

AACE
INTERNATIONAL
RECOMMENDED
PRACTICE

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**ROLES AND RESPONSIBILITIES OF A
PLANNING AND SCHEDULING
PRACTITIONER**

SAMPLE

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ROLES AND RESPONSIBILITIES OF A PLANNING AND SCHEDULING PRACTITIONER

TCM Framework: 7.2 – Schedule Planning and Development

Effective May 17, 2023

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TABLE OF CONTENTS

Table of Contents	1
1. Introduction	3
2. Recommended Practice	5
2.1. Tailored Roles	6
2.2. Planning and Scheduling Competency Areas	6
2.3. Education and/or Experience Levels	6
2.4. Communication and Interpersonal Skills	6
2.5. Planning and Scheduling Knowledge	7
2.6. Computer and Software Skills and Knowledge	7
2.7. Lead Planner / Scheduler	7
2.8. Ethics	8
3. Planning and Scheduling Competency Areas	9
4. Education and/or Experience Levels	11
5. Communication and Interpersonal Skills	12
6. Planning and Scheduling Knowledge and Understanding	15
7. Computer and Software Skills and Knowledge	16
References	17
Contributors	18
A1. Appendix A. Sample Job Description for an Assistant Planner/Scheduler	19
A1.1. Job Scope/Summary	19
A1.2. Leadership Responsibility	19
A1.3. Knowledge & Skills	19
A1.4. Education	19
A1.5. Experience Requirements	19
A1.6. Typical Duties	19
A1.7. Progression	19
B1. Appendix B. Sample Job Description for a Planner/Scheduler	20
B1.1. Job Scope/Summary	20
B1.2. Leadership Responsibility	20
B1.3. Knowledge & Skills	20
B1.4. Education	20
B1.5. Experience Requirements	20

May 17, 2023

B1.6. Typical Duties.....	20
B1.7. Progression	20
C1. Appendix C. Sample Job Description for a Senior Planner/Scheduler	21
C1.1. Job Scope/Summary	21
C1.2. Leadership Responsibility	21
C1.3. Knowledge & Skills.....	21
C1.4. Education	21
C1.5. Experience Requirements.....	21
C1.6. Typical Duties.....	21
C1.7. Progression	22
D1. Appendix D. Sample Job Description for a Manager of Planning and Scheduling	23
D1.1. Job Scope/Summary	23
D1.2. Leadership Responsibility	23
D1.3. Knowledge & Skills	23
D1.4. Education.....	23
D1.5. Experience Requirements	23
D1.6. Typical Duties	23
D1.7. Progression.....	24
E1. Appendix E. Sample Job Description for a Director of Planning and Scheduling	25
E1.1. Job Scope/Summary	25
E1.2. Leadership Responsibility	25
E1.3. Knowledge & Skills	25
E1.4. Education	25
E1.5. Experience Requirements	25
E1.6. Typical Duties.....	25

SAMPLE

May 17, 2023

1. INTRODUCTION

This recommended practice (RP) is intended to serve as a guideline, not a standard. As such, this AACE International RP defines the required roles and responsibilities of a planning and scheduling practitioner.

This RP also outlines the career progression of a planning and scheduling practitioner applicable to various industries. It describes the roles and responsibilities of a planning and scheduling practitioner during the various phases of project planning and schedule development, management, and control.

This RP outlines the roles and responsibilities of a planning and scheduling practitioner, based upon their knowledge, skill level, and years of experience. This RP will outline the following:

- Core planning and scheduling competency areas
- Educational and/or experience levels
- Communication and interpersonal skills
- Total cost management (TCM) knowledge
- Computer and software skills and knowledge

Typically, most planning and scheduling practitioners begin their careers in more traditional project management roles depending upon the industry in which they are employed. For example, in construction, they may first develop their skills as a project engineer, field supervisor, or estimator; or they may have begun their career in the field in a specific trade or discipline of work. The skills learned in these roles become fundamental to their project management foundation as they progress into planning and scheduling roles. As a planning and scheduling practitioner develops their skills, they may progress to a senior level position and be considered planning and scheduling subject matter experts (SMEs) in multiple disciplines or market types. After mastering many areas within the planning and scheduling field, the seasoned planning and scheduling practitioner may become a Manager of Planning and Scheduling or Director of Planning and Scheduling within an individual department or organization. Managers or Directors of Planning and Scheduling may include company management duties such as: developing standards and guidelines, training, budgeting, personnel reviews, and other administrative roles.

The planning and scheduling practitioner's duties are to collaborate with the project management team in developing, monitoring, and updating an integrated project plan and schedule so that the project may be executed in the most efficient manner possible in accordance with the contract. This is accomplished by the following:

1. Coordinating the development and implementation of acceptable planning and scheduling practices as defined by AACE's Recommended Practice No. 10S-90, Cost Engineering Terminology. It is imperative for a planning and scheduling practitioner to learn and master these techniques and methods. [1]
2. Preparing procedures and guidelines for project planning and related schedule management and control.
3. Supporting the project team's efforts toward the development of the project plan and translating that project plan into the project schedule.
4. Leading the development and analysis of project schedules, critical path method (CPM) software implementation, time impact analysis, and delay/acceleration evaluation, and review of periodic schedule updates.
5. Monitoring and updating accurate schedule progress toward achieving the desired project completion date and informing the project management team of changes to schedule forecasts.
6. Preparing and providing schedule progress reports, trending charts, and schedule analysis.
7. Maintaining records of scope changes, trends, and variances that potentially affect schedule performance.
8. Assuring the credibility of the information contained in the schedule.
9. Assisting with the preparation and/or evaluation of project time and cost claims.
10. At the completion of the project, assisting in the developing and recording of the project's historical schedule information, as-built, schedule, and lessons learned, for use on future enterprise projects.

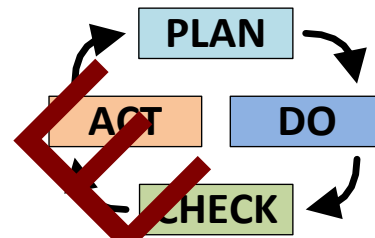
May 17, 2023

A planning and scheduling practitioner also has a duty to maintain continued professional training and development throughout their career. This may be accomplished by:

1. Maintaining a high level of technical expertise through continuing education programs and participation in cost/schedule related professional activities.
2. Providing technical training and guidance to project personnel on planning and scheduling subjects.
3. Developing leadership/team-building skills, as well as written and verbal communication skills.
4. Enhancing their professionalism by participating in and advancing professional organizations dedicated to professional planning and scheduling.

In the *Total Cost Management Framework*, section 7.2 schedule planning and development is defined as follows: “Schedule planning and development are the processes for the planning of work over time in consideration of the costs and resources for that work.” [2] The process includes the following activities:

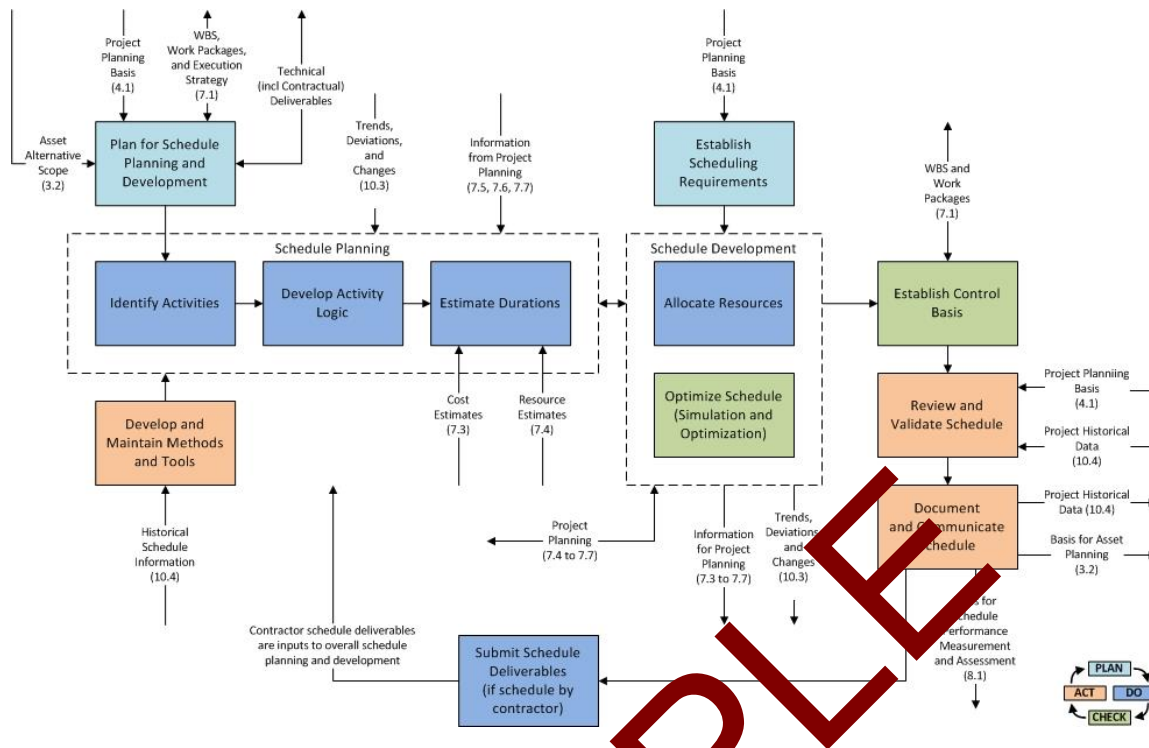
- | | |
|-------|---|
| PLAN | <ul style="list-style-type: none"> • Plan for schedule planning and developments • Establish scheduling requirements |
| DO | <ul style="list-style-type: none"> • Identify activities • Develop activity logic • Estimate durations • Allocate resources • Submit schedule deliverables |
| CHECK | <ul style="list-style-type: none"> • Optimize schedule (simulation and optimization) • Establish control basis |
| ACT | <ul style="list-style-type: none"> • Review and validate schedule • Document and communicate schedule • Develop and maintain methods and tools |



The *Total Cost Management Framework* identifies the planning and scheduling functions in chapter 7.2 *Schedule Planning and Development*. The process map below shows both the schedule planning and development process as well as their interfaces with other disciplines.

The planning and scheduling roles and responsibilities need to be aligned with the planning and scheduling process outlined in *Figure 7.2-1 Process Map for Schedule Planning and Development*.

May 17, 2023



This RP is in alignment with Recommended Practice 14R-99, *Required Skills and Knowledge of Planning and Scheduling* as well as Recommended Practice 11R-88, *Required Skills and Knowledge of Cost Engineering*. [3] [4]

2. RECOMMENDED PRACTICE

This recommended practice will outline the levels of roles and responsibilities for the planning and scheduling function. In general, this RP relates to planning and scheduling across all industries. This RP will outline the supporting skills and knowledge in addition to the levels of education, years of practical experience, planning and scheduling skills, interpersonal skills, computer skills, and planning and scheduling knowledge.

The following are typical job titles indicating various levels of planning and scheduling roles and responsibilities:

- Assistant Planner / Scheduler
- Planner / Scheduler
- Senior Planner / Scheduler
- Manager of Planning and Scheduling
- Director of Planning and Scheduling

Appendices A-E provide sample job descriptions for the planning and schedule roles listed above.

It is important to note that both *planner* and *scheduler*, or *planning and scheduling* are integral to the job titles above, as they reflect the separate but dependent roles that these skills and responsibilities hold for a planning and scheduling practitioner. As the *Total Cost Management Framework* states in Section 7.2.1, "Schedule planning and schedule development are separate, but related, sub-processes that call for different skills and knowledge emphasis." [2]

2.1. Tailored Roles

Depending on the size of the organization, additional roles may be needed to properly manage a planning and scheduling workforce. For example, the role of Manager of Planning and Scheduling may require expansion to allow for additional levels of management geographically, by market sector or product type, or to align with an organization's existing business units. For a large organization, the roles of Planner/Scheduler and Senior Planner/Scheduler may be given different levels to allow for promotion and growth opportunity (for example: Planner/Scheduler 1, Planner/Scheduler 2, etc.). It is important to note that progression to the roles of Manager of Planning and Scheduling or Director of Planning and Scheduling will likely be dictated by the growth of an organization or the availability of such leadership roles, rather than set time periods of progression.

2.2. Planning and Scheduling Competency Areas

The core planning and scheduling areas of competencies are outlined in RP 145-00, *Required Skills and Knowledge of Planning and Scheduling*. [3] These apply across the following roles: owner planning and scheduling, planning and scheduling consulting, or construction contractor planning and scheduling. The level of skills and competency increases as the planning and scheduling practitioner progresses throughout their career gaining experience. See Table 1 for more information.

2.3. Education and/or Experience Levels

As a planning and scheduling practitioner progresses throughout their career, they will achieve various milestones, gain progressively more responsibilities, and grow with greater skills, knowledge, and scheduling experience. Their advancement in maturity increases based upon range of years of planning and scheduling experience, as outlined in the appendices to this RP. College or university education is desirable, but construction field experience or other industry-related practical experience are considered equivalent attributes to a college degree. A combination or blend of both formal education and practical field experience is necessary. AACE certification as a Certified Scheduling Technician (CST) or Planning and Scheduling Professional (PSP) is recommended. See Table 2 for more information.

2.4. Communication and Interpersonal Skills

The planning and scheduling profession requires strong communication, interaction, and interpersonal skills. The ability to clearly communicate the project schedule both verbally and in writing is a major practitioner function. These skills become of greater importance as a planning and scheduling practitioner progresses into leadership and management roles.

Communication skills should increase and mature as a planning and scheduling practitioner progresses through the experiential/managerial levels of their careers. The following are strong communication skills that a planning and scheduling practitioner master:

- Time management and the prioritization of tasks
- Superior organizational skills
- Being an active listener
- Nonverbal communication, body language, and eye contact
- Clear, concise communication – written and verbal
- Empathy – respect the viewpoints of others
- Open-mindedness, flexibility, and humility
- Feedback – request, listen, and respond

- Presentation aptitude
- Teamwork and collaboration

See Table 3 for more information.

2.5. Planning and Scheduling Knowledge

The planning and scheduling process is one of the many roles within cost engineering, as defined in the *TCM Framework*. [2] Planning and scheduling practitioners are part of a larger project team with members such as: designers, estimators, cost controllers, construction managers, construction inspectors, superintendents, project managers, etc. Planning and scheduling practitioners help guide plan development and management in engineering, procurement, construction, and other areas by leveraging their broad cost engineering knowledge.

The knowledge of core areas within planning and scheduling should mature as roles and experience levels increase. These knowledge areas may include:

- Project planning
- Schedule development
- Schedule management planning
- Schedule maintenance and updating
- Physical progressing and earned value
- Trends, deviations, and forecasting
- Change management
- Resource planning and loading
- Contingency and risk management
- What-if or scenario planning
- Claims preparation and evaluation
- Budgets, cost control, and cost estimation
- Virtual design construction (VDC)/building information modeling (BIM)
- 4D scheduling

See Table 4 for more information.

2.6. Computer and Software Skills and Knowledge

Planning and scheduling practitioners must have good computer and software skills, as well as the knowledge and ability to use these tools effectively. Proficiency should progress as the roles and experience levels change or mature. Computer and software skill areas include the use of:

- General off-the-shelf software (non-scheduling)
- Company proprietary software
- Planning and scheduling software (schedule development, schedule maintenance, schedule analysis, etc.)
- Company operational software (estimating, risk analysis, VDC/BIM modeling, 4D scheduling, etc.)

See Table 5 for more information.

2.7. Lead Planner / Scheduler

The lead planner/scheduler is a specific designation applied when a team of planning and scheduling practitioners are working together to produce or manage a schedule. The lead planner/scheduler shall be responsible for the