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16. Abstract

This work focuses on important concepts in making information available to decision makers and the public, specifically focused on the Transportation Industry. The emphasis is on the PowerPoint presentation and enhancing the message through this medium. Critical elements include adhering to the assigned time limit, incorporating animation, font size, including images, techniques, and preparation. While much information is available on-line about presentations, audiences at too many transportation meetings view substandard presentations, which likely negatively affect understanding and decision-making. Blending available information, focus group feedback and observations yield a foundation for transportation planners in improving presentations to constituents.

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# TESTING INFORMATION TO IMPROVE COMMUNICATION WITH COMMUNITIES AND DECISION MAKERS

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Center for Transportation Training and Research Texas Southern University

Research Report SWUTC/11/473700-00055-1

Sponsored by

Southwest Region University Transportation Center The Center for Transportation Training and Research Texas Southern University 3100 Cleburne Avenue Houston, Texas 77004

September 2011

### **ABSTRACT**

This paper focuses on important concepts in making information available to decision makers, specifically focused on the Transportation Industry. The emphasis is on the PowerPoint presentation and enhancing the message through this medium. Critical elements include adhering to the assigned time limit, incorporating animation, font size, including images, techniques, and preparation. While much information is available on-line about presentations, audiences at too many transportation meetings view substandard presentations, which likely negatively affect understanding and decision-making. Blending available information, focus group feedback and observations yield a foundation for transportation planners in improving presentations to constituents.

#### **EXECUTIVE SUMMARY**

Planners and engineers conduct numerous forums to discuss transportation concepts and projects. PowerPoint presentations are the primary tool used to convey important information during public meetings and at critical decision points for transportation officials and policy makers. Often the outcome may be negatively impacted because the message has not been presented in the best way. Too many individuals have experienced poor PowerPoint presentations skewing their understanding of the material and affecting their conclusions. The objective of this work is to explore development of effective PowerPoint presentations for communicating to transportation communities and decision makers. This research involved a compilation of literature, a focus group of community and transportation professionals and observations.

There is much guidance available about crafting effective PowerPoint presentations. However, the information is ignored or presenters are unaware of its availability. Synthesizing the available literature, focus group feedback and observations yields a foundation for transportation professionals to improve presentations to constituents. Critical elements include adhering to the assigned time limit, using adequate font size, and not overloading each slide. Images, including animation should be used purposefully. The application of PowerPoint presentations are farreaching and tremendously impact transportation knowledge and decision making. This work found that better PowerPoint presentations will occur if several practices are followed. Key practices are listed below.

- Adhere to designated time limit,
- Be careful not to overcrowd the presentation with too many words or lines per slide,
- Use animations and images to add emphasis only,
- Only no more than two fonts per slide,
- Prepare ahead of time to be fully knowledgeable of the topic

Recognize that community consensus and transportation decision making may be advanced by improving the message provided to citizens and officials through the PowerPoint presentation.

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### **ACKNOWLEDGEMENT**

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### CHAPTER I INTRODUCTION

PowerPoint presentations contribute much to communicating important information during public forums and at critical decision points for transportation officials and policy makers. PowerPoint programs are used to discuss projected growth and existing conditions, show plans and options and report project and research findings. In the academic environment, PowerPoint presentations are used to present lectures, projects or introduce concepts; this medium is also used in meetings, conferences and workshops.

Regrettably, most individuals have experienced a poor PowerPoint presentation. Commonly, presenters generally will have too many words on the slide, use fonts or images that are too small, or place too much information on a single slide. The result is unclear messaging and the presenter's key point may be obscured by the quality of the presentation. There is much guidance available about crafting effective PowerPoint presentations. However, the information is ignored or presenters are unaware of its availability. This work explains how to adequately use and display information using the Power Point with a focus on the transportation community. As a demonstration, a PowerPoint presentation was prepared for a FHWA policy initiative and tested on a focus group.

### **OBJECTIVE**

The objective of this work is to explore development of effective PowerPoint presentations for communicating to transportation communities and decision makers.

### **METHODOLOGY**

This research will involve a three-pronged approach. One, a focus group of community and transportation professionals was convened and viewed a PowerPoint presentation about FHWA's noise compatible planning initiative. The group provided comments about the comprehensibility of the information and quality of the slides. Their input was considered alongside the second prong --literature written on the subject. Lastly, the study team observed PowerPoint presentations at workshops, public meetings and other events to document errors that reduce effectiveness of the material being explained.

### CHAPTER 2 STRUCTURING THE PRESENTATION

### **BACKGROUND**

The first version of the PowerPoint program was developed by Bob Gaskins and Dennis Austin (Hewitt, 2008). The software package became more popular than previous presentation methods of 35 mm slides and transparencies, in part, because presentations could be developed more quickly and less expensively than slides or transparencies. Also, the presentation could be placed initially on a disk and later on a flash drive, more easily transportable than a 35 mm slide tray. Microsoft acquired PowerPoint software in 1987 and integrated the use of graphics and animations; more recent versions allow the user to embed entire videos.

Information about effective presentation and developing proficient PowerPoint's is largely the domain of marketing and public relations companies. Numerous sources and web locations offer essentially the same advisement about messaging, font size, preparation, attention to time and use of imaging and animation.

The purpose of the presentation is to provide information, influence a position, or solicit a decision. A truly successful presentation will leave the viewer motivated in some way. At the core, some presentations may just convey knowledge leaving the audience wiser or more informed. Others are designed to lead to a decision on the part of citizens or decision makers. Clearly, a plethora of dynamics are involved in decision making, so positive or negative outcomes would not be based on the presentation alone. A poor presentation can cause a deterioration in the components of the dialog. For example, Lindblom long ago argued the government is incapable of sweeping decisions and can only make incremental changes (1959). Downs (2004) theorizes that elected officials will not concur on the difficult decisions required to reduce congestion. More recently, Brown (2009) writes that decisions are based on intuition, informal reasoning (or judgment), in addition to the data and array of decision-making tools. Nonetheless, data assimilation and decision making strategies will continue to be presented via the PowerPoint medium. Improving presentations and increasing the clarity of message may enhance the attention to the data and decision making strategies in light of encouraging a better balance between the intuition judgment bias and the data available.

### **PREPARATION**

### The Message

The first step in preparing a PowerPoint presentation is focusing on the principle message to convey. A slide toward the beginning should provide an outline of information to be presented in the presentation and include three or four major sections. Ensure the outline is followed throughout the presentation and remind the audience of the outline during the presentation. Delineate key points and develop the concept in entirety. Be cognizant of time parameters and rehearse the comments more than once, timing the slides and comments to ensure maintenance of the schedule. One way to prepare is to write out exactly what you plan to say using the written text as a guide (Chorbajian, 2006).

### **Adhering to the Time Limit**

Exceeding the prescribed time limit is one of the more common mistakes individuals make when presenting in Power Point (Communication Skills-Marketing Oral Presentation, 1999). Power Point presentations that are too long can easily cause the audience to lose interest and give the presenter an unprofessional appearance. Shorter, more impactful presentations are preferred to elongating key points. In general, allow two minutes for each slide; audiences tend to lose focus with something on the screen that has not been discussed for more than five minutes.

# CHAPTER 3 THE SLIDES

### **FONT SIZE**

Basic easy to read fonts should be used in the presentations. The presenter should inquire about the size of the room and ensure the font size is appropriate for all audience members to see. There is no need to be fancy, size can be used to attract attention and smaller fonts indicate a point is less important for purposes of the message of the particular slide. A font smaller than 18pt is likely to be difficult to read (Communication Skills-Making Oral Presentation, 1999). Also use no more than two fonts per slide. More than that on a single slide will be distracting and result in a jumbled appearance.

### **TEXT**

One way to keep a presentation understandable and effective is by not trying to communicate too much on a frame. The Transportation Research Board requests no more than 7 lines per slide. Other sources suggest not exceeding 6 lines per slide. In How to Create an Effective Power Point Presentation (2008) the recommendation is to use 6 words per bullet, 6 bullets per image, and 6 word slides in a row. In some technical presentations, this may not be reasonable, but in adjusting, the presenter should focus on simplicity and winnowing the message to adhere to these guidelines as closely as reasonable.

### **COLORS**

Color options are numerous and leave much to personal preference. In developing the slides, the key is contrast. Pair backgrounds, dark background with light text or light background with dark text. Avoid colors in background and text that are in the middle ranges of the color strip, opting for those at the top and bottom. Avoid the use of yellow and some pale greens as they are difficult to see and often result in glare.

### **IMAGES**

There are two views about images such as photos and figures in presentations. One perspective is they add visual interest and keep audiences engaged; Another perspective is images are an unnecessary distraction. The key is to use images only when adding important information making an abstract point more concrete (Wax, 2008). It is important to limit the graph or image usage to one per slide. Too many images distract the viewer and can cause the main point to be missed (How to create an effective Power Point Presentation, 2008). (Wax, 2008). Refrain from using clip art images and characters that are cartoonish. A specific point should be in progress if these are used. Otherwise, the seriousness of the presentation is at risk of compromise.

### **TECHNIQUES**

PowerPoint Presentation techniques have become a vital component for making the PowerPoint presentation stand out. To receive positive feedback, numerous techniques can be used in a broad spectrum of ways. It is necessary for presenters to make precise decisions when it comes to using techniques that will accommodate the PowerPoint Presentation in a helpful way. There are various methods to capture the audience at the beginning of a presentation. One way is to open with a short video clip or some startling statistic that will gain and keep the audience's attention throughout the presentation (Chorbajian, 2006). Using statistics has always been a useful and easy tactic when dealing with small or large audiences. Another helpful technique is to choose persons in the audience who are nodding and smiling in agreement and talk directly to them. Eye contact is also a useful technique when captivating the audience's attention. Eye contact, accompanied by a smile, gives the audience the impression the speaker is happy to be there. Presenters who are well prepared find it easy to maintain eye contact with the audience 75 percent to 85 percent of the time (Chaney & Green, 2006). Offering the audience refreshments before the presentation is another technique used to gain the audience's attention. Refreshments should be light snacks such as cookies, donuts, or fruit.

#### **ANIMATIONS**

Animations allow the speaker to add interest while emphasizing important details to the audience, but support for using them varies (Tessler, 2003). When incorporating animation, care must be taken to ensure the visual effect is in working order; there is a risk because fool proof animations is difficult to acquire. Audiences are usually patient, but the effect is lost if the animation feature is activated and nothing happens. Care must be taken when using equipment different from that used for practice and developing the presentation. Also, caution is in order because too much animation is distracting. To emphasize a main point, leave the animation on the screen, use only one transition during a slide. One of the most difficult presentations to watch is where the presenter animates every word; sentences fly in, drop down, and explode with sound effects. This is very distracting and makes the audience lose track of what the presenter is explaining (How to create an effective Power Point Presentation, 2008). The presenter may have a strong topic to present, but if the presentation is crowded with animations the presentation is likely to receive negative feedback.

# CHAPTER 4 ADDITIONAL CONSIDERATIONS

### **DELIVERY**

There is no need to read the comments verbatim, rather speak conversationally, as you would to colleagues in a small group setting. Cue cards are fine to hold which trigger the organization and key words or phrases that should be mentioned along with each slide.

### STRUCTURING FOR DECISION MAKING

The presentation must address several phases in order to set the stage for a decision. First is the education phase, which provides background, existing conditions and in general presents the problem. This phase should be designed to gain consensus about existing conditions and the problem at hand. It should present the purpose of the talk and why the audience should be interested. If the general premise advanced here is not concurred, it is less likely that consensus decision making will happen later. Information presented here should be factual, not subject to significant debate. Next, the PowerPoint presentation covers the approach or methods of assembling and processing the information, so the audience knows how the findings were derived. The third phase is the body of the data or information for consideration. Viewers at this phase are essentially walked through the discovery and analysis. Lastly, the information that has been seen is summarized for the decision. The problem being address should be re-presented, the information learned paraphrased and reviewed and the viewer challenged to make a decision or otherwise prompted for their action. Presentations often end with a slide soliciting questions from the audience.

### LESSONS LEARNED FROM THE FOCUS GROUP AND OBSERVATIONS

A focus groups session assembled six community professionals adept at transportation planning and community meetings. The group viewed a PowerPoint presentation designed to solicit support for FHWA's Noise Compatible Planning initiative. Guidance from the group centered on color choices and clarification of visual images. Responses to the assessment tool indicated the information was clear and convincing.

The study team observed PowerPoint presentations at workshops and public meetings. By far, the most frequent error is too many words and lines on a single slide. A series of examples are in Appendix A that show PowerPoint slides used in presentations for a variety of transportation professionals and communities. Acceptable structures and colors are shown as dos and slides with structural or color issues are provided as don'ts.

# CHAPTER 5 CONCLUSION

The application of PowerPoint presentations are far-reaching tremendously impact transportation knowledge and decision making. However, inadequate knowledge and improper development of the PowerPoint presentations are prevalent. Review of documentation, focus groups and observations show that most individuals do not consistently apply best practice guidelines in making a presentation using PowerPoint. This work found that better PowerPoint presentations will occur if several practices are followed as delineated below:

- Adhere to designated time limit,
- Be careful not to overcrowd the presentation with too many words or lines per slide,
- Use animations and images to add emphasis only,
- Only no more than two fonts per slide,
- Prepare ahead of time to be fully knowledgeable of the topic

Recognize that community consensus and transportation decision making may be advanced by improving the message provided to citizens and officials through the PowerPoint presentation.

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# APPENDIX A EXAMPLES OF RECOMMENDED AND DISCOURAGED POWERPOINT STRUCTURES

The series of slides presented first reflect recommended practice that facilitates communication with PowerPoint slides. Examples are included reflecting **Recommended** formats. Following is a section with **Discouraged** formats.

### **Encouraged Practice and Examples of Recommended Slides**

### **Text**

Keep slides concise – no more than 7 lines per slide and no more than 7 words per line Fonts -use easy to read fonts, title size 48 and 24 for subtitles and lists

Use uppercase letters for the first letter

Use space between lines of text

Use statements or lists, not sentences

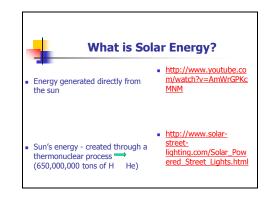
Use keywords that focus on the message.

### Recommended

# Taking a Hard Look at Evacuation

Lessons Learned from Hurricane Ike and Rita

John Doe, Ph.D. Texan University Center for Transportation August 3, 2011



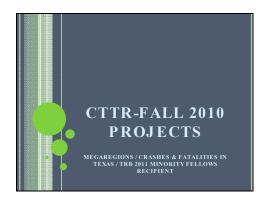
### **Discussion Outline**

- · Lessons Learned from Hurricane Rita
- · Highlights from Literature
- Defining Evacuation Success
- · Considerations for the Future

### Color

Limit color to 2 to 4 colors or shades that stand out and are easily viewed Use colors to highlight important words or concepts

### Recommended

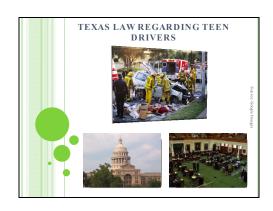




### **Images and Shapes**

Include images that the audience can identify with using no more than 3 images per slide Consider images that reflect the demographics and characteristics of the audience Remember to credit the source of the image, if appropriate



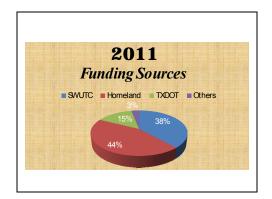


## **Graphs and Charts**

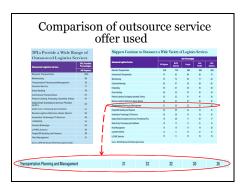
Use only appropriate graphs, charts and images that closely follow or complement the concept of the slide;

Include graphs and charts that show relationships, comparisons and change; illustrate your point verbally, discussing the graph or chart. If you need to show a chart that can't be read; highlight one row and use as case to show the audience what's on the graphic.

### Recommended





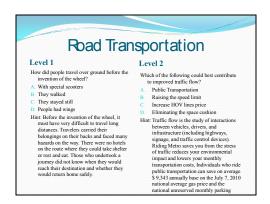


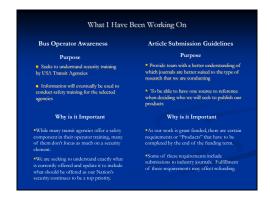
The slides that follow show examples that are difficult to read and will hinder understanding and communication of points, as desired.

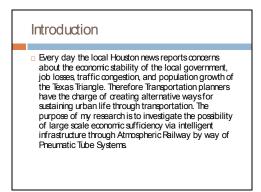
### Discouraged Structures and Examples of Slide Formats Not Wise to Use Text

Don't - include too much detail or crowd the information Refrain from flashy or curvy fonts and using all uppercase letters Omit punctuation marks for bulleted items on slides use

### Discouraged







### Color

Don't mix multiple color schemes in the same presentation Refrain from a dark color on a dark background and light colors on light backgrounds Be cautious of colors that strain the eyes; see low contrast shades in charts and graphs.

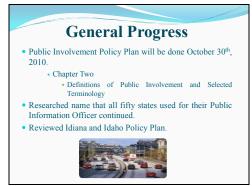
## Discouraged

	Data	Collec	tion	
	North Shepherd	Northwest Station	West Bellfort	Westchase
Population	47739	27070	17004	5171
Distance	9.75	20.15	17.55	15.
Occupancy	284	1920	1921	15
Total Express	0	42	44	1
Location to Congestion	0	1	0	
Visibility	1	1	1	
HOV Access	1	1	1	
Cost Savings	8.23	14.67	12.81	12.8
Time Savings	-9	30.5	16.5	

Too much information, light blue background difficult to see.



Fuchsia (pink) harsh on the eyes.



Text too light under "Chapter Two"

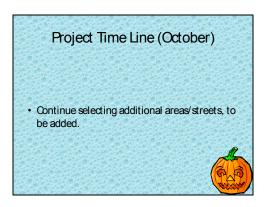
## **Images and Shapes**

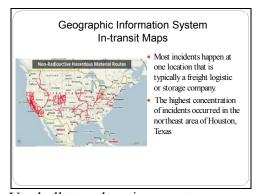
Don't - use too many graphics that can be distracting; use low-quality images; use cartoonish images that can undermine your credibility.

# Discouraged



Dotted background is distracting



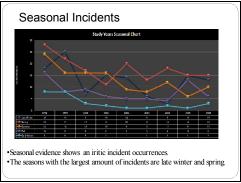


Use bullet explanations, not sentences

# **Graphs and Charts**

Don't - use graphs that are difficult to read or have no connection to the slide or topic.





Too many lines and the key and table numbers can't be read.

### **Sound and Animation**

Don't use sounds when they aren't appropriate Overload the presentation with animations

### **Transitions**

Don't use flashy transitions