## Common Inputs, Tools and Techniques and Outputs

Throughout this PMP® Exam Prep course, you'll see common inputs, tools and techniques, and outputs. They've been collected in this document so you have them all in one place. Instead of repeating them in the videos, they're listed here for your reference.  Studying these will help you understand the material better.

## Common Inputs

You'll notice for many of the processes that the following items will be common inputs. It's important to be familiar with them, as you'll see them over and over again in the material we're covering.

[1]**Enterprise environmental factors (EEFs)**: Conditions not under the control of the project team that influence, constrain, or direct the project. Examples of EEFs:

- Internal

    - Organizational culture, structure, and governance

    - Geographic distribution of facilities or resources

    - Infrastructure

    - Information technology software

    - Resource availability

    - Employee capability

- External

    - Marketplace conditions

    - Social and cultural influences and issues

    - Legal restrictions

    - Commercial database

    - Academic research

    - Government or industry standards

    - Financial considerations

    - Physical environmental elements

[2]**Organizational process assets (OPAs)**: Plans, processes, policies, procedures, and knowledge bases specific to and used by the performing organization. Examples include:

- Project document templates

- Previous project documents, such as project plans, schedules, and budgets

- Lessons learned

- Risk data

- Earned value data

- Historical information

- Document repositories for configuration management, financial data, issue and defect management, and metrics

[3]**Project management plan**: The document that describes how the project will be executed, monitored, and controlled and closed.

**Project documents**: These are any documents generated in support of the project, other than the project management plan.

**Business documents**: The business case and benefits management plan.

[3]**Project charter**: A document issued by the project initiator or sponsor that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities.

[3]**Agreements**: Any document or communication that defines the initial intentions of a project. This can take the form of a contract, memorandum of understanding (MOU), letters of agreement, verbal agreements, email, etc.

[3]**Work performance data**: The raw observations and measurements identified during activities being performed to carry out the project work.

[3]**Work performance information**: The performance data collected from the controlling processes, analyzed in comparison with project management plan components, project documents, and other work performance information.

[3]**Work performance reports**: The physical or electronic representation of work performance information compiled in project documents, intended to generate decisions, actions, or awareness.

[3]**Lessons learned register**: A project document used to record knowledge gained during a project so that it can be used in the current project and entered into the lessons learned repository.

## Common Tools and Techniques

[3]**Data gathering**: Techniques used to collect data and information from a variety of sources.

[3]**Data analysis**: Techniques used to organize, assess, and evaluate data and information.

[3]**Data representation**: Graphic representations or other methods used to convey data and information.

[3]**Expert judgment**: Judgment provided based upon expertise in an application area, knowledge area, discipline, industry, etc., as appropriate for the activity being performed. Any group or person with specialized education, knowledge, skill, experience, or training may provide this expertise.

[4]**Decision making**: These are techniques used to select a course of action from different alternatives. There are several methods of reaching a group decision, such as:

- **Unanimity**: A decision that is reached whereby everyone agrees to a single course of action.

- **Majority**: A decision is reached with support obtained from more than 50% of the members of the group.

- **Plurality**: A decision that is reached whereby the largest block in a group decides, even if a majority is not achieved. This method is generally used when the number of options nominated is more than two.

- **Autocratic**: One individual takes responsibility for making the decision for the group.

- **Multicriteria decision analysis**: A technique that uses a decision matrix to provide a systematic analytical approach for establishing criteria, such as risk levels, uncertainty, and valuation, to evaluate and rank many ideas.

**Meetings**: Play an important role in these processes and is a common tool or technique you'll see often. The preference is to have everyone collocated, in the same room, but meetings may be held virtually too.

[3]**Project management information system (PMIS)**: An information system consisting of the tools and techniques used to gather, integrate, and disseminate the outputs of project management processes. This is also considered an enterprise environmental factor.

[3]**Interpersonal and team skills**: Skills used to effectively lead and interact with team members and other stakeholders.

## Common Outputs

Work performance data, information. and reports are often common inputs and outputs so it's important to understand the flow of each of these items.

First you start out with **work performance data**. This is the raw data you collect on your project. The raw data isn't very useful until you analyze it and convert it to work performance information. With **work performance information**, you see how your project is performing, for example, if your project is on schedule, if it's on budget, and how many change requests have been processed.

You then take the work performance information and put it into a **work performance report**. This level of information can then be presented to your stakeholders or sponsor and even be put in dashboards for the team to view. So it goes like this: data, then information. and finally, reports.

- [3]**Change requests**: A formal proposal to modify any document, deliverable or baseline.

- **Project management plan updates and other project documents updates**: Anytime there is a change to the project, you'll need to go back and review the project management plan and other project documents to see if they need to be revised.

Now that you know the common inputs, tools and techniques, and outputs to the 49 processes, I recommend you visit this handout often to get a firm understanding of what they are and how they fit into each process.

[1]Project Management Institute, *A Guide to the Project Management Body of Knowledge, (PMBOK® Guide)* – Sixth Edition, Project Management Institute, Inc., 2017, Pages 38–39.

[2]Project Management Institute, *A Guide to the Project Management Body of Knowledge, (PMBOK® Guide)* – Sixth Edition, Project Management Institute, Inc., 2017, Pages 39–40.

[3]These definitions are taken from the *Glossary of the Project Management Institute, A Guide to the Project Management Body of Knowledge, (PMBOK® Guide)* – Sixth Edition, Project Management Institute, Inc., 2017.

[4]Project Management Institute, *A Guide to the Project Management Body of Knowledge, (PMBOK® Guide)* – Sixth Edition, Project Management Institute, Inc., 2017, Page 144.