

CI/CD PROPOSAL

1. CI/CD Fit In

Stage	Before CI/CD	After CI/CD
Coding	Human	Human
Code Review	Human, Subjective, Inconsistent	Human/CI - Static Analysis
Compile/Lint	Human	CI
Merge/Integrate	Human	CI
Run Unit Tests	Human, Hit or Miss, Easily Bought Off with Pressure	CI
Run Integration Tests	Human, Hit or Miss, Easily Bought Off with Pressure	CI
Verify Dependency Security	Human, Often Not Done	CI
Deploy to Test Env	Human, Problematic, Missed Steps	CD
Team Test	Human, Time Consuming	CD - Automated Acceptance Tests
Deploy to Client Test Env	Human, Problematic, Missed Steps	CD
Client Test	Human, Often Unnecessary If Pre-Development Activities are On Point	Human - Maybe Not Needed If We Can Build Confidence

Stage	Before CI/CD	After CI/CD
Create Infrastructure	Human, Problematic, Missed Steps, Stressful	CD
Deploy to Production	Human, Problematic, Missed Steps, Stressful	CD
Smoke Test in Prod	Human, Inconsistent	Automated Smoke Tests (Subset of AAT's)
Rollbacks	Human, Problematic, Missed Steps, Stressful	CD
Promoting Production	Human, Problematic, Missed Steps, Stressful	CD
Celebrate!	Human	Human

**Before we implement CI/CD almost everything requires human intervention.
After apply CI/CD, we can reduce it!**

2. Benefits for Business

Technical Language	Value	Translation
Catch Compile Errors After Merge	Reduce Cost	Less developer time on issues from new developer code
Catch Unit Test Failures	Avoid Cost	Less bugs in production and less time in testing
Detect Security Vulnerabilities	Avoid Cost	Prevent embarrassing or costly security holes

Technical Language	Value	Translation
Automate Infrastructure Creation	Avoid Cost	Less human error, Faster deployments
Automate Infrastructure Cleanup	Reduce Cost	Less infrastructure costs from unused resources
Faster and More Frequent Production Deployments	Increase Revenue	New value-generating features released more quickly
Deploy to Production Without Manual Checks	Increase Revenue	Less time to market
Automated Smoke Tests	Protect Revenue	Reduced downtime from a deploy-related crash or major bug
Automated Rollback Triggered by Job Failure	Protect Revenue	Quick undo to return production to working state

Many steps are done automatically which helps to reduce costs thereby increasing revenue.