

# Управление на комуникациите

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Курс “Управление на проекти”

**Figure 6-1. The importance of communications management (survey of project managers).**

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Which of the following do you consider important project management skills?

Communication skills	84%
Organization skills	75%
Team building skills	72%
Leadership skills	68%
Technological skills	48%

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# Управление на комуникациите

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- **Project Communications Management** includes the processes required to ensure timely and appropriate generation, collection, distribution, storage, retrieval, and ultimate disposition of project information.
- **Project managers** spend the majority of their time communicating with team members and other project stakeholders, whether they are internal (at all organizational levels) or external to the organization.
- **Effective communication** creates a bridge between diverse stakeholders involved in a project, connecting various cultural and organizational backgrounds, different levels of expertise, and various perspectives and interests in the project execution or outcome

# Communication activity dimensions

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- **Internal** (within the project) and **external** (customer, other projects, the media, the public),
- **Formal** (reports, memos, briefings) and **informal** (emails, ad-hoc discussions),
- **Vertical** (up and down the organization) and **horizontal** (with peers),
- **Official** (newsletters, annual report) and **unofficial** (off the record communications),
- **Written and oral**
- **Verbal and non-verbal** (voice inflections, body language).

# Communication skills

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- Listening actively and effectively,
- Questioning, probing ideas and situations to ensure better understanding,
- Educating to increase team's knowledge so that they can be more effective,
- Fact-finding to identify or confirm information,
- Setting and managing expectations,
- Persuading a person or organization to perform an action,
- Negotiating to achieve mutually acceptable agreements between parties,
- Resolving conflict to prevent disruptive impacts, and
- Summarizing, recapping, and identifying the next steps.

# Управление на комуникациите в проекта

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- **Identify Stakeholders** — The process of identifying all people or organizations impacted by the project, and documenting relevant information regarding their interests, involvement, and impact on project success.
- **Plan Communications** — The process of determining the project stakeholder information needs and defining a communication approach.
- **Distribute Information** — The process of making relevant information available to project stakeholders as planned.
- **Manage Stakeholder Expectations** — The process of communicating and working with stakeholders to meet their needs and addressing issues as they occur.
- **Report Performance** — The process of collecting and distributing performance information, including status reports, progress measurements, and forecasts.

## Project Communications Management Overview

### 10.1 Identify Stakeholders

- .1 Inputs
  - .1 Project charter
  - .2 Procurement documents
  - .3 Enterprise environmental factors
  - .4 Organizational process assets
- .2 Tools & Techniques
  - .1 Stakeholder analysis
  - .2 Expert judgment
- .3 Outputs
  - .1 Stakeholder register
  - .2 Stakeholder management strategy

### 10.4 Manage Stakeholder Expectations

- .1 Inputs
  - .1 Stakeholder register
  - .2 Stakeholder management strategy
  - .3 Project management plan
  - .4 Issue log
  - .5 Change log
  - .6 Organizational process assets
- .2 Tools & Techniques
  - .1 Communication methods
  - .2 Interpersonal skills
  - .3 Management skills
- .3 Outputs
  - .1 Organizational process assets updates
  - .2 Change requests
  - .3 Project management plan updates
  - .4 Project document updates

### 10.2 Plan Communications

- .1 Inputs
  - .1 Stakeholder register
  - .2 Stakeholder management strategy
  - .3 Enterprise environmental factors
  - .4 Organizational process assets
- .2 Tools & Techniques
  - .1 Communication requirements analysis
  - .2 Communication technology
  - .3 Communication models
  - .4 Communication methods
- .3 Outputs
  - .1 Communications management plan
  - .2 Project document updates

### 10.5 Report Performance

- .1 Inputs
  - .1 Project management plan
  - .2 Work performance information
  - .3 Work performance measurements
  - .4 Budget forecasts
  - .5 Organizational process assets
- .2 Tools & Techniques
  - .1 Variance analysis
  - .2 Forecasting methods
  - .3 Communication methods
  - .4 Reporting systems
- .3 Outputs
  - .1 Performance reports
  - .2 Organizational process assets updates
  - .3 Change requests

### 10.3 Distribute Information

- .1 Inputs
  - .1 Project management plan
  - .2 Performance reports
  - .3 Organizational process assets
- .2 Tools & Techniques
  - .1 Communication methods
  - .2 Information distribution tools
- .3 Outputs
  - .1 Organizational process assets updates

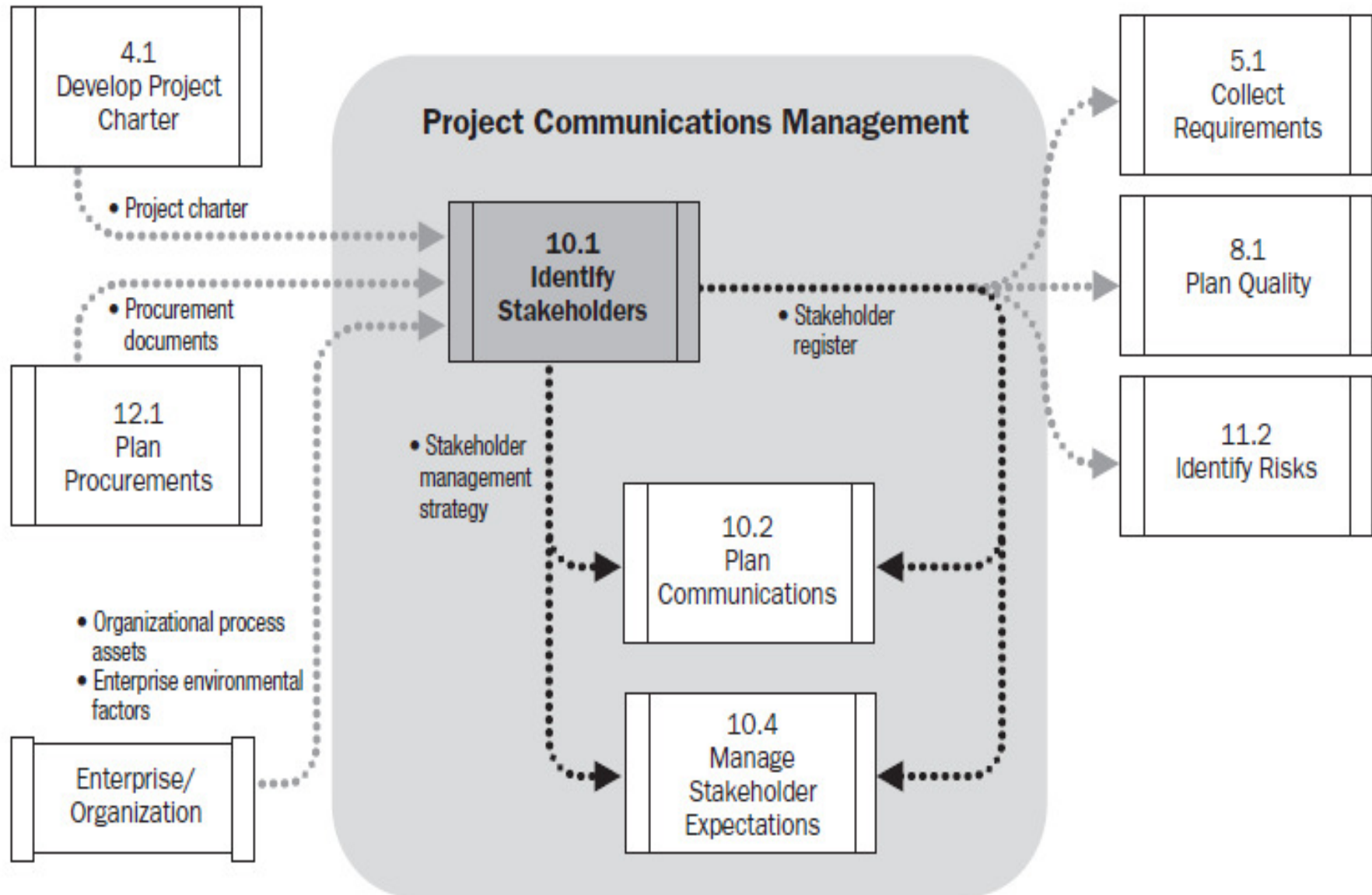
# Process: Identify Stakeholders

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- **Identify Stakeholders:** process of identifying all people or organizations impacted by the project, and documenting relevant information regarding their interests, involvement, and impact on project success.
- **Project stakeholders:**
  - persons and organizations such as customers, sponsors, the performing organization, and the public
  - actively involved in the project, or whose interests may be positively or negatively affected by the execution or completion of the project.
  - may exert influence over the project and its deliverables
  - at different levels within the organization and may possess different authority levels, or may be external to the performing organization for the project.
- It is critical for project success to identify the stakeholders early in the project, and to **analyze their levels of interest, expectations, importance and influence**



# Process: Identify Stakeholders



# Identify Stakeholders: Inputs

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- **Project Charter:** can provide information about internal and external parties involved in and affected by the project, such as project sponsors), customers, team members, groups and departments participating in the project, and other people or organizations affected by the project.
- **Procurement Documents:** If a project is the result of a procurement activity or is based on an established contract, the parties in that contract are key project stakeholders. Other relevant parties, such as suppliers, should also be considered as part of the project stakeholders list.
- **Enterprise Environmental Factors:**
  - Organizational or company culture and structure
  - Governmental or industry standards (e.g. regulations, product standards).
- **Organizational Process Assets:**
  - Stakeholder register templates
  - Lessons learned from previous projects
  - Stakeholder registers from previous projects

# Identify Stakeholders: Tools and Techniques

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- **Stakeholder Analysis:** a technique of systematically gathering and analyzing quantitative and qualitative information to determine whose interests should be taken into account throughout the project.
  - identifies the interests, expectations, and influence of the stakeholders and relates them to the purpose of the project
  - helps identify stakeholder relationships that can be leveraged to build coalitions and potential partnerships to enhance the project's chance of success.
- **Stakeholder analysis steps:**
  - **Step 1:** Identify all potential project stakeholders and relevant information, such as their roles, departments, interests, knowledge levels, expectations, and influence levels. Identifying other stakeholders is usually done by interviewing identified stakeholders and expanding the list until all potential stakeholders are included.
  - **Step 2:** Identify the potential impact or support each stakeholder could generate, and classify them so as to define an approach strategy. In large stakeholder communities, it is important to prioritize the key stakeholders to ensure the efficient use of effort to communicate and manage their expectations.
  - **Step 3:** Assess how key stakeholders are likely to react or respond in various situations, in order to plan how to influence them to enhance their support and mitigate potential negative impacts.

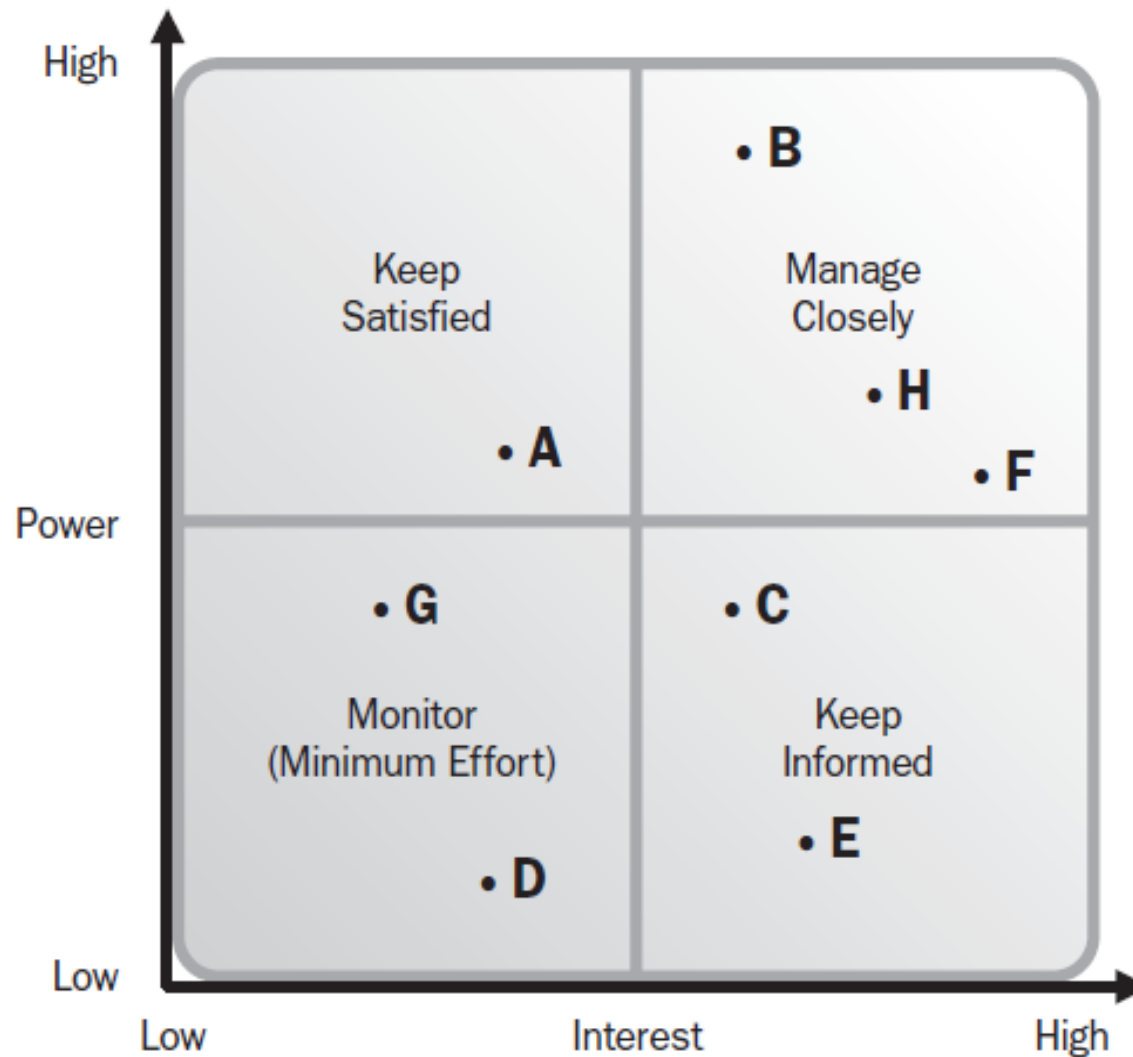
# Identify Stakeholders: Tools and Techniques

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## ■ Stakeholders classification models:

- **Power/interest grid**, grouping the stakeholders based on their level of authority (“power”) and their level or concern (“interest”) regarding the project outcomes;
- **Power/influence grid**, grouping the stakeholders based on their level of authority (“power”) and their active involvement (“influence”) in the project;
- **Influence/impact grid**, grouping the stakeholders based on their active involvement (“influence”) in the project and their ability to effect changes to the project’s planning or execution (“impact”); and
- **Salience model**, describing classes of stakeholders based on their power (ability to impose their will), urgency (need for immediate attention), and legitimacy (their involvement is appropriate).

# Power/Interest Grid with Stakeholders



# Identify Stakeholders: Tools and Techniques

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- **Expert Judgment:** To ensure comprehensive identification and listing of stakeholders, judgment and expertise should be sought from groups or individuals with specialized training or knowledge on the subject area such as:
  - Senior management
  - Other units within the organization
  - Identified key stakeholders
  - Project managers who have worked on projects in the same area (directly or through lessons learned)
  - Subject matter experts (SMEs) in business or project area,
  - Industry groups and consultants
  - Professional and technical associations
- Expert judgment can be obtained through individual consultations (one-on-one meetings, interviews, etc.) or through a panel format (focus groups, surveys etc).

# Identify Stakeholders: Outputs

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- **Stakeholder Register:** contains all details related to the identified stakeholders:
  - **Identification information:** Name, organizational position, location, role in the project, contact information;
  - **Assessment information:** Major requirements, main expectations, potential influence in the project, phase in the life cycle with the most interest
  - **Stakeholder classification:** Internal/external, supporter/neutral/resistor, etc.
- **Stakeholder Management Strategy:** defines an approach to increase the support and minimize negative impacts of stakeholders throughout the entire project life cycle. It includes elements such as:
  - Key stakeholders who can significantly impact the project,
  - Level of participation in the project desired for each identified stakeholder
  - Stakeholder groups and their management (as groups).
- A common way of **representing** the stakeholder management strategy is a stakeholder analysis matrix.

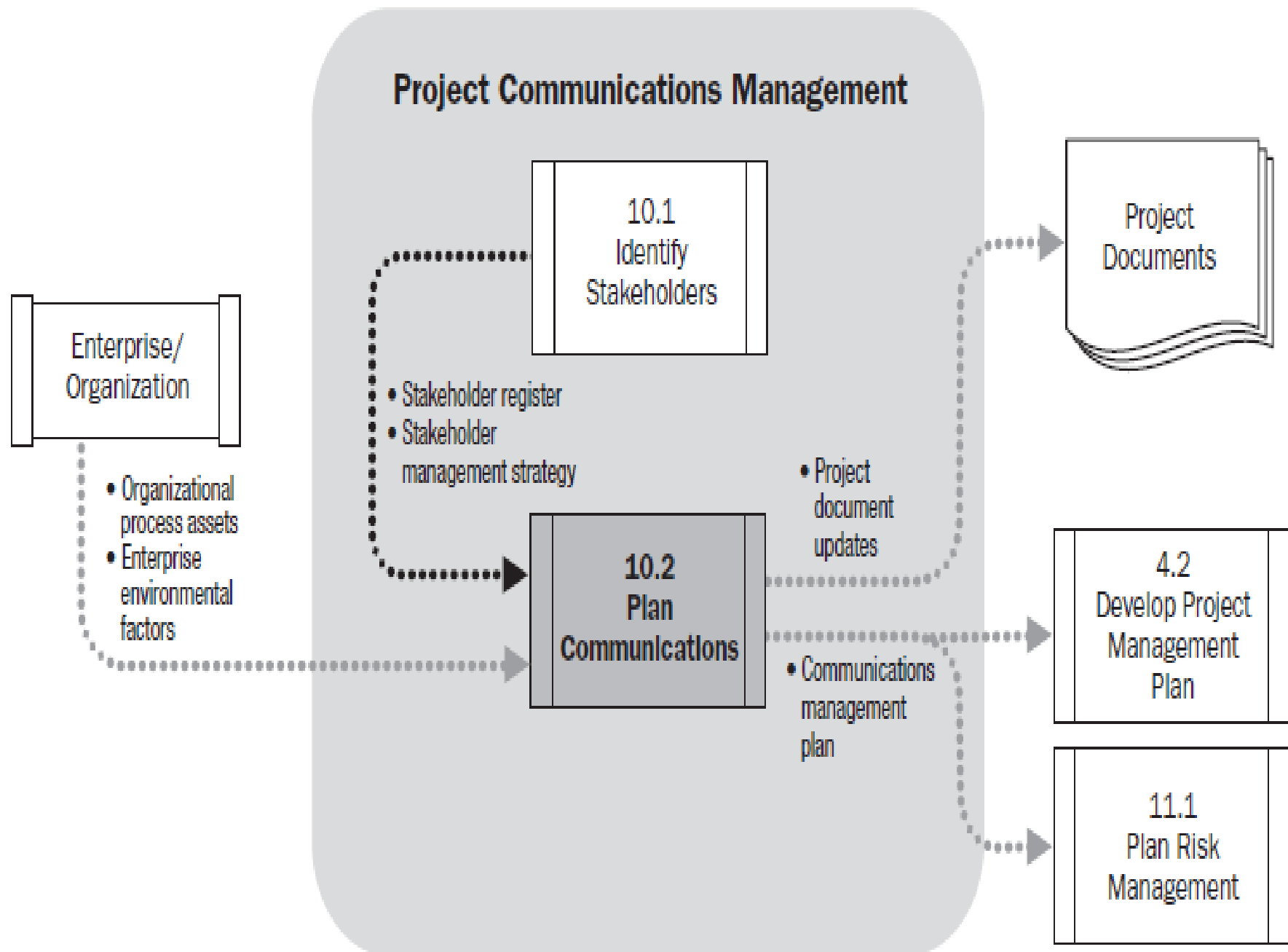
# Stakeholder analysis matrix

Stakeholder	Stakeholder Interest(s) in the Project	Assessment of Impact	Potential Strategies for Gaining Support or Reducing Obstacles



# Plan Communications

- **Plan Communications:** process of determining the project stakeholder information needs and defining a communication approach.
  - responds to the information and communications needs of the stakeholders; for example, who needs what information, when they will need it, how it will be given to them, and by whom.
  - While all projects share the need to communicate project information, the informational needs and methods of distribution vary widely.
  - Identifying the information needs of the stakeholders and determining a suitable means of meeting those needs are important factors for project success.
- A **communication plan** allows the project manager to document the approach to communicate most efficiently and effectively with stakeholders.
  - Effective communication means that the information is provided in the right format, at the right time, and with the right impact.
  - Efficient communication means providing only the information that is needed.
- On most projects, the communications planning is done very early, such as during project management plan development. This allows appropriate resources, such as time and budget, to be allocated to communication activities. The results of this planning process should be reviewed regularly throughout the project and revised as needed to ensure continued applicability.
- Plan Communications process is tightly linked with enterprise environmental factors, since the organization's structure will have a major effect on the project's communications requirements.



# Plan Communications: Inputs

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- **Stakeholder Register**
- **Stakeholder Management Strategy**
- **Enterprise Environmental Factors:** All enterprise environmental factors are used as inputs for this process since communication must be adapted to the project environment.
- **Organizational Process Assets:** lessons learned and historical information are of particular importance from all process assets of the organization, because they can provide insights on both the decisions taken regarding communications issues and the results of those decisions in previous similar projects. These can be used as guiding information to plan the communication activities for the current project.

# Plan Communications: Tools and Techniques

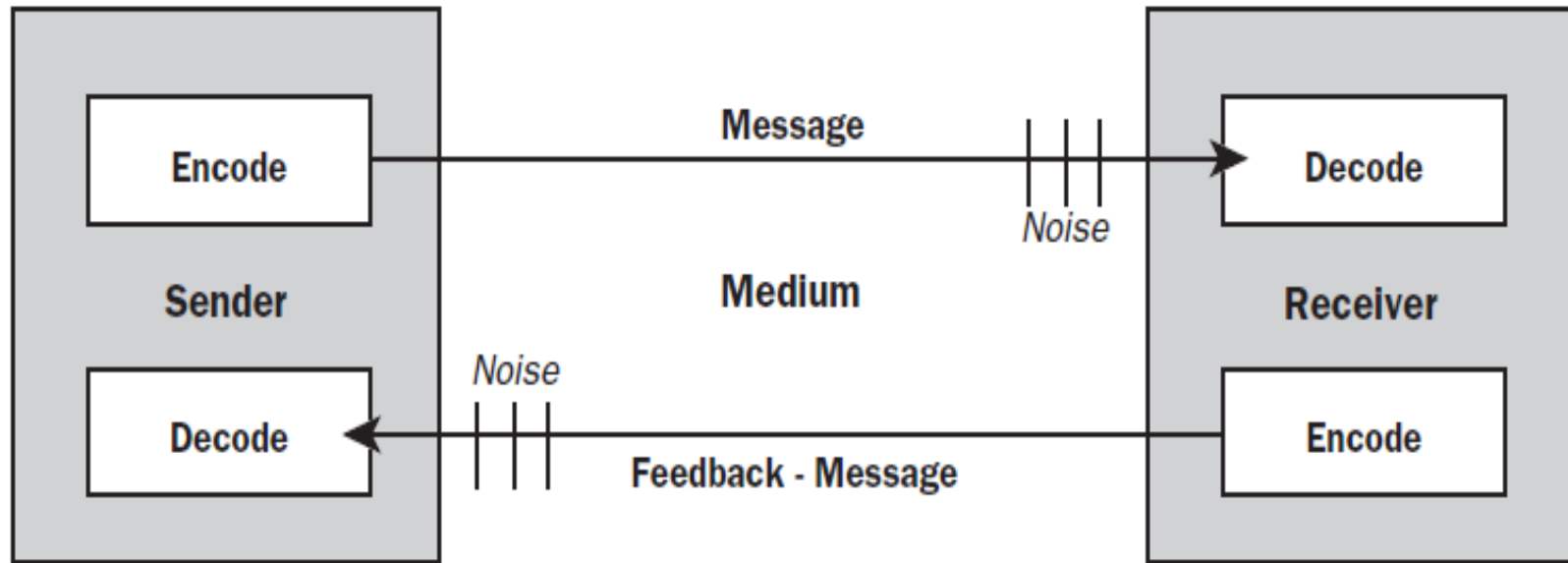
- **Communication Requirements Analysis:** determines the information needs of the project stakeholders.
  - requirements are defined by combining the type and format of information needed with an analysis of the value of that information.
  - Project resources are expended only on communicating information that contributes to success, or where a lack of communication can lead to failure.
- The project manager should consider the number of potential communication channels or paths as an indicator of the complexity of a project's communications.
- A key component of planning project communications is to determine and limit who will communicate with whom and who will receive what information.
- Information typically used to determine project communication requirements includes:
  - Organization charts,
  - Project organization and stakeholder responsibility relationships,
  - 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., communicating across organizations),
  - External information needs (e.g., communicating with the media, public, or contractors), and
  - Stakeholder information from the stakeholder register and the stakeholder management strategy.

# Plan Communications: Tools and Techniques

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- **Communication Technology:** the methods used to transfer information among project stakeholders.
  - a project team may use techniques from brief conversations all the way through to extended meetings, or from simple written documents to material (e.g., schedules and databases) that is accessible online as methods of communication.
- Factors that can affect the project include:
  - **Urgency of the need for information.** Is project success dependent upon having frequently updated information available on a moment's notice, or would regularly issued written reports suffice?
  - **Availability of technology.** Are appropriate systems already in place or do project needs warrant change? For example, do the intended stakeholder(s) have access to a selected communications technology?
  - **Expected project staffing.** Are the proposed communication systems compatible with the experience and expertise of the project participants, or is extensive training and learning required?
  - **Duration of the project.** Is the available technology likely to change before the project is over?
  - **Project environment.** Does the team meet and operate on a face-to-face basis or in a virtual environment?

# Basic Communication Model



- **Communication Models:** demonstrates how information is sent and received between two parties, defined as the sender and the receiver.
  - Inherent in the model is an action to acknowledge a message. Acknowledgement means that the receiver signals receipt of the message, but not necessarily agreement with the message.
  - Another action is the response to a message, which means that the receiver has decoded, understands, and is replying to the message.
- The key components of the model include:
  - **Encode.** To translate thoughts or ideas into a language that is understood by others.
  - **Message and feedback-message.** The output of encoding.
  - **Medium.** The method used to convey the message.
  - **Noise.** Anything that interferes with the transmission and understanding of the message (e.g., distance, unfamiliar technology, lack of background information).
  - **Decode.** To translate the message back into meaningful thoughts or ideas.

# Plan Communications: Tools and Techniques

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- **Communication Methods:** The project manager decides, based on communication requirements, what, how, and when communication methods are to be used in the project.
- Classification of methods:
  - **Interactive communication.** Between two or more parties performing a multidirectional exchange of information. It is the most efficient way to ensure a common understanding by all participants on specified topics, and includes meetings, phone calls, video conferencing, etc.
  - **Push communication.** Sent to specific recipients who need to know the information. This ensures that the information is distributed but does not certify that it actually reached or was understood by the intended audience. Push communication includes letters, memos, reports, emails, faxes, voice mails, press releases etc.
  - **Pull communication.** Used for very large volumes of information, or for very large audiences, that requires the recipients to access the communication content at their own discretion. These methods include intranet sites, e-learning, and knowledge repositories, etc.

# Plan Communications: Outputs

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- **Communications Management Plan:** contained in or is a subsidiary of the project management plan.
  - The communications management plan can be formal or informal, highly detailed or broadly framed, and based on the needs of the project.
  - The communications management plan can include guidelines and templates for project status meetings, project team meetings, e-meetings, and e-mail.
  - The use of a project website and project management software can also be included if they are used in the project.
- **Project Document Updates:** include:
  - Project schedule
  - Stakeholder register
  - Stakeholder management strategy

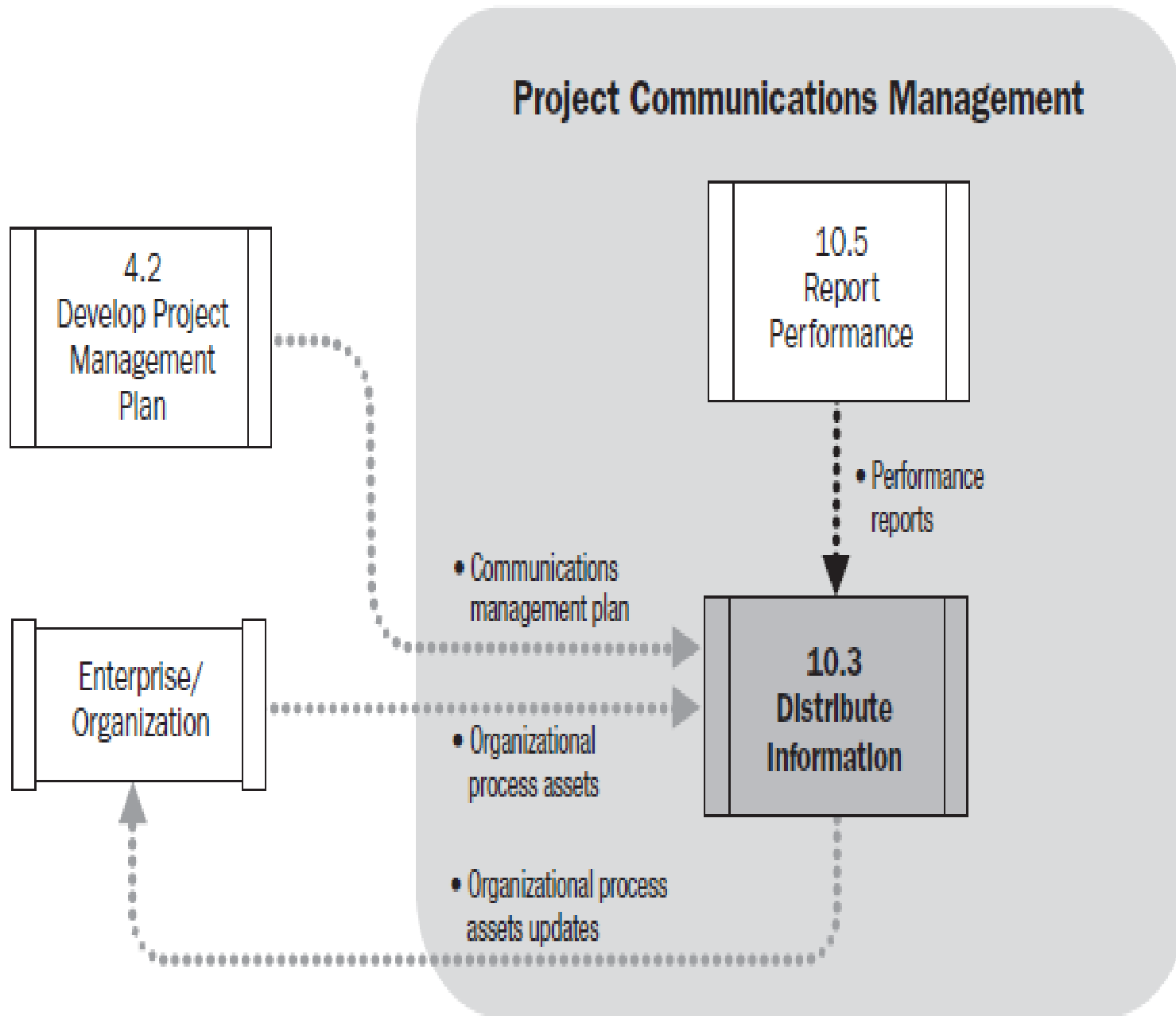


# Plan Communications: Outputs

- The communications management plan usually provides:
  - Stakeholder communication requirements;
  - Information to be communicated, including language, format, content, and level of detail;
  - Reason for the distribution of that information;
  - Time frame and frequency for the distribution of required information;
  - Person responsible for communicating the information;
  - Person responsible for authorizing release of confidential information;
  - Person or groups who will receive the information;
  - Methods or technologies used to convey the information, such as memos, e-mail, and/or press releases;
  - Resources allocated for communication activities, including time and budget;
  - Escalation process identifying time frames and the management chain (names) for escalation of issues that cannot be resolved at a lower staff level;
  - Method for updating and refining the communications management plan as the project progresses and develops;
  - Glossary of common terminology;
  - Flow charts of the information flow in the project, workflows with possible sequence of authorization, list of reports, and meeting plans, etc.; and
  - Communication constraints, usually derived from specific legislation or regulation, technology, and organizational policies, etc.

# Distribute Information

- **Distribute information:** process of making relevant information available to project stakeholders as planned.
  - performed throughout the entire project life cycle and in all management processes.
  - The focus is mainly in the execution process, which includes implementing the communications management plan, as well as responding to unexpected requests for information.
- Effective information distribution includes a number of techniques including:
  - **Sender-receiver models.** Feedback loops and barriers to communication.
  - **Choice of media.** Situation specifics of when to communicate in writing versus orally, when to write an informal memo versus a formal report, and when to communicate face-to-face versus by e-mail.
  - **Writing style.** Active versus passive voice, sentence structure, and word choice.
  - **Meeting management techniques.** Preparing an agenda and dealing with conflicts.
  - **Presentation techniques.** Body language and design of visual aids.
  - **Facilitation techniques.** Building consensus and overcoming obstacles.



# Distribute Information: Inputs

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- **Project Management Plan:** contains the communications management plan
- **Performance Reports:** used to distribute project performance and status information, should be made available prior to project meetings, and should be as precise and current as possible.
  - Forecasts are updated and reissued based on work performance measurements provided as the project is executed. This information is about the project's past performance that could impact the project in the future, for example, estimates at completion and estimates to complete.
  - Forecast information is often generated using earned value methods, but may use other methods such as analogy with past projects, re-estimating remaining work, inclusion of impact of external events in the schedule, and others. This information should be available along with performance information and other important information that must be distributed for decision-making purposes.
- **Organizational Process Assets:** include:
  - Policies, procedures, and guidelines regarding information distribution,
  - Templates
  - Historical information and lessons learned.

# Distribute Information: Tools and Techniques

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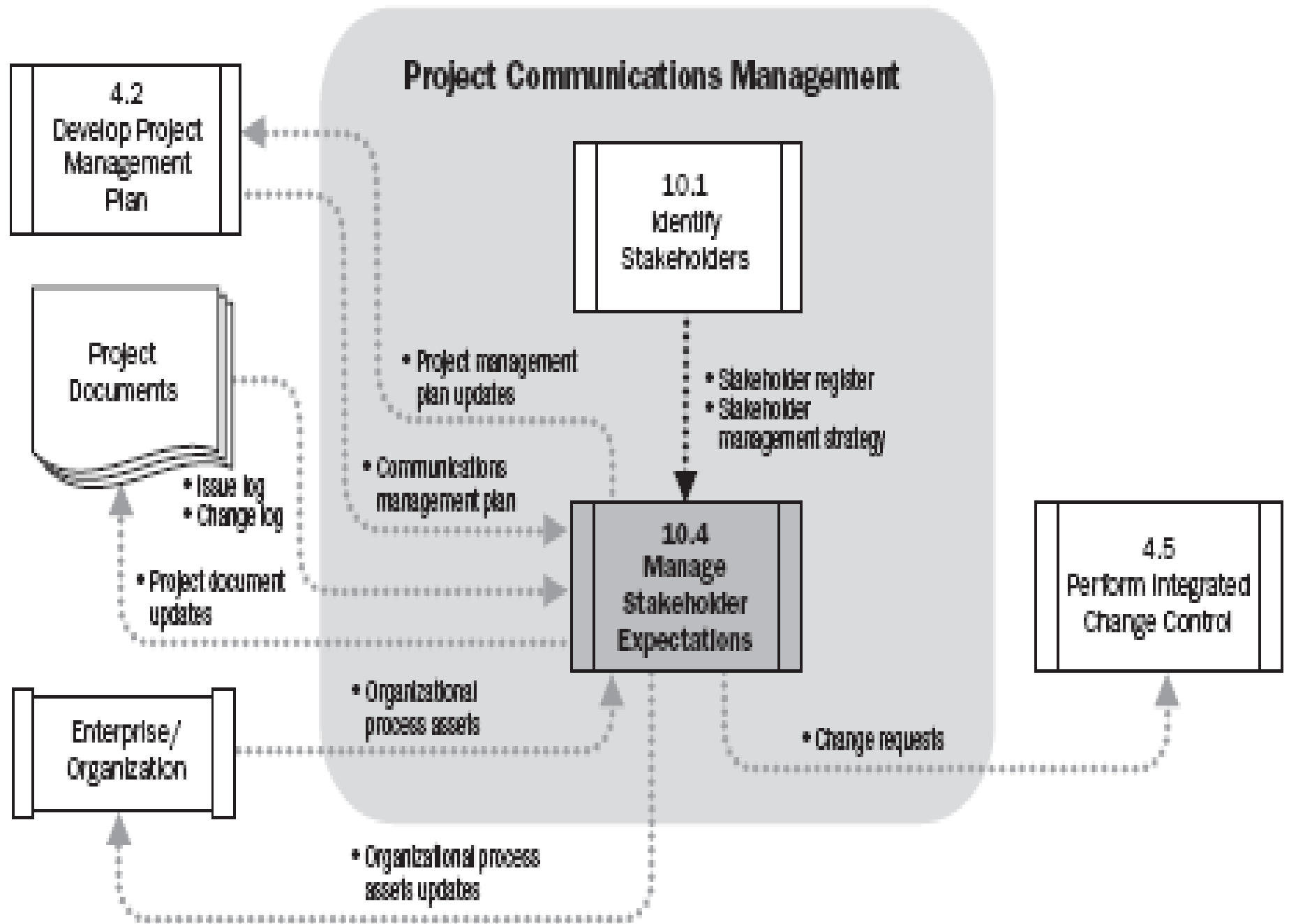
- **Communication Methods:** Individual and group meetings, video and audio conferences, computer chats, and other remote communications methods are used to distribute information.
- **Information Distribution Tools**
- Project information can be distributed using a variety of tools, including:
  - Hard-copy document distribution, manual filing systems, press releases, and shared-access electronic databases;
  - Electronic communication and conferencing tools, such as e-mail, fax, voice mail, telephone, video and web conferencing, websites and web publishing; and
  - Electronic tools for project management, such as web interfaces to scheduling and project management software, meeting and virtual office support software, portals, and collaborative work management tools.

# Distribute Information: Outputs

- **Organizational Process Assets Updates:** include:
  - **Stakeholder notifications.** Information may be provided to stakeholders about resolved issues, approved changes, and general project status.
  - **Project reports.** Formal and informal project reports describe project status and include lessons learned, issues logs, project closure reports, and outputs from other Knowledge Areas
  - **Project presentations.** The project team provides information formally or informally to any or all of the project stakeholders. The information and presentation method should be relevant to the needs of the audience.
  - **Project records.** Project records can include correspondence, memos, meeting minutes, and other documents describing the project. This information should, to the extent possible and appropriate, be maintained in an organized manner. Project team members can also maintain records in a project notebook or register, which could be physical or electronic.
  - **Feedback from stakeholders.** Information received from stakeholders concerning project operations can be distributed and used to modify or improve future performance of the project.
  - **Lessons learned documentation.** Documentation includes the causes of issues, reasoning behind the corrective action chosen, and other types of lessons learned about information distribution. Lessons learned are documented and distributed so that they become part of the historical database for both the project and the performing organization.

# Manage Stakeholder Expectations

- **Manage Stakeholder Expectations:** process of communicating and working with stakeholders to meet their needs and addressing issues as they occur.
  - involves communication activities directed toward project stakeholders to influence their expectations, address concerns, and resolve issues, such as:
  - helps to increase the likelihood of project acceptance by negotiating and influencing their desires to achieve and maintain the project goals,
  - Addressing concerns that have not become issues, usually is related to anticipation of future problems. These concerns need to be uncovered and discussed, and the risks need to be assessed.
  - Clarifying and resolving issues that have been identified. The resolution may result in a change request or may be addressed outside of the project, for example, postponed for another project or phase or deferred to another organizational entity.
  - helps to increase the probability of project success by ensuring that the stakeholders understand the project benefits and risks. This enables them to be active supporters of the project and to help with risk assessment of project choices. By anticipating people's reaction to the project, preventive actions can be taken to win their support or minimize potential negative impacts.





# Manage Stakeholder Expectations:

## Inputs

- **Stakeholder Register:** list of the relevant stakeholders for the project. It is used to ensure that all stakeholders are included in the project communications.
- **Stakeholder Management Strategy:** An understanding of stakeholder goals and objectives is used to determine a strategy to manage stakeholder expectations.
- **Project Management Plan:** contains the communications management plan. Stakeholder requirements and expectations provide an understanding of stakeholder goals, objectives, and level of communication required during the project. The needs and expectations are identified, analyzed, and documented in the communications management plan, which is a subsidiary of the project management plan.
- **Issue Log:** or action item log can be used to document and monitor the resolution of issues; to facilitate communication and ensure a common understanding of issues.
  - Issues do not usually rise to the importance of becoming a project or activity but are usually addressed in order to maintain good, constructive working relationships among various stakeholders, including team members.
  - Issues are clearly stated and categorized based on urgency and potential impact. Unresolved issues can be a major source of conflict and project delays.
- **Change Log:** used to document changes that occur during a project. These changes and their impact to the project in terms of time, cost, and risk, must be communicated to the appropriate stakeholders
- **Organizational Process Assets:** include:
  - Organizational communication requirements
  - Issue management procedures
  - Change control procedures
  - Historical information about previous projects

# Manage Stakeholder Expectations: Tools and Techniques

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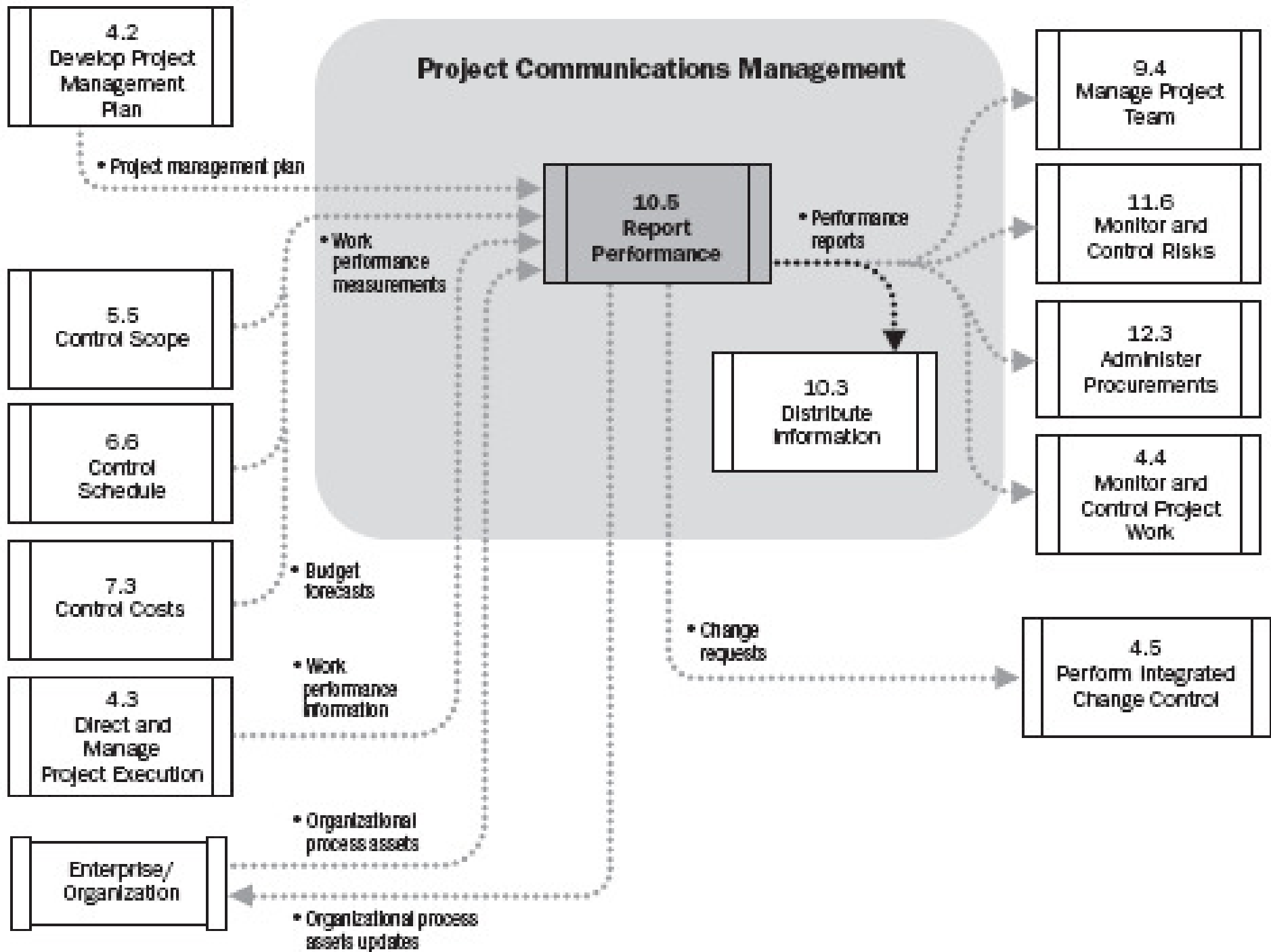
- **Communication Methods:** identified for each stakeholder in the communications management plan are utilized during stakeholder management.
- **Interpersonal Skills:** The project manager applies appropriate interpersonal skills to manage stakeholder expectations. For example:
  - Building trust,
  - Resolving conflict
  - Active listening
  - Overcoming resistance to change
- **Management Skills:** act of directing and controlling a group of people for the purpose of coordinating and harmonizing the group towards accomplishing a goal beyond the scope of individual effort. Management skills used by the project manager include:
  - Presentation skills
  - Negotiating
  - Writing skills
  - Public speaking

# Manage Stakeholder Expectations: Outputs

- **Organizational Process Assets Updates:** include:
  - Causes of issues
  - Reasoning behind corrective actions chosen
  - Lessons learned from managing stakeholder expectations.
- **Change Requests:** Managing stakeholder expectations may result in a change request to the product or the project. It may also include corrective or preventive actions as appropriate.
- **Project Management Plan Updates:** Communications management plan e.g. is updated when new or changed communication requirements are identified. For example, some communications may no longer be necessary, an ineffective communication method may be replaced by another method, or a new communication requirement may be identified.
- **Project Document Updates:** include:
  - **Stakeholder management strategy.** This is updated as a result of addressing concerns and resolving issues. For example, it may be determined that a stakeholder has additional informational needs.
  - **Stakeholder register.** This is updated as information on stakeholders change, when new stakeholders are identified or if registered stakeholders are no longer involved in or impacted by the project, or other updates for specific stakeholders are required.
  - **Issue log.** This is updated as new issues are identified and current issues are resolved.

# Report Performance

- **Report Performance:** process of collecting and distributing performance information, including status reports, progress measurements, and forecasts.
  - involves the periodic collection and analysis of baseline versus actual data to understand and communicate the project progress and performance as well as to forecast the project results.
  - need to provide information at an appropriate level for each audience.
  - The format may range from a simple status report to more elaborate reports.
  - A simple status report might show performance information, such as percent complete, or status dashboards for each area (i.e., scope, schedule, cost, and quality).
- More elaborate reports may include:
  - Analysis of past performance,
  - Current status of risks and issues,
  - Work completed during the period,
  - Work to be completed next,
  - Summary of changes approved in the period
  - Other relevant information which must be reviewed and discussed.
- A complete report should also include forecasted project completion (including time and cost). These reports may be prepared regularly or on an exception basis.



# Report Performance: Inputs

- **Project Management Plan:** provides information on project baselines.
  - The performance measurement baseline is an approved plan for the project work to which the project execution is compared, and deviations are measured for management control.
  - The performance measurement baseline typically integrates scope, schedule, and cost parameters of a project, but may also include technical and quality parameters.
- **Work Performance Information:** Information from project activities is collected on performance results such as:
  - Deliverables status
  - Schedule progress
  - Costs incurred
- **Work Performance Measurements:** used to generate project activity metrics to evaluate actual progress compared to planned progress. These metrics include, but are not limited to:
  - Planned versus actual schedule performance
  - Planned versus actual cost performance
  - Planned versus actual technical performance
- **Budget Forecasts:** provide information on the additional funds that are expected to be required for the remaining work, as well as estimates for the completion of the total project work.
- **Organizational Process Assets:** include:
  - Report templates
  - Policies and procedures that define the measures and indicators to be used
  - Organizationally defined variance limits

# Report Performance: Tools and Techniques

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- **Variance Analysis:** it is an after-the-fact look at what caused a difference between the baseline and the actual performance.
  - The process for performing variance analysis may vary depending on the application area, the standard used, and the industry.
  - Common steps are:
    - Verify the quality of the information collected to ensure that it is complete, consistent with past data, and credible when comparing with other project or status information,
    - Determine variances, comparing the actual information with the project baseline and noting all differences both favorable and unfavorable to the project outcome. Earned value management uses specific equations to quantify variances.
    - Determine the impact of the variances in the project cost and schedule as well as in other areas of the project (i.e., quality performance adjustments and scope changes, etc.).

# Report Performance: Tools and Techniques

- **Forecasting Methods:** process of predicting future project performance based on the actual performance to date.
- Forecasting methods may be classified in different categories:
  - **Time series methods.** use historical data as the basis for estimating future outcomes.
    - Examples of methods: earned value, moving average, extrapolation, linear prediction, trend estimation, and growth curve.
  - **Causal/econometric methods.** Some forecasting methods use the assumption that it is possible to identify the underlying factors that might influence the variable that is being forecasted.
    - For example, sales of umbrellas might be associated with weather conditions. If the causes are understood, projections of the influencing variables can be made and used in the forecast.
    - Examples of methods in this category include regression analysis using linear regression or non-linear regression, autoregressive moving average (ARMA), and econometrics.
  - **Judgmental methods.** incorporate intuitive judgments, opinions, and probability estimates.
    - Examples of methods in this category are composite forecasts, surveys, Delphi method, scenario building, technology forecasting, and forecast by analogy.
  - **Other methods.** may include simulation, probabilistic forecasting, and ensemble forecasting.



# Report Performance: Tools and Techniques

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- **Communication Methods:** Status review meetings can be used to exchange and analyze information about the project progress and performance.
  - The project manager generally uses a push communication technique to distribute performance reports.
- **Reporting Systems:** provides a standard tool for the project manager to capture, store, and distribute information to stakeholders about the project cost, schedule progress, and performance.
  - Software packages allow the project manager to consolidate reports from several systems and facilitate report distribution to the project stakeholders.
  - Examples of distribution formats may include table reporting, spreadsheet analysis, and presentations.
  - Graphic capabilities can be used to create visual representations of project performance information.

# Report Performance: Outputs

- **Performance reports:** organize and summarize the information gathered, and present the results of any analysis as compared to the performance measurement baseline.
  - Reports should provide the status and progress information, at the level of detail required by various stakeholders, as documented in the communications management plan.
  - Common formats for performance reports include bar charts, S-curves, histograms, and tables.
  - Variance analysis, earned value analysis, and forecast data is often included as part of performance reporting.
- Performance reports are issued periodically and their format may range from a simple status report to more elaborate reports.
- A simple status report might show only performance information such as percent complete, or status dashboards for each area (e.g., scope, schedule, cost, and quality).
- More elaborate reports may include:
  - Analysis of past performance,
  - Current status of risks and issues,
  - Work completed during the reporting period,
  - Work to be completed during the next reporting period,
  - Summary of changes approved in the period,
  - Results of variance analysis,
  - Forecasted project completion (including time and cost)
  - Other relevant information to be reviewed and discussed.

# Report Performance: Outputs

## *Tabular Performance Report Sample*

	Values			Variance		Performance Index	
WBS Element	Planned Value (PV)	Earned Value (EV)	Actual Cost (AC)	Schedule EV - PV	Cost EV - AC	Schedule EV ÷ PV	Cost EV ÷ AC
1.0 Pre-Pilot Plan	63,000	58,000	62,500	(5,000)	(4,500)	0.92	0.93
2.0 Checklists	64,000	48,000	46,800	(16,000)	1,200	0.75	1.03
3.0 Curriculum	23,000	20,000	23,500	(3,000)	(3,500)	0.87	0.85
4.0 Mid-Term Evaluation	68,000	68,000	72,500	–	(4,500)	1.00	0.94
5.0 Implementation Support	12,000	10,000	10,000	(2,000)	–	0.83	1.00
6.0 Practice Manual	7,000	6,200	6,000	(800)	200	0.89	1.03
7.0 Roll-Out Plan	20,000	13,500	18,100	(6,500)	(4,600)	0.68	0.75
Totals	257,000	223,700	239,400	(33,300)	(15,700)	0.87	0.93

# Report Performance: Outputs

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- **Organizational Process Assets Updates:** include report formats and lessons learned documentation, including the causes of issues, reasoning behind the corrective action chosen, and other types of lessons learned about performance reporting. Lessons learned are documented so that they become part of the historical database for both this project and the performing organization.
- **Change Requests:** Analysis of project performance often generates change requests. These change requests are processed through the Perform Integrated Change Control process as follows:
  - Recommended corrective actions include changes that bring the expected future performance of the project in line with the project management plan, and
  - Recommended preventive actions can reduce the probability of incurring future negative project performance.



Въпроси?

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