungen mit 5.000 – 200.000 Benutzern

- Nachvollziehbarkeit wesentlicher Systemereignisse

IBM S/390 / zSeries Shipped Capacity Worldwide

MIPS Shipped

1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004

Source: IBM Market Research

MIPS = Million Instructions per Second

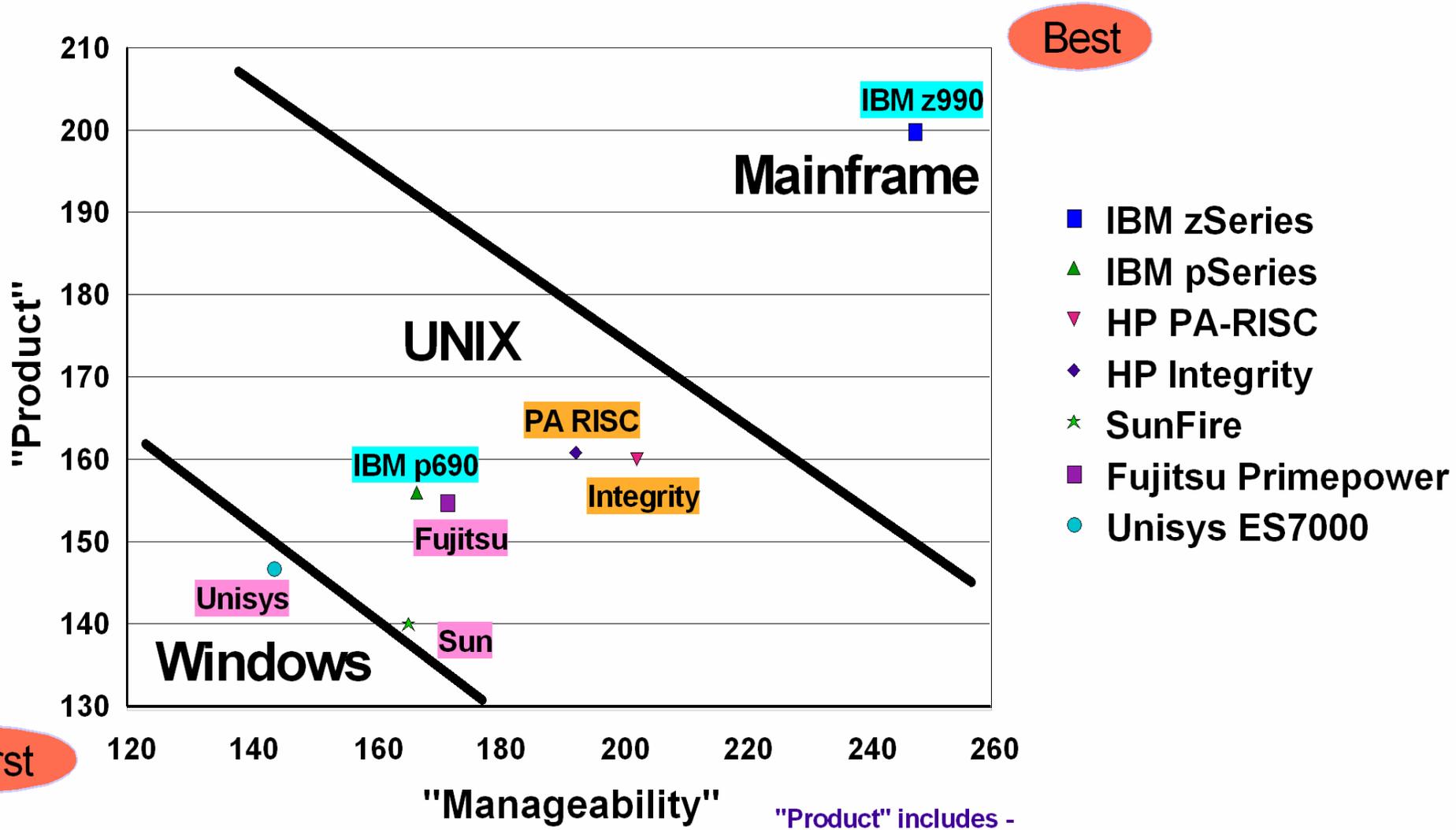|	Compaq Proliant W2000	SUN Exxxx Solaris	HP HP9000 HPUX	IBM S/390 OS/390
Processor Technology	7	6	10	10
Systems Performance	30	50	50	50
Clustering Performance	2	4	4	10
Single Systems Availability	20	30	30	50
Multiple Syst. Availability	20	24	32	40
Workload Management	5	20	30	50
Partitioning	4	28	16	40
Systems Management	28	24	28	40
Totals	116	186	200	290

Application Server Evaluation Model, Technology Comparision
Gartner Group, February 2001
Hohe Punktzahl ist besser

Product	BULL		FUJITSU		HP			IBM			SUN	UNISYS	
	GCOS	NovaScale	Primepower	BS2000	NonStop	HP9000	Integrity	zSeries	pSeries®	iSeries®	Sunfire	Clearpath	ES7000
Processor Technology	8	9	8	9	6	8	9	10	9	9	7	9	9
System Performance	9	7	9	9	9	8	9	10	10	9	8	9	8
Unplanned Downtime (Single)	9	7	8	9	10	8	8	10	8	9	8	9	8
Unplanned Downtime (Clustered)	9	6	8	9	10	8	8	10	8	8	7	9	7
Disaster Tolerance/Recovery	9	4	6	9	10	8	7	10	5	8	5	9	6
Totals	44	33	39	45	45	40	41	50	40	43	35	45	38

Gartner Application Server Evaluation Model (ASEM), October 2004

Operations Management	BULL		FUJITSU		HP			IBM			SUN	UNISYS	
	GCOS	NovaScale	Primepower	BS2000	NonStop	HP9000	Integrity	zSeries	pSeries	iSeries	Sunfire	Clearpath	ES7000
Planned Downtime	9	5	9	9	10	8	8	10	7	7	9	10	6
Partitioning	9	4	7	8	10	7	5	10	8	9	6	10	7
Capacity on Demand	6	2	6	7	3	8	8	8	6	7	5	8	2
OS Manageability	9	6	7	9	8	8	8	9	7	8	7	9	5
Server Management Tools	7	6	5	7	9	8	8	10	5	8	6	7	7
Workload Management	5	3	5	7	7	8	8	10	5	9	5	10	6
Totals	45	26	39	47	47	47	45	**57**	38	48	38	54	33

Gartner Application Server Evaluation Model (ASEM), October 2004

Best

Worst

210
200
IBM z990
Mainframe
190
180
UNIX
170
PA RISC
160
IBM p690
Integrity
150
Fujitsu
"Product"
140
Unisys
Sun
130
Windows

120   140   160   180   200   220   240   260

"Manageability"

■ IBM zSeries
▲ IBM pSeries
▼ HP PA-RISC
◆ HP Integrity
★ SunFire
■ Fujitsu Primepower
● Unisys ES7000

Source: Gartner, ASEM Enterprise Server Update 2004, 22nd October 2004

"Product" includes -
  Processor Technology, System Performance, Unplanned Downtime (Single), Unplanned Downtime (Clustered), Disaster Tolerance/Recovery
"Manageability" includes -
   Planned Downtime, Partitioning, Capacity on Demand, Workload Management, OS Manageability, Server Management Tools

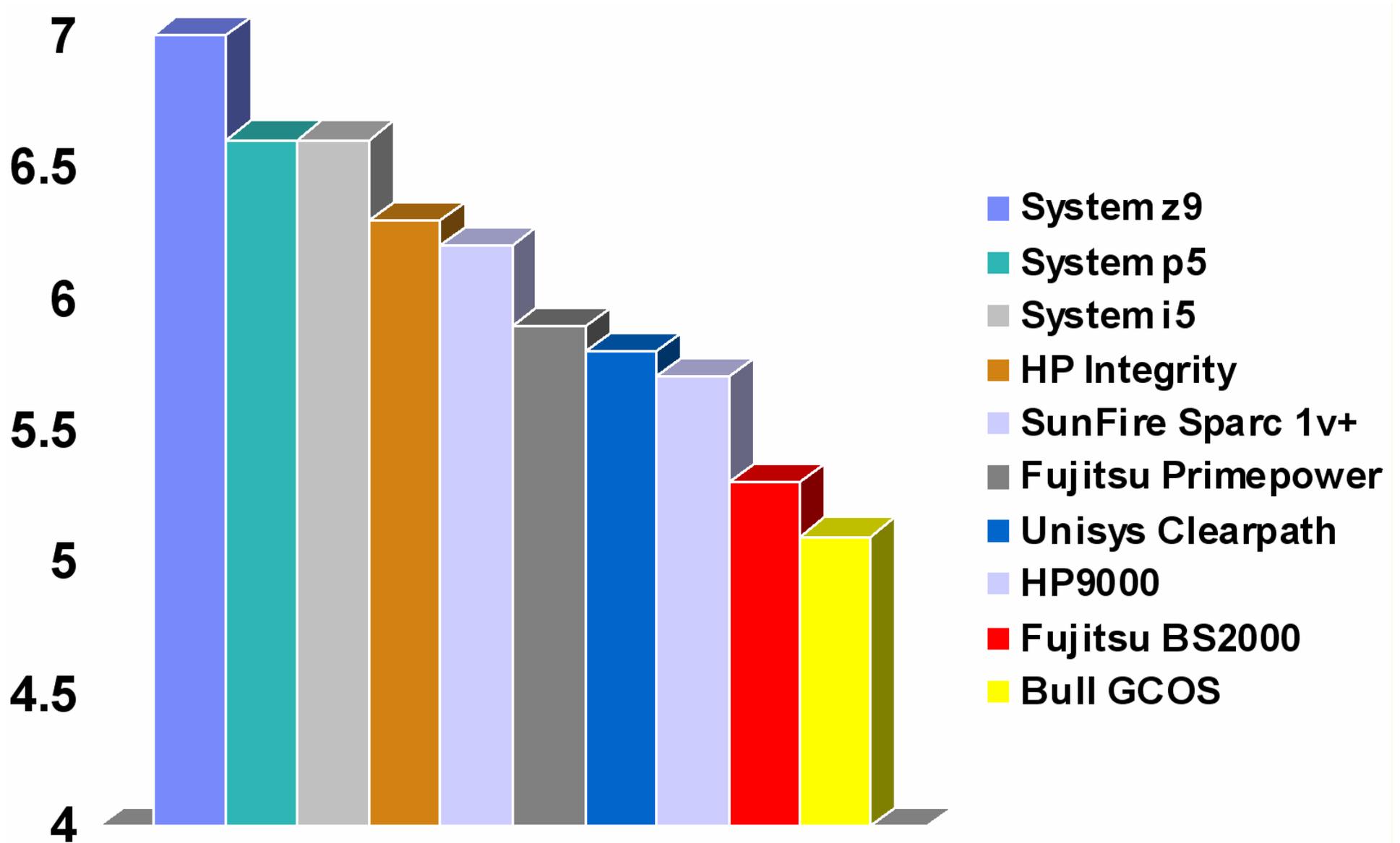# Gartner's platform positioning 4Q08 – Platform Summary
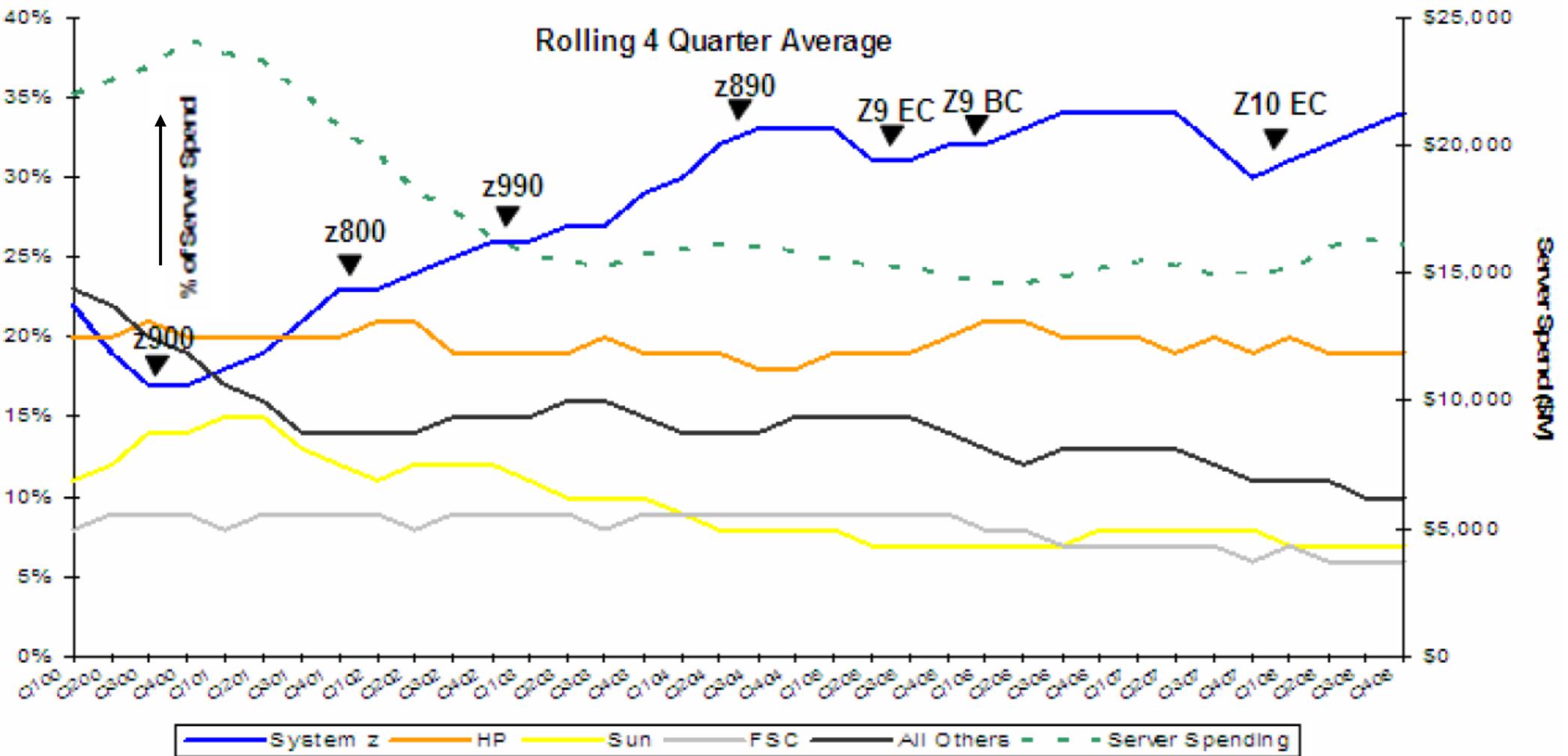
Platform positioning - Selected Platforms
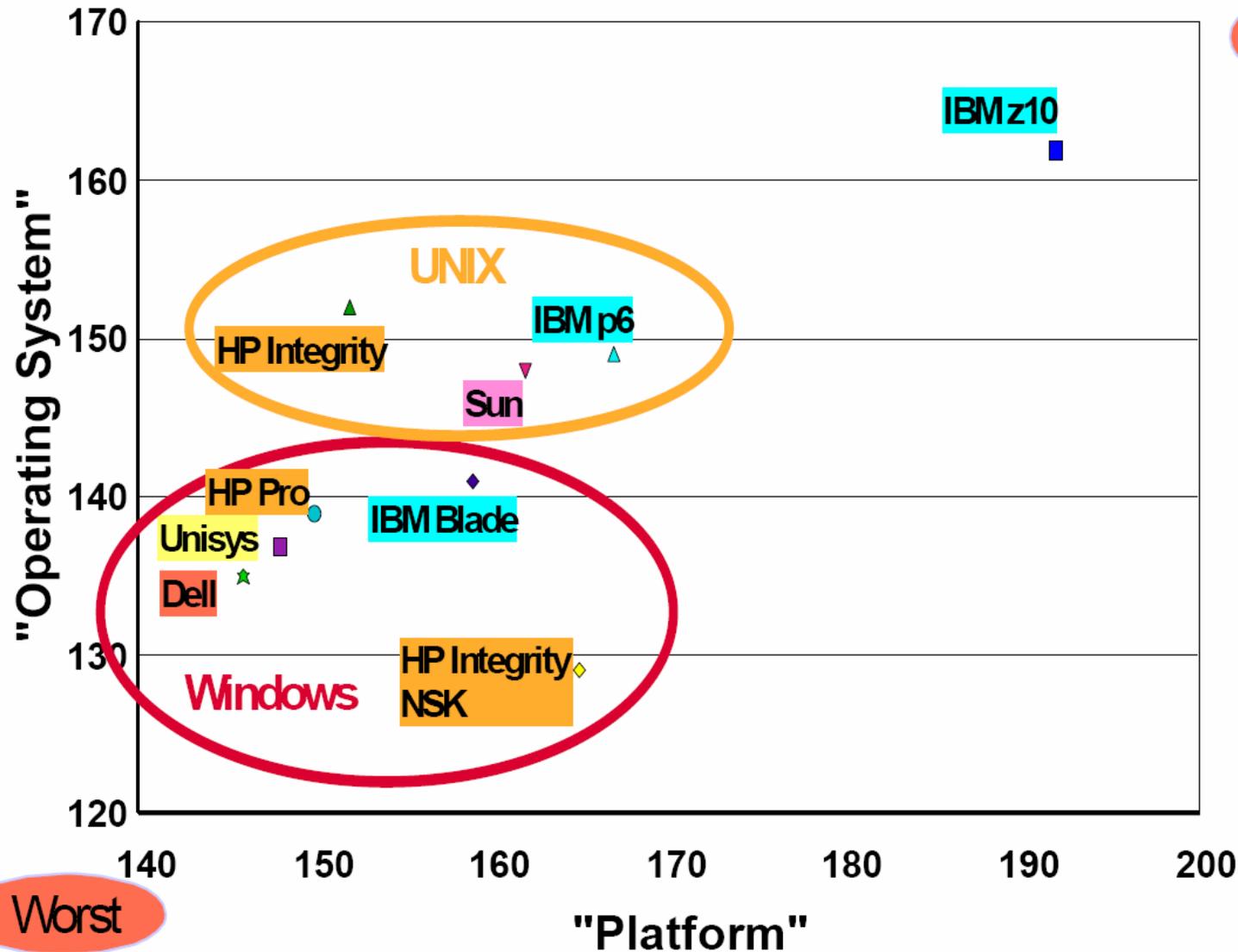
Gartner's platform positioning - 2Q06, overall Rating

Platform	FORM FACTOR	PLATFORM & RELATED TOOLS	PLATFORM SERVICES	OS & TOOLS BEST RESULT	OS SERVICES BEST RESULT	Stack Vision Best Result	Stack Execution Best Result	CORPORATE/ SALES & MARKETING	LOCAL/ GO-TO-MARKET	AVERAGE SCORE
1 IBM SYSTEM z9	F	7.8	8.9	8.9	7.2	4.2	4.0	8.1	7.1	7.0
2 IBM SYSTEM p5	F	7.5	7.2	7.7	7.2	4.3	3.8	8.1	7.1	6.6
3 IBM SYSTEM i5	F	7.0	7.3	8.0	7.2	4.5	3.7	8.1	7.1	6.6
4 HP INTEGRITY	F	6.3	7.6	7.4	6.8	4.2	3.3	8.0	7.3	6.3
5 SUN FIRE U/SPARC IV+	F	6.6	6.3	7.7	6.8	4.2	3.5	7.7	6.9	6.2
6 FUJITSU PRIMEPOWER	F	5.9	6.0	7.7	6.2	4.0	3.5	7.0	6.7	5.9
7 UNISYS CLEARPATH	F	4.5	7.7	8.1	7.1	3.3	3.0	7.1	5.7	5.8
8 HP 9000	F	4.1	5.7	7.0	6.6	3.7	3.0	8.0	7.3	5.7
9 FUJITSU BS2000	F	3.5	7.1	6.0	6.4	3.0	3.0	7.0	6.7	5.3
10 BULL GCOS	F	3.5	6.2	6.9	6.6	3.0	2.3	6.4	5.6	5.1

Gartner's platform positioning - 2Q06, overall Rating

Rolling 4 Quarter Average

Source: IDC 4Q08 WW Server Tracker

Legend: System z — HP — Sun — FSC — All Others — Server Spending

PLATFORM & TOOLS	PROCESSOR PERFORMANCE	MULTI-CORE CAPABILITY	MULTI-THREAD CAPABILITY	PLATFORM EFFICIENCY (PERFORMANCE VS. POWER/COOLING)	
	SMP/MPP SCALABILITY	SINGLE SYSTEM AVAILABILITY	OVERALL ARCHITECTURAL VIABILITY	VIABILITY OF CURRENT GENERATION	
PLATFORM SERVICES	PLANNED DOWNTIME	DISASTER TOLERANCE & RECOVERY	HARDWARE PROTECTION AND SECURITY	HARDWARE ELECTRICAL ISOLATION	
	VIRTUAL MACHINES (HYPERVISORS LPARS)	MIXED WORKLOAD/OS HOSTING	MIXED WORKLOAD OS MANAGEMENT	LAYERED PLATFORM SERVICES	SERVER MANAGEMENT TOOLS
OS & RELATED TOOLS	FAILOVER CLUSTERING	WORKLOAD MANAGEMENT	CAPACITY ON DEMAND	OS MANAGEABILITY	
	OS VERTICAL SCALING	SOFTWARE PORTFOLIO	THIRD PARTY TOOLS SUPPORT		
OS SERVICES	INSTALLATION SERVICES	HELPDESK & ESCALATION	REMOTE MANAGEMENT	OS DISTRIBUTION	
	OS/HW COMBINED TRACK RECORD	EDUCATION SERVICES	ENGINEERING (LEVEL 3) SERVICES	OS MIGRATION SERVICES	HIGH AVAILABILITY SERVICES