

Planning for the Future of the Mainframe Workforce – Now What?

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Session #3111



Once Upon a Time...



- You bought a big, powerful mainframe computer, and put your business-critical data and applications on it
- And it worked so well, you could focus on the smaller computers that always seemed to need attention
- And the people who made the big computer work got older and older, while new people went to the smaller computers
- But the big computer was still needed for very important data and applications
- Then, one day, the people who made the big computer work began to retire, taking critical knowledge with them
- Then somebody said:

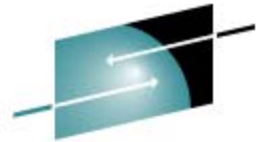
“Hey! We need the mainframe to keep our business alive!
Who’s going to keep the mainframe running?”

Planning for the Future: Agenda



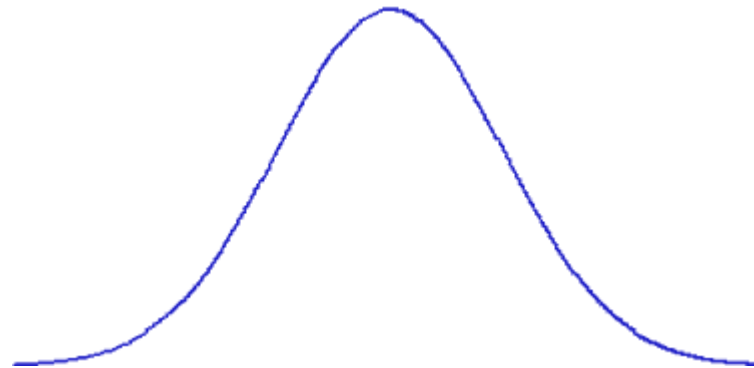
- The Issue: Retiring Mainframe expertise
- What does the retiring of mainframe expertise mean to enterprises?
- What are we doing about it?
- What are the options?
- Mainframe Continuity Planning Business Drivers
- The view from 2008
- Discussion

Issue: Retiring Mainframe Expertise



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- April 7, 2008: System/360 Mainframe's 44th Birthday
- The Average Mainframer Nears Retirement
- Small "Next Generation"
- Mainframe expertise supply is shrinking
- Majority of Critical Data and associated applications reside on the Mainframe
- Software is back leveled and/or obscure
- Environment and Procedures not well-documented



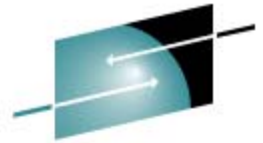
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Benefits of the Mainframe



- 99+% Uptime
- Billions of Lines of Business-Critical (and Y2K-Proofed) Code (eg. COBOL, Assembler)
- Massive Data Available to Numerous Concurrent Applications on a Single Mainframe, MIMPLEX or Sysplex
- Full Productive Utilization of Powerful CPU's
- Top Organizations on Earth Rely on It
- Best ROI
- Green

What Makes the Mainframe Tick?



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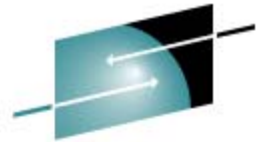
- Hardware Architecture
- Operating System
- Management Software
- Tried-and-Proven Applications
- Business-Focused Processes
- ...then a miracle occurs...
- **People!**
 - Experience
 - Judgment
 - Culture
 - Familiarity with Context
 - Knowledge of What Not to Do
 - Historical Awareness
 - Proven Persistence
 - Skills and Background

What Does it Mean to Enterprises?



- Wave of retirements continues to grow
- Companies can't fill critical headcount as labor pool falls below demand
- Companies who didn't plan look at contingencies
- Supply and demand flip
- Small delta can make a big difference (think oil prices)

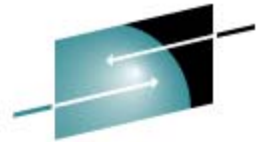
Timing is Critical But Unlike Y2K:



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- It's a people issue, not just programs
- You can't fix it in a few intense months and then walk away
- It's not a one-time expense
- It's not a one-night problem
- When it hits, it'll keep getting bigger
- You can build on the experience

What Are We Doing About It?



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- What is your organization doing about this?
 - Hiring and/or training new mainframers?
 - Trying to move off the mainframe?
 - Saying they'll move off the mainframe?
 - Outsourcing?
 - Other?
 - None of the above?
 - You're retiring, so it's not your problem?
- What do you think your organization **should** be doing about this?

The Choices – Now or Later



- Move off the mainframe
 - Much planning, skill and effort
- Move to an outsourcer
 - Should be done for the right reasons
- Hire or contract skill and experience
 - Supply vs. Demand
- An In-house Mainframe Continuity Strategy
 - Ensure business continuity and security

Factors in Choosing Your Approach

- It's a people problem
- Complexity and business value of current context
- How much time before it becomes a crisis?
- Internal demographics – how soon and which expertise will depart?
- Can headcount be proactively increased?
- Short and long term costs of approach, including:
 - Data integrity
 - Cross-application integration
 - Performance requirements
 - Transition costs
- How all this maps to your corporate business and IT strategy

Move Off the Mainframe?

- Moving applications and/or data to distributed systems
 - Reverse engineering software to migrate applications, or
 - Data conversion tools to move to packaged applications
- Chief advantage:
 - Removes or reduces need for mainframe support
- Risks and Factors:
 - Demonstrably poor ROI
 - Migration process may be long and costly
 - Could bring even greater complexity into the enterprise
 - Target systems might suffer from diminished system management, security, capacity and reliability levels
 - The people challenge: need people who understand how it works now to do it right
 - Failing to achieve “zero sum equivalent” functionality and performance
 - Retraining can be expensive

Outsource?



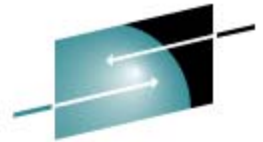
- Popular solution to reduce IT complexity and unpredictability
- Advantage of reduced mainframe involvement while retaining mainframe's strengths of system management, security and reliability
- Problem: do you want to give away control of your key, critical functions/applications?
- Risks and Factors:
 - Getting the right agreement – SLA, top people
 - Will it limit your ability to adapt quickly?
 - Does the vendor employ tight security controls and policies?
 - Perception – Political, Trust
 - Must transition context familiarity as well – takes time
 - There are no “silver bullets” – you don't solve critical problems by throwing them blindly at someone else

Hire/Contract Skill and Expertise?



- Hiring or contracting the most talented technologists available
- Advantage: avoids the risks of software and system-level migration or transfer
- Risks and Factors:
 - Talent pool is shrinking and costs will rise
 - Consultants must still become familiar with context
 - Their knowledge leaves with them when their contract ends or they get a better job offer
 - Danger of unqualified consultants once incentive is large enough
 - Must choose consultants carefully, dealing with trusted partners or employing comprehensive screening checks

In-House Mainframe Continuity Plan?



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- Proactive: build next generation on solid foundation
- Acknowledges continuing importance of mainframe
- Avoids risks associated with migration, outsourcing and consultants
- Maintain ownership of proven computing assets and business-critical mainframe applications and data
- Risks and Factors:
 - Requires executive commitment to a strategic approach
 - Must build on culture, not just skills
 - Innovative role must be defined to draw and retain talent
- Two aspects:
 - Technology Continuity
 - Technologist Continuity

- **Baseline Planning**
 - Healthchecks
 - Implement Recommendations
 - Assess Readiness
- **Upgrade to Current Releases**
- **Eliminate Obsolete and Obscure Loose Ends**
- **Ensure Software meets Business Needs**
- **Enterprise Architecture**

- Ramp up new Mainframers
 - Educate on mainframe basics
 - In-house mentoring/apprenticeship
 - Build on culture, not just knowledge
 - Education and User Conferences on ISV Software and other topics
 - Services to augment while experienced staff mentor

The View from 2008

- Since raising the issue at the Anaheim SHARE (Winter 2005), there has been some movement
- Largest organizations starting to develop a new generation
- Academic Initiatives from IBM and others (including CA) support colleges and universities
- Rediscovery of business value of mainframe
- Linux!
- Vista...
- Shrinking IT workforce across all platforms
- And mainframes keep getting easier to run

The View from 2008

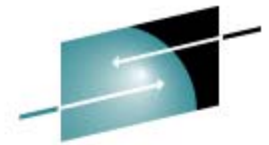
- Unified, Simplified Productivity Through Graphical Interfaces
- Outsourcers continue to be important but optional
- IBM acquires PSI...
- Small number of ex-mainframers returning so far
- What's a mainframer's retirement plan?
- Then, there's



Where to Go From Here?



- Get your management's awareness of the issue and support for dealing it
- Consider carefully and eliminate those options that won't work for your organization
- Understand which systems, applications and skill sets are business-critical going forward
- Know what can be readily outsourced or moved to other platforms
- Know which critical skill sets are in imminent danger of departure
- Architect a business-focused outcome
- **Act now**, while it's still an opportunity, not a crisis



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Questions / Discussion

