DEV.02

Effective Presentation Skills for Cost Engineers

Dr. Andrew F. Griffith, PE

*E*ffective communication is important for cost management professionals. We collect and analyze data concerning a project's estimated cost and schedule, current status, risks, and final outcome. We communicate our findings to the project team, functional managers, business sponsors, and even the public. Effective communication is essential to our success as a profession and to our individual careers. The most accurate analysis is of little use if it is not transmitted to others.

Oral presentations with projected slides as support are often used to communicate the results of our work. In many cases, this type of presentation is the only form of communication. Most of us spend a significant amount of time attending or delivering presentations that are supported by Microsoft ® PowerPoint® slides. Why are we using presentations more than ever before? With the advent of computers and easy availability of PowerPoint, most of us now have the tools to build presentations. In the past, plastic presentation laminates were hand drawn, which put a limitation on how and when presentations were delivered. Another reason is that professionals are under increased time pressure and are less likely to read an article, report, or even a long e-mail message. Presentations are viewed as a fast, effective, and easy form of communication.

When done well, presentations can be effective. Effective presentations can educate, provide a forum for questions, facilitate agreement, motivate action, and even entertain. However, many business presentations are not effective. They often lack a clear objective, flow, or structure. Poor presentations are often too detailed or are too long. Finally, poor delivery can undermine what would otherwise be an effective presentation. What can we do to make our presentations more effective? Based on extensive literature review, work with colleagues, formal training courses, and good and bad experiences, this paper outlines a framework for developing and delivering effective presentations. Everyone can improve his or her presentation skills. The objective of this article is to help you improve the effectiveness of your business presentations by outlining some basic principles and proven techniques. This framework is broken down into three major categories:

- Developing the content and structure based on the audience and objective of the presentation, or simply the Story
- Building the supporting audiovisuals, or Mechanics
- Planning, rehearsing, and giving the actual presentation, or Delivery

STORY

Building a good story is a critical first step. The story is the overall message that you want to convey to the audience. The story should be structured in a way that is easy to follow and easy to understand. The more our presentations can be a story, means the more likely we are to hold our audiences' attention. Three articles published in the *Harvard Business Review* discuss the power of stories in business communication [1], [2], and [3].

Unfortunately, most business presentations do not tell a story. Many presentations follow the same sequence that was used in doing the work. In other words, the presentation is a blow-by-blow account of how the presenter did his or her work and arrived at the conclusions. This may be appropriate for a dissertation defense, but does not make for much of a story.

So how do you build a good story? You should follow three steps as you design the presentation: define the situation, articulate the core concept, and construct a storyboard.

Define the Situation

You have worked long hours on the research, analysis, and hard thinking required by your topic. Now it is time to think about the situation that you will face when you give the presentation:

- Why are you giving this presentation? Most people would rather do almost anything but sit through another business presentation. You need to convince yourself that they should attend your presentation. What do you want your audience to do or think as a result of the presentation? Write a single sentence stating your objective for the presentation. The objective should be realistic, should be specific, and should lead to action by the audience [6].
- Who is the audience? Study your audience before you design the presentation. If your topic is contingency setting, the presentation you give to a group of seasoned cost engineers would be different from one that you would give to senior management. You need to define who your audience is and evaluate the experience, perspective, and needs of the audience.

- How much time is allowed? You need to know how much time is available for your presentation and plan accordingly. In most situations, audiences appreciate it when a presentation is relatively short and to the point. Even if you have 4 hours available, strive to make it as short as possible.
- What is the best medium for delivery? Do not automatically go to a traditional presentation format. Depending on the audience, objectives, and time available, consider all options. You may decide to provide a handout and simply talk as you sit around a conference table. You may also consider a talk with no supporting slides. The point is to deliberately select the best medium for delivery [6].

Write the Core Concept

Before you begin to build the actual presentation, you should articulate your core concept. Using only a single sentence, write down the core story of you presentation. This exercise is designed to help you stay focused and should include only the basic story:

- What is the objective of the work that you have done?
- What are your core conclusions?
- What are your key recommendations?

Build the Storyboard

Too often people begin building presentations by going directly to the computer and opening PowerPoint. They start to build slides in a linear method from title slide forward. This can be inefficient because they may spend time finalizing a slide that they may eventually discard. Also because of the sunk cost of time, they are reluctant to cut slides after they are created.

Building a storyboard is a technique that you can use to develop an overall flow before starting to build the actual presentation [5]. A storyboard is used to develop the initial structure and flow of a presentation. It lets you map out the presentation before you begin to invest time in building the actual slides.

On a white board or flip chart, lay out the story in a brief format. The first draft may be a simple outline, but it should then evolve into an expanded concept of what will be in the presentation. Your final storyboard spells out details of how the story will unfold. How will you begin the presentation, when will you summarize the conclusions, what sequence will you use, and how will you finish?

MECHANICS

The observed products of the presentation are the mechanics. Mechanics include the audiovisuals used to support the presentation and the handouts provided to the audience. The decisions made regarding the mechanics can have a significant effect on the results.

Good mechanics enhance presentations is several ways. They provide a link between the story and the actual delivery. Good mechanics also facilitate understanding and increase retention. In general, good mechanics can enhance your ability to communicate the message and achieve your objective.

With available technologies, we have a limitless set of options for developing the mechanics of our presentations. With computers, we can insert video, animation, and sound into a slide presentation. We can also produce professional quality handouts using desktop publishing tools. The flexibility available today was unimaginable just a few years ago, which can be both good and bad for the effectiveness of our presentations.

Unfortunately, many presentations go astray despite, or because of, these capabilities. Many presentations overuse these features or simply violate some basic principles concerning graphics. The results are figures that are too busy to understand, long unreadable text slides, dead time when the fancy application is not working, too many slides, or slides that do not support the core concept. In short, poor mechanics get in the way and hurt your ability to communicate your message.

What can we do to improve the mechanics of our presentations? A presenter needs to focus on both the audiovisuals and handouts.

Audiovisuals

Good audiovisuals are essential to an effective presentation. They help to bring the story to life and increase understanding and retention. However, in many cases, the audiovisuals do not help, but get in the way. Poor planning regarding projection technology, sound systems, access to Internet, and application of special computer software can disrupt a presentation, but what most often undermines a presentation is poor design of the projected slides. Because we can do so much with PowerPoint, we often try to do too much.

What can we do to avoid problems with our audiovisuals? First, follow some basic principles when designing graphics. Second, step back and look at the graphics as a whole package.

Graphics

Good graphics are a key component of an effective presentation. Graphics serve many purposes in a presentation, especially one that involves data and analysis. However, it is critical to appreciate what presentation graphics can do and what they cannot do. Well-designed graphics can do the following [5]:

- Clarify concepts or data
- Reinforce verbal communication
- Create interest
- Stimulate thought
- Focus audience attention
- Involve audience
- Review critical points
- Provide transitions

It is also critical to recognize what graphics cannot do. Some of the things that graphics cannot do include the following [5]:

- Replace the presenter
- Substitute for the presentation itself
- Compensate for inadequate organization and preparation
- Mask weak content
- Hide poor presentation skills

2006 AACE International Transactions

Given the fact that most cost professionals did not study graphic design in school, what can we do to improve our presentation graphics? There are four different graphic design elements to consider: text slides, numeric charts, relational charts, and pictures [5]. Following a few simple rules for each element will significantly improve your slides.

Text Slides

Text slides are graphics that are made up entirely of text. The following guidelines will help make these slides clear for the audience and easier to present:

- Maintain a single message per slide.
- Maintain a consistent look for the text slides.
- When using bullets to list ideas, topics, or points, use short phrases or sentence fragments. Avoid long complete sentences and keep the number of bullets and the number of words per bullet to a minimum.
- Maintain parallelism throughout the bullets on a slide. Each line should follow the same word order format (verb subject, subject verb, adjective noun verb, etc.).
- Limit the number of bullet levels to only two. Use just the main bullet level and one sublevel.
- Make sure that the font size is large enough to read from anywhere in the room.
- Animate your text slides only when necessary. Unless you have a clear and compelling reason, do not animate your slides. Overuse can be distracting, and, if you are not well practiced, you can easily miss the cues and embarrass yourself.

Numeric Charts

Numeric charts are graphics that present numeric data in chart form. These types of graphics are good for translating complex concepts and showing relationships. Here are a few key points to consider when developing your next set of numeric charts:

- Insert a short phrase that clearly states the message intended in the graphic. This guides the audience directly to the point that you are making with the slide. For example, "Costs continue to rise" may be added to a data slide showing a cost trend on a time line.
- Limit pie charts to six components and put only one pie chart on a slide. Having several pie charts on a single slide is hard to absorb and causes confusion for the audience [5].
- Label all axes on the figures.
- On charts that use lines to demonstrate relationships, make the trend line bolder than the baseline. Also make the baseline bolder than the gridlines.
- Work to make these graphics as simple as possible. Avoid using too many notes, too many colors, or too many lines and stay with only one central message.
- Consider font size. Can everyone in the room read the entire chart?

Relational Charts

Relational graphics are ones that present data and relationships using tables, hierarchies, flow diagrams, or organizational charts. These charts are used to show tables of data, depict the process flow of a system, or present a hierarchical decomposition like a work breakdown structure. When developing these types of graphics, keep the following issues in mind:

- Do not put too many data items on the slide.
- Make sure that the font size inside boxes and cells of tables are large enough to read from any point in the room.
- Always label columns and rows of tables.
- Always include a clear message as to what point you are making with the slide. Avoid simple nondescript titles that only describe the chart, but give no message. An example of this would be a chart that simply has the words "Organization Chart" as the title. What is the point or message that you want to deliver?

Pictorial

These are graphics that are only photographs, sketches, maps, icons, logos or clip art. They are typically used as examples, backdrop, or filler. You should keep two things in mind when creating these types of graphics:

- Use clip art sparingly and find some new ones when you do use it. Clip art can be useful as a filler for white space, but too much, or too cute, can seem unprofessional.
- Be careful with using pictures to inject humor. Inserting a "funny" picture to make a point can be effective if done well. However, too often we do not select an appropriate picture, or our delivery is not polished. Consider the context, audience, topic, and culture before you try this type of humor.

Complete Package

Complete package is the practice of standing back to see the whole presentation as a finished package. The best way to do this is to print the slides and lay them out on conference tables or on the floor. You can quickly scan the flow, check for inconsistencies in graphic design from slide to slide, and make sure that the presentation includes everything you intended. When all the slides are laid out in this way, you can quickly move slides, remove slides, and insert sheets of paper with notes that show a new slide. Another technique is to read just the graphic titles and subtitles in sequence. This will help you to find slides that are not in the best sequence or ones that just do not fit. As you read the slide titles and subtitles, ask yourself if it tells the story. If not, cycle back to the storyboard as a check to see where you have gone wrong.

Handout

Good handouts are another chance to increase retention and achieve your objective. With a useable handout, the audience can refer back to your talk, which reinforces the message. Think back

DEV.02.3

on most business presentations that you have attended. No matter how effective, how much of the information presented are you able to recall 24 hours later? Handouts are critical and should be part of every presentation.

One author states that the handouts "are one of the most underused tools for ensuring retention of presentation content [4]." The problem is that most presenters do not think beyond simply printing the PowerPoint slides in black and white and distributing them as the sole handout.

What makes a good handout? A good handout provides a useable document that reinforces your message and, if possible, provides more information than what is available in your slides. As you are preparing your talk, you will decide to remove information that does not fit the flow or allocated time. You should try to provide these data in the handout. You may also include detailed source information, Web site addresses, or tables of data that you used to draw your conclusions [6].

DELIVERY

Effective delivery is the final polish that you put on a persuasive story and engaging graphics. When delivery is done well, the audience is attentive and involved. As a result, they understand and retain more. In addition, an effective delivery projects confidence and competence, which will also help in persuading your audience.

However, delivery is where presentations often go wrong. Watching the audience from the back of the room can give you an idea if the delivery is working. If audience members are reading something else, checking their electronic handheld devices, talking with a neighbor, or just moving around in their chairs and checking their watches, you can conclude that the presentation is not going well.

What can you do before and during the presentation to improve the chances that your hard work will come across effectively to the audience? First, plan the introduction in detail. Second, practice the whole presentation more than once. Third, during delivery, follow a few simple guidelines regarding voice, body position and movement, and audience involvement. Last, be ready to handle questions.

Introduction

The introduction of the presentation is critical. You must get the audience's attention at the start, or it will be next to impossible to capture their attention later. Because it is so important, you should plan out the introduction in detail and then deliver it with confidence. You must cover a few key points, which will help set the stage for a successful presentation:

- Introduce yourself if you have not been introduced. As part of this step, focus on why the group should listen to you concerning your topic. Do not give them your life story, but give them enough data to feel confident that you are qualified to speak on the subject. "My name is John Smith, and I have been the project controls manager with this project since it began in 2001." If your topic is some aspect of project con-

trols for that project, your brief introduction has done its job. You gave the audience a reason why it should listen to what you have to say.

- Forecast the time. "For the next 45 minutes, I will be talking about..." This establishes a contract between you and the audience. They now know that they will be there for 45 minutes, and you are committing to finish on time.
- Summarize the talk. "We analyzed the data and concluded that our process for soliciting vendor quotes is not effective and needs to be changed." They now know where you are going, and your job is to fill in the details and persuade them to accept the changes. A business presentation should not be a mystery story. Tell them the conclusions at the start.
- Deliver your opening gambit. An opening gambit is your initial hook used to get the audience's attention. One common technique is to lead with a question and ask for a show of hands. Another technique is to make a relatively outlandish claim or statement that will get attention and interest. "I can save your project $2 million in labor costs." You can also lead with an anecdote to set the stage.
- Give the WIFFY (What is in it for you). Tell the audience why they should care about your topic, or how will they benefit by staying in the room and listening to your talk. "By implementing our recommendations, you can shave two months off the current schedule."

The exact sequence of these elements will vary depending on the audience and the topic. However, the introduction of every presentation should include each of the previous points.

Rehearse

Actors rehearse before performing in front of an audience, athletes practice many grueling hours before a competition, and you should rehearse before you give your presentation. Practice helps you to polish the delivery, plan transitions, test the flow design, and build confidence. Let us be clear, though. The intent is not to memorize your presentation. The objective of rehearsing is to internalize the work to the point where you are able to deliver with confidence, but using a natural and relaxed approach.

Many business professionals do not bother to rehearse their presentations. They assume that building the graphics is enough. In addition, many professionals find rehearsing in front of a mirror or in front of a few colleagues to be difficult. They convince themselves that it is better to save it for the actual presentation.

Force yourself to rehearse no matter how awkward or embarrassing. You need to rehearse in a way that best mimics the actual presentation. If you will be standing, rehearse standing. If you will deliver from behind a podium, rehearse with a podium. If you will have a remote to advance slides, rehearse with a remote. As you rehearse, focus on some key elements:

- Rehearse the introduction several times. This is where a little memorization can be a good thing.
- Rehearse movements and gestures. Where are your critical points, and how will you use gestures to add emphasis?

- Practice smooth transitions as you move from section to section. Fumbled transitions are a clear sign of not enough practice.
- Plan and practice internal linkages. Internal linkages are references that you make to elements that you already covered, or will cover later. These linkages help to tie the whole presentation together for the audience.
- If possible, rehearse at least once in the actual space where you will give the presentation.

Show Time

Finally, we are at the point where you actually give the presentation to an audience. If all the preparation steps outlined in this article have been followed, the actual delivery can be fun, as well as effective. However, when the actual delivery is not done well, all the hard work put into building the talk is wasted. Poor "show time" has many familiar characteristics. The presenter's voice is soft and monotone. The presenter turns his or her back and reads the slides to the audience. The talk is filled with repeated "uhs", which some audience members will actually count, and one of the worst is when the presenter stands with hands in his or her pockets playing with keys or coins. Most of these problems show a lack of comfort with the material. The best way to avoid these problems is to rehearse a presentation several times. As you rehearse, focus on a few fundamentals, which will then become second nature:

- Speak clearly, enunciate, and face the audience when speaking. Use a mix of tones, pace, and volume to avoid a monotone delivery.
- Move, but move naturally. Do not stand in only one place. However, you should also avoid any type of repetitive pattern like pacing back and forth or rocking from one foot to the other.
- Finish your talk on time. As part of your introduction, you make a contract with the audience, and you must comply. Identify aspects of your talk that you can skim quickly or even skip, if needed. If there are many questions, offer to stay after the talk to continue answering questions. However, inform those who want to leave that they may do so.
- Speak naturally. Many presenters write out what we are going to say. However, we do not realize that how we express ourselves in writing is different from how we express ourselves when speaking. Speak the way you normally speak: contractions, idioms, and all [6].

Audience Involvement

The audience is key to any presentation. You want the audience members to pay attention, and you need to react properly when you observe problems. Here are a few techniques that will help with this aspect of your delivery:
- Research your audience. Who will be in the audience, and what are some commonalties? You should also learn the names of key audience members.

- Try to greet audience members as they come into the room. Simply saying hello gives you a chance to meet a number of people before starting your talk.
- Observe the audience during the talk and make adjustments if needed. Establish eye contact. As you talk, look directly at individual audience members and look for signs that they are engaged. Are they paying attention and nodding as you talk? If you are losing their attention, you can pick up the pace, increase your energy, ask the audience a question, or skip a section.

Handling Questions

For many presenters, the major source of nervousness about giving presentations is the fear of questions [6]. This is understandable because questions open you up to different points of view and can expose weaknesses in your logic or facts.

On the other hand, questions help you to reinforce your message. Questions can highlight things that were not clear and then give you a second chance to clarify. Questions let you expand on an important point. Questions help you build a better relationship with the audience because it turns the presentation into a conversation. There are a few techniques that you can use when handling questions:

- Anticipate some questions that may come up and plan a response.
- Listen carefully to the questioner. Many presenters will anticipate questions and cut the questioner off in mid sentence. This is not only impolite, but you may be wrong. Let the person finish the question before you begin to respond. If you are patient, the full question may include clues that will help you to formulate a better answer.
- Repeat the question if you think that it is necessary. In some cases, the rest of the audience cannot hear the question, and repeating it helps everyone in the room.
- Answer the question clearly and concisely. Give the answer to the whole audience and not just to the questioner. Also, stay with the question until you know that you have answered it fully.
- If you don't know the answer, just say so. Bluffing never works, and the audience sees right thought it. If it is possible and practical, you should offer to get the answer and recycle with the person who asked the question. However, if you make that offer, you must follow through.

Presentations that generate a lot of questions are normally the most effective because it shows that the audience is thinking and listening. The questions show that they want more information. If you give a talk and there are no questions, be concerned. Chances are that the audience did not receive your message, and you are not likely to achieve your objective.

With a little extra work and the application of some basic techniques, everyone can improve the effectiveness of their presentations. It is critical to our success as a profession and to our individ-

ual careers that we deliver effective presentations. Our work is important, but is of little use if the results are not effectively transmitted to our audiences.

When building a presentation, it is helpful to think about the entire deliverable in three components: Story, Mechanics, and Delivery. Building a compelling story involves establishing the objective of the presentation, evaluating the situation that you will encounter, and building a storyboard. Mechanics involve using the powerful technologies available to build clear and crisp audio-visuals that provide the right support to your talk. Presentation graphics should be the supporting backdrop to your presentation; they are not "the presentation." Finally, delivery involves putting the final polish on your story and graphics. Proper delivery requires practice and the application of some basic principles concerning use of voice, body position and movement, time management and proper handling of questions.

RECOMMENDATIONS

The observations and techniques outlined in this article are based on personal experience, input from colleagues, and published books. Following is a list of books on the subject. These sources provide different perspectives, but they all agree on the basic principles of building and delivering effective presentations. I recommend that you buy a couple of these books and commit yourself to improving your presentations. If you incorporate some of the suggested techniques, you will see positive results.

- Arredondo, Lani, The McGraw-Hill 36-Hour Course: Business Presentations, McGraw-Hill Trade, 1994, ASIN 0070028400.
- Morgan, N., Working the Room: How to Move People to Action Through Audience-Centered Speaking, Harvard Business School Press, 2003, ISBN: 1-57851-819-9.
- Rotondo, J. and Rotondo, M. Jr., Presentation Skills for Managers, McGraw-Hill, 2002, ISBN: 0-07-137930-4.
- Weissman, J., Presenting to Win: The Art of Telling Your Story, Prentice Hall, 2003, ISBN: 0-13-046413-9.
- Westerfield, J., Giving a Presentation, Barnes & Noble, 2003, ISBN: 076074016X.
- Zelazny, G., Say It With Charts: The Executive's Guide to Visual Communication, McGraw-Hill, 2000, ISBN: 0-07-136997-X.
- Zelazny, G., Say It With Presentations: How to Design and Deliver Successful Business Presentations, McGraw-Hill, 1999, ISBN: 0-07-135407-7.

REFERENCES

1. Conger, J. A. (1998), The Necessary Art of Persuasion, Harvard Business Review, May-June.
2. Denning, S. (2004), Telling Tales, Harvard Business Review, May.
3. McKee, R. (2003), Storytelling That Moves People: A Conversation With Screenwriting Coach Robert McKee, Harvard Business Review, June.
4. Rotondo, J. and Rotondo, M. Jr. (2002), Presentation Skills for Managers, McGraw-Hill.
5. Weissman, J. (2003), Presenting to Win: The Art of Telling Your Story, Prentice Hall.
6. Zelazny, G. (1999), Say It With Presentations: How to Design and Deliver Successful Business Presentations, McGraw-Hill.

Dr. Andrew F. Griffith, PE
Analyst
Independent Project Analysis
Koningin Julianaplein 30
4B Babylon
The Hauge 2595 AA Netherlands
Phone: 31-70-3350707
Email: agriffith@ipaglobal.com