ENGR 301
Engineering Management

DOCUMENTATION AND COMMUNICATION

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Communication Management

The single biggest problem in communication is the illusion that it has taken place.
- George Bernard Shaw

The Importance of Communication

"During their course of study at the University, students are expected to develop ideas and express themselves in well-structured, grammatically correct written language."

– Student Assessment Handbook (April 2018)

Do you agree with this comment?

Project Communications Concepts

Project communications management, particularly in the execution phase, is not just "talking"!

It involves gathering information to:

◦ create, distribute, store, retrieve, and dispose of

project communications in accordance with the "communications management plan".

Project Communications Concepts

Project communications management involves:

- Formal and Informal Communications

- Nonverbal Communications

- Using Appropriate Medium

- Using Appropriate Register

- Understanding Individual and Group Communication Needs

- The Impact of Team Size on Project Communications

Project Communications Concepts

The main outputs are:
- project communications *and*

updates to
- project documents,
- the project management plan, and
- organizational process assets.

Organizational process assets are

"Policies and procedures related to project management, past project files and lessons-learned reports from previous, similar projects."

Project Communications Concepts

Formal and Informal Communications

Formal status reports are not enough!

- Conversations are often preferred, and preferable, to reports or emails

- Face-to-face conversations build trust and relationships

- Frequently are more revealing and productive than formal written documentation

The difference between good and excellent project managers is their ability to nurture relationships and use **empathic listening skills**.

Empathic Listening and Rapport

Good project managers are **empathic listeners**—they listen with the intent to understand

◦ Before you can communicate with others, you have to have **rapport**—a relation of harmony, conformity, accord, or affinity

◦ **Mirroring** is the matching of certain behaviors of the other person, a technique to help establish rapport

[From Covey, *The Seven Habits of Highly Effective People*]

Non-verbal Communications

Research suggests that:
- 58% of human communication is body language
- 35% is how the words are said
- 7% is the content of what is said

The specific numbers are subject to contextual variation, but:
- tone of voice
- body language
- and in particular facial expression

are crucially important.

Project Communications Concepts

Using Appropriate Medium

Email is not great for everything!

- Hard copy
- Phone call
- Voicemail
- Email
- Face-to-face meeting

Each have strengths and weaknesses for different purposes.

Project Communications Concepts

Using Appropriate Register

- ◦ Don't talk to your client in the same way you talk to your team
- ◦ Don't talk to your CEO in the same way to talk to your boss
- ◦ Appropriate use of detail
- ◦ Appropriate inclusion of content (materiality)

Case Study: Using Appropriate Register

https://dilbert.com/strip/2005-02-20

Project Communications Concepts

The Impact of Team Size on Project Communications

It's just mathematics:

number of communication channels = n(n-1) / 2

It's smart to share the responsibility for communications management through the team.

Understanding Individual and Group Communication Needs

Don't believe you can rectify setbacks by adding more people!

- People are not interchangeable.

- Different personality traits mean different communication styles and needs

- Geographical and cultural backgrounds add to the complexity

- Human communication takes *time*

Be aware of the needs of individuals and the group in terms of communication

- times, words, etc.

- beware of assumptions of shared understanding

Communicating Professionally

1. Communicating inside business hours.

   ◦ What message does communicating outside of business hours convey?

2. Following-up meetings immediately with concise written minutes of agreements and action points.

   ◦ What message does making **audio recordings** of meetings convey?

   ◦ How useful is an **audio recording** compared to concise **written minutes**?

Some of these ways of communicating exhibit the traits we associate with professionalism. Do we agree on which those are?

Communications Management Outputs

Business Process Updates

In larger organisations, there will be written documentation of structures for:

- policies and procedures/processes
- guidelines
- standards for work/deliverables
- information systems
- financial systems

Your project communications will have to work with these business processes and, sometimes, projects require changes to processes.

Project Communications and Updating Business Processes

Getting project information to the right people at the right time and in a useful format is just as important as developing the information in the first place.

During execution, project teams must address important considerations for creating and distributing information.

Project Communications Concepts

"One Single Version of the Truth"

Project Communications and Updating Business Processes

Getting project information to the right people at the right time and in a useful format is just as important as developing the information in the first place.

During execution, project teams must address important considerations for creating and distributing information.

Any teams willing to show the current state of their GitLab project(s)?

Monitoring and Controlling Project Communications

Reporting Performance keeps stakeholders informed about how resources are being used to achieve project objectives

- **Status reports** describe where the project stands at a specific point in time
- **Progress reports** describe what the project team has accomplished during a certain period
- **Forecasts** predict future project status and progress based on past information and trends

Who are your stakeholders and what do they need to know?

Monitoring and Controlling Project Communications

Status Reports There is an art to succinctly describing where the project stands at a specific point in time. It requires you to know *both* what *should* be happening and what is *actually* happening.

Stick to the "triple constraint" and "just the facts"

Note: oft-times add Risk for a "quadruple constraint".

Scope: Is work being accomplished as planned?

What work task(s) were planned for this point in the project and which tasks are actually being performed.

Time: How long did it take to perform tasks?

How long tasks were planned to take and how long they are actually taking.

Cost: How much money has been spent to date?

How much was planned to be spent and how much has actually been spent.

Monitoring and Controlling Project Communications

Status Reports: No surprises, no excuses! If there's a problem, don't try to sugar-coat!

- Identify the problem

- State the impact on achieving project goals

- State what you're doing to correct the problem and get back on track

"Being a project manager means never having to say you're sorry"

Communication: Specificity – Conciseness – Accuracy

POOR ISSUE CLOSING COMMENT

While this Issue describes an opportunity to [some work] to improve [feature] of the data recorder. However, the improvement of [feature] would be negligible and it would be better to investigate other changes to make that could improve [feature].

Weaknesses of this comment:
◦ Doesn't state **why** the improvement is "negligible";
◦ Lacks specificity/detail about **how** the determination/evaluation of "negligible" was made;
◦ Provides no detail of **what** "other changes" are and **how** they might be investigated.
◦ Lacks conciseness

BETTER ISSUE CLOSING COMMENT

Closing: evaluated [this work] (commit 33b4ad9e) and found negligible benefit (< 1%). Investigating [specific work], raised as #98, instead.

Strengths of this comment:
◦ Specifies **why** the Issue is being closed;
◦ Specifies **how** the decision to close was reached, on **what** basis, with a **reference**;
◦ Specifies alternate approach being pursued, with a **reference;**
◦ Concise.

Communication:
Specificity – Conciseness – Accuracy

POOR ISSUE PROGRESS COMMENT

Spent time in lab trying to [do something]. [something] wasn't working. I did [something]. Both approaches gave us the same error XYZ which means [inaccurate/speculative diagnosis].

Weaknesses of this comment:

◦ Doesn't state **what** "wasn't working" means specifically;

◦ Doesn't state **how** to reproduce the problem;

◦ Speculates and/or is inaccurate;

◦ Verbose

BETTER ISSUE PROGRESS COMMENT

Attempted [something] by **specific command(s)** but received error XYZ (full transcript follows). Tried [something] (commit 33b4ad9e). Documentation for error XYZ (link) states [summary]

Strengths of this comment:

◦ Specifies **what** commands were tried;

◦ Specifies **how** to reproduce the problem;

◦ Specifies **what** technical approaches were attempted, with a **reference** and a **transcript;**

◦ Concise.

Addendum: Remember Your ABC's

A – Always

B – Be

C – Communicating

With reference to: Glengarry Glen Ross (1992).