



## About Wall Street Systems



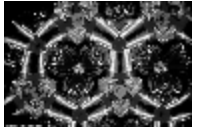
Wall Street Systems

- Founded in 1986
- Treasury software house
- Steady growth
- Large product portfolio
- Many client variants
- Target market of top 200 financial and blue chip companies
- \$200 billion traded daily through system

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## Abstract




- You are in charge of an inexperienced team responsible for managing all of the company's software assets.
- The team are working flat out to keep their heads above water but adding little value to the process
- Shovelling software to clients using a manual process
- Chaos is all around you
  - Unstable software
  - All clients are running different software baselines
  - Whole subsystems are being shipped to clients
  - Very little formal process is in place
- What are you going to do to get control of the situation?

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## The Chaos




- No concept of compatibility levels in releases
- Ad hoc software deliveries
- Multiple source code repositories
- Junior staff responsible for software management
- All code maintained from a single code line
- Many dependency issues with software deliveries
- Labour intensive delivery process

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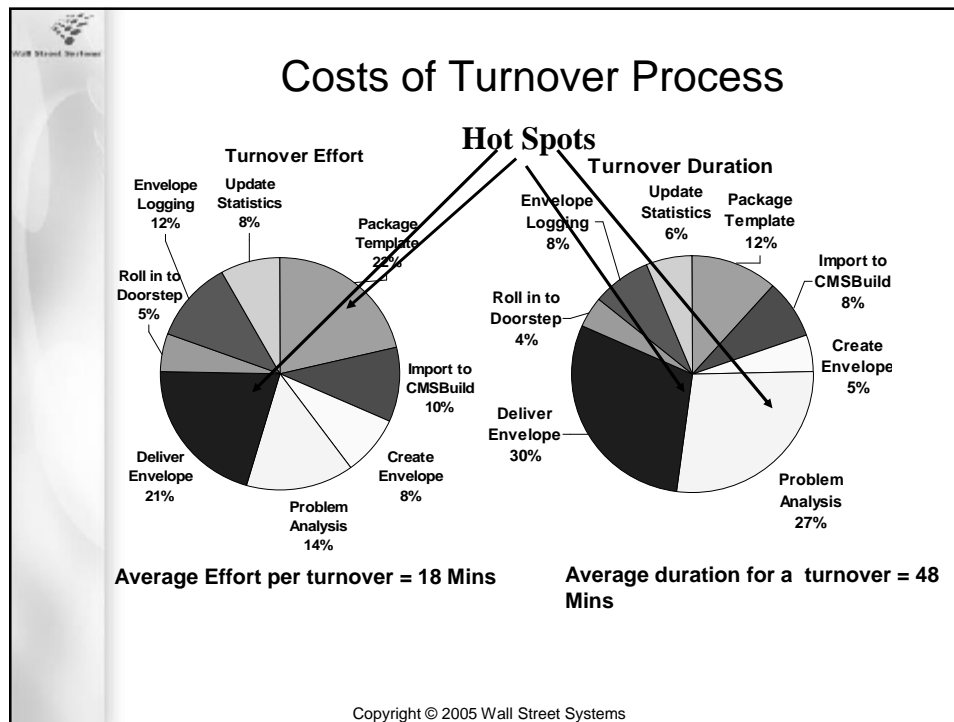


## First Steps




- Documented current process such as it was
- Identify key process areas to free up resource

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## First Steps




- Documented current process such as it was
- Identify key process areas to free up resource
  - Capture delivery requests electronically
  - Automate software build
  - Document Software Management requirements
- Implement process improvements
- Train staff on good software management disciplines
- Evaluate tools against requirements
  - WSS approach presented at CMSG October 2002

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## Introducing Release Management (1)




- Select best fit tools against requirements - WSS selected performe
- Implement tools - consolidated all source code repositories on to performe
- WSS then had a single source base
- Introduced a release development lifecycle

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## Key Release Lifecycle Stages




```
graph TD; A[Project Initiation] --> B[Environment Set-up]; B --> C[Integration Testing]; C --> D[System Testing]; D --> E[In-House Upgrade Process];
```

- Project Definition
- Quality Plan
- Release Build
- Write Release notes
- Establish Test environments
- Sanity testing
- Test key interfaces
- Test scripting
- Test execution
- Issue resolution
- Inverse cleared client region
- Client specific testing

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## Introducing Release Management (2)

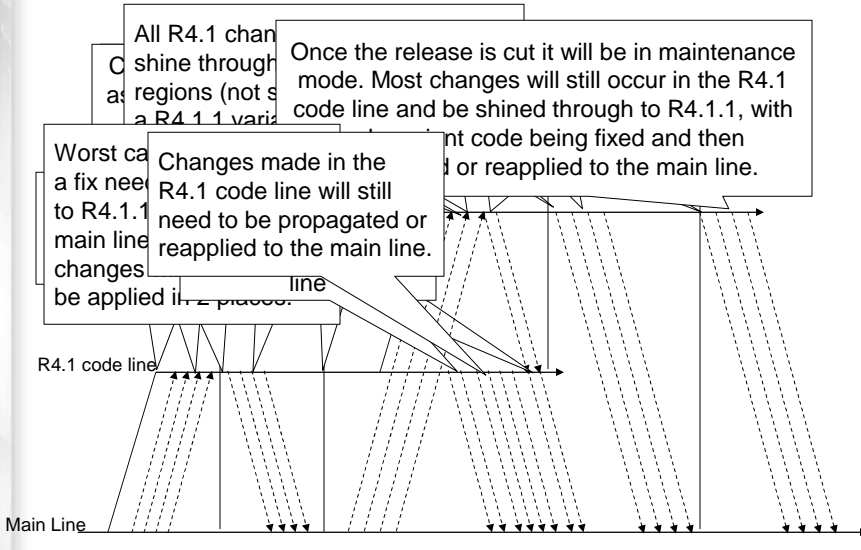


- Release branches

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## Maintenance of Release Source Code



All R4.1 changes shine through as regions (not a R4.1.1 variation). Once the release is cut it will be in maintenance mode. Most changes will still occur in the R4.1 code line and be shined through to R4.1.1, with the R4.1 code being fixed and then re-applied to the main line.

Worst case a fix needed to R4.1.1 main line changes be applied in the process.


Changes made in the R4.1 code line will still need to be propagated or reapplied to the main line.

Main Line

R4.1 code line

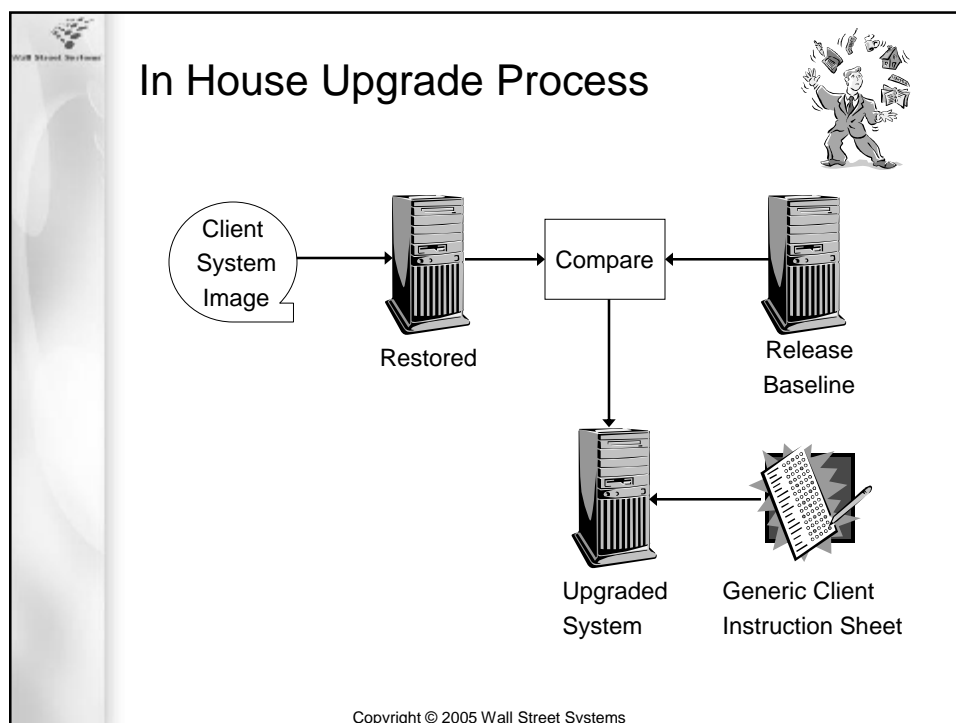
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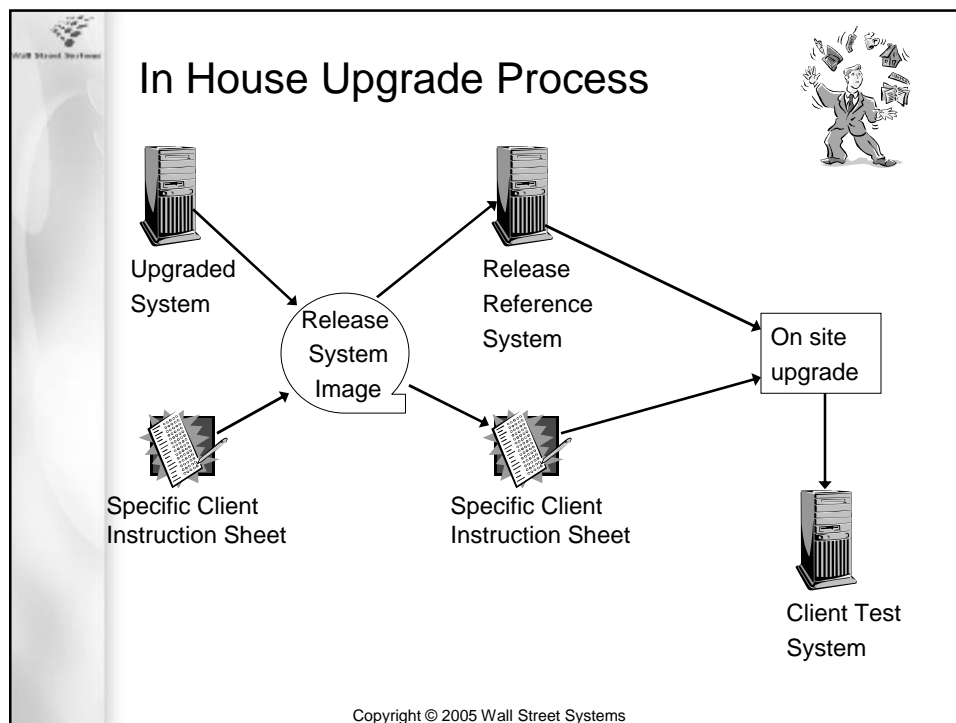
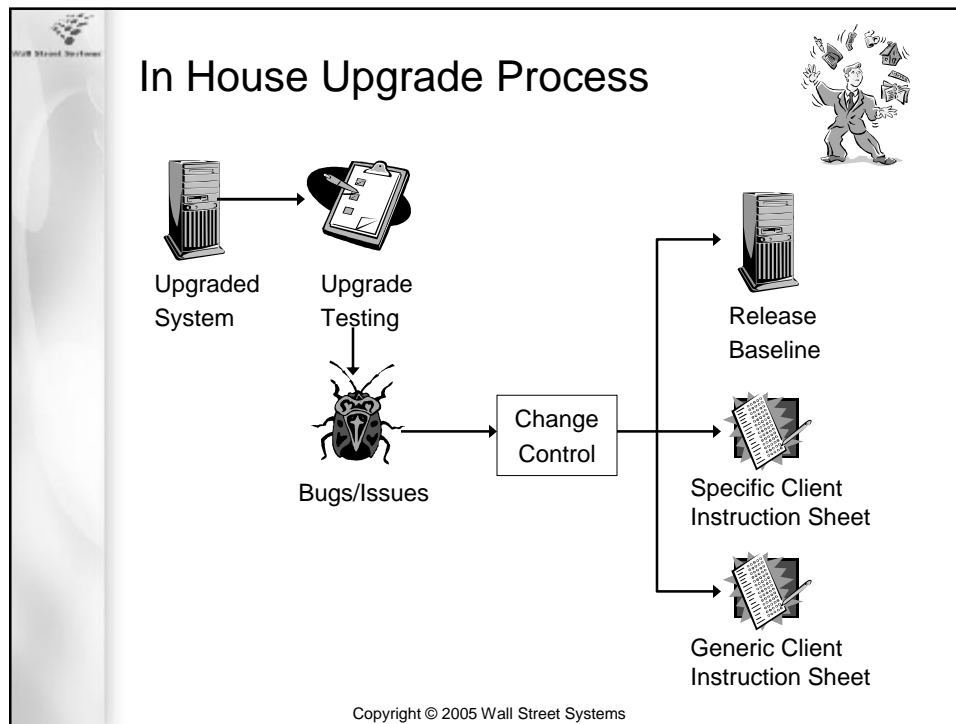
## Introducing Release Management (2)





- Release branches
- Testing cycles against release baselines
- Staff training on the release process
- Testing cycles against release baselines
- Change policy on release code – no enhancements
- In house upgrade process

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## Current status

- First release cycle (R4.1) completed in Q1 2004
  - In house upgrade process finding a third of the number of issues
  - Positive client feedback
- First delta release (R4.1.1) completed in Q4 2004
  - 50% increase in the number of issues found by the in house upgrade process
  - Delta changes were too ambitious – poor change control
- Just completed second delta release (R4.1.2)
  - Quality back to R4.1 levels
- Full release scheduled for Q4 2005



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## Next Steps

- Improve Change Management
  - Requirements Management
  - Improve impact analysis of changes
  - Improve test management
  - Tighten change control
    - Some enhancements still creeping in under the guise of maintenance
- Move culture away from latest is greatest
- Process review of entire development lifecycle

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## Summary

- Chaos is expensive
  - Lower client satisfaction
  - High maintenance overheads
- You have to create some headroom to be able to really improve the process
  - Stop doing unnecessary activities
  - Automate manual processes (don't automate the chaos though!)
  - Measure process costs and improvements
- Invest the headroom created wisely
- WSS have not totally cracked it yet
  - Continual process improvement is key

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