

Team Wide Tune-ups

Optimize Your Team for Tough Times

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Why are you here?

47,000

U.S. JOB CUTS ANNOUNCED MONDAY;
THOUSANDS MORE LAYOFFS AROUND THE GLOBE

FIRM BY FIRM: MONDAY'S U.S. PINK SLIP TALLY



CATERPILLAR
20,000



PFIZER INC.
8,000



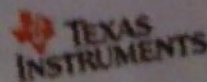
SPRINT NEXTEL
8,000



HOME DEPOT
7,000



GENERAL MOTORS
2,000



TEXAS INSTR
1,800

Times Are Tough

- Do more with less
- Layoffs
- Bankruptcies
- Half the staff and *more* work!
- Gloom and doom

Lift 100 Pounds?

Lift 200 Pounds?

Lift 500 Pounds?

Maybe All of Us?☞

- Lever
- Pulley
- Block and tackle



[flickr.com/photos/_pixelmaniac_/2149556620/](https://www.flickr.com/photos/_pixelmaniac_/2149556620/)

Need to Leverage

Time

Money

Team members

Expertise



Need to Leverage?

Everything!



Focus

- Specific areas
- Exact problems
- Usable solutions



Feedback Loop

- Smaller
- Easier
- Faster

Fast Feedback

- Creates awareness
- Enables learning
- Connects cause and effect

Plan

- Find an area
- Tighten the feedback loop

“How Do I Find an Area?”



Focus Areas

Requirements

Coding

Testing

Deployment

Maintenance

Normal Requirements Loop

- Collect perfect requirements
- Throw to the loser dev team
- Move on to the next project
- Six months... two years...
- Serve as an expert witness at the trial

Requirements Issues

- Too many
- Too few
- Moving target
- Vague
- Terminology mismatch

Requirements Feedback Loops

- Time boxed iterations
- Top 10 list

Time Boxed Iteration

- 1 to 4 weeks
- “Finished” tasks
- Demo
- 10 tasks in 10 days
- Get the customer to prioritize



Iterations Catch...

- Undefined requirements
- Problem teams
- Black hole task
- Any problems
- Compresses everything

Normal Coding FBLs?

- Take junk requirements
- Code for months
- Throw it over the fence to QA
- Fix bugs as reported
- Try to avoid the maintenance team!

Coding Issues

- Can't finish
- Buggy
- Brittle
- Cool features
- Infrastructure

Coding Feedback Loops

- Continuous integration
- Test automation
- Daily meetings
- Peer code reviews
- Time boxed iterations

Continuous Integration

- Code is checked in
- Code is compiled
- Tests are run

Continuous Integration

- No weekly/nightly builds
- Code tested NOW
- Problems caught quickly
- Especially functional

CI Catches...

- Failure to add a file
- Out of date local libraries/code
- Code collisions
- Functional breaks

Test Automation

- Scriptable
- Self-verifying
- Simple (Unit)
- Package level (API)
- Integration (Acceptance)



Test Automation Catches..

- Functional breaks
- Broken refactoring
- Collateral damage
- Ignorance



Defect
Driven
Testing

Find a bug...

Add a test

Jazz

Where's Your Test Coverage?

- On the bugs
- Incremental change
- Automate as needed

Daily Meetings

- 1 to 3 minutes per person
- 3 questions
- Re-direct
- Re-task
- Peer pressure

Daily Meetings Catch...

- Wasted work
- Misunderstanding
- Off track
- Knowledge silos



Peer Code Review

- Finish one task
- Find a co-worker
- Get a review
- Repeat until done

PCR Catches...

- Your bugs
- Their bugs
- Knowledge silos
- Rewriting code
- Hacks



Iterations Catch...

- Mired down developers
- “Almost done” features
- Unestimated features
- Uncommitted code

Typical Testing FBL?

- Wait for developers to release code
- File as many bugs as possible
- Say “I told you so” when things fail
- Wait for the next release
- Write test plans

Testing Issues

- Too slow
- Misses problems
- Expensive
- New eyes

Testing Feedback Loops

- Automated testing
- Continuous integration
- Static code analysis tools

Testing Feedback Loops

- Eliminates click-thru testing
- Runs 24x7
- Repeatable
- Reliable
- Controlled environment
- Free up human testers to think

Typical Deployment FBL

- Don't write an installer. Too busy
- Deploy by hand
- Works for me
- Send the newest developer to person to write an installer
- Attribute problems to “stupid users”

Deployment Issues

- By hand
- Hit or miss
- Manual
- Difficult
- Stupid users

Deployment Feedback Loops

- Scripted deployments
- Continuous integration
- Automated integration tests

Scripted Deployments

- Capistrano
- Database migrations
- Runs locally
- Runs on production
- Runs on test

Deployment Loops Catch...

- Bugs in installers
- Bugs in code
- Performance issues
- Intermittent issues

Typical Maintenance FBL

- Have a product dropped in your lap
- Curse prima donna developers with the political clout to move on
- Fix a bug
- Cause five more
- Get ulcers

Maintenance Issues

- Biggest expense
- Brittle
- Difficult
- Expensive
- Frustrating
- Learning curve

Maintenance Loops

- Automated tests
- Continuous integration
- Static code analysis

Maintenance Loops Catch...

- Assumptions
- Misunderstandings
- Breaks
- Collateral damage

Need to Optimize?

- Find an area
- Tighten the feedback loop





Focus Areas

Requirements

Coding

Testing

Deployment

Maintenance

Where to Start?

Take a picture

Fresh perspective



Onsite Assessments

- Bring in an expert
- Eyes on the process
- See what you take for granted

Fresh perspective

Team Wide Training

- Everyone's on the same page
- Move to productivity quicker
- Don't re-invent the wheel
- Save time and money
- Work smarter and harder

Leverage Expertise

The Process

ID weak areas

Take a picture

Fresh eyes

Focus

Repeat

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