

PROJECT COMMUNICATIONS MANAGEMENT

Project Communications Management includes the processes necessary to ensure that the information needs of the project and its stakeholders are met through development of artifacts and implementation of activities designed to achieve effective information exchange. Project Communications Management consists of two parts. The first part is developing a strategy to ensure communication is effective for stakeholders. The second part is carrying out the activities necessary to implement the communication strategy.

The Project Communications Management processes are:

10.1 Plan Communications Management—The process of developing an appropriate approach and plan for project communication activities based on the information needs of each stakeholder or group, available organizational assets, and the needs of the project.

10.2 Manage Communications—The process of ensuring timely and appropriate collection, creation, distribution, storage, retrieval, management, monitoring, and the ultimate disposition of project information.

10.3 Monitor Communications—The process of ensuring the information needs of the project and its stakeholders are met.

Figure 10-1 provides an overview of the Project Communications Management processes. The Project Communications Management processes are presented as discrete processes with defined interfaces while, in practice, they overlap and interact in ways that cannot be completely detailed in the *PMBOK® Guide*.

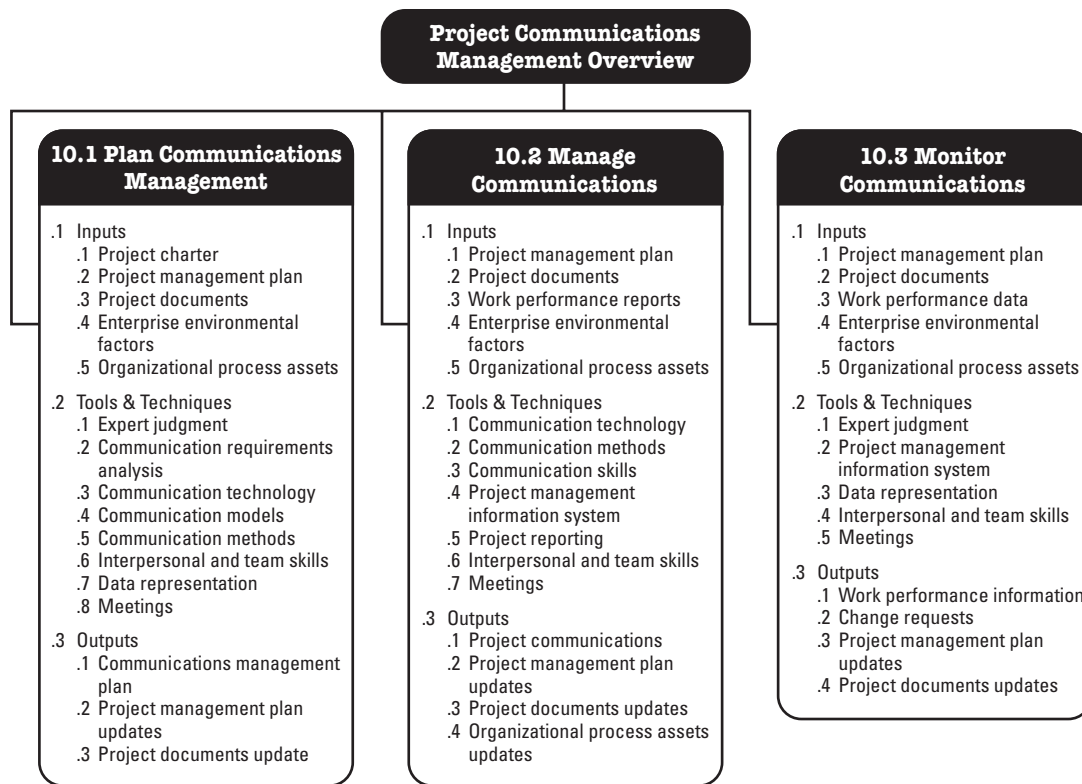


Figure 10-1. Project Communications Overview

KEY CONCEPTS FOR PROJECT COMMUNICATIONS MANAGEMENT

Communication is the exchange of information, intended or involuntary. The information exchanged can be in the form of ideas, instructions, or emotions. The mechanisms by which information is exchanged can be in:

- ◆ **Written form.** Either physical or electronic.
- ◆ **Spoken.** Either face-to-face or remote.
- ◆ **Formal or informal** (as in formal papers or social media).
- ◆ **Through gestures.** Tone of voice and facial expressions.
- ◆ **Through media.** Pictures, actions, or even just the choice of words.
- ◆ **Choice of words.** There is often more than one word to express an idea; there can be subtle differences in the meaning of each of these words and phrases.

Communications describe the possible means by which the information can be sent or received, either through communication activities, such as meetings and presentations, or artifacts, such as emails, social media, project reports, or project documentation.

Project managers spend most of their time communicating with team members and other project stakeholders, both internal (at all organizational levels) and external to the organization. Effective communication builds a bridge between diverse stakeholders who may have different cultural and organizational backgrounds as well as different levels of expertise, perspectives, and interests.

Communication activities have many dimensions, including but not limited to:

- ◆ **Internal.** Focus on stakeholders within the project and within the organization.
- ◆ **External.** Focus on external stakeholders such as customers, vendors, other projects, organizations, government, the public, and environmental advocates.
- ◆ **Formal.** Reports, formal meetings (both regular and ad hoc), meeting agendas and minutes, stakeholder briefings, and presentations.
- ◆ **Informal.** General communications activities using emails, social media, websites, and informal ad hoc discussions.
- ◆ **Hierarchical focus.** The position of the stakeholder or group with respect to the project team will affect the format and content of the message, in the following ways:
 - *Upward.* Senior management stakeholders.
 - *Downward.* The team and others who will contribute to the work of the project.
 - *Horizontal.* Peers of the project manager or team.
- ◆ **Official.** Annual reports; reports to regulators or government bodies.
- ◆ **Unofficial.** Communications that focus on establishing and maintaining the profile and recognition of the project and building strong relationships between the project team and its stakeholders using flexible and often informal means.
- ◆ **Written and oral.** Verbal (words and voice inflections) and nonverbal (body language and actions), social media and websites, media releases.

Communication develops the relationships necessary for successful project and program outcomes. Communication activities and artifacts to support communication vary widely, ranging from emails and informal conversations to formal meetings and regular project reports. The act of sending and receiving information takes place consciously or unconsciously through words, facial expressions, gestures and other actions. In the context of successfully managing project relationships with stakeholders, communication includes developing strategies and plans for suitable communications artifacts and activities with the stakeholder community and the application of skills to enhance the effectiveness of the planned and other ad hoc communications.

There are two parts to successful communication. The first part involves developing an appropriate communication strategy based on both the needs of the project and the project's stakeholders. From that strategy, a communications management plan is developed to ensure that the appropriate messages are communicated to stakeholders in various formats and various means as defined by the communication strategy. These messages constitute the project's communications—the second part of successful communication. Project communications are the products of the planning process, addressed by the communications management plan that defines the collection, creation, dissemination, storage, retrieval, management, tracking, and disposition of these communications artifacts. Finally, the communication strategy and communications management plan will form the foundation to monitor the effect of the communication.

The project's communications are supported by efforts to prevent misunderstandings and miscommunication and by careful selection of the methods, messengers, and messages developed from the planning process.

Misunderstandings can be reduced but not eliminated through using the 5Cs of written communications in composing a traditional (non-social media) written or spoken message:

- ◆ **Correct grammar and spelling.** Poor use of grammar or inaccurate spelling can be distracting and can also introduce distortions in the message, diminishing credibility.
- ◆ **Concise expression and elimination of excess words.** A concise, well-crafted message reduces the opportunities for misunderstanding the intent of the message.
- ◆ **Clear purpose and expression directed to the needs of the reader.** Ensure that the needs and interests of the audience are factored into the message.
- ◆ **Coherent logical flow of ideas.** A coherent logical flow of ideas and using “markers” such as introduction and summaries of the ideas throughout the writing.
- ◆ **Controlling flow of words and ideas.** Controlling the flow of words and ideas may involve graphics or just summaries.

The 5Cs of written communications are supported by communication skills, such as:

- ◆ **Listening actively.** Staying engaged with the speaker and summarizing conversations to ensure effective information exchange.
- ◆ **Awareness of cultural and personal differences.** Developing the team’s awareness of cultural and personal differences to reduce misunderstandings and enhance communication capability.
- ◆ **Identifying, setting, and managing stakeholder expectations.** Negotiating with stakeholders reduces the existence of conflicting expectations among the stakeholder community.
- ◆ **Enhancement of skills.** Enhancing the skills of all team members in the following activities:
 - Persuading a person, a team, or an organization to perform an action;
 - Motivating people and providing encouragement or reassurance;
 - Coaching to improve performance and achieve desired results;
 - Negotiating to achieve mutually acceptable agreements between parties and reduce approval or decision delays; and
 - Resolving conflict to prevent disruptive impacts.

The fundamental attributes of effective communication activities and developing effective communication artifacts are:

- Clarity on the purpose of the communication—defining its purpose;
- Understanding as much as possible about the receiver of the communications, meeting needs, and preferences; and
- Monitoring and measuring the effectiveness of the communications.

TRENDS AND EMERGING PRACTICES IN PROJECT COMMUNICATIONS MANAGEMENT

Along with a focus on stakeholders and recognition of the value to projects and organizations of effective stakeholder engagement comes the recognition that developing and implementing appropriate communication strategies is vital to maintaining effective relationships with stakeholders. Trends and emerging practices for Project Communications Management include but are not limited to:

- ◆ **Inclusion of stakeholders in project reviews.** The stakeholder community of each project includes individuals, groups, and organizations that the project team has identified as essential to the successful delivery of project objectives and organizational outcomes. An effective communication strategy requires regular and timely reviews of the stakeholder community and updates to manage changes in its membership and attitudes.
- ◆ **Inclusion of stakeholders in project meetings.** Project meetings should include stakeholders from outside the project and even the organization, where appropriate. Practices inherent in the agile approaches can be applied to all types of projects. Practices often include short, daily standup meetings, where the achievements and issues of the previous day, and plans for the current day's work, are discussed with the project team and key stakeholders.
- ◆ **Increased use of social computing.** Social computing in the form of infrastructure, social media services, and personal devices has changed how organizations and their people communicate and do business. Social computing incorporates different approaches to collaboration supported by public IT infrastructure. Social networking refers to how users build networks of relationships to explore their interests and activities with others. Social media tools can not only support information exchange, but also build relationships accompanied by deeper levels of trust and community.
- ◆ **Multifaceted approaches to communication.** The standard communication strategy for project stakeholder communications embraces and selects from all technologies and respects cultural, practical, and personal preferences for language, media, content, and delivery. When appropriate, social media and other advanced computing technologies may be included. Multifaceted approaches such as these are more effective for communicating to stakeholders from different generations and cultures.

TAILORING CONSIDERATIONS

Because each project is unique, the project team will need to tailor the way that Project Communications Management processes are applied. Considerations for tailoring include but are not limited to:

- ◆ **Stakeholders.** Are the stakeholders internal or external to the organization, or both?
- ◆ **Physical location.** What is the physical location of team members? Is the team colocated? Is the team in the same geographical area? Is the team distributed across multiple time zones?
- ◆ **Communications technology.** What technology is available to develop, record, transmit, retrieve, track, and store communication artifacts? What technologies are most appropriate and cost effective for communicating to stakeholders?
- ◆ **Language.** Language is a main factor to consider in communication activities. Is one language used? Or are many languages used? Have allowances been made to adjust to the complexity of team members from diverse language groups?
- ◆ **Knowledge management.** Does the organization have a formal knowledge management repository? Is the repository used?

CONSIDERATIONS FOR AGILE/ADAPTIVE ENVIRONMENTS

Project environments subject to various elements of ambiguity and change have an inherent need to communicate evolving and emerging details more frequently and quickly. This motivates streamlining team member access to information, frequent team checkpoints, and colocating team members as much as possible.

In addition, posting project artifacts in a transparent fashion, and holding regular stakeholder reviews are intended to promote communication with management and stakeholders.

10.1 PLAN COMMUNICATIONS MANAGEMENT

Plan Communications Management is the process of developing an appropriate approach and plan for project communications activities based on the information needs of each stakeholder or group, available organizational assets, and the needs of the project. The key benefit of this process is a documented approach to effectively and efficiently engage stakeholders by presenting relevant information in a timely manner. This process is performed periodically throughout the project as needed. The inputs, tools and techniques, and outputs of the process are depicted in Figure 10-2. Figure 10-3 depicts the data flow diagram for the process.

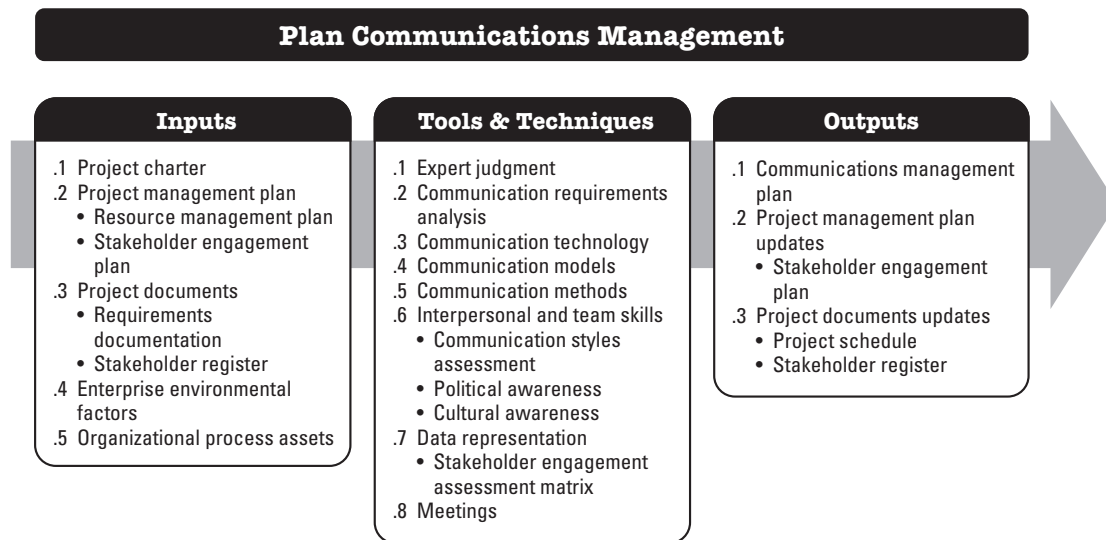


Figure 10-2. Plan Communications Management: Inputs, Tools & Techniques, and Outputs

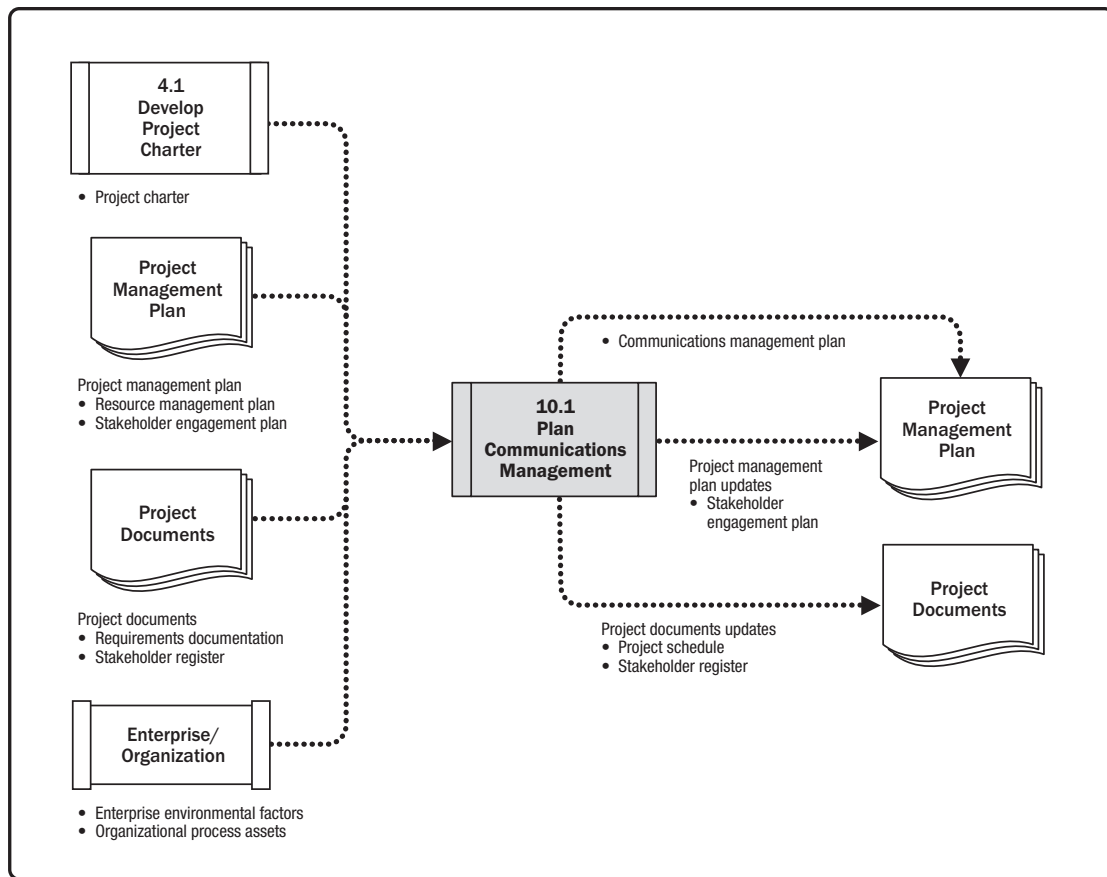


Figure 10-3. Plan Communications Management: Data Flow Diagram

An effective communications management plan that recognizes the diverse information needs of the project's stakeholders is developed early in the project life cycle. It should be reviewed regularly and modified when necessary, when the stakeholder community changes or at the start of each new project phase.

On most projects, communications planning is performed very early, during stakeholder identification and project management plan development.

While all projects share the need to communicate project information, the information needs and methods of distribution may vary widely. In addition, the methods of storage, retrieval, and ultimate disposition of the project information need to be considered and documented during this process. The results of the Plan Communications Management process should be reviewed regularly throughout the project and revised as needed to ensure continued applicability.

10.1.1 PLAN COMMUNICATIONS MANAGEMENT: INPUTS

10.1.1.1 PROJECT CHARTER

Described in Section 4.1.3.1. The project charter identifies the key stakeholder list. It may also contain information about the roles and responsibilities of the stakeholders.

10.1.1.2 PROJECT MANAGEMENT PLAN

Described in Section 4.2.3.1. Project management plan components include but are not limited to:

- ◆ **Resource management plan.** Described in Section 9.1.3.1. Provides guidance on how team resources will be categorized, allocated, managed, and released. Team members and groups may have communication requirements that should be identified in the communications management plan.
- ◆ **Stakeholder engagement plan.** Described in Section 13.2.3.1. The stakeholder engagement plan identifies the management strategies required to effectively engage stakeholders. These strategies are often fulfilled via communications.

10.1.1.3 PROJECT DOCUMENTS

Project documents that can be considered as inputs for this process include but are not limited to:

- ◆ **Requirements documentation.** Described in Section 5.2.3.1. Requirements documentation can include project stakeholder communications.
- ◆ **Stakeholder register.** Described in Section 13.1.3.1. The stakeholder register is used to plan communications activities with stakeholders.

10.1.1.4 ENTERPRISE ENVIRONMENTAL FACTORS

The enterprise environmental factors that can influence the Plan Communications Management process include but are not limited to:

- ◆ Organizational culture, political climate, and governance framework;
- ◆ Personnel administration policies;
- ◆ Stakeholder risk thresholds;
- ◆ Established communication channels, tools, and systems;
- ◆ Global, regional, or local trends, practices, or habits; and
- ◆ Geographic distribution of facilities and resources.

10.1.1.5 ORGANIZATIONAL PROCESS ASSETS

The organizational process assets that can influence the Plan Communications Management process include but are not limited to:

- ◆ Organizational policies and procedures for social media, ethics, and security;
- ◆ Organizational policies and procedures for issue, risk, change, and data management;
- ◆ Organizational communication requirements;
- ◆ Standardized guidelines for development, exchange, storage, and retrieval of information;
- ◆ Historical information and lessons learned repository; and
- ◆ Stakeholder and communications data and information from previous projects.

10.1.2 PLAN COMMUNICATIONS MANAGEMENT: TOOLS AND TECHNIQUES

10.1.2.1 EXPERT JUDGMENT

Described in Section 4.1.2.1. Expertise should be considered from individuals or groups with specialized knowledge or training in the following topics:

- ◆ Politics and power structures in the organization;
- ◆ Environment and culture of the organization and other customer organizations;
- ◆ Organizational change management approach and practices;
- ◆ Industry or type of project deliverables;
- ◆ Organizational communications technologies;
- ◆ Organizational policies and procedures regarding legal requirements of corporate communications;
- ◆ Organizational policies and procedures regarding security; and
- ◆ Stakeholders, including customers or sponsors.

10.1.2.2 COMMUNICATION REQUIREMENTS ANALYSIS

Analysis of communication requirements determines the information needs of the project stakeholders. These requirements are defined by combining the type and format of information needed with an analysis of the value of that information.

Sources of information typically used to identify and define project communication requirements include but are not limited to:

- ◆ Stakeholder information and communication requirements from within the stakeholder register and stakeholder engagement plan;
- ◆ Number of potential communication channels or paths, including one-to-one, one-to-many, and many-to-many communications;
- ◆ Organizational charts;
- ◆ Project organization and stakeholder responsibility, relationships, and interdependencies;
- ◆ Development approach;
- ◆ Disciplines, departments, and specialties involved in the project;
- ◆ Logistics of how many persons will be involved with the project and at which locations;
- ◆ Internal information needs (e.g., when communicating within organizations);
- ◆ External information needs (e.g., when communicating with the media, public, or contractors); and
- ◆ Legal requirements.

10.1.2.3 COMMUNICATION TECHNOLOGY

The methods used to transfer information among project stakeholders may vary significantly. Common methods used for information exchange and collaboration include conversations, meetings, written documents, databases, social media, and websites.

Factors that can affect the choice of communication technology include:

- ◆ **Urgency of the need for information.** The urgency, frequency, and format of the information to be communicated may vary from project to project and also within different phases of a project.
- ◆ **Availability and reliability of technology.** The technology that is required for distribution of project communications artifacts should be compatible, available, and accessible for all stakeholders throughout the project.
- ◆ **Ease of use.** The choice of communication technologies should be suitable for project participants and proper training events should be planned, where appropriate.

- ◆ **Project environment.** Whether the team will meet and operate on a face-to-face basis or in a virtual environment; whether they will be located in one or multiple time zones; whether they will use multiple languages for communication; and finally, whether there are any other project environmental factors, such as various aspects of culture, which may constrain the efficiency of the communication.
- ◆ **Sensitivity and confidentiality of the information.** Some aspects to consider are:
 - Whether information to be communicated is sensitive or confidential. If so, additional security measures may be required.
 - Social media policies for employees to ensure appropriate behavior, security, and the protection of proprietary information.

10.1.2.4 COMMUNICATION MODELS

Communication models can represent the communication process in its most basic linear form (sender and receiver), in a more interactive form that encompasses the additional element of feedback (sender, receiver, and feedback), or in a more complex model that incorporates the human elements of the sender(s) or receiver(s) and attempts to show the complexity of any communication that involves people.

- ◆ **Sample basic sender/receiver communication model.** This model describes communication as a process and consists of two parties, defined as the sender and receiver. This model is concerned with ensuring that the message is delivered, rather than understood. The sequence of steps in a basic communication model is:
 - *Encode.* The message is coded into symbols, such as text, sound or some other medium for transmission (sending).
 - *Transmit message.* The message is sent via a communication channel. The transmission of this message may be compromised by various physical factors such as unfamiliar technology or inadequate infrastructure. Noise and other factors may be present and contribute to loss of information in transmission and/or reception of the message.
 - *Decode.* The data received is translated by the receiver back into a form useful to the receiver.

◆ **Sample interactive communication model.** This model also describes communication as a process consisting of two parties, the sender and receiver, but recognizes the need to ensure that the message has been understood. In this model, noise includes any interference or barriers that might compromise the understanding of the message, such as the distraction of the receiver, variations in the perceptions of receivers, or lack of appropriate knowledge or interest. The additional steps in an interactive communication model are:

- *Acknowledge.* Upon receipt of a message, the receiver may signal (acknowledge) receipt of the message, but this does not necessarily mean agreement with or comprehension of the message—merely that it has been received.
- *Feedback/response.* When the received message has been decoded and understood, the receiver encodes thoughts and ideas into a message and then transmits this message to the original sender. If the sender perceives that the feedback matches the original message, the communication has been successful. In communication between people, feedback can be achieved through active listening, described in Section 10.2.2.6.

As part of the communication process, the sender is responsible for the transmission of the message, ensuring the information being communicated is clear and complete, and confirming the message is correctly interpreted. The receiver is responsible for ensuring that the information is received in its entirety, interpreted correctly, and acknowledged or responded to appropriately. These components take place in an environment where there will likely be noise and other barriers to effective communication.

Cross-cultural communication presents challenges to ensuring that the meaning of the message has been understood. Differences in communication styles can arise from differences in working methods, age, nationality, professional discipline, ethnicity, race, or gender. People from different cultures communicate using different languages (e.g., technical design documents, different styles) and expect different processes and protocols.

The communication model shown in Figure 10-4 incorporates the idea that the message itself and how it is transmitted are influenced by the sender's current emotional state, knowledge, background, personality, culture, and biases. Similarly, the receiver's emotional state knowledge, background, personality, culture, and biases will influence how the message is received and interpreted, and will contribute to the barriers or noise.

This communication model and its enhancements can assist in developing communication strategies and plans for person-to-person or even small group to small group communications. It is not useful for other communications artifacts such as emails, broadcast messages, or social media.

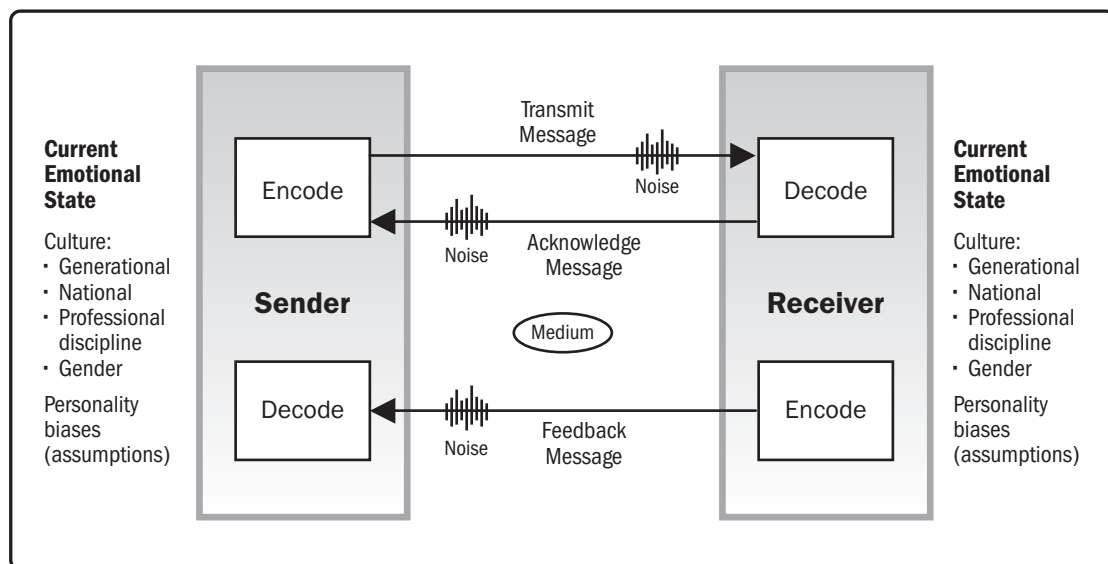


Figure 10-4. Communication Model for Cross-Cultural Communication

10.1.2.5 COMMUNICATION METHODS

There are several communication methods that are used to share information among project stakeholders. These methods are broadly classified as follows:

- ◆ **Interactive communication.** Between two or more parties performing a multidirectional exchange of information in real time. It employs communications artifacts such as meetings, phone calls, instant messaging, some forms of social media, and videoconferencing.
- ◆ **Push communication.** Sent or distributed directly to specific recipients who need to receive the information. This ensures that the information is distributed but does not ensure that it actually reached or was understood by the intended audience. Push communications artifacts include letters, memos, reports, emails, faxes, voice mails, blogs, and press releases.
- ◆ **Pull communication.** Used for large complex information sets, or for large audiences, and requires the recipients to access content at their own discretion subject to security procedures. These methods include web portals, intranet sites, e-learning, lessons learned databases, or knowledge repositories.

Different approaches should be applied to meet the needs of the major forms of communication defined in the communications management plan:

- ◆ **Interpersonal communication.** Information is exchanged between individuals, typically face-to-face.
- ◆ **Small group communication.** Occurs within groups of around three to six people.
- ◆ **Public communication.** A single speaker addressing a group of people.
- ◆ **Mass communication.** There is a minimal connection between the person or group sending the message and the large, sometimes anonymous groups for whom the information is intended.
- ◆ **Networks and social computing communication.** Supports emerging communication trends of many-to-many supported by social computing technology and media.

Possible communications artifacts and methods include but are not limited to:

- ◆ Notice boards,
- ◆ Newsletters/in-house magazines/e-magazines,
- ◆ Letters to staff/volunteers,
- ◆ Press releases,
- ◆ Annual reports,
- ◆ Emails and intranets,
- ◆ Web portals and other information repositories (for pull communication)
- ◆ Phone conversations,
- ◆ Presentations,
- ◆ Team briefings/group meetings,
- ◆ Focus groups,
- ◆ Face-to-face formal or informal meetings between various stakeholders,
- ◆ Consultation groups or staff forums, and
- ◆ Social computing technology and media.

10.1.2.6 INTERPERSONAL AND TEAM SKILLS

Interpersonal and team skills that can be used for this process include but are not limited to:

- ◆ **Communication styles assessment.** A technique used to assess communication styles and identify the preferred communication method, format, and content for planned communication activities. Often used with unsupportive stakeholders, this assessment may follow a stakeholder engagement assessment (described in Section 13.2.2.5) to identify gaps in stakeholder engagement that require additional tailored communication activities and artifacts.

- ◆ **Political awareness.** Political awareness helps the project manager to plan communications based on the project environment as well as the organization's political environment. Political awareness concerns the recognition of power relationships, both formal and informal, and also the willingness to operate within these structures. An understanding of the strategies of the organization, knowing who wields power and influence in this arena, and developing an ability to communicate with these stakeholders are all aspects of political awareness.
- ◆ **Cultural awareness.** Cultural awareness is an understanding of the differences between individuals, groups, and organizations and adapting the project's communication strategy in the context of these differences. This awareness and any consequent actions minimize misunderstandings and miscommunication that may result from cultural differences within the project's stakeholder community. Cultural awareness and cultural sensitivity help the project manager to plan communications based on the cultural differences and requirements of stakeholders and team members.

10.1.2.7 DATA REPRESENTATION

A data representation technique that can be used for this process includes but is not limited to a stakeholder engagement assessment matrix. Described in Section 13.2.2.5. The stakeholder engagement assessment matrix, shown in Figure 13-6, displays gaps between current and desired engagement levels of individual stakeholders, it can be further analyzed in this process to identify additional communication requirements (beyond the regular reports) as a method to close any engagement level gaps.

10.1.2.8 MEETINGS

Project meetings can include virtual (e-meetings) or face-to-face meetings, and can be supported with document collaboration technologies, including email messages and project websites. The Plan Communications Management process requires discussion with the project team to determine the most appropriate way to update and communicate project information, and to respond to requests from various stakeholders for information.

10.1.3 PLAN COMMUNICATIONS MANAGEMENT: OUTPUTS

10.1.3.1 COMMUNICATIONS MANAGEMENT PLAN

The communications management plan is a component of the project management plan that describes how project communications will be planned, structured, implemented, and monitored for effectiveness. The plan contains the following information:

- ◆ Stakeholder communication requirements;
- ◆ Information to be communicated, including language, format, content, and level of detail;
- ◆ Escalation processes;
- ◆ Reason for the distribution of that information;
- ◆ Timeframe and frequency for the distribution of required information and receipt of acknowledgment or response, if applicable;
- ◆ Person responsible for communicating the information;
- ◆ Person responsible for authorizing release of confidential information;
- ◆ Person or groups who will receive the information, including information about their needs, requirements, and expectations;
- ◆ Methods or technologies used to convey the information, such as memos, email, press releases, or social media;
- ◆ Resources allocated for communication activities, including time and budget;
- ◆ Method for updating and refining the communications management plan as the project progresses and develops, such as when the stakeholder community changes as the project moves through different phases;
- ◆ Glossary of common terminology;
- ◆ Flow charts of the information flow in the project, workflows with possible sequence of authorization, list of reports, meeting plans, etc.; and
- ◆ Constraints derived from specific legislation or regulation, technology, organizational policies, etc.

The communications management plan can include guidelines and templates for project status meetings, project team meetings, e-meetings, and email messages. The use of a project website and project management software can be included if these are to be used in the project.

10.1.3.2 PROJECT MANAGEMENT PLAN UPDATES

Any change to the project management plan goes through the organization's change control process via a change request. Components that may require a change request for the project management plan include but are not limited to the stakeholder engagement plan, which is described in Section 13.2.3.1. The stakeholder engagement plan is updated to reflect any processes, procedures, tools, or techniques that affect the engagement of stakeholders in project decisions and execution.

10.1.3.3 PROJECT DOCUMENTS UPDATES

Project documents that may be updated as a result of carrying out this process include but are not limited to:

- ◆ **Project schedule.** Described in Section 6.5.3.2. The project schedule may be updated to reflect communication activities.
- ◆ **Stakeholder register.** Described in Section 13.1.3.1. The stakeholder register may be updated to reflect communications planned.

10.2 MANAGE COMMUNICATIONS

Manage Communications is the process of ensuring timely and appropriate collection, creation, distribution, storage, retrieval, management, monitoring, and the ultimate disposition of project information. The key benefit of this process is that it enables an efficient and effective information flow between the project team and the stakeholders. This process is performed throughout the project.

The Manage Communications process identifies all aspects of effective communication, including choice of appropriate technologies, methods, and techniques. In addition, it should allow for flexibility in the communications activities, allowing adjustments in the methods and techniques to accommodate the changing needs of stakeholders and the project. The inputs, tools, techniques, and outputs of this process are depicted in Figure 10-5. Figure 10-6 depicts the data flow diagram of the Manage Communications process.

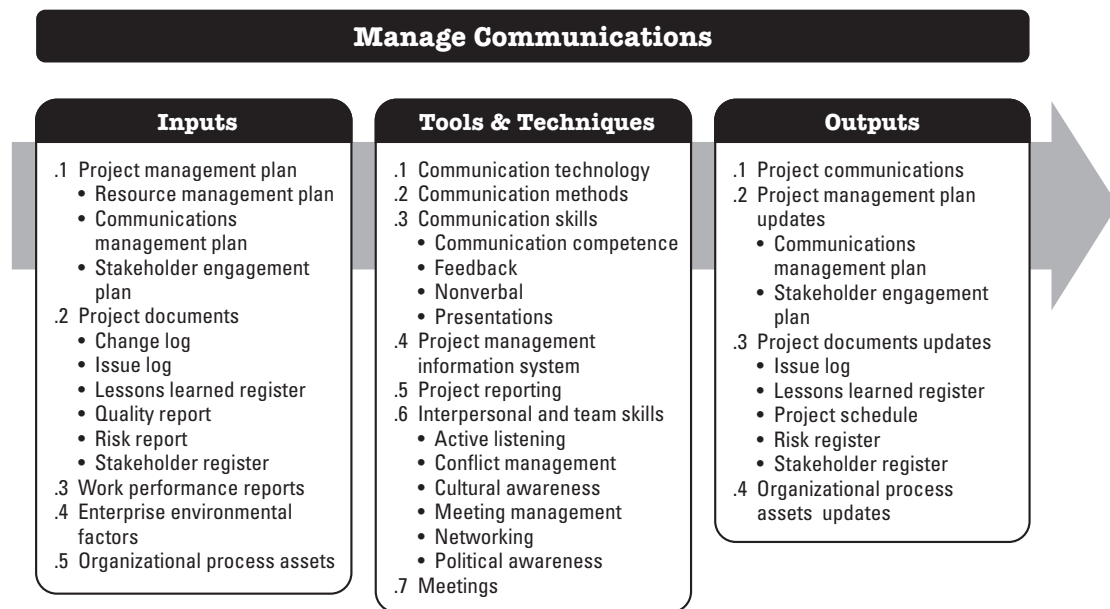


Figure 10-5. Manage Communications: Inputs, Tools & Techniques, and Outputs

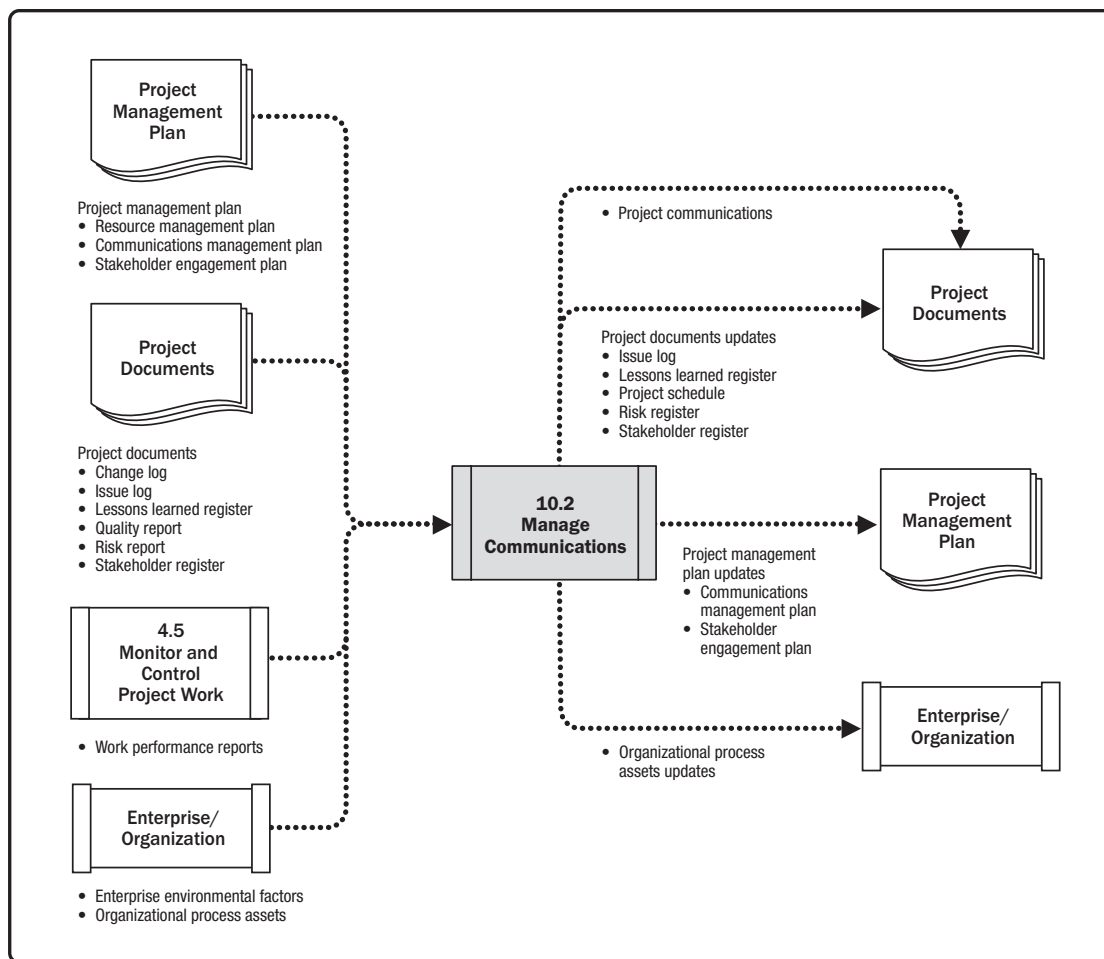


Figure 10-6. Manage Communications: Data Flow Diagram

This process goes beyond the distribution of relevant information and seeks to ensure that the information being communicated to project stakeholders has been appropriately generated and formatted, and received by the intended audience. It also provides opportunities for stakeholders to make requests for further information, clarification, and discussion. Techniques and considerations for effective communications management include but are not limited to:

- ◆ **Sender-receiver models.** Incorporating feedback loops to provide opportunities for interaction/participation and remove barriers to effective communication.
- ◆ **Choice of media.** Decisions about application of communications artifacts to meet specific project needs, such as when to communicate in writing versus orally, when to prepare an informal memo versus a formal report, and when to use push/pull options and the choice of appropriate technology.
- ◆ **Writing style.** Appropriate use of active versus passive voice, sentence structure, and word choice.
- ◆ **Meeting management.** Described in Section 10.2.2.6. Preparing an agenda, inviting essential participants, and ensuring they attend. Dealing with conflicts within the meeting or resulting from inadequate follow-up of minutes and actions, or attendance of the wrong people.
- ◆ **Presentations.** Awareness of the impact of body language and design of visual aids.
- ◆ **Facilitation.** Described in Section 4.1.2.3. Building consensus and overcoming obstacles such as difficult group dynamics, and maintaining interest and enthusiasm among group members.
- ◆ **Active listening.** Described in Section 10.2.2.6. Listening actively involves acknowledging, clarifying and confirming, understanding, and removing barriers that adversely affect comprehension.

10.2.1 MANAGE COMMUNICATIONS: INPUTS

10.2.1.1 PROJECT MANAGEMENT PLAN

Described in Section 4.2.3.1. Project management plan components include but are not limited to:

- ◆ **Resource management plan.** Described in Section 9.1.3.1. The resource management plan describes the communications that are needed for management of team or physical resources.
- ◆ **Communications management plan.** Described in Section 10.1.3.1. The communications management plan describes how project communications will be planned, structured, monitored, and controlled.
- ◆ **Stakeholder engagement plan.** Described in detail in Section 13.2.3.1. The stakeholder engagement plan describes how stakeholders will be engaged through appropriate communication strategies.

10.2.1.2 PROJECT DOCUMENTS

Project documents that can be considered as inputs for this process include but are not limited to

- ◆ **Change log.** Described in Section 4.6.3.3. The change log is used to communicate changes and approved, deferred, and rejected change requests to the impacted stakeholders.
- ◆ **Issue log.** Described in Section 4.6.3.3. Information about issues is communicated to impacted stakeholders.
- ◆ **Lessons learned register.** Described in Section 4.4.3.1. Lessons learned earlier in the project with regard to managing communications can be applied to later phases in the project to improve the efficiency and effectiveness of communications and the communication process.
- ◆ **Quality report.** Described in Section 8.2.3.1. Information in the quality report includes quality issues, project and product improvements, and process improvements. This information is forwarded to those who can take corrective actions in order to achieve the project quality expectations.
- ◆ **Risk report.** Described in Section 11.2.3.2. The risk report presents information on sources of overall project risk, together with summary information on identified individual project risks. This information is communicated to risk owners and other impacted stakeholders.
- ◆ **Stakeholder register.** Described in Section 13.1.3.1. The stakeholder register identifies the individuals, groups, or organizations that will need various types of information.

10.2.1.3 WORK PERFORMANCE REPORTS

Described in Section 4.5.3.1. Work performance reports are circulated to the project stakeholders through this process as defined in the communications management plan. Examples of work performance reports include status reports and progress reports. Work performance reports can contain earned value graphs and information, trend lines and forecasts, reserve burndown charts, defect histograms, contract performance information, and risk summaries. They can be presented as dashboards, heat reports, stop light charts, or other representations useful for creating awareness and generating decisions and actions.

10.2.1.4 ENTERPRISE ENVIRONMENTAL FACTORS

The enterprise environmental factors that can influence this process include but are not limited to:

- ◆ Organizational culture, political climate, and governance framework;
- ◆ Personnel administration policies;
- ◆ Stakeholder risk thresholds;
- ◆ Established communication channels, tools, and systems;
- ◆ Global, regional, or local trends and practices or habits; and
- ◆ Geographic distribution of facilities and resources.

10.2.1.5 ORGANIZATIONAL PROCESS ASSETS

The organizational process assets that can influence this process include but are not limited to:

- ◆ Corporate policies and procedures for social media, ethics, and security;
- ◆ Corporate policies and procedures for issue, risk, change, and data management;
- ◆ Organizational communication requirements;
- ◆ Standardized guidelines for development, exchange, storage, and retrieval of information; and
- ◆ Historical information from previous projects, including the lessons learned repository.

10.2.2 MANAGE COMMUNICATIONS: TOOLS AND TECHNIQUES

10.2.2.1 COMMUNICATION TECHNOLOGY

Described in Section 10.1.2.3. Factors that influence the technology include whether the team is colocated, the confidentiality of any information that needs to be shared, resources available to the team members, and how the organization's culture influences the way in which meetings and discussions are normally conducted.

10.2.2.2 COMMUNICATION METHODS

Described in Section 10.1.2.5. The choice of communication methods should allow flexibility in the event that the membership of the stakeholder community changes or their needs and expectations change.

10.2.2.3 COMMUNICATION SKILLS

Communication techniques that can be used for this process include but are not limited to:

- ◆ **Communication competence.** A combination of tailored communication skills that considers factors such as clarity of purpose in key messages, effective relationships and information sharing, and leadership behaviors.
- ◆ **Feedback.** Feedback is information about reactions to communications, a deliverable, or a situation. Feedback supports interactive communication between the project manager, team and all other project stakeholders. Examples include coaching, mentoring, and negotiating.
- ◆ **Nonverbal.** Examples of nonverbal communication include appropriate body language to transmit meaning through gestures, tone of voice, and facial expressions. Mirroring and eye contact are also important techniques. The team members should be aware of how they are expressing themselves both through what they say and what they don't say.
- ◆ **Presentations.** A presentation is the formal delivery of information and/or documentation. Clear and effective presentations of project information to relevant stakeholders can include but are not limited to:
 - Progress reports and information updates to stakeholders;
 - Background information to support decision making;
 - General information about the project and its objectives, for the purposes of raising the profile of the work of the project and the team; and
 - Specific information aimed at increasing understanding and support of the work and objectives of the project.

Presentations will be successful when the content and delivery take the following into account:

- The audience, their expectations, and needs; and
- The needs and objectives of the project and project team.

10.2.2.4 PROJECT MANAGEMENT INFORMATION SYSTEM (PMIS)

Described in Section 4.3.2.2. Project management information systems can ensure that stakeholders can easily retrieve the information they need in a timely way. Project information is managed and distributed using a variety of tools, including:

- ◆ **Electronic project management tools.** Project management software, meeting and virtual office support software, web interfaces, specialized project portals and dashboards, and collaborative work management tools.
- ◆ **Electronic communications management.** Email, fax, and voice mail; audio, video and web conferencing; and websites and web publishing.
- ◆ **Social media management.** Websites and web publishing; and blogs and applications, which offer the opportunity to engage with stakeholders and form online communities.

10.2.2.5 PROJECT REPORTING

Project reporting is the act of collecting and distributing project information. Project information is distributed to many groups of stakeholders and should be adapted to provide information at an appropriate level, format, and detail for each type of stakeholder. The format may range from a simple communication to more elaborate custom reports and presentations. Information may be prepared regularly or on an exception basis. While work performance reports are the output of the Monitor and Control Project Work process, this process develops ad hoc reports, project presentations, blogs, and other types of communication about the project.

10.2.2.6 INTERPERSONAL AND TEAM SKILLS

Interpersonal and team skills that can be used for this process include but are not limited to:

- ◆ **Active listening.** Techniques of active listening involve acknowledging, clarifying and confirming, understanding, and removing barriers that adversely affect comprehension.
- ◆ **Conflict management.** Described in Section 9.5.2.1.
- ◆ **Cultural awareness.** Described in Section 10.1.2.6.
- ◆ **Meeting management.** Meeting management is taking steps to ensure meetings meet their intended objectives effectively and efficiently. The following steps should be used for meeting planning:
 - Prepare and distribute the agenda stating the objectives of the meeting.
 - Ensure that the meetings start and finish at the published time.
 - Ensure the appropriate participants are invited and attend.
 - Stay on topic.
 - Manage expectations, issues, and conflicts during the meeting.
 - Record all actions and those who have been allocated the responsibility for completing the action.
- ◆ **Networking.** Networking is interacting with others to exchange information and develop contacts. Networks provide project managers and their teams with access to informal organizations to solve problems, influence actions of their stakeholders, and increase stakeholder support for the work and outcomes of the project, thus improving performance.
- ◆ **Political awareness.** Described in Section 10.1.2.6. Political awareness assists the project manager in engaging stakeholders appropriately to maintain their support throughout the project.

10.2.2.7 MEETINGS

Meetings support the actions defined in the communication strategy and communications plan.

10.2.3 MANAGE COMMUNICATIONS: OUTPUTS

10.2.3.1 PROJECT COMMUNICATIONS

Project communications artifacts may include but are not limited to: performance reports, deliverable status, schedule progress, cost incurred, presentations, and other information required by stakeholders.

10.2.3.2 PROJECT MANAGEMENT PLAN UPDATES

Any change to the project management plan goes through the organization's change control process via a change request. Components of the project management plan that may be updated as a result of carrying out this process include but are not limited to:

- ◆ **Communications management plan.** Described in Section 10.1.3.1. When changes are made to the project communications approach as a result of this process, these changes are reflected in the project communications plan.
- ◆ **Stakeholder engagement plan.** Described in Section 13.2.3.1. Stakeholder communication requirements and agreed-upon communications strategies are updated as a result of this process.

10.2.3.3 PROJECT DOCUMENTS UPDATES

Project documents that may be updated as a result of carrying out this process include but are not limited to:

- ◆ **Issue log.** Described in Sections 4.3.3.3. The issue log is updated to reflect any communication issues on the project, or how any communications have been used to impact active issues.
- ◆ **Lessons learned register.** Described in Section 4.4.3.1. The lessons learned register is updated with information on challenges encountered and how they could have been avoided as well as approaches that worked well and what did not work well for managing communications.
- ◆ **Project schedule.** Described in Section 6.5.3.2. The project schedule may be updated to reflect the status of communication activities.
- ◆ **Risk register.** Described in Section 11.2.3.1. The risk register is updated to capture risks associated with managing communications.
- ◆ **Stakeholder register.** Described in Section 13.1.3.1. The stakeholder register can be updated to include information regarding communications activities with project stakeholders.

10.2.3.4 ORGANIZATIONAL PROCESS ASSETS UPDATES

Organizational process assets that may be updated as a result of this process include but are not limited to:

- ◆ Project records such as correspondence, memos, meeting minutes and other documents used on the project; and
- ◆ Planned and ad hoc project reports and presentations.

10.3 MONITOR COMMUNICATIONS

Monitor Communications is the process of ensuring the information needs of the project and its stakeholders are met. The key benefit of this process is the optimal information flow as defined in the communications management plan and the stakeholder engagement plan. This process is performed throughout the project. The inputs, tools and techniques, and outputs of the process are depicted in Figure 10-7. Figure 10-8 depicts the data flow diagram for the process.

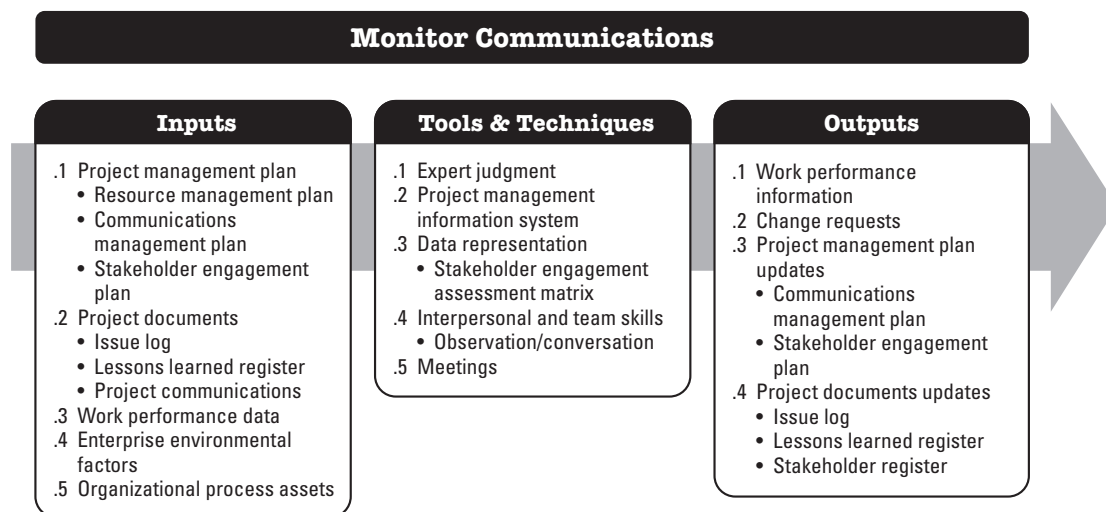


Figure 10-7. Monitor Communications: Inputs, Tools & Techniques, and Outputs

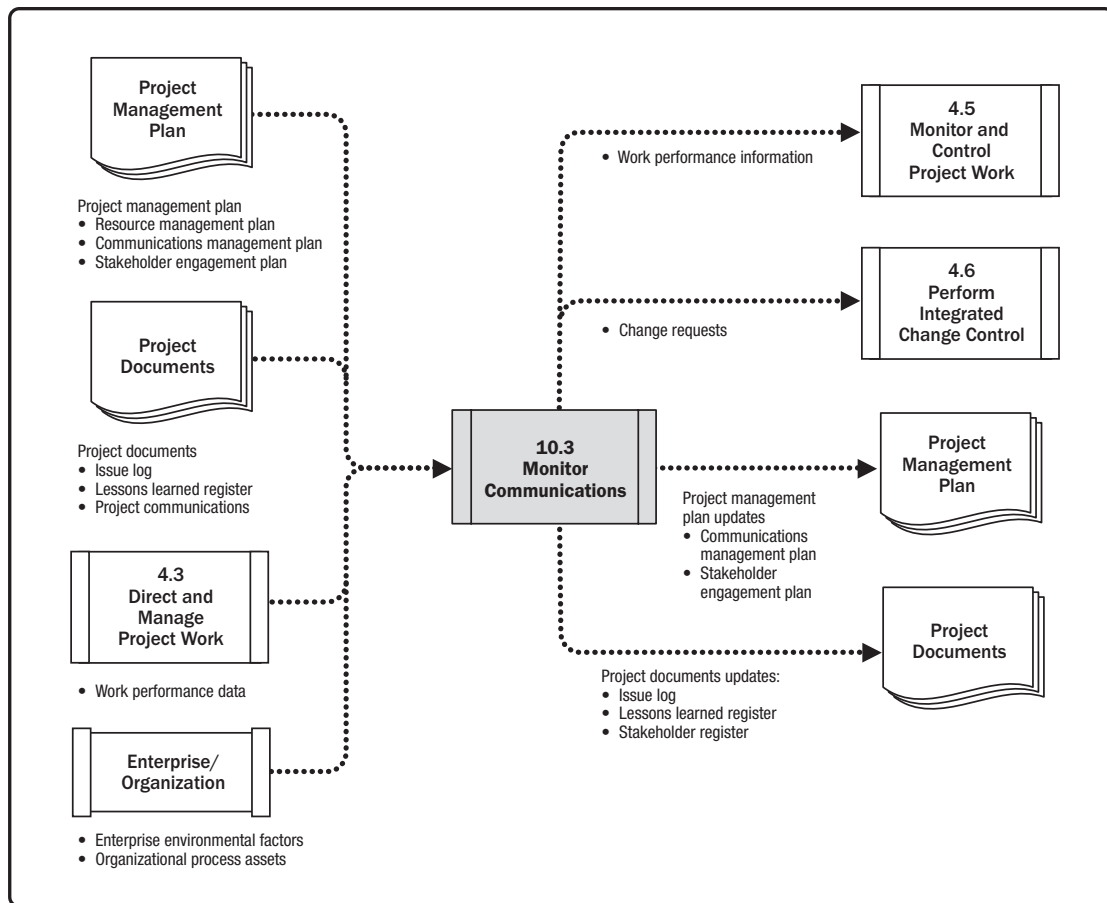


Figure 10-8. Monitor Communications: Data Flow Diagram

Monitor Communications determines if the planned communications artifacts and activities have had the desired effect of increasing or maintaining stakeholders' support for the project's deliverables and expected outcomes. The impact and consequences of project communications should be carefully evaluated and monitored to ensure that the right message with the right content (the same meaning for sender and receiver) is delivered to the right audience, through the right channel, and at the right time. Monitor Communications may require a variety of methods, such as customer satisfaction surveys, collecting lessons learned, observations of the team, reviewing data from the issue log, or evaluating changes in the stakeholder engagement assessment matrix described in Section 13.2.2.5.

The Monitor Communications process can trigger an iteration of the Plan Communications Management and/or Manage Communications processes to improve effectiveness of communication through additional and possibly amended communications plans and activities. Such iterations illustrate the continuous nature of the Project Communications Management processes. Issues or key performance indicators, risks, or conflicts may trigger an immediate revision.

10.3.1 MONITOR COMMUNICATIONS: INPUTS

10.3.1.1 PROJECT MANAGEMENT PLAN

Described in Section 4.2.3.1. Project management plan components include but are not limited to:

- ◆ **Resource management plan.** Described in Section 9.1.3.1. The resource management plan can be used to understand the actual project organization and any changes through understanding of roles and responsibilities and the project organization charts.
- ◆ **Communications management plan.** Described in Section 10.1.3.1. The communications management plan contains the current plan for collecting, creating, and distributing information in a timely manner. It identifies the team members, stakeholders, and the work involved in the communication process.
- ◆ **Stakeholder engagement plan.** Described in Section 13.2.3.1. The stakeholder engagement plan identifies the communication strategies that are planned to engage stakeholders.

10.3.1.2 PROJECT DOCUMENTS

Project documents that can be considered as inputs for this process include but are not limited to:

- ◆ **Issue log.** Described in Section 4.3.3.3. The issue log provides the project's history, a record of stakeholder engagement issues, and how they were resolved.
- ◆ **Lessons learned register.** Described in Section 4.4.3.1. Lessons learned earlier in the project can be applied to later phases in the project to improve communication effectiveness.
- ◆ **Project communications.** Described in Section 10.2.3.1. Provides information about communications that have been distributed.

10.3.1.3 WORK PERFORMANCE DATA

Described in Section 4.3.3.2. Work performance data contains data on the types and quantities of communications that have actually been distributed.

10.3.1.4 ENTERPRISE ENVIRONMENTAL FACTORS

The enterprise environmental factors that can influence the Monitor Communications process include but are not limited to:

- ◆ Organizational culture, political climate, and governance framework;
- ◆ Established communication channels, tools, and systems;
- ◆ Global, regional, or local trends, practices, or habits; and
- ◆ Geographic distribution of facilities and resources.

10.3.1.5 ORGANIZATIONAL PROCESS ASSETS

The organizational process assets that may influence the Monitor Communications process include but are not limited to:

- ◆ Corporate policies and procedures for social media, ethics, and security;
- ◆ Organizational communication requirements;
- ◆ Standardized guidelines for development, exchange, storage, and retrieval of information;
- ◆ Historical information and lessons learned repository from previous projects; and
- ◆ Stakeholder and communications data and information from previous projects.

10.3.2 MONITOR COMMUNICATIONS: TOOLS AND TECHNIQUES

10.3.2.1 EXPERT JUDGMENT

Described in Section 4.1.2.1. Expertise should be considered from individuals or groups with specialized knowledge or training in the following topics:

- ◆ Communications with the public, the community, and the media, and, in an international environment, between virtual groups; and
- ◆ Communications and project management systems.

10.3.2.2 PROJECT MANAGEMENT INFORMATION SYSTEM (PMIS)

Described in Section 4.3.2.2. Project management information systems provides a set of standard tools for the project manager to capture, store, and distribute information to internal and external stakeholders with the information they need according to the communications plan. The information contained in the system is monitored to assess its validity and effectiveness.

10.3.2.3 DATA REPRESENTATION

A data representation technique that can be used includes but is not limited to the stakeholder engagement assessment matrix (Section 13.2.2.5), which can provide information about the effectiveness of the communications activities. This is achieved by reviewing changes between desired and current engagement and adjusting communications as necessary.

10.3.2.4 INTERPERSONAL AND TEAM SKILLS

Interpersonal and team skills that can be used for this process include but are not limited to observation/conversation as described in Section 5.2.2.6. Discussion and dialogue with the project team helps determine the most appropriate way to update and communicate project performance, and to respond to requests from stakeholders for information. Observation and conversation enables the project manager to identify issues within the team, conflicts between people, or individual performance issues.

10.3.2.5 MEETINGS

Face-to-face or virtual meetings are used for decision making; responding to stakeholder requests; and having discussions with suppliers, vendors, and other project stakeholders.

10.3.3 MONITOR COMMUNICATIONS: OUTPUTS

10.3.3.1 WORK PERFORMANCE INFORMATION

Described in Section 4.5.1.3. Work performance information includes information on how project communication is performing by comparing the communications that were implemented compared to those that were planned. It also considers feedback on communications, such as survey results on communication effectiveness.

10.3.3.2 CHANGE REQUESTS

Described in Section 4.3.3.4. The Monitor Communications process often results in the need for adjustment, action, and intervention on communications activities defined in the communications management plan. Change requests are processed through the Perform Integrated Change Control process (Section 4.6).

These change requests may result in:

- ◆ Revision of stakeholder communication requirements, including stakeholders' information distribution, content or format, and distribution method; and
- ◆ New procedures to eliminate bottlenecks.

10.3.3.3 PROJECT MANAGEMENT PLAN UPDATES

Any change to the project management plan goes through the organization's change control process via a change request. Components that may require a change request for the project management plan include but are not limited to:

- ◆ **Communications management plan.** Described in Section 10.1.3.1. The communications management plan is updated with new information to make communication more effective.
- ◆ **Stakeholder engagement plan.** Described in Section 13.2.3.1. The stakeholder engagement plan is updated to reflect the actual situation of stakeholders, their communication needs, and their importance.

10.3.3.4 PROJECT DOCUMENTS UPDATES

Project documents that may be updated as a result of carrying out this process include but are not limited to:

- ◆ **Issue log.** Described in Section 4.3.3.3. The issue log may be updated with new information on issues raised, their progress, and resolution.
- ◆ **Lessons learned register.** Described in Section 4.4.3.1. The lessons learned register may be updated with causes of issues, reasons behind the corrective actions chosen, and other communication lessons learned as appropriate.
- ◆ **Stakeholder register.** Described in Section 13.1.3.1. The stakeholder register may be updated with revised stakeholder communication requirements.

