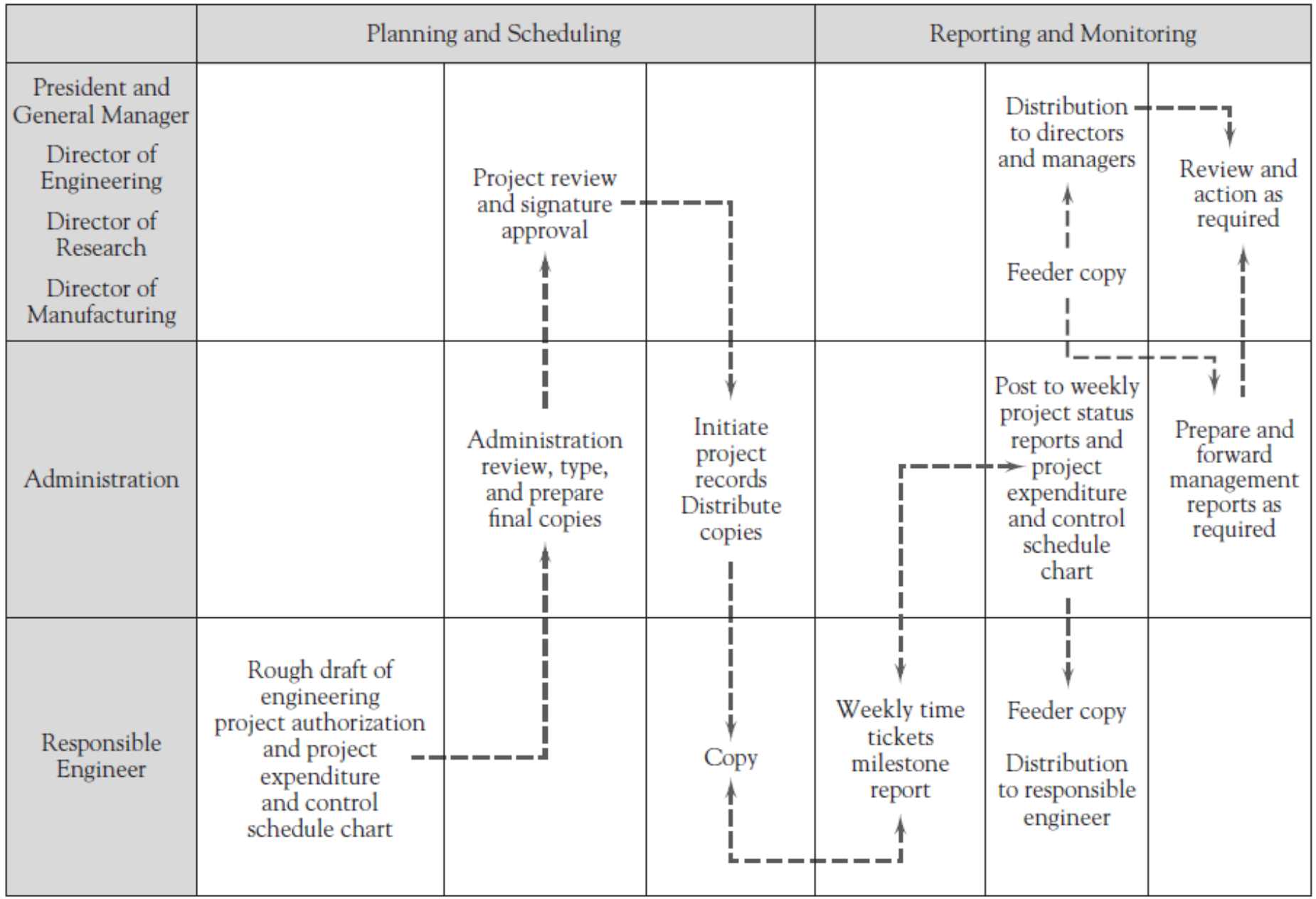
Monitoring and Controlling Project

Managing a project involves following

- Continually planning what to do
- Checking on progress
- Comparing progress to plan
- Taking corrective action to bring progress into agreement with the plan if it is not
- Replanning when needed


Planning and Scheduling
Reporting and Monitoring
President and General Manager
Director of Engineering
Director of Research
Director of Manufacturing
Administration
Responsible Engineer
Project review and signature approval
Distribution to directors and managers
Review and action as required
Feeder copy
Administration review, type, and prepare final copies
Initiate project records Distribute copies
Post to weekly project status reports and project expenditure and control schedule chart
Prepare and forward management reports as required
Rough draft of engineering project authorization and project expenditure and control schedule chart
Copy
Weekly time tickets milestone report
Feeder copy
Distribution to responsible engineer

DATA COLLECTION AND REPORTING

- physical collection of data and the analysis of that data, if necessary, to transform them into information.
- Once transformed, however, there are many ways to present the information and these are covered under the topic of reporting

Earned Value in Project Management

- Earned value (EV) is a way to measure and monitor the level of work completed on a project against the plan.
- It is a quick way to tell if you're behind schedule or over budget on your project
- One can calculate the EV of a project by multiplying the percentage complete by the total project budget.

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Earned value calculations

- Schedule Variance (SV): Schedule variance is the difference between your planned progress and your actual progress to date.
- SV = EV (earned value) - PV (planned value).
- IF SV is negative, it indicates the project is behind schedule.

Earned value calculations

- Cost Variance (CV): Cost variance is the difference between how much you planned on spending thus far and your actual costs to date.
- CV = EV (earned value) - AC (actual cost).
- IF CV is negative, it indicates the project could go over budget or run out of money.

Earned value calculations

- Schedule Performance Index (SPI):
- The SPI calculation is, SPI = EV/PV.
- When SPI is above 1.00, the project ahead of schedule. If it's below 1.00, project is behind.

Earned value calculations

- Cost Performance Index (CPI)
- The CPI calculation is, CPI = EV/AC.
- When SPI is above 1.00, the project is under budget. If it's below 1.00, project is overspending.

Scope Creep

- Scope creep is what happens when changes are made to the project scope without any control procedure like change requests.
- Those changes also affect the project schedule, budget, costs, resource allocation and might compromise the completion of milestones and goals
- Scope creep is one of the most common project management risks.

- scope creep occurs when new project requirements are added by project clients or other stakeholders after the project execution has started.
- these changes are not properly reviewed
- the project team is expected to complete more tasks, deliverables and milestones with the same resources and in the same time as the original scope.

1. Every project plan must include a change control system by which requests for changes in the project's plan, processes, budget, schedule, or deliverables are evaluated.

2. Every project change must be introduced by a change order that includes a description of the agreed-upon change together with any resulting changes in the plan, processes, budget, schedule, or deliverables.

3. Changes must be approved in writing by the client's agent as well as by a representative of senior management of the firm conducting the project.

4. The project manager must be consulted on all proposed changes prior to the preparation and approval of the change order. (The PM's approval is not required.)

5. Once the change order has been approved, the project plan be amended to reflect the change and the change order becomes a part of that plan.