Power of Integrated Cost & Schedule

ARES PRISM

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Speaker Fun Facts

Deer

Possum

Racoon

Armadillo

I live in Houston, Texas. While I love where I live, there are several friends and foes that like to stop by. Some causing more commotion than others!

AACE International

- Founded in 1956
- 7,000 members across the globe
- ARES PRISM has supported AACE for 20+ Years
- Recommended Practices sharing industry knowledge

Agenda

- Problems to Solve
- Integrated Cost & Schedule
- Key Benefits
- Case Study
- Recommended Practices

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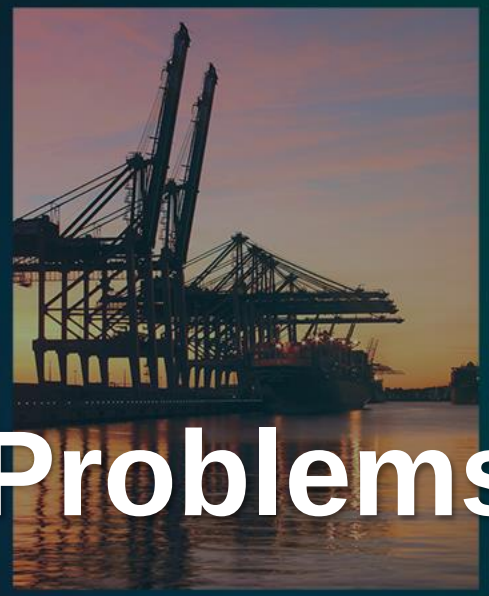
Problems to Solve



Polls

- Simply select an option
- Completely anonymous
- No wrong answers!
- Interactive way to see what our attendees are experiencing

Polls

Question: What percentage of projects do you think meet their original goals or business intent?

a) 80-90%

b) 70-80%

c) 60-70%

d) 50-60%

The Problem to Solve

*Met Original Goals/Business Intent	62%	Experienced Scope Creep	45%
Completed within Original Budget	53%	Failed Project's Budget Lost	32%
Completed on Time	49%	Deemed Failure	16%

*Source: The High Cost of Low Performance – PMI's 8th Global Project Management Survey – 2016.

Average **11.4%** investment wasted due to **poor performance** (PMI, 2020)

67% more projects fail when organizations **undervalue** project management for driving change (PMI, 2020)

Only **31%** of organizations have **integrated project management reporting** systems (KPMG, 2019)

How Often Does Your Organization Use These?

	Always	Often	Sometimes	Rarely	Never
Project Performance Measures	29%	36%	24%	8%	3%
Risk Management Practices	28%	35%	24%	10%	3%
Change Management Practices	27%	37%	24%	9%	3%
Program Management	25%	37%	23%	10%	6%
Resource Management	25%	38%	23%	10%	4%
Internal/Proprietary Methodologies	24%	38%	21%	8%	9%
Project Portfolio Management	21%	33%	25%	12%	9%
Earned Value Management	12%	21%	24%	22%	21%

*Source: The High Cost of Low Performance – PMI's 8th Global Project Management Survey – 2016.

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Integrated Cost & Schedule

Polls

Question: Do you know the difference between a **cost-loaded schedule** and a **time-phased budget**?

a) Yes

b) No

c) Somewhat

d) Not sure

Cost Loaded Schedule Method

Involves the simultaneous development of a project estimate, using various estimating tools, and a project schedule using the Critical Path Methodology. Some challenges are:

1. Loading of resources and estimated costs onto activities can be a tedious, manual process, especially if the estimated costs have been developed using Excel.
2. Large effort required to translate the quantities, hours, and cost from the estimate to the specific activities they represent
3. Matching the granularity of the schedule to the estimate. Estimators and schedulers work at different levels of detail and it is not practical to force either discipline to adopt each other's approach.
4. Managing intangible and indirect costs like project management, freight, taxes, etc. for which no activities exist in a schedule. These costs can represent up to 30% of a project's total cost.
5. Aligning and tracking multiple budgets (baseline, current, pending, accounting, and funding). This is difficult to achieve on a schedule.
6. Handling changes to the costs (change requests, change orders etc.). Most scheduling applications, including Primavera P6 and MS Project, do not provide a means to record multiple change orders against activities. Instead, schedulers must edit the cost budgets assigned to the activities.
7. Managing contingency, including drawdowns. This is not possible with a Cost-Loaded Schedule.

Time-Phased Budget Method

This method enables the planning and tracking of the costs over time through a common control record. Rather than individually assigning each estimated cost to specific activities, the control account allows for the roll-up of multiple activities and their associated costs to a single record. Some benefits include:

1. Forming the basis for calculating Earned Value Management (EVM) metrics, which provide the project performance status for cost and schedule.
2. Making maintenance of the schedule simpler by allowing it to focus on sequence and timing of project execution.
3. Addressing changes to budgets and forecasts, while changes to the schedule are being considered.
4. Managing performance of multiple budgets; approved and control budgets.

5. Addressing the issue of how indirect costs are time-phased.
6. Addressing the issue of time-phasing contingency.
7. Making changes in the cost forecasts easier.
8. Recording purchase order and contract committed costs from the financial systems.
9. Providing the ability to forecast costs based on earned value indices compared to only using remaining budget to complete methods.
10. Applying different expenditure curves for different Time-Phased Budgets and forecast.

Polls

Question: Does your organization currently integrate its project cost, estimating, and schedule data?

a) Yes
b) No
c) Somewhat
d) Not sure

Polls

Question: How is integration currently achieved?

a) Spreadsheets/Excel
b) In-house system
c) Project controls system
d) Ad-hoc at best
e) Not applicable

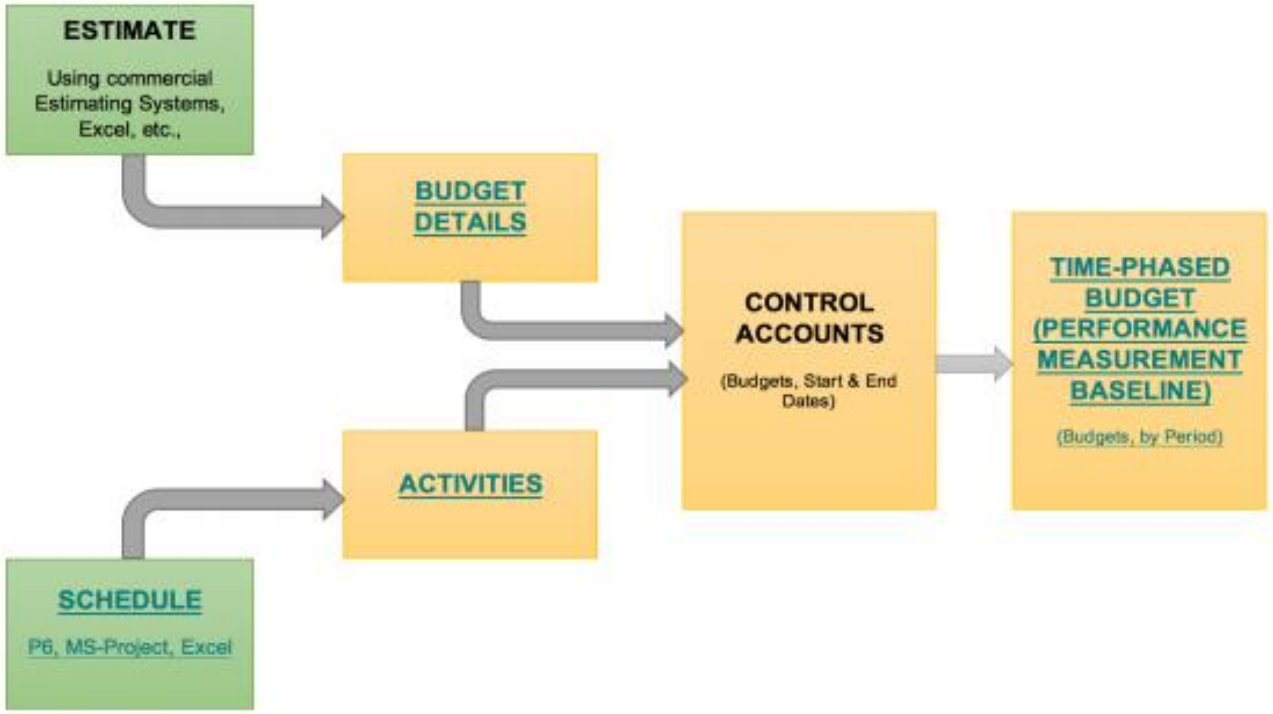
Integrating Cost & Schedule

Integrate cost and schedule to create a time-phased budget instead of a cost-loaded schedule

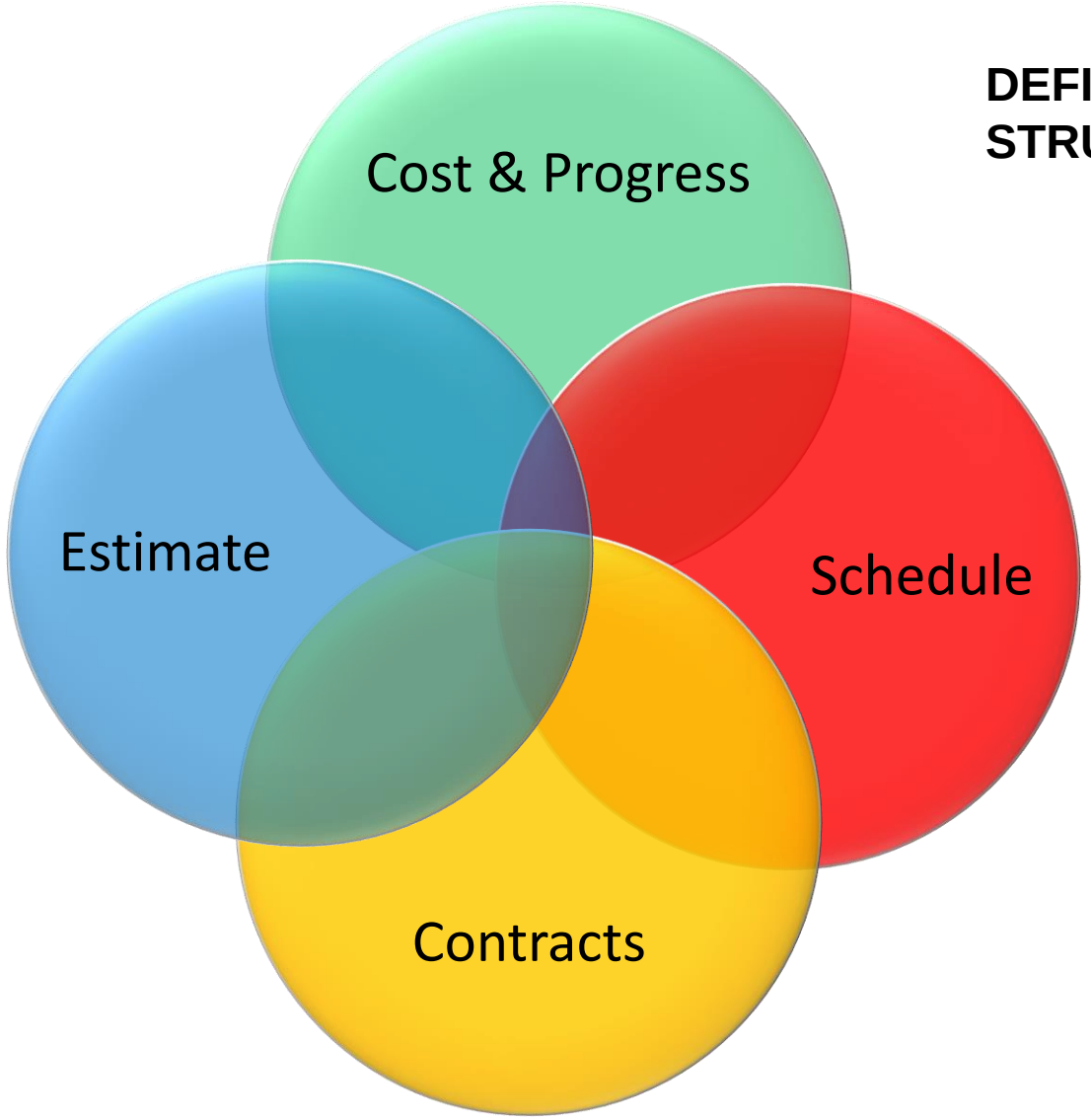
- Roll up and categorize relevant project metrics
- Shows an auditable and time phased decision process
- Manage budgets, track changes, and track trends
- Manage contingency
- See change and understand the overall enterprise impact
- Forecast future expenditures and financial trends
- Report project progress based upon industry standard earned value practices (Thank you AACE!)
- Flexible cost spreading based upon project function

Time-Phased Budget Method

A Time-Phased Budget is a budget that is not only defined in terms of magnitude but also indicates the planned expenditure of that budget over time. The Time-Phased Budget method also begins with an estimate and a schedule, but instead of incorporating one within the other, it uses "control accounts" to link them together.



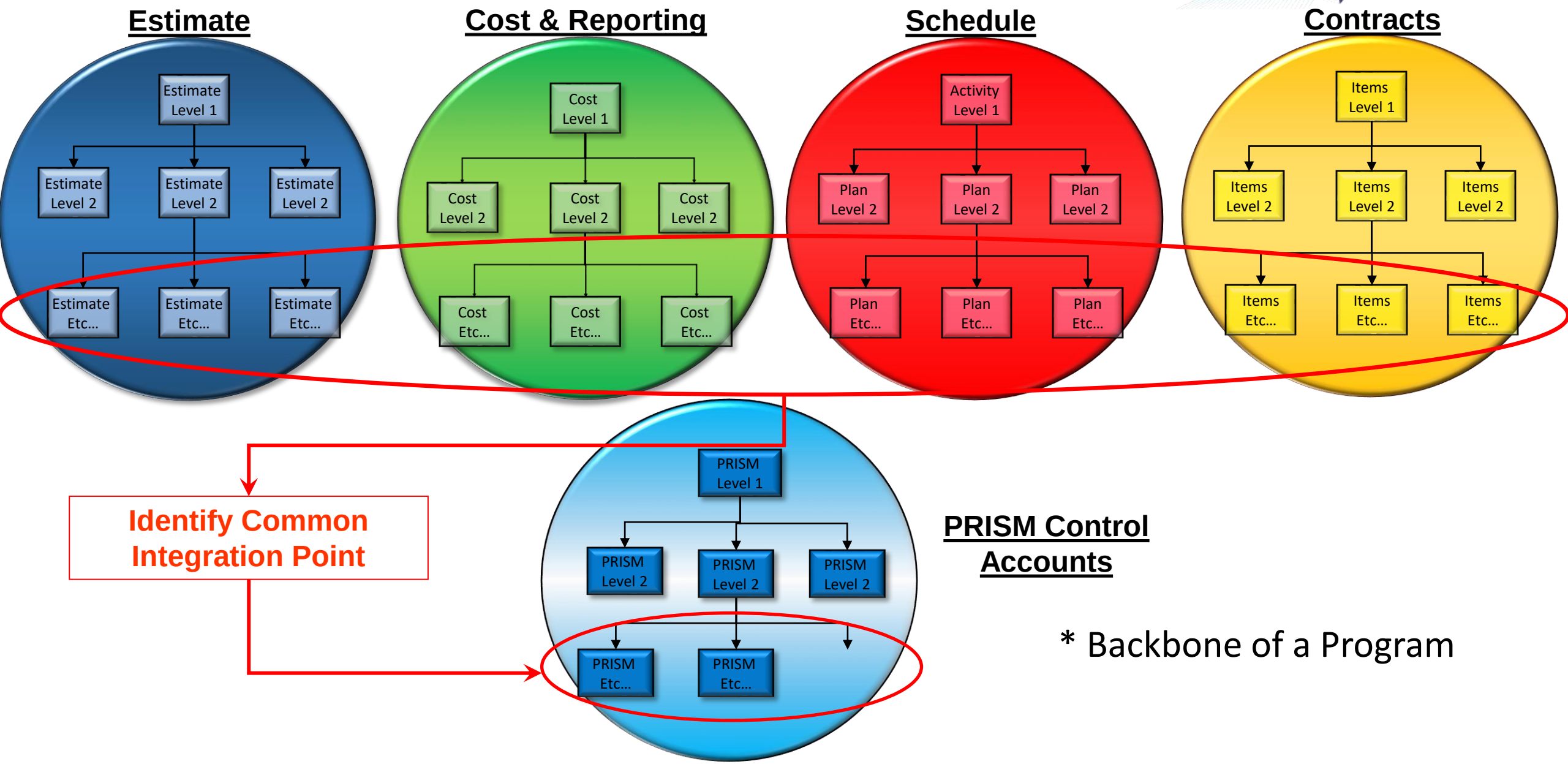
Integrated Coding Structures



DEFINE SINGLE INTEGRATED STRUCTURE

** Provides integration & traceability from Original Baseline Estimate and our operating Budget /Cost data, which is then time phased with the Schedule start & finish dates*

Creation of Integrated Coding Structure

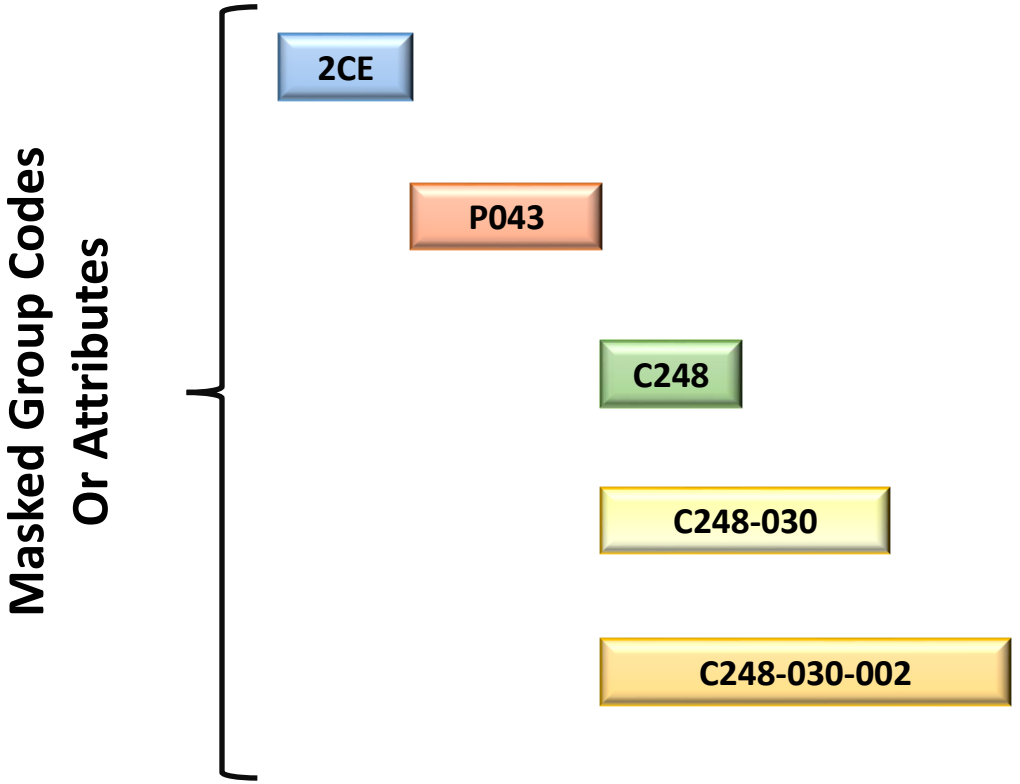


* Backbone of a Program

Intelligent Control Account Coding

Control Account:

2CE-P043-C248-030-002 : C248 - Diaphragm Wall North



L01– Area :
2CE - Central

L1 – Project :
P043 – Portals & Shafts

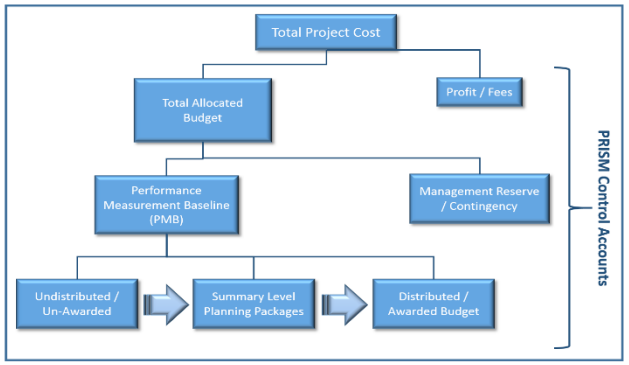
L2 – Contract :
C248 – Pudding Mill Lane Contract

L3 – Activity Group:
C248-030 – Cut & Cover Tunnel Sections

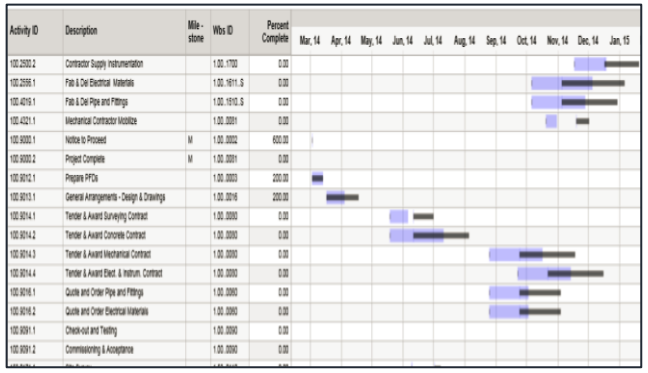
L4 – Activity :
C248-030-002 : Diaphragm Wall North

Cost Schedule Integration

TOTAL CONTRACT VALUE



Program Plan (Schedule)



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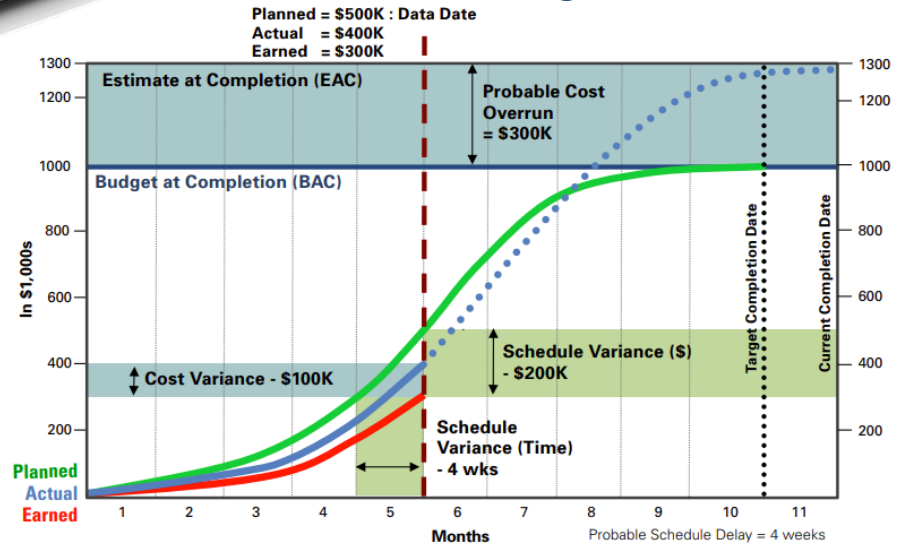
Time Phased Budget Baseline



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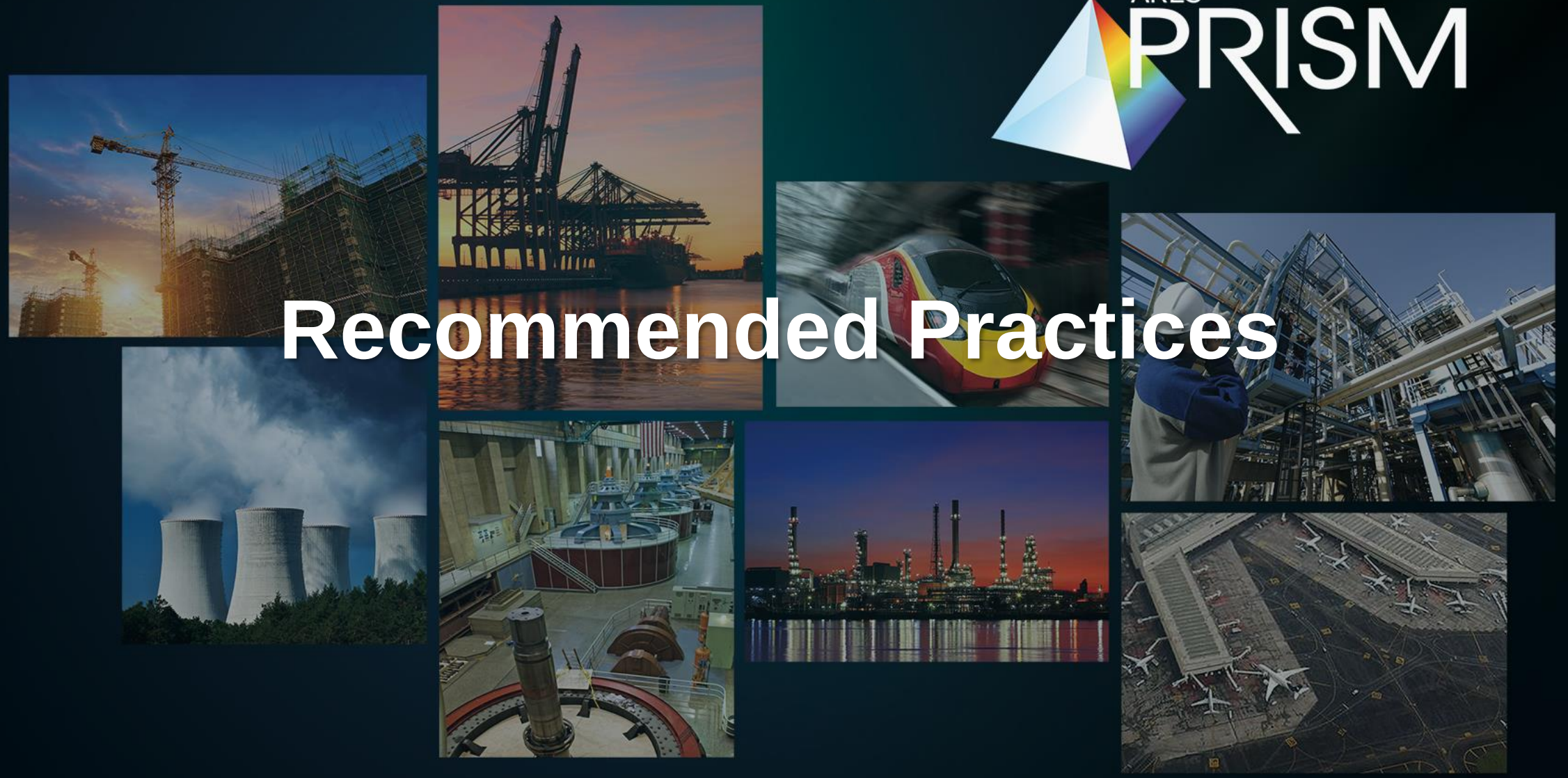
Key Benefits

Key Benefits

Successful integration of Estimate, Schedule and Cost using proper PM procedures can lower project costs by 5-15%. On a $1B program, savings can be $50-150 million!

- More accurate Reporting (and faster Period close)
- Real-time Project Feedback
- Faster Response to Project Issues
- Efficiency Improvements (e.g., fewer FTEs, faster communications across controls teams)
- Improved Change Management & Accuracy of Change Orders
- Lower Project Risk (e.g., reduced exposure to claims)
- Better control of Cashflow
- Increased Time on Tools with better Field Management & Supply Chain planning



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Recommended Practices

ARES PRISM Meets AACE Recommended Practices

55R-09 Analyzing S-Curves

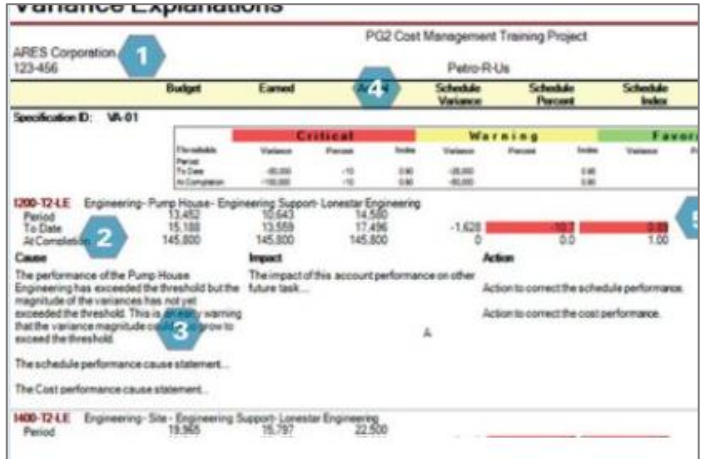
AACE Analyzing S-Curves

WHITE PAPER

This white paper explores the AACE International Recommended Practice 55R-09 on analyzing S-curves and describes how an earned value management tool, like PRISM G2, can be used to meet and exceed its requirements.

READ MORE

86R-14 Variance Analysis & Reporting



AACE Variance and Analysis Reporting

WHITE PAPER

This white paper explores AACE's newest recommended practice, 86R-14, which provides guidance for planning, performing, managing, and controlling the variance analysis process. This white paper outlines how to use PRISM to easily follow the guidelines outlined in the recommended practice.

READ MORE

82R-13 Earned Value Management

AACE Earned Value Management

WHITE PAPER

This white paper explores the 32 EVM principles in the ANSI standard EIA-748C; taking these 32 principles and associating them with the National Defense Industrial Association's (NDIA) Earned Value Management Systems Intent Guide. Learn how to use ARES PRISM to conform to the AACE International Recommended Practice 82R-13 today.

READ MORE

Questions & Answers

Survey

Please make sure to complete the survey and give us feedback about the webinar. Its quick and easy so be sure to fill it out before you exit the webinar!

Thank You for Joining Us!

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