# Student Co-Op Evaluation System

Patrick Flanagan
Tom Small
Whitney Sorenson
Dan Volpe
Chris Woodbury

# Outline

- Project Overview
- Requirements
- Process Plan
- Testing
- Risks Faced
- Metrics
- Lessons Learned
- Project Status

# Project Overview

- Online student co-op evaluation system
- Built on top of existing employer evaluation system
- Customer
  - RIT Office of Co-Operative Education and Career Services
- Target Audience
  - Engineering and Engineering Technology

# Benefits of System

- Remove the need for paper evaluations
- Provide sophisticated methods of reporting and analysis
- Convenient and easy access to both student and employer evaluations

# Requirements

- Extend existing system
- Online student evaluation submission
- Analysis of student evaluation data
- Student access to past evaluations
- Integration with employer evaluation system
- Notification of users by email of important events

# Process

- Agile development
  - Multiple short iterations
  - No major up-front design
  - Refactoring of existing system
  - Frequent access to customers
- Weekly status meetings
- Bugzilla
- Testing

# Iteration Cycle

1. Identify goals of iteration
2. Requirements drill down
3. File feature requests into Bugzilla
4. Assign features to developers
5. Implementation
6. Integration testing
7. Deployment
8. Stakeholder feedback session

# Project Schedule

| **Quarter** | **Weeks** | **Dates** | **Iteration** |
|---|---|---|---|
| 042 | 5 – 8 | 1/10/05 – 2/4/05 | Iteration 1 |
| 042 | 9 – 11 | 2/7/05 – 2/25/05 | Iteration 2 |
| 043 | 1 – 3 | 3/7/05 – 3/25/05 | Iteration 3 |
| 043 | 4 – 6 | 3/28/05 – 4/15/05 | Iteration 4 |

- Deliver in 6th week
- Planned 2 week buffer

# Iteration Tasks

- Iteration 1
  - Student view of system, system & development environment configuration, email system
- Iteration 2
  - Refactoring, polish student view, dynamic form generation/editing
- Iteration 3
  - Reporting
- Iteration 4
  - Bug fixes, new feature requests, further polishing

# Testing

- Informal, small-scale testing performed continuously throughout development
- End-of-iteration integration testing
  - Code freeze
  - Developers tested each other’s features
- Stakeholder testing
  - After each iteration, throughout development
- Full-scale test plan
- Pilot testing

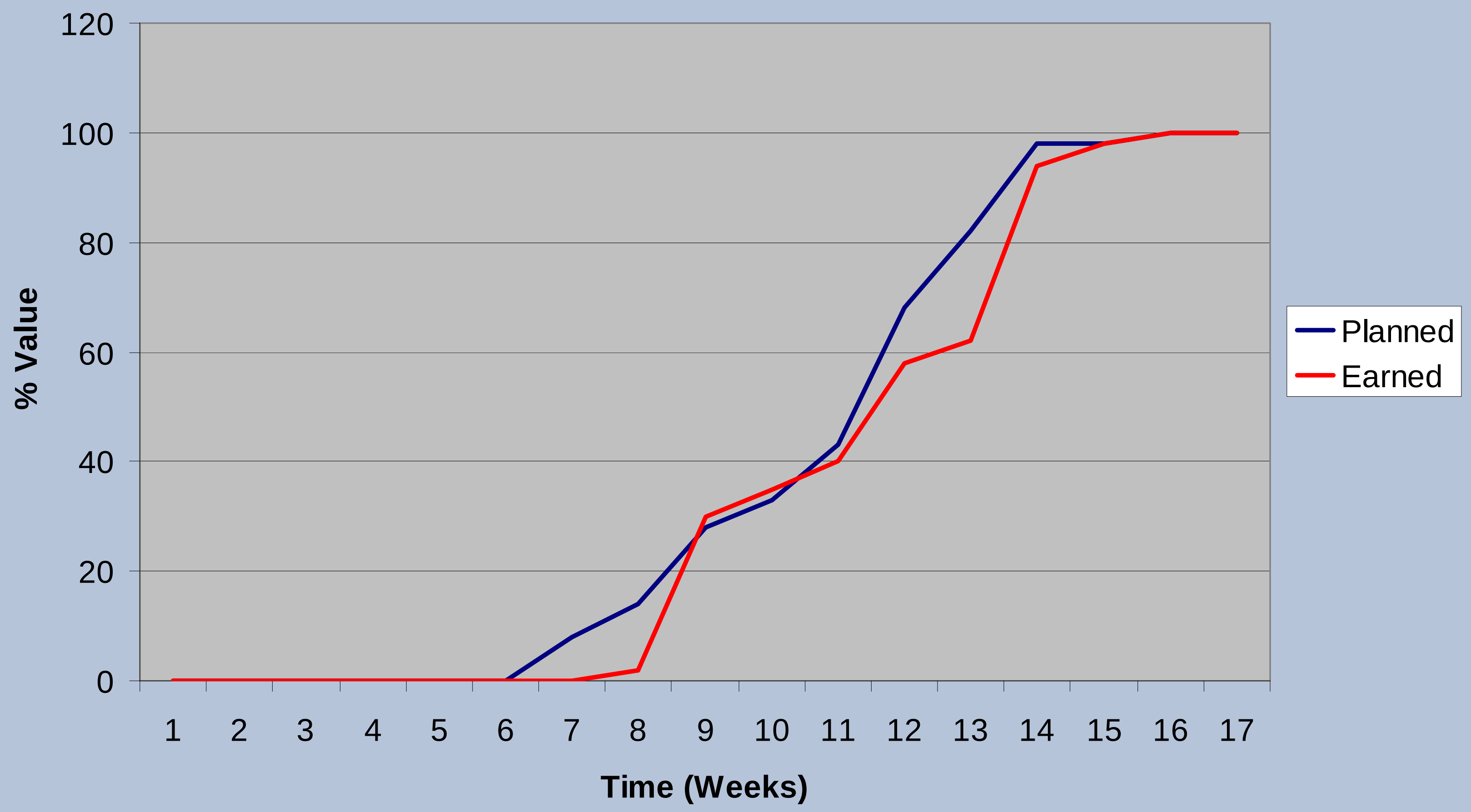
# Risks Encountered

- Existing design and implementation
- Existing documentation
- Feature creep
- Changing requirements
- Configuration
- Final deployment

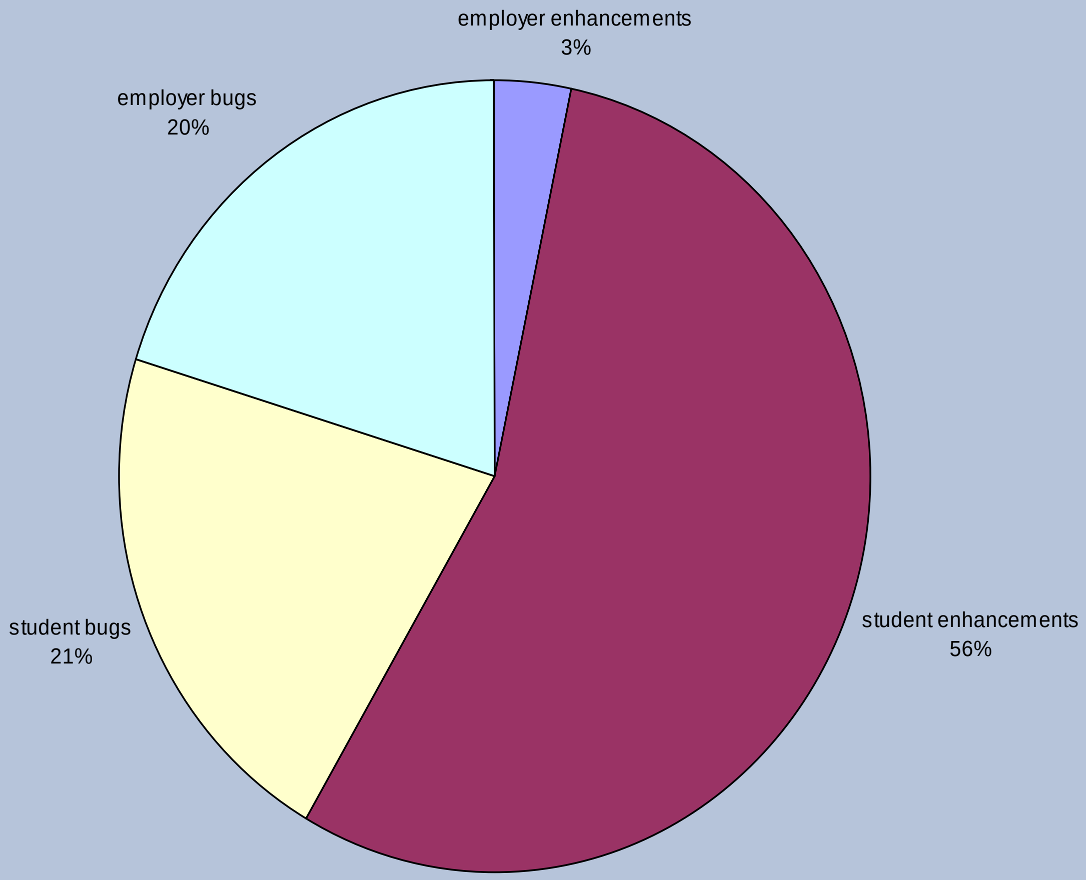
# Metrics

- Earned value
- Defects
- Requirements volatility

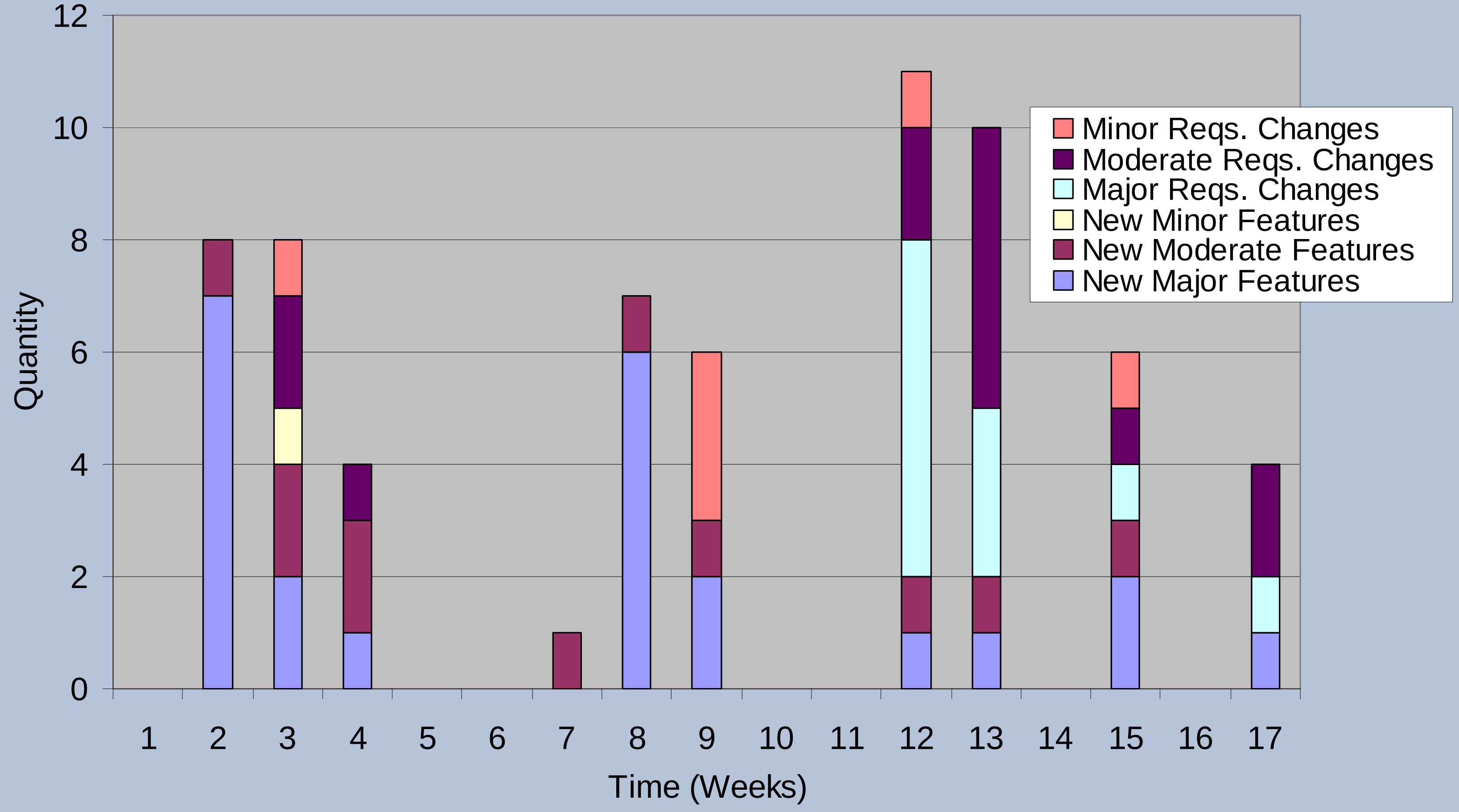
# Earned Value



# Defects


employer enhancements
3%
employer bugs
20%
student bugs
21%
student enhancements
56%

# Volatility


12
10
8
6
4
2
0
Quantity
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
Time (Weeks)
Minor Reqs. Changes
Moderate Reqs. Changes
Major Reqs. Changes
New Minor Features
New Moderate Features
New Major Features

# Deliverables

- System code
- Test plan
- Online, integrated user manual
- Technical overview of code

# Lessons Learned

- Agile process
  - Flexibility in responding to new requests
  - Frequent customer communication, feedback
  - Feature creep; no up-front sign-off on requirements
    - Had to decide which requests we could accept
    - Had to make sure we could do what we agreed to
- Difficult to extend inherited system
  - No contact with former team
  - Poor internal documentation
  - Constraining design

# Future

- OCECS has indicated desire to use system for entire Institute
  - System should be able to support that now, but will need testing
- Significant refactoring and/or re-implementation may be necessary

# Project Status

- Delivered to OCECS
- Team is available to assist in deployment, troubleshooting and bug-fixing
- OCECS is testing internally and running pilot program
- Roll-out planned for this summer

# Questions