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Challenges of Today's Business Environment

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Agenda

- Where are we starting from?
 - Life on the front-line
 - The CIO Agenda
 - Some mainframe Facts
 - Some mainframe Myths
- The mainframe in the context of modern IT
 - IBM's commitment to the Mainframe
 - The changing role of the mainframe
 - The mainframe as a "full participant" in modern IT
- The evolution of the mainframe
 - A normal part of distributed computing
 - The mainframe charter will continue to deliver improved customer value
 - In 15 years... lots of people will be using mainframe technology without even knowing it
- Wrap up
 - Understand the value of the mainframe
 - Understand its potential role
 - Watch as the mainframe continues to evolve



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The state of End-user IT

The road to hell...

1960s
DIY
everywhere

Early 1990s
+ New platforms/
applications,
increased outsourcing

DIY
+ bureau
services

Late 1990s
Yet more
investment/
divestment

Decentralisation of control

Greater accessibility to technology

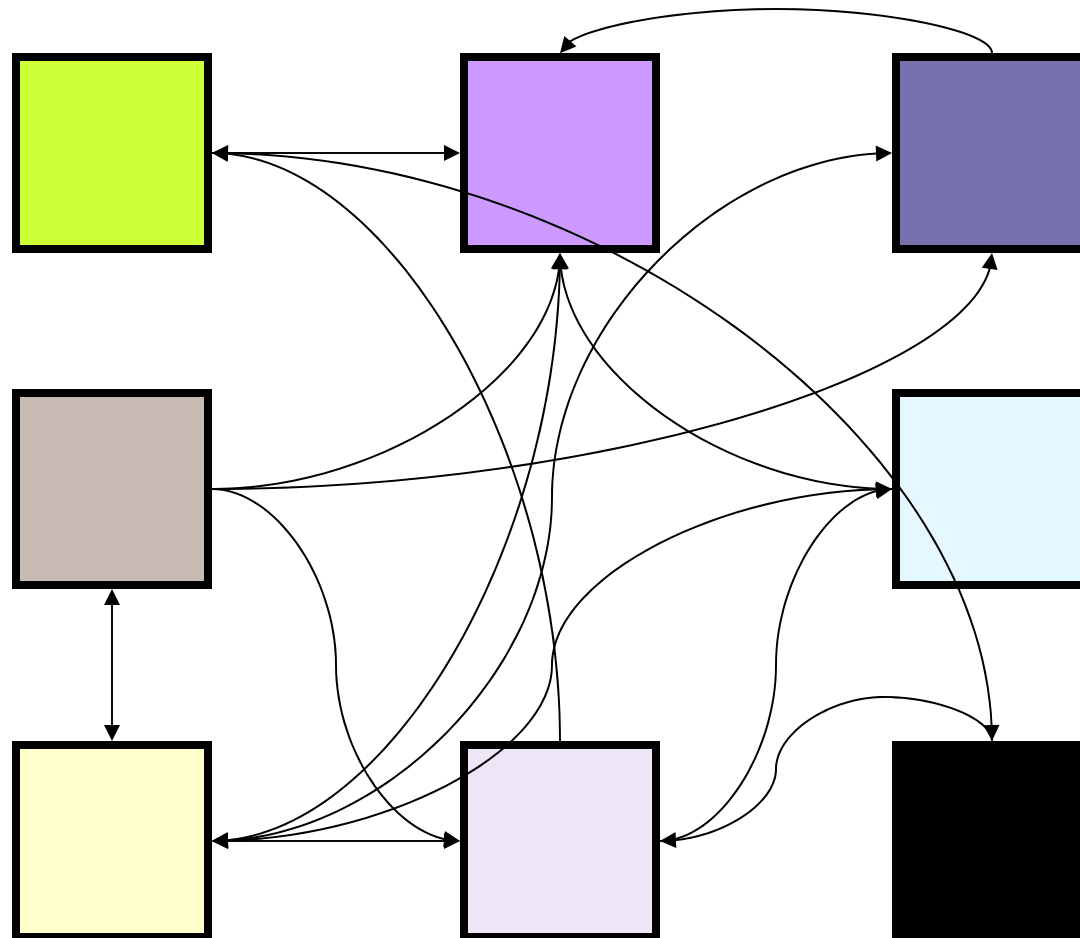
+
Packaged
applications

Less synergy between technologies

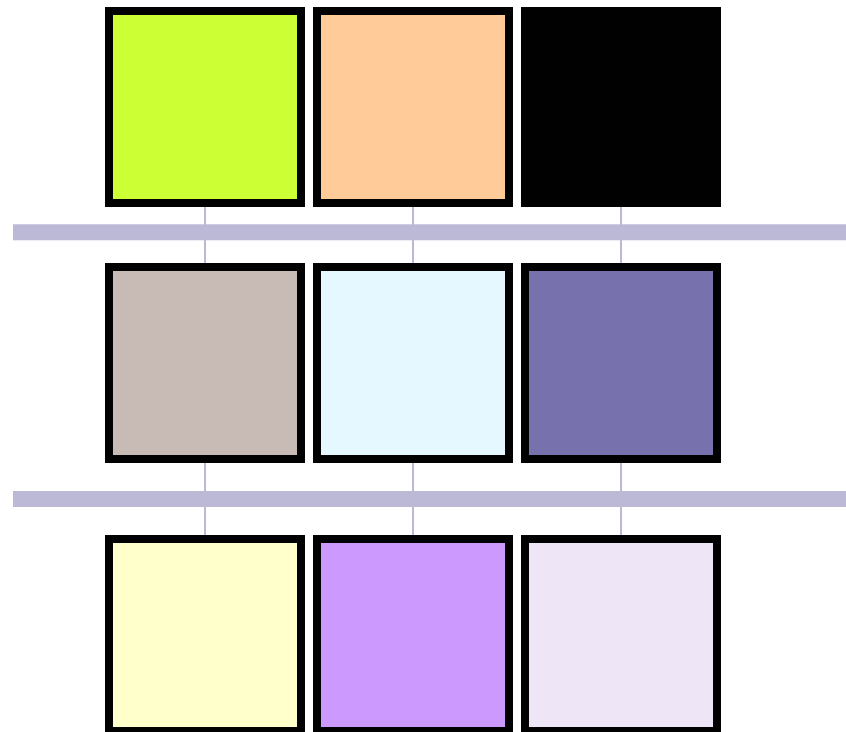
And so on....

time →

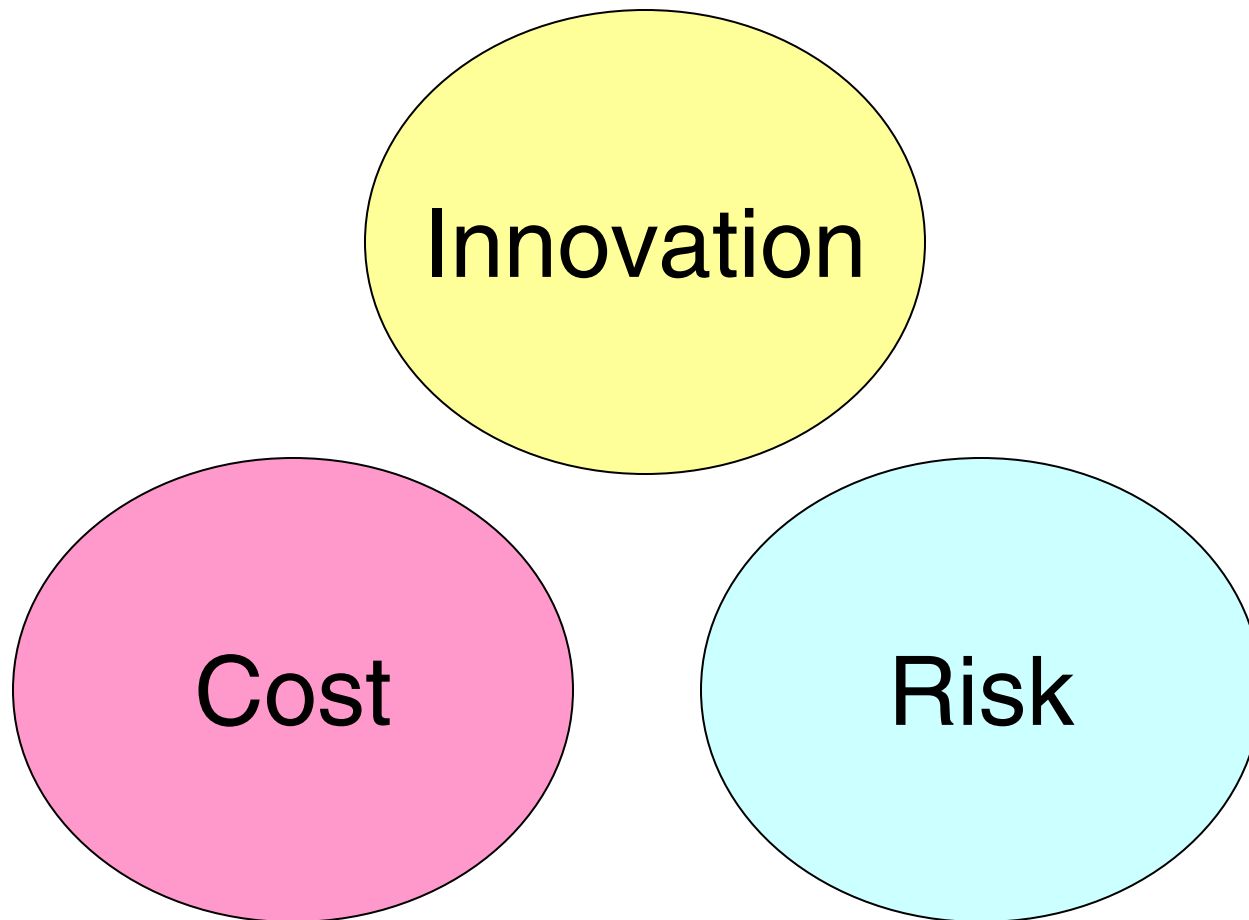
Life on the front line



And they all want to get here....



What's on the CIO's agenda?



Key CIO projects

- Consolidation
 - Reducing server count, combining workloads
- Information management
 - Coping with the information explosion
 - Meeting data retention requirements (staying out of jail)
- Infrastructure simplification
 - Reducing the cost and complexity of infrastructure
 - Notably around management and admin
- A strategic shift to “service orientated IT” (SOIT)
 - ITIL and Enterprise IT Management

Some mainframe facts

A quotation...

***'I predict that the last mainframe will be unplugged
on 15 March 1996'***

Stewart Alsop (1991)

The mainframe is thriving

- The mainframe lies at the heart of several industries
 - 80% of Banking transactions run through COBOL
 - Transport, Manufacturing and Defence all depend on the mainframe
- COBOL remains one of the most widely deployed programming languages
 - Over 150bn lines of COBOL in production
 - Growing at a rate of 2-4% p/a
- The number of deployed mainframe MIPS continues to grow
 - At a rate of 15% a year

Some mainframe myths

Mainframe myths

- The mainframe is a dying platform
 - But deployed mainframe MIPS continue to grow
 - IBM continues to make huge investments in the platform (Over a billion dollar for z9 alone)
- There's a mainframe skills crisis
 - But any decline in programmers is more than offset by improved development tools
 - Systems management is increasingly automated lowering the admin burden
- The mainframe is inflexible
 - But the mainframe can run Java, Websphere and Linux applications, as well as COBOL and PL/1



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The mainframe in the context of modern IT

IBM's commitment to the mainframe

- IBM is investing heavily in its mainframe business
 - z9..
 - 1.2 billion dollars in R&D
 - A team of 5000 people
- IBM Software group is committed to supporting the mainframe platform
 - Websphere 6.0
 - Released in March 2005
 - Common code-base between mainframe and non-mainframe versions

The Mainframe Charter

- A commitment to the mainframe platform, and to mainframe users
 - Announced in August 2003
 - Focussing on Innovation, Value, and Community
- Innovation
 - Openness
 - Performance
 - Simplification
- Value
 - Lowering the cost of mainframe computing
 - More flexible pricing/charging options
- Community
 - Provide greater support in terms of education, skills and advice

Delivering on the Mainframe Charter

■ Innovation

■ Openness

- More accessible
- More flexible

■ Performance

- Z9 saw a doubling in performance across the board

■ Simplification

- Big improvements in automation / administration

■ Value

■ Lowering the cost of mainframe computing

- Consistent reductions in the cost of hardware and software
- z9 saw a dramatic fall in the cost / MIP

■ Specialist processors

- Avoiding big “upgrade” fees for software

The changing role of the mainframe

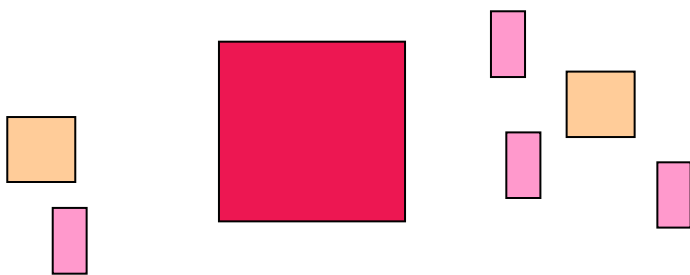
A quotation...

'If you were plowing a field, which would you rather use?

Two strong oxen or 1024 chickens? '

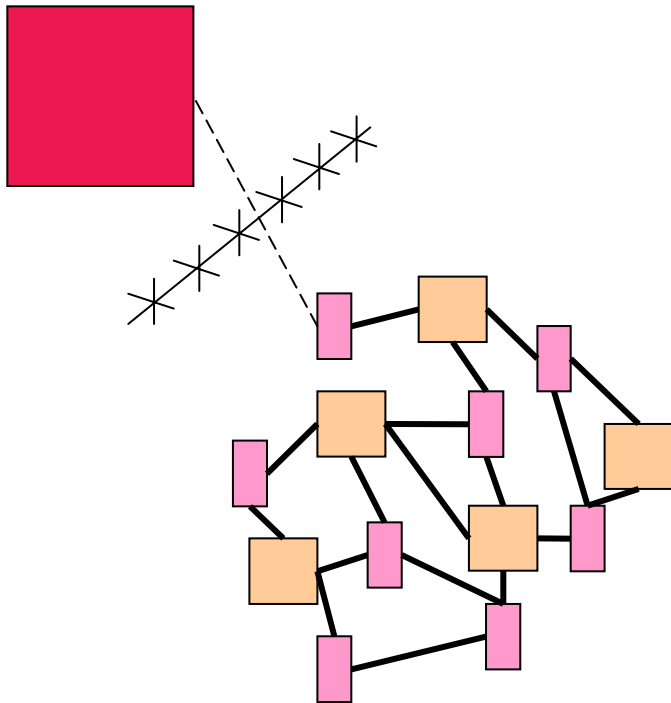
Seymour Cray

1980's – The mainframe is king!



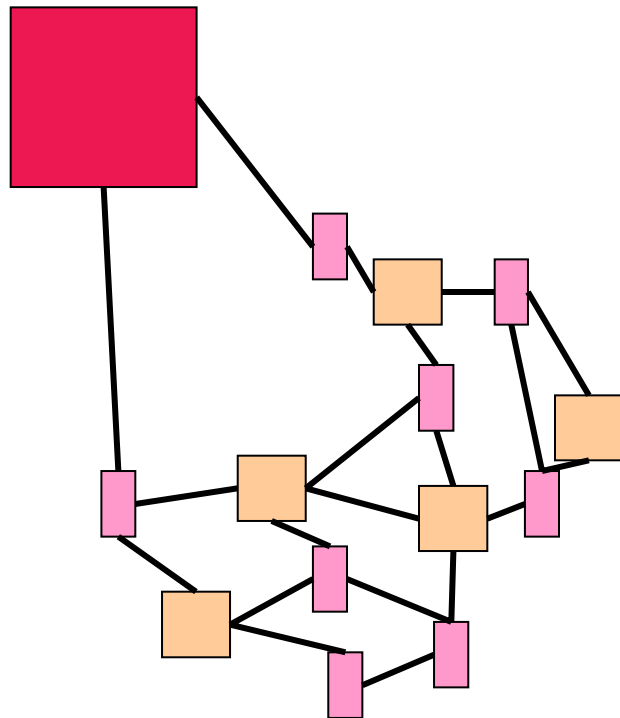
- A continent apart
 - High security
 - No integration
- Mainframe unaware growth of distributed computing
 - Separate applications
 - Separate organisations
- Completely separate technology base
 - Chips, memory, storage

1980's – The mainframe fortress



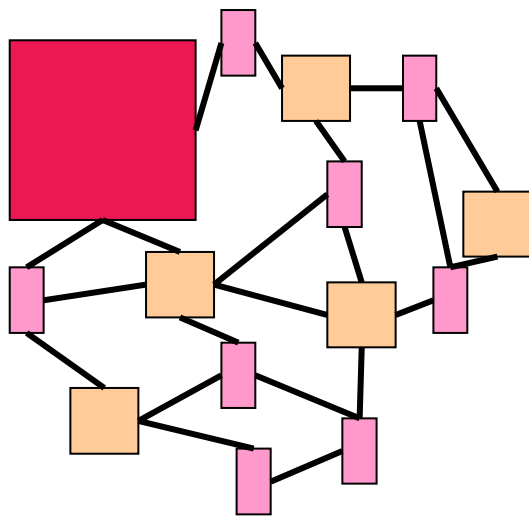
- Very hard to “get to”
 - High security
 - Very low integration
- Mainframe resisting growth of distributed computing
 - Separate applications
 - Separate organisations
- Completely separate technology base
 - Chips, memory, storage

1990's – The mainframe opens up



- Still separate but more accessible
 - Connectivity middleware
 - APPC
- Mainframe in grudgingly acknowledges the presence of “other” technologies
 - Still largely separate applications and organisations
 - Some integration
 - Mostly “Data”
 - A little transactional integration
- Technology still very distinct
 - Chips, memory, storage

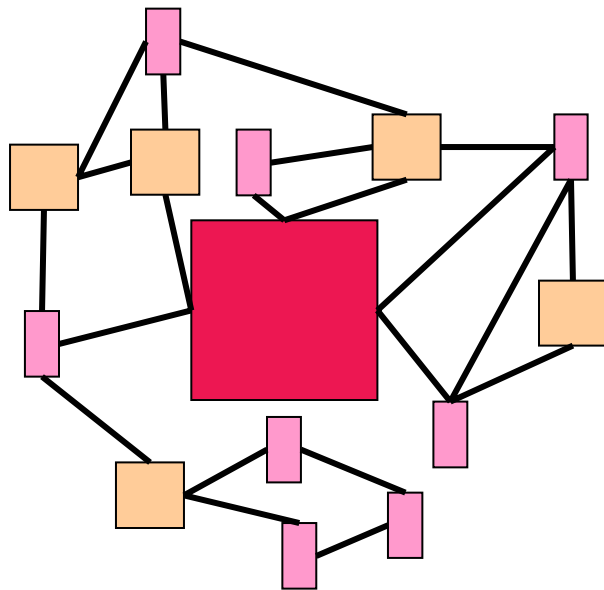
2000's – The mainframe begins to participate



- The mainframe is now accessible
 - Standards based connectivity
 - Support for Web Services, Java, Linux
- Mainframe aims to become a “first class citizen” in the world of distributed computing
 - Applications and organisations sharing resources and expertise
 - Integration easier, better
 - Data integration now straight forward
 - Transactional integration much easier to implement
- Some technology convergence
 - Storage
 - Chips....

The evolution of the mainframe

The mainframe moving to the heart of IT



- The mainframe is back at the centre
 - Seamless integration
 - Flexible platform supporting a wide range of workloads
- Mainframe becomes a “first class citizen” in the world of distributed computing
 - Viewed as a “core platform”
 - Fully integrated within it
 - Data, transaction, security
- Significant technology convergence
 - Storage
 - Chips....

The Mainframe Charter will continue to deliver

- Value
 - Mainframe “value for money” will continue to improve
 - We estimate by 20-25% a year
 - IBM will push flexible pricing out to a wider range of third parties
 - Some will “hold out” – and suffer the consequences
- Innovation and integration
 - Mainframe as “hub”
 - File server, SOA Hub (zee-SB), Security controller, Database, Application server
 - Transparent interoperability
 - Wider range of workloads
 - .NET for z-Series ?



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The future of the mainframe

The mainframe evolves....

- The mainframe is not going to go away
 - But its role is going to evolve
- Over the next 5 years the overall number of “live” mainframes could decline by up to 5% p/a
 - Attrition would be highest at the low end
 - Most of the attrition will come in the form of upward consolidation onto larger mainframes
 - Application modernisation and the mainframe charter will decelerate any attrition that might take place
- Over the same period the number of mainframe MIPS in production will rise by about the same amount
 - Workload will consolidate upwards

IBM is hugely committed to the mainframe

- Z9 – over a billion in R&D
 - IBM is investing heavily in the platform
- The Mainframe charter
 - Delivering consistent improvements in platform value
 - On the stuff that IBM controls
 - And indirectly on third-parties
- The mainframe is becoming a “part” of IT
 - No longer an island, or at the “edge”

In fifteen years

- Developers will be writing applications for the mainframe without even knowing it
 - The platform their application is deployed to will be determined by the system according to pre-set policies
 - Let's face it – millions of end-users already use mainframe applications without realising today
- The mainframe will still be the obvious platform for carrier-class workloads
 - A combination of price, performance and QOS will keep the mainframe at the top of the heap
- Someone somewhere will be saying...
 - “I predict that the last mainframe will be switched off...”
 - But the world is full of crazy people



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Wrap up

IBM is hugely committed to the mainframe

- Z9 – over a billion in R&D
 - IBM is investing heavily in the platform and the ecosystem
- The Mainframe charter
 - Delivering consistent improvements in platform value
 - On the stuff that IBM controls
 - And indirectly on third-parties
- The mainframe is moving to the “heart” of IT
 - No longer an island, or at the “edge”

A strong platform for decades to come

- A consolidation platform
 - Combining workloads
 - Simplifying management
- An information store
 - Not just “data” or “databases”
 - Rich, manageable, searchable, secure content
- A service hub
 - For SOA
 - For Identity and security



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The mainframe... alive and kicking

Thank-you

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