MANAGED BUSINESS SOLUTIONS

Planning and Budgeting for HP e3000 Transitions

Planning & Budgeting: Agenda

hp e3000 transition solutions

1. Strategic Thinking
2. Hardware
3. Databases
4. Tools and Compilers
5. Migration Tools
6. Application Facelifts
7. Timeline
8. Resources
9. Budget Rollup
10. Q&A

Strategic Thinking

Planning and Budgeting Challenges

- The magnitude of the project
  - Planning, Budgeting, Execution
  - Timeline, Resources
- Diverse HP e3000 Environments
  - So many technologies
- Many applications / modules
  - Migrate, replace, retire, rewrite, or stay
- New resource skill sets and retooling

Where to Begin

hp e3000 transition solutions

- Making a plan
  - IT needs analysis
  - Technology assessments
  - Application assessments
  - Transition research
  - Risk assessment
- Making a budget
- Acquiring tools technology
- Getting started

IT Needs Analysis

- Step back and take a strategic look at your IT
  - Do your applications still meet your business needs?
    - Current and strategic future needs?
    - Which ones do / don't
    - What percentage of the need is met?
  - Are there applications that are highly specialized to the business?
    - Can they be replaced?
    - What percentage cannot be replaced?
  - What is the current backlog of IT requests?
  - How does executive management feel about IT / the core systems?
  - Is there competition to IT direction?

Technology Inventory

hp e3000 transition solutions

- Which technologies are currently being used?
  - 3GL Compilers (Cobol, Fortran, Pascal, RPG, Basic, etc.)
  - 4GL Compilers (Speedware, Transact, Cognos, Protos, etc.)
  - Reporting Tools (EasyReporter, Quiz, Data Express, UDALink, etc.)
  - Database Enhancement Products (Omnidex, Superdex, Adager, DB General, etc.)
  - Data Extraction Tools (Suprtool, etc.)
  - OS Enhancement Tools (Spooler products, Job Management products, Backup products, Editors, etc.)

Applications Inventory

- Meets the needs of the business (%)
- Size of application (# of)
  - Screens, reports, mass transactions
  - Batch processing
- Dependence on
  - 3rd party technology / licensing
  - OS commands / intrinsics
  - Database-specific functionality
  - Interfaces between other systems / technologies
- Strategic direction
  - Replace
  - Migrate
  - Re-write
  - Retire
  - Stay / Leave

Salvaging vs. Replacing Technology

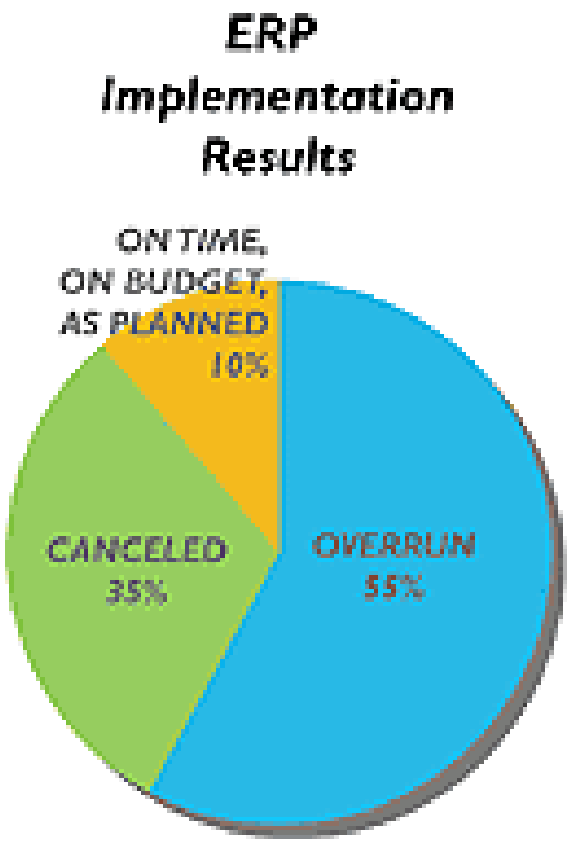
- Which technologies / products will be salvaged or replaced?
- Most likely scenario:
  - Salvage applications
    - 3GL / 4GL Compilers
    - Database enhancement products
    - Some multi-platform tools
  - Replace many of the tools
    - Reporting tools
    - Data Extraction tools
    - OS Enhancement tools

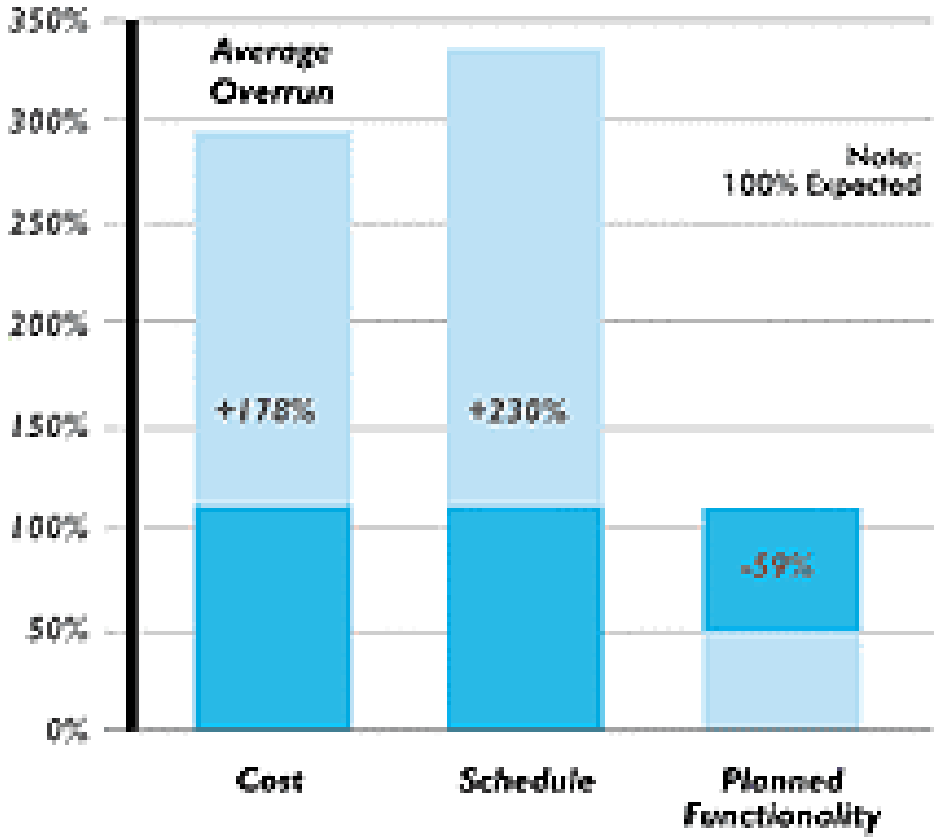
Salvaging vs. Replacing Applications

- What about replacing applications?
  - Moving to packaged applications
  - “If I’m being encouraged to move off the HPe3000, why not just evaluate replacing my entire IT environment.”
    - It’s the applications that run my business, not the hardware.
- Understand the Full Cost and Benefits!
  - Do not over-estimate what you will get.
  - Do not under-estimate what it will take to get there.
    - Budget, Resources, People and Training

The Full Cost of Replacement

hp e3000 transition solutions





Source: Standish Group

invent

hp e3000

The Full Cost of Replacement

- Your current applications have been tuned to how you do business, not others.
- Best-of-breed comes with a price
  - It doesn't reflect the practices that work for you and that differentiate your business
  - customize too much and you can't upgrade
  - If you do not customize, you have to change your internal business processes
- Packaged applications do not take fewer resources to maintain and will most likely not save you money.

Moving to Packaged Applications…

- Accept reality:
  - You will lose functionality you currently have!
  - You may need to overbuy a package application to fit your current needs
  - New functionality offered in the package requires changes to how you do business day-to-day
- Careful planning
  - Know which modules won't exist
  - Evaluate what still needs to be brought forward and how it can be integrated
  - Migration may still need to be done
  - Plan the evolution of legacy modules

Hardware

Replacing the Hardware

- Unix or Windows?
- HP or non-HP?
- Which platforms are best supported by my software vendors?
- HP-UX is the preferred path by most
  - Most widely supported migration path by vendor community
  - Very strong incentives from HP

Replacing the Hardware

- HP-UX
  - How many servers?
  - Storage solution?
  - High Availability?
  - Cheaper hardware, but watch for 3rd party software licensing costs if thinking big
- Windows
  - Reliability and robustness?
  - How many servers?
  - Cheaper, but how easy is migration path?
- Linux
  - Ready for prime-time? (Confidence?)
  - Support?
  - Not the most popular option today.

Costs of Hardware

- Conversion Kits
  - A&N = Free
  - Trade-In promotion (3-15% rebate, combinable up to 15%)
  - Software Trade-In Transfer credit for MPE OS and any other HP products on the HP e3000 (limited to same # of processors)
- HP 9000 Servers
  - Low: $15K - $60K
  - Low/Mid: $50K - $100K+
  - Med: $100K - $1M
  - High: $1M+
- Windows Proliant Servers
  - $2K, $4K, $8.5K per server
  - Windows server licensing can get expensive
  - Total: $10K - $20K
    - Not including storage, high availability, and database
    - Could end up as high as $1M

Costs of Hardware

- Linux
  - Same as Proliant for hardware
  - OS licensing would be less
  - HP offers secure version: $3K
- HP is offering 6-month HP-UX loaner boxes for migrations
  - Probably not enough time for most
  - Can be purchased at a discount after 6 months

Databases

Replacing the Database

- Image was pretty much bundled into the HP e3000 and an obvious choice
- Hardware may be cheaper, but a database purchase is required
- Most are considering Oracle, SQL Server, or Eloquence

Replacing the Database

- Eloquence: Image clone
  - Low-cost
  - Up to 500 concurrent users
  - Functionally similar to Image resulting in fewer code changes to existing applications and comparable performance
  - Sold and supported by Marxmeier Software
  - Good transitional database option
- PostgreSQL, MySQL, and SAPDB are other low-cost reliable options
  - Need to consider where support will come from

Replacing the Database

- What about Omnidex and Superdex?
  - Relational Databases have strong data querying capabilities
    - However, most of the commonly-used Omnidex functionality doesn't exist. (keyword retrieval)
  - Omnidex has a migration path to Omni-Access
    - API compatibility libraries exist, reducing need to re-write queries.
  - Superdex – best option is migration to Omni-Access.

Costs of Databases

- Oracle: ~$20K per processor
  - Could be as high as $40K per processor (Oracle list price)
  - HP and ISVs can help to get a better price
- SQL Server: $10K - $20K per processor
- HP Eloquence: $7K (unlimited users)
  - Easiest port, some risk
- Informix (per server)
  - Tier 1: $3K
  - Tier 2: $6.6K
  - Tier 3: $18K
  - Tier 4: $23K
  - May not be a great strategic option

Tools and Compilers

Replacing Tools and Compilers

- 4GLs
  - License transfer fees, CPU-based pricing.
  - Expect between $10K - $200K per server, depending on 4GL and size of server.
  - Speedware
    - Available on HP-UX, Windows, AIX, Solaris
    - Web or Windows GUI enablement
  - Cognos
    - PowerHouse is available on other operating systems. (some code changes required)
    - Web or Windows GUI enablement
  - Transact
    - Speedware is offering migration solutions for Transact customers
      - Conversion tool to Speedware (and then to other platforms)
      - Web or Windows GUI enablement

Replacing Tools and Compilers

- Cobol
  - AcuCobol: platform portable byte code
    - per developer $2,500, $150 for 1st user and $23 per user on run-time
  - MicroFocus: per platform (dev), many deployment model options, multi-platform support (interpretive), native object code possible.
    - $3000 per developer. $187 per user (run-time)
  - Fujitsu: generates native object code, no run-time fees, version for Visual Studio (.NET compatible).
    - $3000 per dev, includes 1st yr support, $500/yr support, no run-time fees.
  - PerCobol (going to Java)
- Fortran
  - Fortran compilers on HP-UX
  - Fortran to C converter exists
- Pascal
  - Pascal is available on HP-UX and can be ported with relative ease.
  - End-of-support announced – 2 years (also, no native support on IA-64)
  - Converter from Pascal to C exists

Replacing Tools and Compilers

- RPG
  - Converter from RPG to HP Cobol
  - RPG on HP-UX (exists, but no migration tools)
- Business Basic
  - Business Basic option with Eloquence, available on HP-UX and Linux (unknown for Windows)
  - Visual Basic may be an option for some.
- SPL
  - Currently being ported to HP-UX
- *In general, look at the skill-sets you have to support these languages over the long term (porting and supporting).*

3rd Party Technology Replacements

- Reporting tools
- Database manipulation tools
  - Adager and DB General
  - New tools may be needed with relational databases
- Data extraction tools
  - Suprtool
  - Replaced with more modern ETL tools
- Others
  - Spooler products, Backup product, Job Management, Editors, etc.

Migration Tools

Migration Tools

hp e3000 transition solutions

- 3GLs – 4 HP-validated migration solutions
  - Speedware: AMXW
    - Migration tool, packaged and sold as a toolset.
  - Ordina Denkart: ViaNova 3000
    - ASP model of migration, charged by number of lines of code, up to 95% migrated
    - Many 3GL options
    - EdWin and Wingspan for VPlus support
    - MPUX for MPE Emulation
  - Transoft
    - Migration toolset, sold as a consultative solution.
  - Sungard Bi-Tech – Transport
    - Migration toolset, sold via consulting, residual run-time libraries for Image and OS calls

Migration Tools

hp e3000 transition solutions

- 4GLs
  - Speedware
    - 100% portable to any Speedware supported platform, no code changes
    - Built-in database migration tools
    - No charge for migration features
  - Cognos
    - 95%+ portable to other PowerHouse-supported platforms
    - Very minor code change required
    - Recommended that customers go to / through Axiant
  - Transact
    - Speedware migration toolset
    - Free with migration services

hp invent

LUND

mbs

MB Foster

SPEEDWARE

hp e3000

Migration Tools

- Database migration tools
  - Quest – Bridgeware, Netbase, Benchmark Factory, Data Factory
    - Data porting, mirroring, shadowing, load testing, etc.
    - Taurus – DataBridger
  - Speedware – DBmotion
  - MB Foster - UDACentral

Application Facelifts

Application Facelifts

hp e3000 transition solutions

- Cobol
  - EdWin (Web / GUI)
  - ExegeClient (GUI)
  - AcuCobol (offers GUI)
    - ScreenJet (GUI)
    - AD Technologies
  - Robust (Web and Windows)
  - LegacyJ – PerCobol
  - Others (shop around)
- Speedware / Transact
  - Visual Speedware (VB GUI)
  - Speedware Autobahn (Web)
- Cognos
  - Axiant
  - PowerHouse Web

Migration Facelift Costs

- Resources or Technology
  - Some solutions require re-engineering, others are more plug-and-play.
  - Cost is either in time and resources or in technology
  - Expect to pay 25% - 50% over the application migration costs
- You may want to make sure you have skill-sets to properly develop GUI interfaces.

Timeline

Establishing a Timeline

- Fast, cheap, or good:
  Pick any 2 !

  Factors that determine timeline
  - Deadline dates
  - Internal resources vs. outsourcing
  - Cost restrictions
  - Technology complexities
  - Diversity of environment
  - Straight migration vs. enhancements

- Different migration tools – different approaches/timelines
  - Gradual vs. Big Bang/Magic Weekend
  - Testing
  - Concurrent / on-going projects
  - Training / Education
  - Locations (of customers / sites)

Estimating Time

- Time components
  - Assessments and service vendor selection
  - Planning and analysis
  - Hardware and technology acquisition
  - Application migration (Estimated by migration methods chosen)
  - Database migrations
  - Resource training
  - Testing and verification

Estimating Time

- Migration time per technology (estimates are highly dependent on complexity and amount of code)
  - Cobol / VPlus: 6 - 60 months
  - Pascal: 6 - 24 months
  - RPG: 6 - 24 months
  - Fortran: 6 - 24 months
  - Speedware: 3-9 months
  - Transact: 6 - 24 months
  - Cognos: 6 - 24 months
  - Database migration: 1 - 3 months
- Comprehensive Planning is essential to determining a more precise timeline

Resources

In-house vs. Outsourcing

- Do you have enough / any in-house resources?
- What to outsource:
  - Planning and Analysis
    - Let experienced people help you
  - Project Management
    - Have experienced resources steer you around obstacles and potential pitfalls)
  - Application and Database Migrations (some or all)
  - Some Application / Module re-writes
  - On-going Application Support
    - To free up valuable resources for migrations

In-house vs. Outsourcing

- What to do in-house:
  - Application enhancements
    - Opportune time to add an enhancement or two
  - Component re-writes
    - If replacing older modules / technology
  - Migration Testing
    - Test as you or someone else migrates
  - Application and Database Migrations
    - If you have the staff to do some or lots of the work, especially critical components

Budget Rollup

Budgeting Technology

hp e3000 transition solutions

- Planning/Analysis
  - Varies; dependent on many factors
  - $10K-$100K
- Hardware
  - Low: $15K - $100K
  - Mid: $100K - $1M
  - High: $1M+
- Tools and Compilers
  - 4GLs: $10K - $200K per server
  - 3GLs: $10K - $150K
- Databases
  - Market leading: $30K per processor
  - Mid-tier: $10K - $20K per processor
  - Cheap: $5-10K per server

Budgeting Technology

- Reporting tools
  - $10K - $100K
- Application Facelifts
  - $20K - $100K plus labor (if any)

- Others
  - Spooler products
  - Backup products
  - Job Schedulers
  - Editors
  - Sort products
  - Etc…

Budgeting Migration

hp e3000 transition solutions

- Cobol Migration tools
  - $30K - $200K for technology alone
  - $100K (1M loc) + time for ASP model
  - $100K - $1M+ for outsourcing
  - Possible residual run-times / annual support fees $5K - $100K/yr
- Speedware migrations
  - 3-9 man-months of in-house work
  - $100K - $250K completely outsourced
- Cognos migrations
  - 6-24 man-months of in-house work
- Transact migrations
  - $100K to $500K mixed in-house and outsourcing

Budgeting Migration

- Database migrations
  - $10K to $80K for database migration tools
  - Up to $200K for full database migration, mirroring, and load testing tools
- Application enhancements
  - Time and resources
  - Consider a phased approach
    - Phase 1 migration & rollout
    - Phase 2 enhancements

Other Budget Items

- Training
  - Programmers
  - Operations
  - Database Administrators
  - End-Users
- Implementation
  - Test, test, test!
- New support models

Totaling the Costs

- Planning and Analysis
- New Hardware
- New Databases
- 3GL/4GL Software Licensing
- Replacement Tools / Technologies
- Migration Tools / Technology
- Migration Resources
  - In-house
  - Outsourcing
- New Hires
- Application Enhancements / Facelifts
- Training
- Implementation

Thank You

Questions & Answers


hp
invent