Announcements

Design (tie-in) Doc due next week

R1 a little over **two week away**

Much more than just a demo…

Start working on draft of Architecture Doc

Thursday

Complete BP: Change Mgmt reading (requires email registration)

ERP Progress (each CT slides)

RG Weekly Status

Change Accountability *Lecture*

Change Control Process Activity

Required External Reading

http://searchsecurity.techtarget.com/magazineContent/5-Steps-for-Developing-Strong-Change-Management-Program-Best-Practices

Don't focus on security

Change Accountability

SWEN-343

Questions for today

How does one control change in a project?

What difficulties does/will this have?

What can be done about it?

Where do Changes Originate?

Planned software development
Unexpected problems
   Bugs
   Security
Enhancements

Why do you need a **Change Management Plan?**

Inform the necessary parties (a Strong FYI)
   Knowledge sharing
   When/if systems will be down
Provide:
   Backup plan
   Trail of production changes
Catch mistakes
   More eyes = more likely to catch issues
Ensure proper protocol
   Reduce chaos

Alternatives to CMP

Free for all: People do what they want
→ Chaos

"Democracy": Everyone votes.
→ Takes forever to get anything done

Representative Group
A small group of educated individuals make decisions.
Like an intelligent version of congress

Change Control Board (CCB) or CAB

A formal group of representatives who
   approve or reject project changes
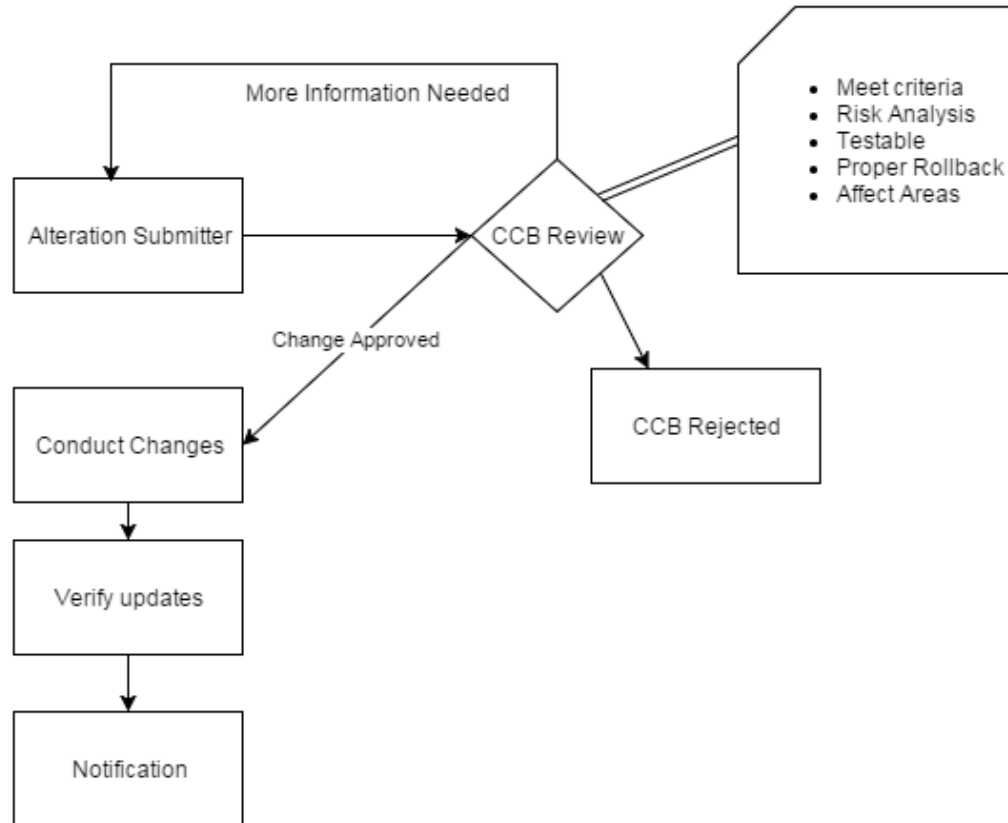Provide guidelines for:
   Preparing change requests
   Evaluate change requests
   Manage implementation of approved changes
Group should be stakeholders

"Typical" Process Plan

What are some challenges this can lead to?

What are some challenges this can lead to?

"I want it now"

Emergency fixes - Emergency CCB (Account for this)

    Bug

    Customer Demand

    Security vulnerability

    Hardware issue

People don't follow process

    What are negative ramifications?

    How do you enforce this?

People approve since it is "easier"

    Rubber stamp approvals

"The Google Way"

A pushed submission MUST

    Have attached tests

      That run & pass

    Be signed off by:

      Directory owner

      One other engineer

Stages

1. Request & Approval
2. Planning & Testing
3. Scheduling & Communication
4. Implementation
5. Documentation & Follow up

Request For Change (RFC) & Approval

Many items to review…..
- Is it needed?
- Does reward outweigh the risk?
- Is it complete?
- Should the changes be made?
- Does it leave proper audit trail

RFC can be **rejected** due to poor planning/documentation
- But will often push back to requestor

Planning & Testing

Significant **scrutiny** should occur here….
Requestor should provide:
      Implementation & Backout plans
          Easy rollback is of paramount importance
Testing should not be an afterthought
      Verify that change took place
      Verify that change properly took place
Much of plan is **driven by risk**
      How much verification
      Who should be on hand

Scheduling & Communication

When to perform changes?

Off hours? - Will you have necessary people?

Turn into a well documented **process**

Think checklists, visibility and value-add

Change management **tools** may be useful

Many vendors with different approaches

Atlassian JIRA, IBM Rational ClearCase, etc.

Implementation

Follow plan

Have proper people on call or in attendance

Don't be afraid to roll-back/not conduct update

Documentation & Follow-up

Create a sound **audit** trail
- Approvals
- Comments
- Plans
  - Implementation & Backout
- .. Good for:
  - Compliance
  - Project history
  - Rollback

What Should the Document Look Like?

Example Document

http://www.se.rit.edu/~swen-343/resources/SampleCCB.docx
What changes should be made?

Activity

As a class, come up with a CM process
   What document will you use?
   What "flow" will you use?
   Who will your approvers be?
      From what role & group-groups
   Will you use change management software?
   What will happen to those who don't follow the process?

Possible Process

Each group come up with their 3 primary plan attributes & needs: 5 min

Class discussion & refinement: 10 min

Agreement of doc and process: 5 min

Resources

http://www.jamasoftware.com/blog/the-change-control-board/

http://searchsecurity.techtarget.com/magazineContent/5-Steps-for-Developing-Strong-Change-Management-Program-Best-Practices