



Extending Your Mainframe for More Business Value

Affordable Business Growth
with System z

Quiz

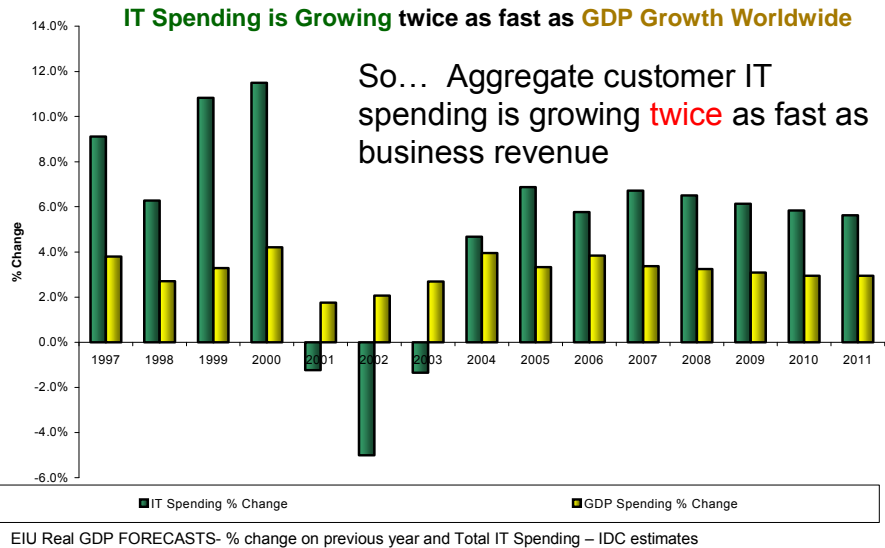
How fast are IT costs growing?

A: Slower than business revenue growth

B: About equal to business revenue growth

C: Faster than business revenue growth

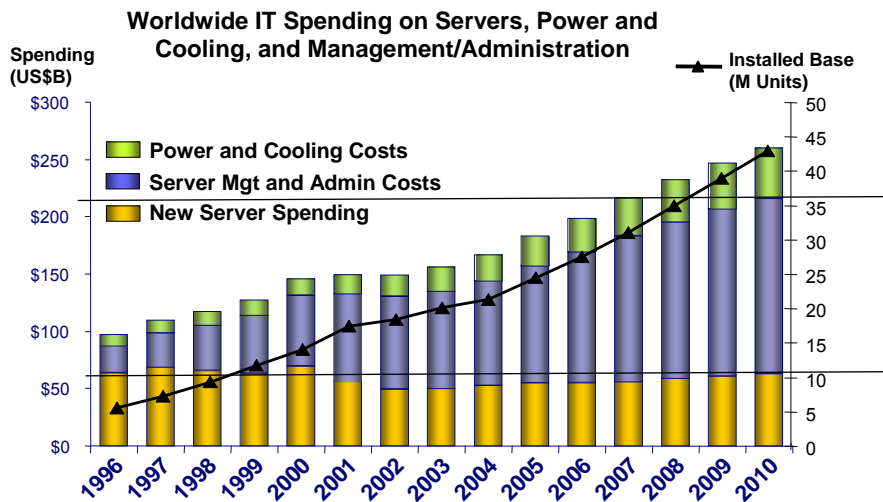
Top Down Analysis: IT Spending Growth



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Rising Operational Costs For Distributed Servers Are a Contributing Factor



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Source: IDC, 2006

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Two Challenges

How can we

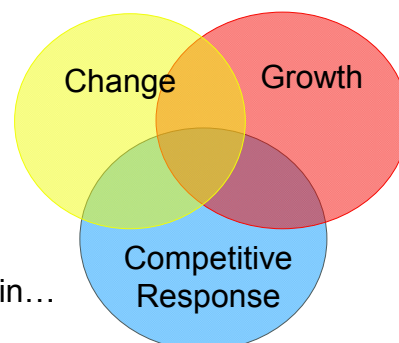
- Extend business capability quickly?

and

- Prevent I/T expenses from growing faster than business revenue?

Extensibility, A Definition *from wikipedia*

- In software engineering, **extensibility** is a system design principle where the implementation takes into consideration future growth. It is a systemic measure of the ability to extend a system and the level of effort required to implement the extension.



System z Has Extensibility built in...

Mainframe Extension Is a Winning Strategy

- Extension delivers new business capability *faster*
 - ▶ Building on the investments in I/T, data center and people skills
- Extension is a key cost-containment strategy
 - ▶ IT costs growing twice as fast as business revenue due to business imperatives and distributed deployments
- Mainframe extension can help reduce IT spending growth from **twice** business revenue growth to **equal or less** business revenue growth

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A Growing Mainframe Customer is a Business to be Emulated

- A survey of 585 large or growing IBM mainframe customers:
 - ▶ Average business revenue growth **12.1%**
 - ▶ Average profit growth 21.9%
 - ▶ Average MIPS growth 24.3%
 - ▶ Average mainframe HW and SW spending growth **6.4%**
- These customers are extending their existing mainframes to deliver new business capability while constraining IT spending growth to **half** of business revenue growth

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Mainframe Extension Solutions Achieve the Lowest Cost of Acquisition

Scenarios	Cost of Distributed vs. z	Distributed Cost Ratio
Mainframe Extension		
- Automobile Manufacturer	\$21.0M vs \$0.8M	26.0x
- WebSphere Case Study	\$5.3M vs \$3.0M	1.8x
- Major Retailer	\$8.3M vs \$7.0M	1.2x
- SAP Database Server	\$4.5M vs \$2.3M	2.0x
- Data Warehouse	\$10.4M vs \$3.7M	2.8x
Linux Consolidation		
- IBM IGS	\$901.9M vs \$521.2M	1.7x
- Brokerage Firm (Power)	\$12.7M vs \$7.8M	1.6x
- Brokerage Firm (Floor)	\$25.5M vs \$10.7M	2.4x
- Major Bank	\$46.9M vs \$19.9M	2.4x

2.0X

Note: Automobile Manufacturer was a special case

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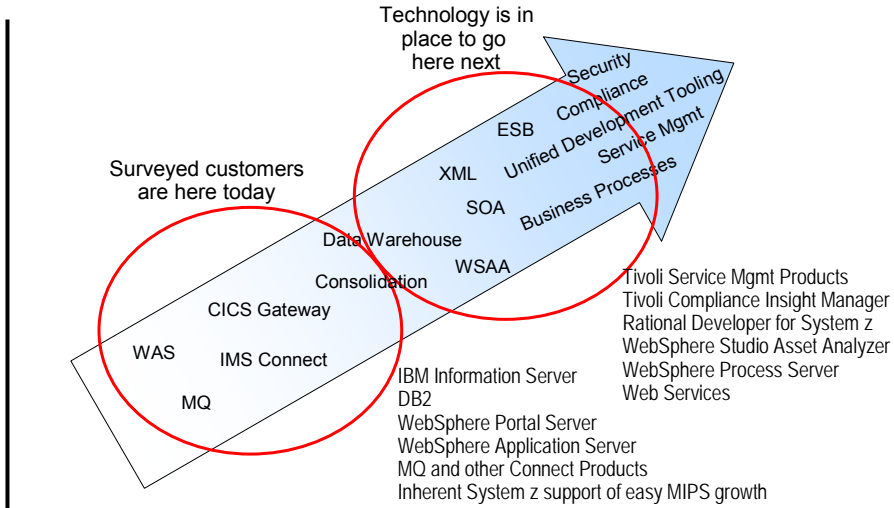
State of Mainframe Customers

- Impressive numbers from an IBM survey of top mainframe customers
 - ▶ 59 out of top 59 global 500 banks
 - ▶ 18 out of top 20 global 500 insurance companies
 - ▶ 7 out of top 9 global healthcare companies
 - ▶ 7 out of top 9 global retailers
 - ▶ All top US life, property, and casualty insurance companies in 2007 Fortune 500
 - ▶ Average mainframe capacity 15,000 MIPS and growing
 - ▶ Revenue is growing twice as fast as mainframe costs
 - Compared with "IT Spending is Growing twice as fast as GDP Growth Worldwide"

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Technologies Are in Place for Mainframe Extension Solutions



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Mainframe Extension Solutions Help Deliver New Business Capability Faster

- Organic Growth – Easy Growth of Existing Workload
- Extend Access Channels with SOA
- New Data Workloads on System z
- Deliver Business Insight with a Data Warehouse on System z
- Extend Connectivity with a Mainframe Communications Backbone
- Consolidate Workloads to Reduce Costs
- Extend Data Security on the Mainframe
- Extend IT Service Management
- Extend Development Team Productivity

Today we'll take a closer look at these extension solutions and the mainframe technologies behind them...

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Mainframe Extension Solution – Organic Growth

- **Easy Growth of Existing Workload**
- **Large enterprises grow at 10%+ annually**
 - ▶ Top 25 Industry Leading Companies in the Fortune Global 500 grew 13% annually from 2005 to 2007
 - ▶ Top 59 Global Banks grew 22% annually in 2006
- **Key growth areas**
 - ▶ Expansion in geography and channels
 - ▶ Expansion in market segments
 - ▶ Mergers and acquisitions
- **Growing pains and requirements**
 - ▶ Business growth drives transaction growth
 - ▶ Need to seamlessly scale up workload capacity

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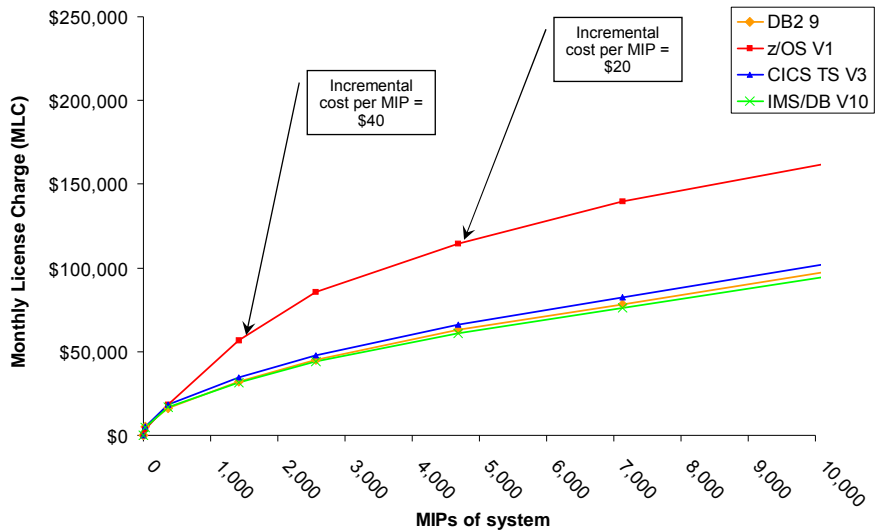
Easy Organic Growth on the Mainframe

- **System z designed to scale easily**
 - ▶ Non-disruptive capacity on demand
 - ▶ System automatically uses new processor, memory, and storage capacity
- **The cost of running incremental workload on the mainframe goes down as the total workload grows**
 - ▶ Mainframe design and IBM pricing policies favor the addition of more workload
 - ▶ Special hardware pricing for qualified types of organic growth
 - ▶ Lower software costs per transaction as workload grows
 - ▶ Labor costs hold steady as workload grows
- **Customers have learned that organic growth on the mainframe can be the most cost efficient choice**

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Software Pricing Curves Favor Growth



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“Specialty Engines” Reduce Cost for New Workloads

- Special assist processors for System z
 - ▶ For Java workloads (zAAP)
 - ▶ For selected DB2 workloads (zIIP)
 - ▶ For Linux workloads (IFL)
- Attractive pricing
 - ▶ \$125K for a 920 MIP processor (92% discount)
 - ▶ No charge for IBM software running on zAAP/zIIP
 - ▶ IBM software running on IFL costs 120 PVU's
 - ▶ Free upgrade to next generation!
- Requirements
 - ▶ Max number of zAAP =< number of general purpose processors
 - ▶ Max number of zIIP =< number of general purpose processors
 - ▶ No limit on the number of IFL's



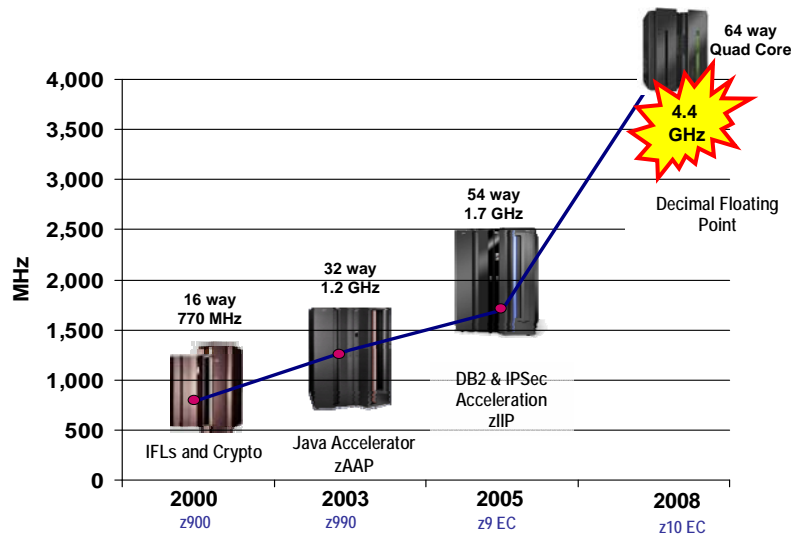
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Which Workloads Can Benefit From Specialty Processors?

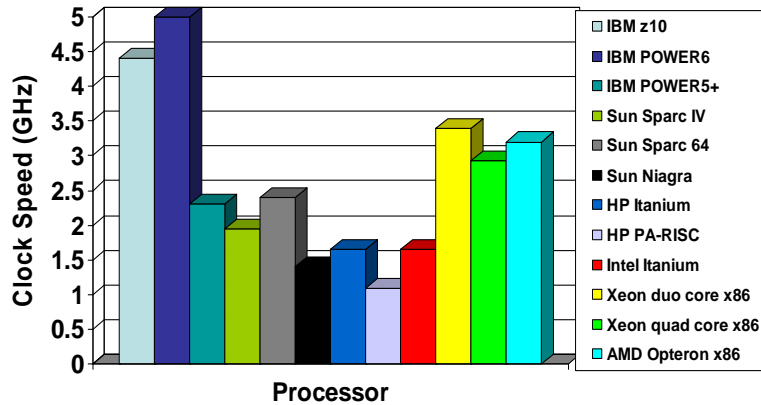
- What workloads can be run on a zAAP?
 - ▶ Java processing (**SOA scenarios**)
 - Up to 85%
- What workloads can be run on a zIIP?
 - ▶ Queries received via DRDA Remote Access Protocol (**Data base server scenarios**)
 - Up to 40%
 - ▶ Parallel queries (**Data Warehouse scenario**)
 - Up to 80%
 - ▶ Some of index maintenance utilities
 - ▶ IPSec and XML processing
 - Up to 71% (inbound) and 90% (outbound) for IPSec
- What workloads can be run on an IFL?
 - ▶ 100% of **Linux** workloads

z10 – Significant Performance Improvement



IBM z10 and POWER6 Lead the Competition

Fastest Available Processor Technology

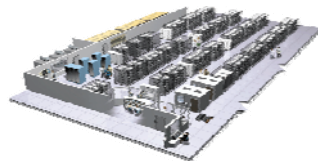


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An Inconvenient Truth!

Equivalent CO₂ Emissions in one year



10,000 sq ft at 125
watts/ft² @ \$0.09 per
kWh

\$985K per year

11,498 tons of CO₂
per year

==

368 Chevy Tahoes



==

9,424 refrigerators



==

10,549 round trips
NY to LA



==

78,753 75 watt light
bulbs running 8 hrs/day



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Introducing Service Oriented Finance

We are a traditional bank with branch offices throughout the country.

Banking competitors and non-bank specialists are taking away our customers.



**Service Oriented Finance
CEO**

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Service Oriented Finance

Our customers demand greater choice, and personal security and control in their banking relationships.

We need a next generation banking system!



Marketing

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Service Oriented Finance

But we've invested a lot of money in our current IT infrastructure.



Service Oriented Finance
CIO

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The Value of Mainframe Computing

- Mainframe extension solutions meet customer requirements at lowest TCO
- SOA can help you reuse your existing mainframe investments
- Consolidation is a proven way to save money and simplify operations
- The mainframe delivers superior qualities of continuous operations, rapid scale up, and security
- Mainframe specialty processors and disaster recovery are a bargain
- Mainframes have a much lower environmental impact

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Our Agenda Today

Agenda	
30 minutes	Affordable Business Growth with System z
45 minutes	Extend Access Channels with SOA
45 minutes	New Data Workloads on System z
15 minutes	<i>Break</i>
45 minutes	Deliver Business Insight with a Data Warehouse on System z
30 minutes	Extend Connectivity With a Mainframe Communications Backbone
60 minutes	<i>Lunch</i>
45 minutes	Consolidate Workloads to Reduce Cost
20 minutes	Extend Data Security on the Mainframe
30 minutes	Extend IT Service Management
15 minutes	<i>Break</i>
45 minutes	Extend Development Team Productivity
20 minutes	Extend Your Investment in System z

DEMO: Architecture

