



Planning and Budgeting for HP e3000 Transitions

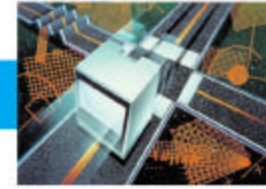
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Owner and Founder

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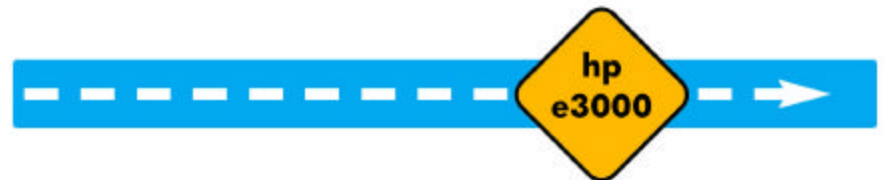
Agenda

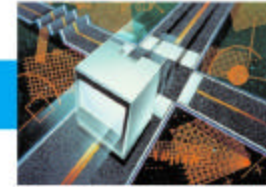
- Strategic Thinking
- Hardware
- Databases
- Tools and Compilers
- Migration Tools
- Application Facelifts
- Timeline
- Resources
- Budget Rollup
- Q&A





Strategic Thinking

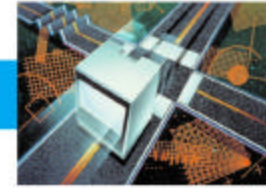




Planning and Budgeting Challenges

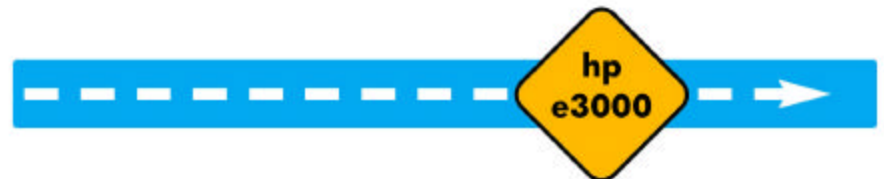
- The magnitude of the project
 - Planning, Budgeting, Execution
 - Timeline, Resources
- Diverse HP e3000 Environments
 - So many technologies
- Many applications / modules
 - Migrate, replace, retire, rewrite, or stay
- New resource skill sets and retooling

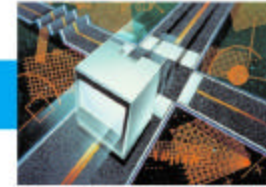




Where to Begin

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

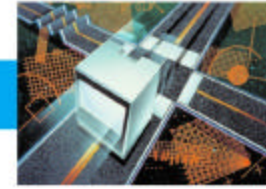




IT Needs Analysis

- 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?

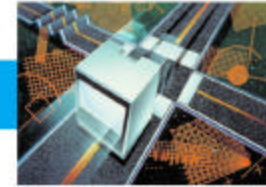




IT Needs Analysis- cont

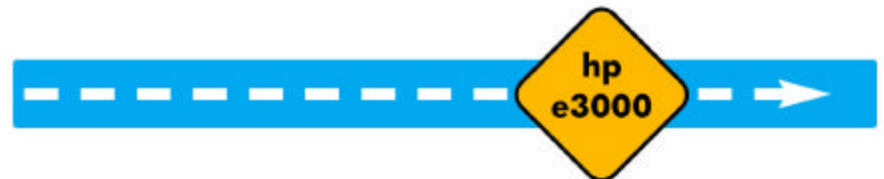
- What is the current backlog of IT requests?
- How does executive management feel about IT / the core systems?
- Is there competition to IT direction?





Technology Inventory

- 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, DataExpress, UDALink, etc.

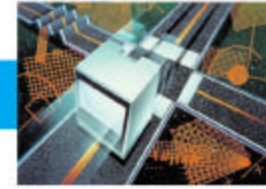




Technology Inventory

- Database Enhancement Products
 - Omnidex, Superdex, Adager, DB General, etc.
- Data Extraction Tools
 - Suprtool, MBF-UDALink etc.
- OS Enhancement Tools
 - Spooler products, Job Management products, Backup products, Editors, etc.

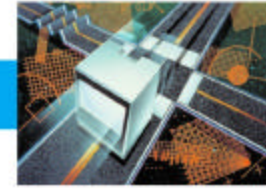




Applications Inventory

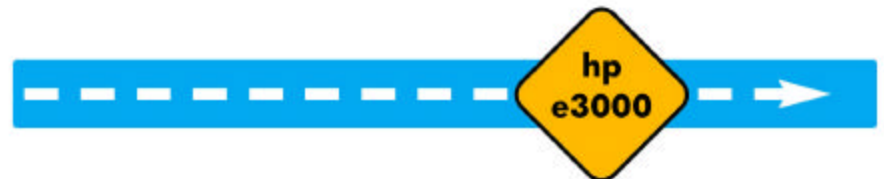
- Meets the needs of the business (%)
- Size of application (# of)
 - Screens, reports, mass transactions
 - Batch processing
- Dependence on
 - 3rd party technology / licensing
 - OS commands / intrinsics
 - Database-specific functionality
 - Interfaces between other systems / technologies

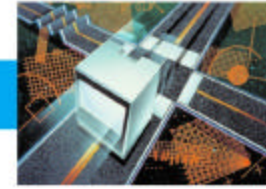




Applications Inventory

- Strategic direction
 - Replace
 - Migrate
 - Re-write
 - Retire
 - Stay / Leave





Salvaging vs. Replacing Technology

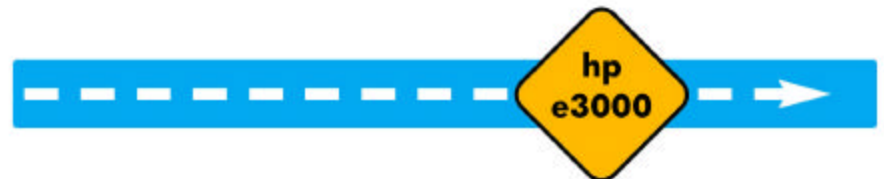
- Which technologies / products will be salvaged/ replaced?
 - Salvage applications
 - 3GL / 4GL Compilers
 - Database enhancement products
 - Some multi-platform tools
 - Replace many of the tools
 - Reporting tools
 - Data Extraction tools
 - OS Enhancement tools

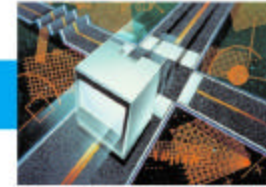




Salvaging vs. Replacing Applications

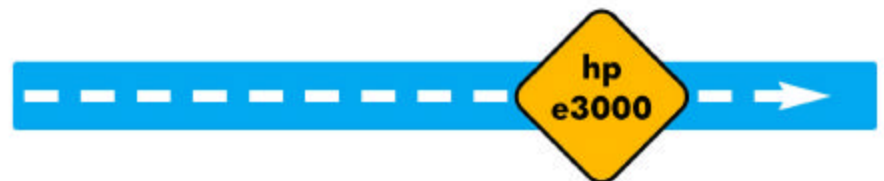
- What about replacing applications?
 - Moving to packaged applications
 - “If I’m being encouraged to move off the HPe3000, why not just evaluate replacing my entire IT environment.”
 - It’s the applications that run my business, not the hardware.

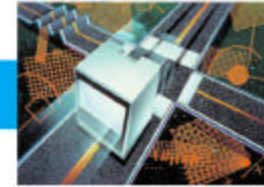




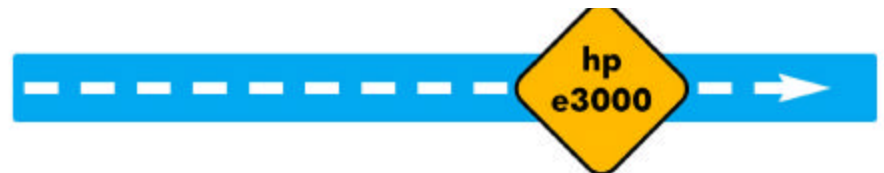
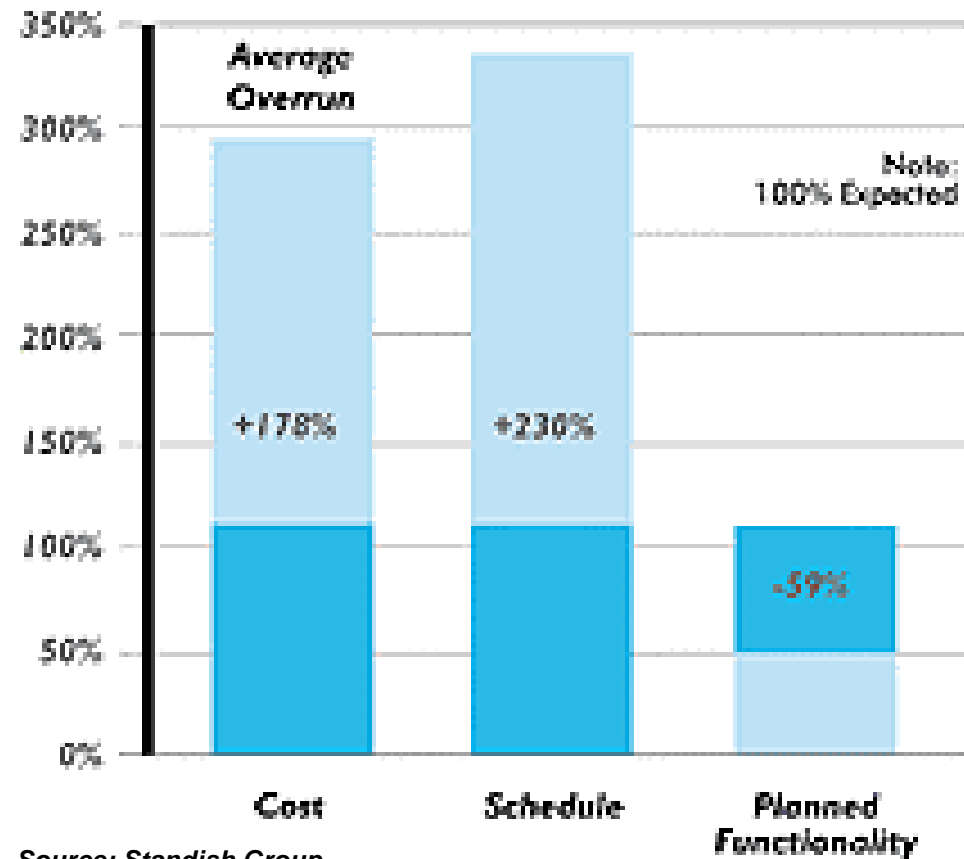
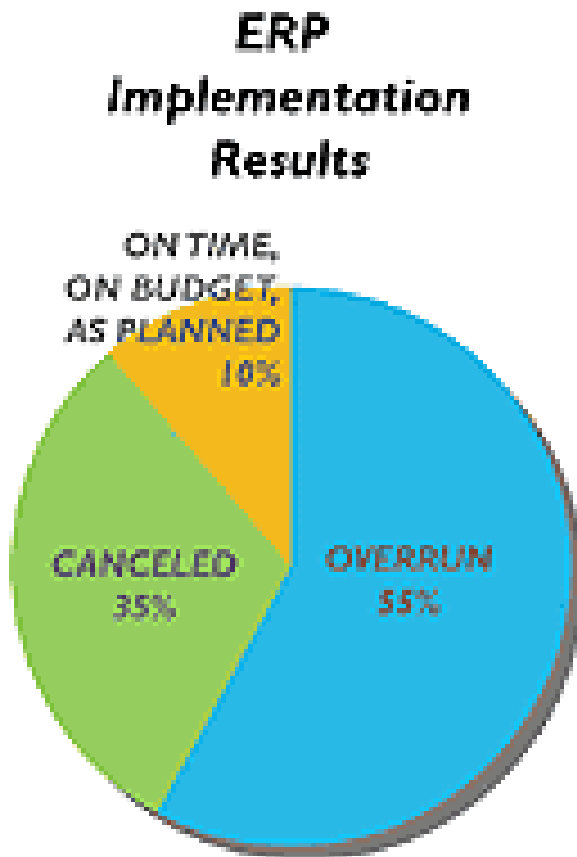
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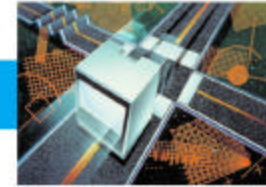
- Understand the Full Cost and Benefits!
 - Do not over-estimate what you will get.
 - Do not under-estimate what it will take to get there.
 - Budget, Resources, People and Training





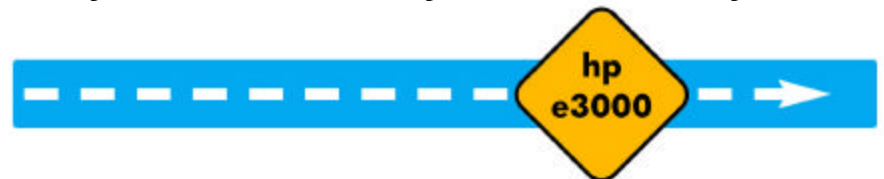
The Full Cost of Replacement

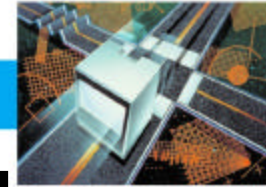




The Full Cost of Replacement

- 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.

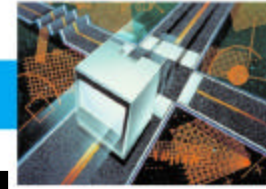




Moving to Packaged Applications...

- 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





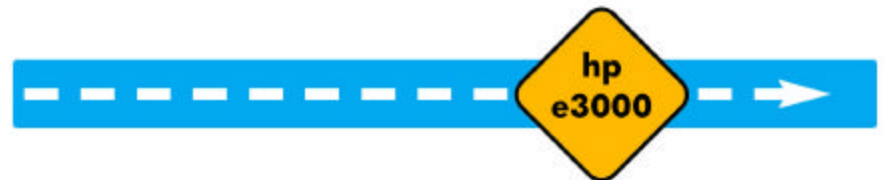
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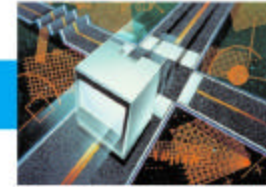
- Careful planning
 - Know which modules won't exist
 - Evaluate what still needs to be brought forward and how it can be integrated
 - Migration may still need to be done
 - Plan the evolution of legacy modules





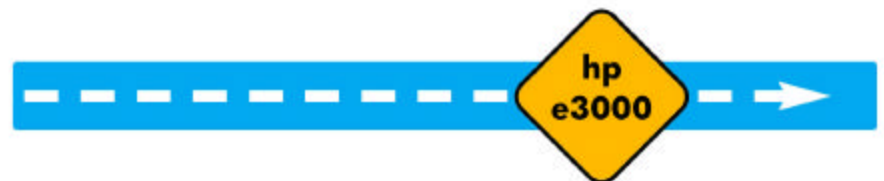
Hardware





Replacing the Hardware

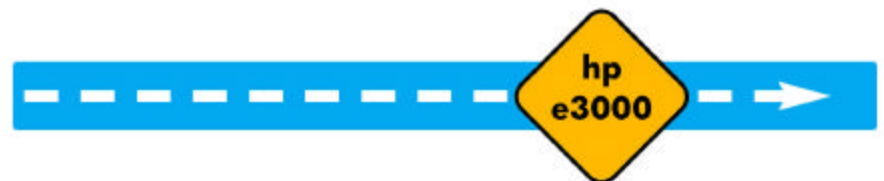
- Unix or Windows?
- HP or Non-HP?
- Which platforms are best supported by my software vendors?
- HP-UX is the preferred path by most
 - Most widely supported migration path by vendor community
 - Very strong incentives from HP

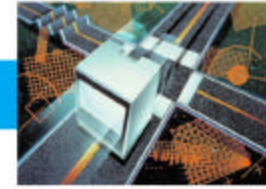




Replacing the Hardware

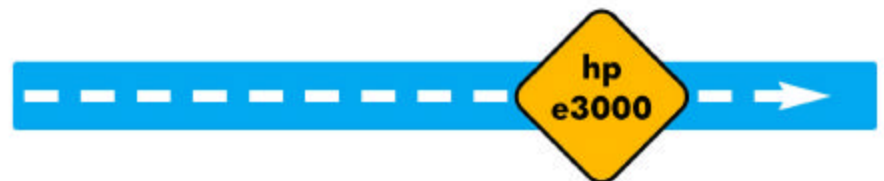
- Conversion Kits
 - A&N Class Conversion Kits (free)
 - Conversion kits for other HP e3000 models available
 - Not always the answer
 - Migration is not done on the flick of a switch
 - HP offering 6-month HP-UX loaner boxes for migrations
 - Probably not enough time for most
 - Can be purchased at a discount after the 6 months.

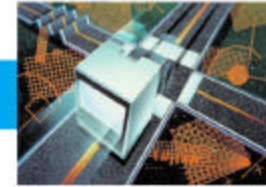




Replacing the Hardware

- HP-UX
 - How many servers?
 - Storage solution?
 - High Availability?
 - Cheaper hardware, watch for 3rd party s/w licensing costs if thinking big.

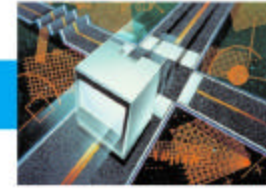




Replacing the Hardware

- 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: 60-70% off HP9000 price
- HP 9000 Servers
 - Low: \$15K - \$60K
 - Low/Mid: \$50K - \$100K+
 - Med: \$100K - \$1M
 - High: \$1M+

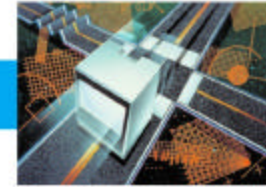




Costs of Hardware

- 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
- Linux
 - Same as Net Servers for hardware
 - OS licensing would be less
 - HP offers secure version: \$3K





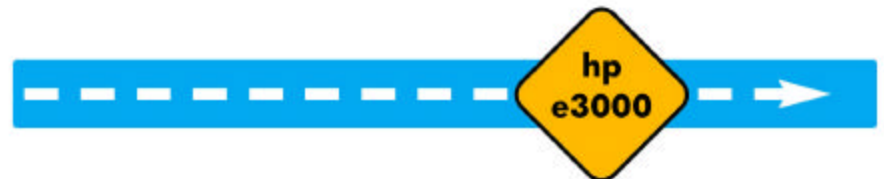
Databases

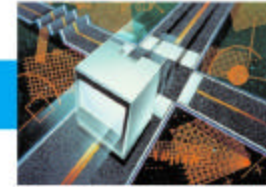




Replacing the Database

- 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

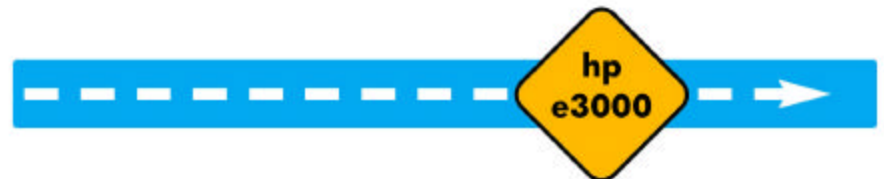
- Eloquence: Image clone
 - Low-cost
 - Up to 500 concurrent users
 - Functionally similar to Image, fewer code changes to existing applications and comparable performance
 - Good transitional database option
- PostgreSQL, MySQL, and SAPDB are other low-cost reliable options
 - Need to consider where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

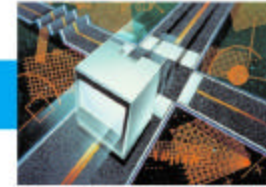




Replacing the Database

- What about Omnindex and Superdex?
 - Relational Databases have strong data querying capabilities
 - However, most of the commonly-used Omnindex functionality doesn't exist. (keyword retrieval)
 - Omnindex 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.

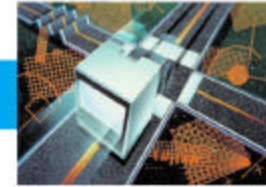




Costs of Databases

- Oracle: ~\$20K per processor
 - Could be as high as \$40K per processor
 - HP and ISVs can help to get a better price
- SQL Server: \$10K - \$20K per processor

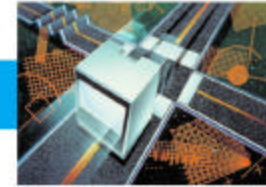




Costs of Databases

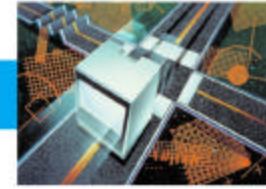
- HP Eloquence: \$7K (unlimited users)
 - Easiest port, some risk
- Informix (per server)
 - Tier 1: \$3K
 - Tier 2: \$6.6K
 - Tier 3: \$18K
 - Tier 4: \$23K
 - May not be a great strategic option





Tools and Compilers

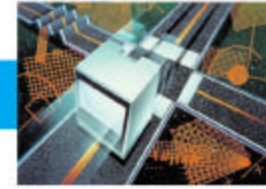




Replacing Tools and Compilers

- 4GLs
 - Speedware
 - Available on HP-UX, Windows, AIX, Solaris
 - Web or Windows GUI enablement
 - Cognos
 - Powerhouse and Axiant available on other operating systems. (some code changes required)
 - Web or Windows GUI enablement





Replacing Tools and Compilers

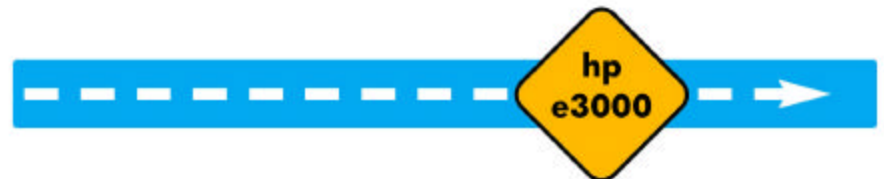
- 4GLs
 - Transact
 - Speedware is offering migration solutions for Transact customers
 - Conversion tool to Speedware (and then to other platforms)
 - Web or Windows GUI enablement

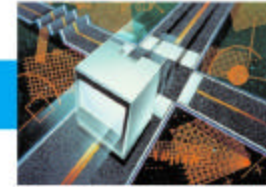




Replacing Tools and Compilers

- Cobol
 - AcuCobol: platform portable byte code
 - MicroFocus: per platform (dev), many deployment model options, multi-platform support (interpretive), native object code possible.
 - Fujitsu: generates native object code, no run-time fees, version for Visual Studio (.NET compatible).
 - PerCobol (going to Java)





Replacing Tools and Compilers

- 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



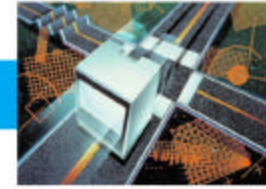


Replacing Tools and Compilers

- 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).

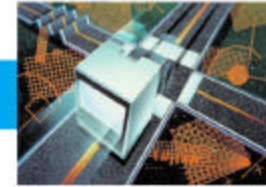




Costs of Tools and Compilers

- 4GLs
 - License transfer fees, CPU-based pricing.
 - Expect between \$10K - \$200K per server, depending on 4GL and size of server.
 - SPW offering 50% off license transfer fees.

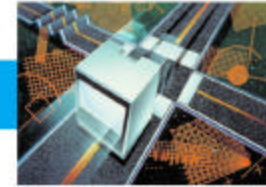




Costs of Tools and Compilers

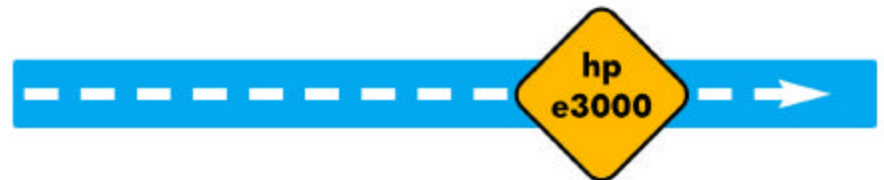
- 3GLs
 - AcuCobol: per developer \$2,500, \$150 for 1st user and \$23 per user on run-time
 - MicroFocus: \$3000 per developer. \$187 per user (run-time)
 - Fujitsu: \$3000 per dev, includes 1st yr support, \$500/yr support, no run-time fees.





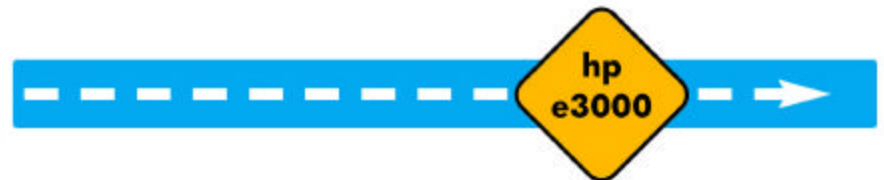
3rd Party Technology Replacements

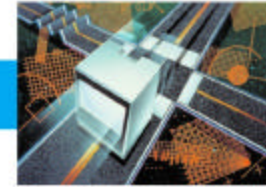
- Reporting tools
- Database manipulation tools
 - Adager and DB General
 - New tools may be needed with relational databases
- Data extraction tools
 - Suprtool
 - Replaced with more modern ETL tools
- Others
 - Spooler and Backup product, Job Management, Editors, etc.





Migration Tools





Migration Tools

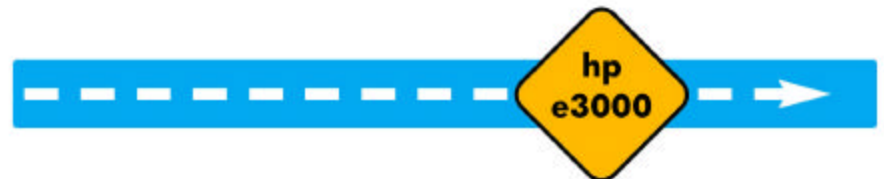
- 3GLs – 4 HP-validated migration solutions
 - Neartek – AMXW
 - Migration tool, packaged and sold as a toolset.
 - Denkart – ViaNova 3000
 - ASP model of migration, charged by number of lines of code, up to 95% migrated
 - Many 3GL options
 - EdWin and Wingspan for VPlus support
 - MPUX for MPE Emulation

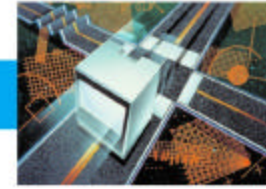




Migration Tools

- 3GLs – 4 HP-validated migration solutions
 - Transoft
 - Migration toolset, sold as a consultative solution.
 - Sungard Bi-Tech – Transport
 - Migration toolset, sold with consulting, residual run-time libraries for Image and OS calls





Migration Tools

- 4GLs
 - Speedware
 - 100% portable to any Speedware supported platform, no code changes
 - Built-in database migration tools
 - No charge for migration features





Migration Tools

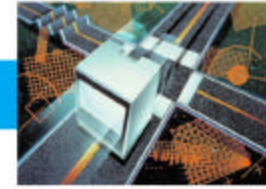
- 4GLs
 - Speedware
 - 100% portable to any Speedware supported platform, no code changes
 - Built-in database migration tools
 - No charge for migration features
 - Cognos
 - 95%+ portable to other Powerhouse-supported platforms
 - Very minor code change required
 - Recommended that customers go to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



- Transact
 - Speedware migration toolset

• Free with migration services

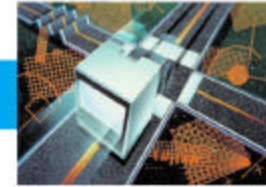




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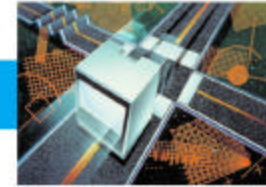




Migration Tools

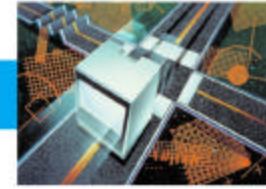
- Database migration tools
 - Quest – Bridgewater, Netbase, Benchmark Factory, Data Factory
 - Data porting, mirroring, shadowing, load testing, etc.
 - Taurus – DataBridger
 - Speedware – DBmotion
 - MB Foster - UDACentral





Application Facelifts

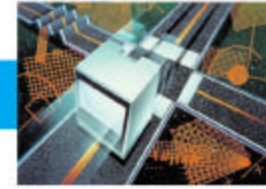




Application Facelifts

- Either as part of a migration effort or post-migration, consider enhancing the visual interface of the application.
 - Putting either a Web or Windows interface on top of the application can dramatically improve the life of an application





Application Facelifts

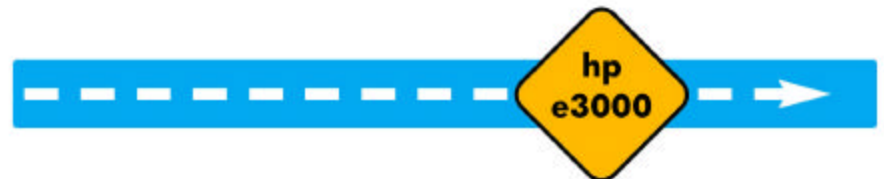
- Cobol
 - EdWin (Web / GUI)
 - ExegeClient
 - AcuCobol (offers GUI)
 - ScreenJet (GUI)
 - Robust (Web and Windows)
 - LegacyJ – PerCobol
 - Others (shop around)

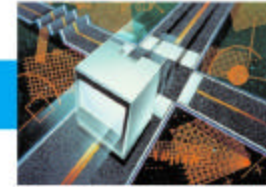




Application Facelifts

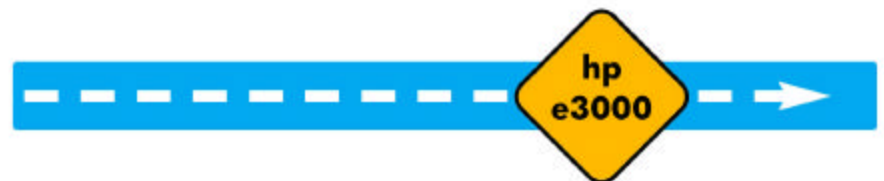
- Speedware / Transact
 - Visual Speedware (VB GUI)
 - Speedware Autobahn (Web)
- Cognos
 - Axiant
 - PowerHouse Web





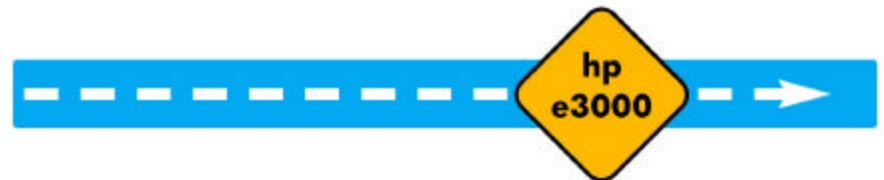
Migration Facelift Costs

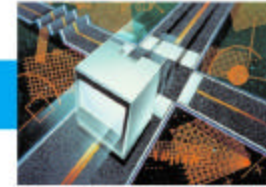
- Resources or Technology
 - Some solutions require re-engineering, others are more plug-and-play.
 - Cost is either in time and resources or in technology
 - Expect to pay 25% - 50% over the application migration costs
- You may want to make sure you have skill-sets to properly develop GUI interfaces.





Timeline

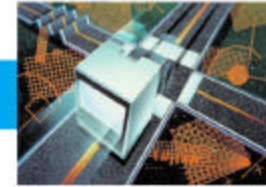




Establishing a Timeline

- Fast,
- Cheap
- Good
- Different migration tools have different approaches and timelines

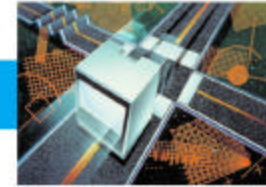




Timeline – Determining Factors

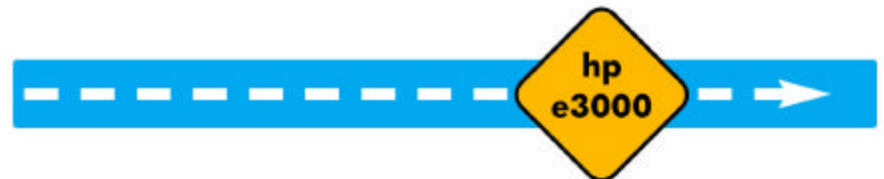
- Deadline dates
- Internal resources vs. outsourcing
- Cost restrictions
- Technology complexities
- Diversity of environment
- Straight migration vs. enhancements
- Gradual vs. Big Bang
- Testing
- Concurrent / on-going projects
- Training / Education
- Locations (of customers / sites)





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

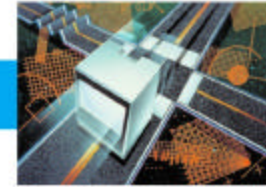




Estimating Time

- 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: 3 - 12 months
 - Database migration: 1 - 3 months
- Comprehensive Planning is essential to determining a more precise timeline





Resources

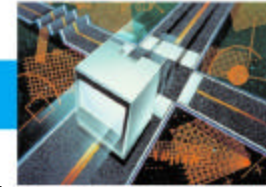




In-house vs. Outsourcing

- 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

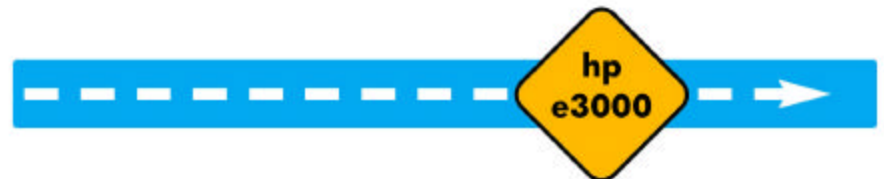
- What to do in-house:
 - Application enhancements
 - Opportune time to add an enhancement or two
 - Component re-writes
 - If replacing older modules / technology
 - Migration Testing
 - Test as you or someone else migrates
 - Application and Database Migrations
 - If you have the staff to do some or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

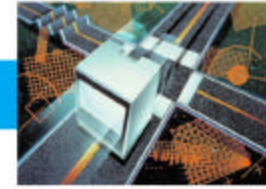




Estimating Resources

- Migration resources
 - How many qualified resources are available to aid in migrations?
 - Determine time split between existing / on-going projects and migrations
 - Work backwards – pre-assign specific things you want to do in-house
 - Assign responsibilities, roles, and task owners upfront

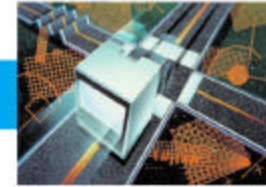




Estimating Resources

- Determine outsourcing requirements
 - What will be done externally
 - Look at the various migration options and associated costs
- Packaged applications
 - These take as many people to maintain as home-grown systems.

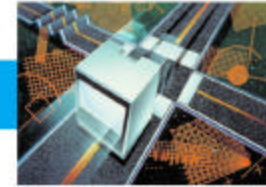




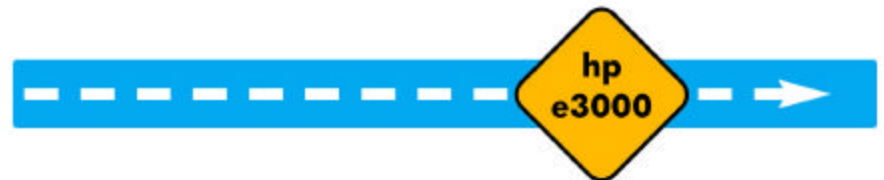
Estimating Resources

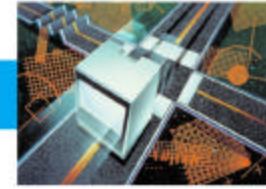
- New staffing requirements
 - New tasks/jobs for the target platform
 - More maintenance and administration is required with UNIX/NT/Linux and relational databases
 - System Administrator(s)
 - Database Administrator(s)





Budget Rollup

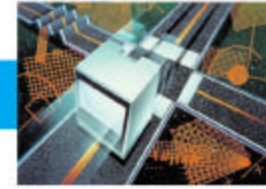




Budgeting Technology

- Hardware
 - Low: \$15K - \$100K
 - Mid: \$100K - \$1M
 - High: \$1M+
- Databases
 - Market leading: \$30K per server
 - Mid-tier: \$10K - \$20K per server
 - Cheap: \$5-10K per server

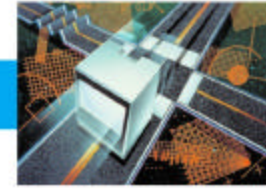




Budgeting Technology

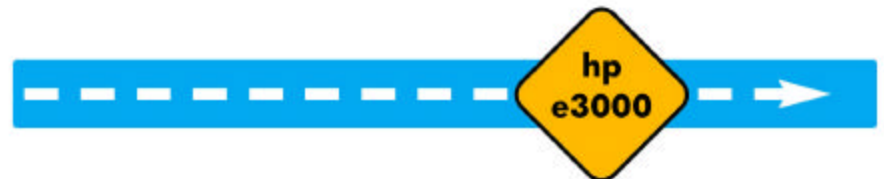
- Tools and Compilers
 - 4GLs: \$10K - \$200K per server
 - 3GLs: \$10K - \$150K
- Reporting tools
 - \$10K - \$100K
- Application Facelifts
 - \$20K - \$100K plus labor (if any)

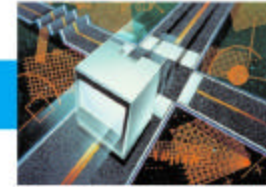




Budgeting Technology

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

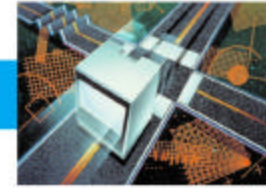




Budgeting Migration

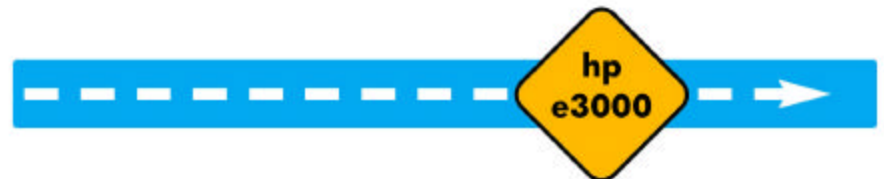
- Cobol Migration tools
 - \$30K - \$200K for technology alone
 - \$100K (1M loc) + time for ASP model
 - \$100K - \$1M+ for outsourcing
 - Possible residual run-times / annual support fees \$5K - \$100K/yr

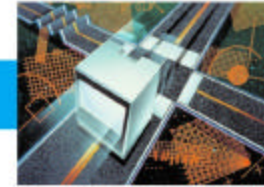




Budgeting Migration

- Speedware / Cognos migrations
 - 3-9 man-months of in-house work
 - \$100K - \$250K completely outsourced
- Transact migrations
 - \$100K to \$500K mixed in-house and outsourcing

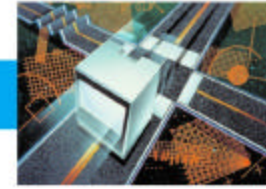




Budgeting Migration

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

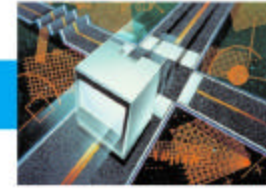




Other Budget Items

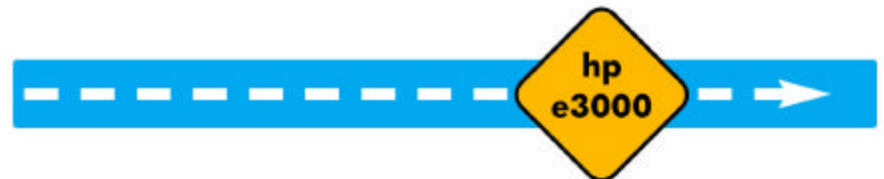
- Training
 - Programmers
 - Operations
 - End-Users
- Implementation





Totaling the Costs

- Planning and Analysis
- New Hardware
- New Databases
- 3GL/4GL Software Licensing
- Replacement Tools / Technologies
- Migration Tools / Technology

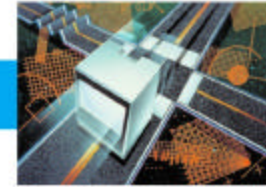




Totaling the Costs

- Migration Resources
 - In-house
 - Outsourcing
- New Hires
- Application Enhancements / Facelifts
- Training
- Implementation





Thank You

Questions & Answers

