Motivation

How can we better assess project performance, and provide insight for future project improvement?

Objectives

- Identify core project control metrics and indicators
- Identify recommended practices for use and interpretation

Methods

- Survey (51 responses)
- Case Studies (10 projects)
- Validation with Delphi Method (2 sessions)

Results

A Metric Typology

- Strategic Decisions
- Tactical Decisions
- Operational Decisions

B Metric Classification

- Core Metrics: key metrics that provide the greatest insight for indicating the likely project outcomes
- Significant Metrics: metrics that can supplement or complement the core metrics
- Predictive Metrics: forecast project cost and schedule outcomes
- Descriptive Metrics: identify progress and performance issues

C Use and Interpretation of Metrics

- Key points considered:
  - Requirements and timing for usage
  - Background information and explanation of metrics
  - Application scenarios
  - Relationships between different metrics

Applications

Project Controls - Gap Analysis Software

- Create Project
- Select Previous Project
- Metric Gap Analysis Module
- Metric Dictionary
- Search Metrics
- Metric Information and Maps
- Metric Gap Report

D Impact of Project Characteristic

- Strong correlation between core metric usage and cost and schedule outcomes of projects at 90% significance level.

E Validation of Core Metrics

- Core Metric Gap Report
- Performance Assessment
- Predictive Metrics
- Descriptive Metrics
- Core Metric Baseline
- Core Metric Usage

Future Work

- Critical Factors for Improving Reliability of Metrics
- Detailed Statistical Analyses and Further Validation
- Interactions of Core Metrics and Critical Reliability Factors

Acknowledgements

- Research Team 322: Improving Project Progress & Performance
- OHL School of Construction, Florida International University

References