Mainframe Continuity Planning

A Foundation for the Future

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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?"

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Mainframe Continuity Planning: Agenda

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

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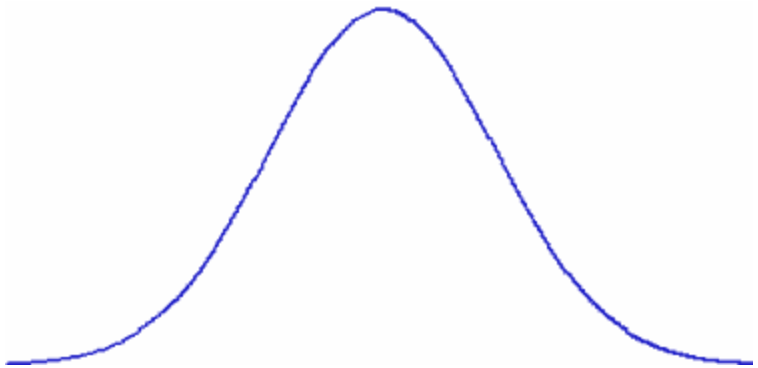
Issue: Retiring Mainframe Expertise

- April 7, 2004: System/360 Mainframe's 40th Birthday
- The Average Mainframer Nears Retirement
- Little or no "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



RETIREMENT

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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

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What Makes the Mainframe Tick?

- 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

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What Does it Mean to Enterprises?

- Wave of retirements grows over next 3+ years
- 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)

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Timing is Critical But Unlike Y2K:

- It's a people issue, not just programs
- You can't fix it in a few intense months and then walk away from it
- 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

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What Are You Doing About It?

- 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?

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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

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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 and IT strategy

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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:
  - 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

Help if You Move

- Enterprise IT solutions for non-mainframe as well as mainframe platforms
- Products and services to make applications more maintainable and portable
- Services to Renew Legacy Applications

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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

Help if You Outsource

- Software to enable them to more effectively manage all their clients
- Software that enables smoother transitions
- ISV Relationship with outsourcers – you're both customers

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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

Help When Hiring Consultants

- Using industry leading software means more experienced people available for it
- Security software to enable you to only give access to what's needed
- Life Cycle Management software to enable proper tracking and management of code regardless of employee turnover
- Automation and Performance Management allow for the automation of expertise

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In-House Mainframe Continuity Plan?

- 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

Technology Continuity

- Baseline Planning
  - Healthchecks
  - Implement Recommendations
  - Assess Readiness
- Upgrade to Current Releases
- Ensure Software meets Business Needs
- Enterprise Architecture

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Technologist Continuity

- 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

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Help for Technology Continuity

- Services
  - Installs, Consolidations
  - Upgrades
  - Healthchecks
  - Assessments
- Enterprise-scale Management Software
  - Cross-platform, cross-discipline, standards-based user interfaces
  - Simplicity of use and maintenance
  - Integration
  - Low Total Cost of Ownership
  - Enterprise-wide including the mainframe…

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Help for Technologist Continuity

- Mainframe basics courses including CBT
- Product-specific courses
  - Classroom
  - On-site
  - Web-based Learning
- User Conferences
- Staff Augmentation Services to cover for experienced staff while they mentor new apprentices

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Where to Go From Here?

- Get your management's awareness of the issue and support for dealing with 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