



PROJECT MANAGEMENT
CENTER FOR EXCELLENCE

A.J. CLARK SCHOOL OF ENGINEERING
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AGILE IMPROVEMENTS TO CPM

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Research Question

- Many projects are attempting to adopt agile, but continue to impose traditional monitoring and controls, including the critical path method (CPM) for scheduling
- How can projects use CPM in an agile project to create a detailed enough plan for project managers while maintaining the flexibility agile provides?



CPM Limitations

- Baselining
- Difficult to accurately estimate & forecast durations
- Dependencies relationships are not always apparent or known up front
- Variability in resources; failure to account for learning curves and complexity



Approach

- Rolling wave planning and “baselining”
- Story Point estimation
- Iterative and incremental development/change management
- Capacity based planning & resourcing
- Limiting WIP



Summary & Next Steps

- Traditional methods for project controls are focused on monitoring, not controlling
- Failure to understand underlying processes and design lead to systemic project failure
- Control can only be achieved by understanding what can be changed and how it impacts the project
- Humans are the largest source of project variation and change
- Agile can be used to manage variability, resulting in project monitoring & *control*