

# Project Management

Overview of principles & best practices

## GENERAL

**Project:** “A unique set of activities that are meant to produce a defined outcome, with a specific start and finish date, and a specific allocation of resources.” (Harvard Business School, 1996, p. 4)

**Project scope:** the defined and agreed upon goals, activities, and outcomes of the project, used to help keep the project on track as parameters change (Martinelli & Milosevic, 2015)

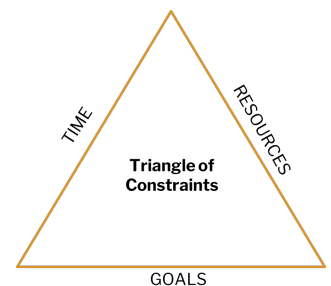
**Project management:** “Process of developing substantive, systematic data about each parameter [goals, time, resources] so that the tradeoff decision making between parameters is more effective.” (Harvard Business School, 1996, p. 4)

## PLANNING

*Planning establishes a strong foundation for a project and recurs throughout the project. Key project activities begin with planning and end with assessment, which in turn helps with planning next steps and future iterations.*

*Use the project management triangle to help define scope.*

The classic project management **triangle of constraints** (goals, time, and resources) helps with defining what is known about the project and clarifying whether aspects are fixed or flexible. The triangle also helps in reinforcing awareness of how these constraints (or parameters) influence each other and how, without a well-defined scope statement, any one of these can contribute to **scope creep**.



*Clarify and define the scope with others.*

Talk with the project lead to ensure clear understanding of what the goals are, including deliverables and key definers of success. Review these goals with the team, to ensure that the time frame and resources are sufficient to meet goals, and also to surface risks. Ensure that the team lead clearly understands limitations, resource needs, and risks before finalizing scope.

*Develop and share timelines with the team.*

Creating and sharing a schedule with others on a team helps assist with key principles of project management – time & effort management, accountability, and risk management – by

- *Organizing work + tracking progress* (Breaks work into manageable chunks)
- *Establishing commitments* (Makes explicit what will be done, by whom, when)
- *Encouraging connections + questions* (Helps people realize how others’ work depends on theirs; Forces changes in perspective, attitude, and behavior, including raising questions about the realism of the schedule and potential risks)

## COLLABORATION + COMMUNICATION

*If we agree that mind-reading is impossible (or at least unpredictable), then we can realize the importance of effective communication. Consider **what you need to communicate, with whom, and how**, then check to make sure this approach works for the people you’ll be communicating with.*

*Communication is essential for effective project management, especially for teams.*

- Provides clarity and focus among stakeholders (e.g., goals; roles; expectations; tasks)
- Builds relationships (e.g., trust; camaraderie; accountability; mentorship; acknowledgment)
- Sustains momentum (e.g., project status; planning ahead; reflection)
- Addresses and avoids problems (e.g., defining issues; constructive problem-solving)

*Communication works best when the mode of communication supports the need.*

- *Asynchronous & general, short-range* > Sustains momentum (ex: Slack, Reddit, Facebook)

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- *Asynchronous & general, long-range* > Provides clarity & focus among stakeholders (ex: wikis, manuals, codebooks, permissions & consent, MOUs, charter)
- *Asynchronous & targeted* > Provides clarity & focus among stakeholders; Sustains momentum (ex: email, chat, notifications built into tools)
- *Simultaneous & targeted* > Builds relationships; Sustains momentum; Addresses & avoids problems (ex: group meetings or one-on-one conversations – especially in person)

## STUFF MANAGEMENT

*Good stuff management is an ongoing process. Take time monthly to check in, clean up files, modify strategies accordingly, and iterate moving forward. Consider assigning a “stuff management guru.”*

*Develop a plan for how you will organize your materials (e.g., storage tool; file structure; file names).*

As a team determine what platform you will use to store and organize your data and other materials. Implement a folder structure to help team members locate and disambiguate important files as well protect against data loss. Using (and writing down) your folder structure and file-naming convention can greatly help with this process. Good file names:

- Are consistent and unambiguous
- Only contain letters, numbers, and underscores/dashes (no spaces or special characters)
- Consider a versioning strategy
- Use YYYYMMDD structure for dates (easier ordering and machine-readability)

*Create documentation for your content, context, and workflow.*

Documentation is key for communicating with your team and others and helps support a more efficient research process. Consider what types and formats of documentation your team will generate and prioritize the most important. Three levels of documentation to consider include:

- **Stuff/file level:** Contents/attributes of your files (units of measurements, variables, values, etc.)
- **Study level:** Context of your research (methodology, process, protocols, lab notes)
- **Administrative level:** Organization, project charters, workflow management (who does what)

An extensible format for any type of documentation is a plain text README file. These can be used at any level to record important information.

## TOOLS

*Tools take time to learn and use effectively. Unnecessary or inappropriate tools can over-complicate the work, wasting time and attention. Use project and team needs to decide whether / what tool is needed; seek input and buy-in from all users; and allow time for everyone to learn and consistently use the tool.*

*File-management/-sharing and storage*

- **Folder structure** (e.g., replicating and syncing folder structure with desktop; describing folders)
- **Collaboration** (e.g., who can/not access files; different kinds of permissions for file use)
- **Version control** (e.g., provided or not; details on each version; automatic or manual)
- **Storage** (e.g., limitations on file size for upload; size limits for entire project; back-up frequency)

*Communication*

- **Mode** (e.g., asynchronous or synchronous; targeted or general; one-way or bi-directional)

*Project management*

- **Task tracking** (e.g., automatic or manual notifications tied to tasks; dependencies tracking)
- **Calendaring** (e.g., different views according to subproject work; syncing with other calendars)
- **File sharing** (e.g., integration with other storage tools; linking files with tasks)