AACE® International Recommended Practice No. 27R-03

SCHEDULE CLASSIFICATION SYSTEM
TCM Framework: 7.2 – Schedule Planning and Development

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Note: As AACE International Recommended Practices evolve over time, please refer to www.aacei.org for the latest revision.

Contributors:

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PURPOSE

This recommended practice (RP) is intended to serve as a guideline, not a standard. As a recommended practice of AACE International, the intent of the guideline is to improve the understanding and the communication among stakeholders involved with preparing, evaluating, and using project schedules. Various enterprises often misinterpret the quality and value of the information available to prepare schedules and the various methods employed during the scheduling process. It is understood that each enterprise may have its own project scheduling processes and terminology, and may classify schedules in their own particular ways. This guideline provides a generic and generally acceptable classification system that can be used as a basis of comparison. If an enterprise or organization has not formally documented its own schedule classification system, then this RP guideline can be used to provide an acceptable basis.

This recommended practice introduces a schedule classification system, which provides the guidelines for applying the general principles of schedule classification to project schedules. A schedule classification system maps the phases and stages of scheduling with a generic maturity and quality matrix that can be applied across a wide variety of industries. It is intended to be applied to any schedule in any industry and across all stakeholders including government and academia.

A separate recommended practice provides a guideline for describing the specific use of schedule levels to project schedules. Schedule levels provide the details necessary to recognize the characteristics of each of the schedule levels for the purposes of communicating, executing (controlling and monitoring) and reporting the specific details of the project. Schedule levels consider reporting requirements for each of the stakeholders and the appropriate amount of information necessary for effective communication and decisions.

This recommended practice has been developed such that it:

- Provides common understanding of the concepts involved with classifying project schedules regardless of the type of enterprise or industry
- Fully defines and treats the major characteristics used in classifying schedules so that enterprises may determine how their practices compare to these guidelines
- Uses degree of project definition as the primary characteristic to categorize schedule classes
- Reflects generally accepted practices in the cost engineering profession

This classification guideline is intended to help those involved with project schedules to avoid misinterpretation of the various classes of schedules and to avoid their misapplication and misrepresentation. Improving communications about schedule classifications reduces business costs and project cycle times by avoiding inappropriate business and financial decisions, actions, delays, or disputes caused by misunderstandings of schedules and what they are expected to represent.

Schedule Classifications versus Schedule Levels

As indicated below, schedule classifications define to the team the required engineering definition and “degree of completeness” needed for schedule development. Schedule levels establish the breakdown and amount of detail required for communication and reporting. The following diagram (Figure 1) illustrates the two discrete ways that schedules can be developed and/or presented.
As identified in Figure 1, there is a clear delineation between the schedule classification index and schedule levels. By establishing two separate and discrete functions, we can establish a basis for developing the project to the right amount of detail with the right information for the right audience. This will assist in our ability to improve project team communication, collaboration, and effectiveness while achieving excellence in managing our projects and resources.

INTRODUCTION

AACE International has developed and published two recommended practices related to cost estimate classifications. RP 17R-97 provides the general guidelines and principles of the cost estimate classification system. RP 18R-97 serves as an addendum for application in engineering, procurement, and construction for the process industries.

This guideline is intended to provide a generic methodology for the classification of project schedules in any industry. It is intended to be supplemented with recommended practices that will provide extensions and additional detail for specific industries. This recommended practice will:

- Provide a classification methodology applicable across all industries
- Identify, cross-reference, benchmark, and empirically evaluate the multiple characteristics related to the class of schedule

CLASSIFICATION METHODOLOGY

There are numerous characteristics that can be used to categorize schedule types. The most significant of these are degree of project definition, end usage of the schedule, and scheduling approach used. The time and effort expended to prepare the schedule and expected accuracy range will not be discussed in this RP. It is recommended that each company develop an approach based on their historical data, project type, and business rules. The
primary characteristic used in this guideline to define the classification category is the degree of project definition; other characteristics are secondary.

Categorizing schedules by degree of project definition is consistent with the AACE International philosophy of total cost management (TCM), which is a quality-driven process applied during the entire project life cycle. The discrete levels of project definition used for classifying schedules correspond to the typical phases and gates of evaluation, authorization, and execution often used by project stakeholders during a project life cycle.

Five schedule classifications have been established. While the degree of project definition is a continuous spectrum, it was determined from benchmarking industry practices that three to five discrete categories are commonly used. Five categories are established in this guideline, as it is easier to simplify by combining categories than it is to arbitrarily split a standard.

The schedule class designations are labeled Class 1, 2, 3, 4, and 5. A Class 5 schedule is based upon the lowest degree of project definition, and a Class 1 schedule indicates full project definition and maturity. This arbitrary countdown approach considers that scheduling is a process whereby successive schedules are prepared until a final schedule closes the process.

<table>
<thead>
<tr>
<th>SCHEDULE CLASS</th>
<th>PRIMARY CHARACTERISTIC</th>
<th>SECONDARY CHARACTERISTIC</th>
<th>SCHEDULING METHODS USED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 5</td>
<td>0% to 2%</td>
<td>Concept screening</td>
<td>Top down planning using high level milestones and key project events.</td>
</tr>
<tr>
<td>Class 4</td>
<td>1% to 15%</td>
<td>Feasibility study</td>
<td>Top down planning using high level milestones and key project events. Semi-detailed.</td>
</tr>
<tr>
<td>Class 3</td>
<td>10% to 40%</td>
<td>Budget, authorization, or control</td>
<td>&quot;Package&quot; top down planning using key events. Semi-detailed.</td>
</tr>
<tr>
<td>Class 2</td>
<td>30% to 70%</td>
<td>Control or bid/tender</td>
<td>Bottom up planning. Detailed.</td>
</tr>
<tr>
<td>Class 1</td>
<td>70% to 100%</td>
<td>Bid/tender</td>
<td>Bottom up planning. Detailed.</td>
</tr>
</tbody>
</table>

Table 1 – Generic Schedule Classification Matrix
[1] RP 18R-97 provides the range in percentages for each class.