

Poster Design: The Basics

Presented by:

Irene Svete, Washington NASA Space Grant

Jennifer Harris, Associate Director, URP

Jake Deppen, Graduate Staff Assistant, URP

Purpose

Academic posters are a summary of what you did, how you did it, and what you learned.

Most are divided into four parts:

- Introduction (*what you did*)
- Design or methods (*how you did it*)
- Results
- Conclusion (*what you learned*)

Space is limited. Choose your words and graphics carefully.

Getting Started

A poster should be visually simple, yet highly informative.



About system dynamics modeling:

- SD is a worldview and a framework for analyzing problems.
- SD provides insight into the interactions between parts of a system.
- SD has been applied to Air Force sustainment before, resulting in unintuitive conclusions: cannibalization reduces F-16 mission capability.

Air Logistics Centers:

- Air Force Sustainment is a complex, large, integrated, and open enterprise.
- There are unique challenges with improving an ALC that may not apply to private corporations:
 - ALCs are not-for-profit.
 - There is a strong social contract prohibiting layoffs.
 - Budgeting occurs years in advance, making short-term changes difficult.
 - Turnover in leadership is very high.
- Do these differences suggest that change methods from industry should be adjusted for the new environment?

Enterprise Change

Improving complex enterprises with system models

Key questions:

When compared to other improvement methods (TQM, 6σ, etc.) does a systems approach...

- ... lead to different conclusions?
- Is it preferable? Under what circumstances?
- How does the approach influence the change process?



Methods:

- Observe the change process underway at the US Air Force Ogden Air Logistics Center.
- Apply system dynamics methods to improving F-16 availability and reducing costs.
- Develop and test hypotheses with system dynamics, and compare these with results from the current change process.



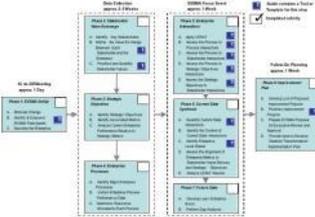


Justin Hemann
Master's Candidate in
Engineering Systems
justinh@mit.edu
650.823.5147

Advisor: George Roth
groth@mit.edu

Research applications

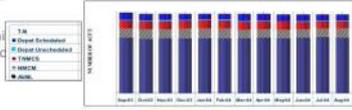
- Enterprise Value Stream Mapping and Analysis (EV SMA) helps participants set goals, create alignment, and plan.
- The system approach used here could be applied in steps 5 and 8 of EV SMA:
 - Identification of enterprise interactions.
 - Development of an improvement plan and selection of improvement projects.



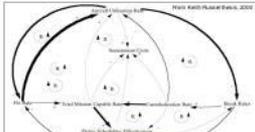
Hypotheses and recommendations

- Several hypotheses have been generated from this approach (at right).
- If the hypotheses are supported by evidence then potential recommendations are:
 - Enable the benefits of improvements with the logistics organization to be re-invested in further improvements.
 - Re-align metrics to discourage local optimization.
 - Testing and recommendations for Hypothesis 1: under development.

- Hypothesis 1: System performance is conserved; improving it will require fundamental changes to the enterprise.
- Hypothesis 2: Local optimization results in negative system behaviors.
- Hypothesis 3: Reinvestment in process improvement has helped the Ogden depot maintenance organization to advance.
 - In 2003 the depots had started all of the 24 process improvement initiatives identified in 2001.
 - Logistics organization started only 7 of 19 initiatives.



Components of availability fluctuate, but the overall availability is constant



Cannibalization hurts mission capability rate while helping local performance

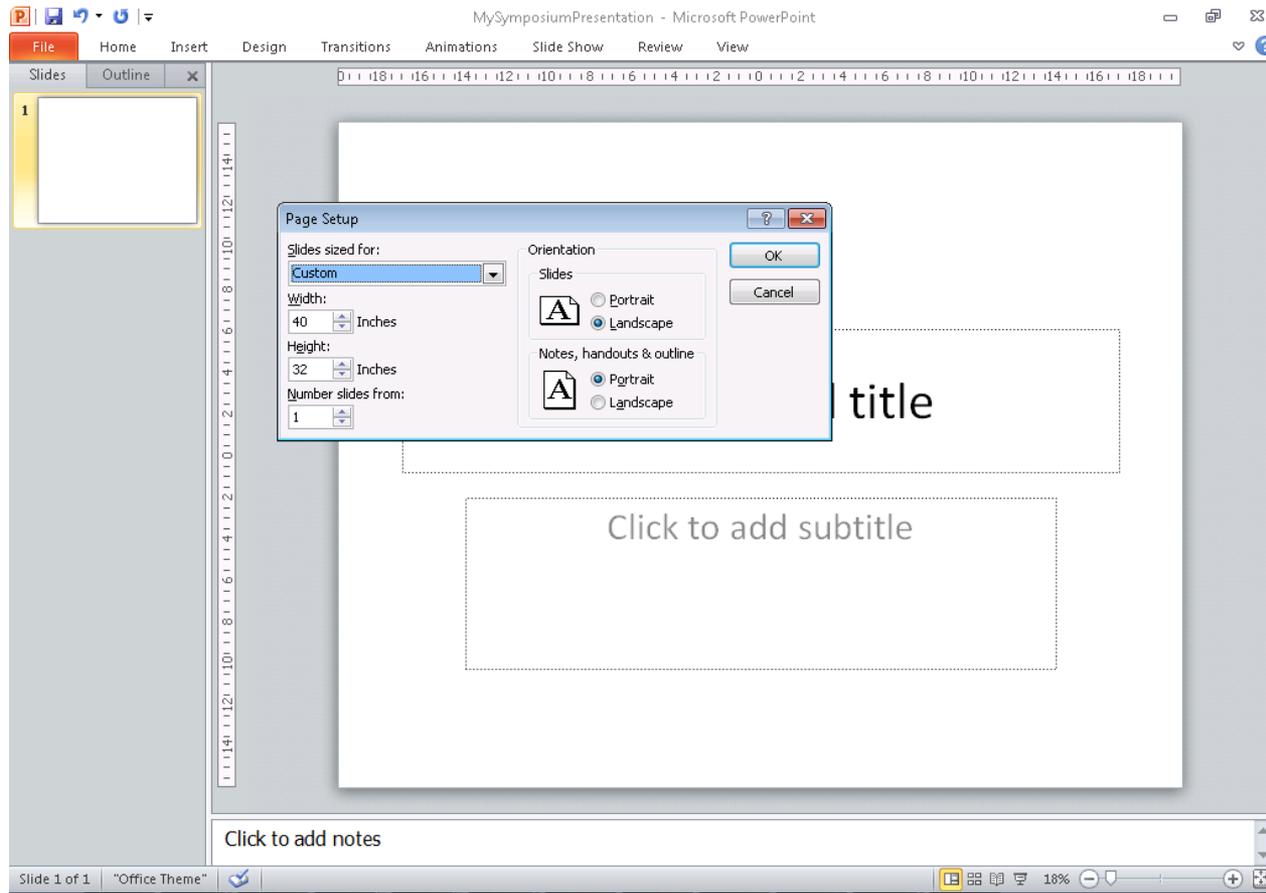
Depot organization reinvests working capital fund, supply organization cannot reinvest

Programs for Poster Design

- **MS PowerPoint (most popular)**
- **Impress (Open Office version)**
- Adobe Illustrator
- Adobe Photoshop
- Adobe InDesign
- Adobe FreeHand (formerly Macromedia)
- LaTeX (mostly for Linux users)
- Paper, scissors & glue stick

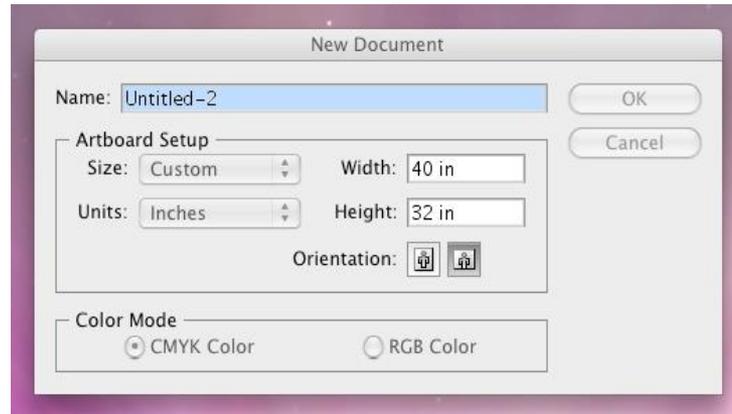
First Steps for PowerPoint

- 1) Open a New Presentation (ppt)
- 2) Change page size to poster size (40" wide x 32" tall for the Undergraduate Research Symposium)

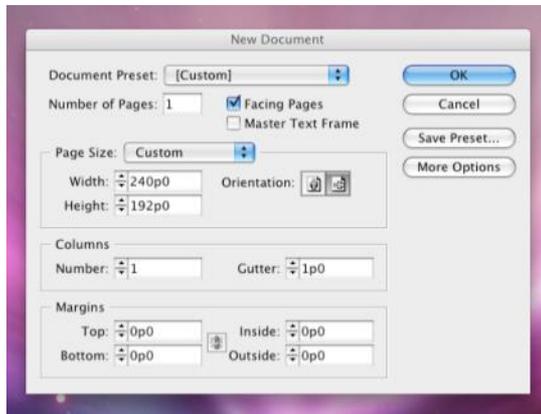


Adobe Options

Illustrator



InDesign



Photoshop



Poster Elements

Words

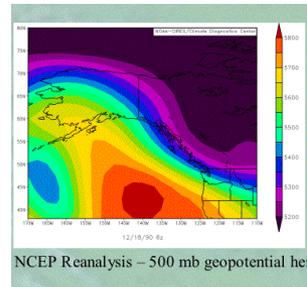
- Title
- Section headings
- Captions
- Body Text

Borders

Backgrounds

Graphics

Charts and Graphs



Photos



Illustrations



Layout

Experiment with the different program features:

- Creating text boxes
- Adding images (insert or copy/paste)
- Adding graphs (copy/paste, check font size)
- Adding tables (copy/paste, create table & copy/paste content)
- Background, etc.

Layout

Present information the way you would normally read — left to right, top to bottom.

Use columns and line breaks to divide the poster into smaller sections.

Use bullets instead of long paragraphs to summarize information.

Fonts

Someone standing 3-4 feet away should be able to read everything on your poster.

- Title: **72-point**
- Headings/Section Titles: **40-point**
- Body Text: **28-point**
- Captions: **24-point**

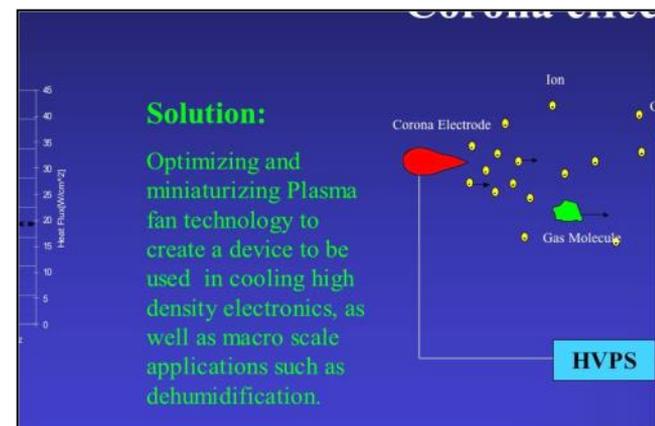
Fonts

Limit yourself to 2-3 types of fonts in order to create consistency and unity.



Sans-serif (e.g., Arial, Futura Verdana) for titles, headings, graphics

Serif (e.g., Times New Roman, Garamond, Footlight MT Light) for text



Images

Poster content should be 60 percent images, 40 percent text.

A picture is worth a 1,000 words. Use graphs, charts, tables and photos to summarize and present data.

Use quotes to illustrate a theme

Don't crowd. White space—like what you see around these words— makes a poster easier to read.

Images

High resolution images (150 dpi or higher) are a must when printing large posters.

Color mode for printing is usually CMYK (confirm with your print shop)

Think about contrast.

Insert objects, charts or photos. Don't cut and paste, or copy and paste.



Acknowledgements and References

Remember to include your name and affiliations.

List names of mentors and/or collaborators.

List funders

Include citations and references to outside sources if appropriate

- In-text citation
- Separate “references” section

Printing Your Poster

PRINT EARLY!!!

Do not wait for the last minute!

Prices indicated are estimates for 40" by 32"

Creative Communications - B-042

<http://f2.washington.edu/fm/c2/posters>

- With Budget: ~\$27
- Without Budget: ~\$34

UW Posters - Health Sciences Building T-271

uwposters.com

- With Budget: Semi-gloss - \$39 + \$7 for proof
- Without Budget: Semi-gloss - ~\$50 + \$7 for proof

Architecture

- Departmental use

Ave Copy Center

- \$5/sq ft (about \$55 + tax)

Kinko's

- \$7.25/sq ft (\$70-\$108+ tax)
 - Same day if not busy

TIP....Request a contract proof, because \$7 can save you a big headache.
Contract proofs are guaranteed!

Other things to consider – matte & semi-gloss or economy bond?

Mounting Your Poster

In most cases, DON'T! Hard to transport/reuse

You can get foam board from the University Book Store (~\$4).

If possible, do not permanently affix your poster to the foam board—use binder clips.

The Day of the Presentation

Check-in between 8 and 10:30 am in MGH.

Poster should be freestanding.

URP will provide the easels; you will be placed near other posters in your research area

Presenters are asked to remain at their posters during the formal session times

Please pick up your poster by 6:30.

Rain happens! – consider a garbage bag for Friday

Tips for Presenting Well

Prepare a two minute summary for visitors using your poster as a visual guide.

Stay close by, but off to the side just a bit, so that passers-by can see things also so that you don't block the vision of people already gathered around.

Don't become so engrossed in conversation with any single individual that you (or they) accidentally prevent others from viewing your poster.

Stay by your poster through the whole session

Final Thoughts

*A good poster can't make up
for bad research, but a bad
poster can make good
research hard to recognize!*

Design Help Desk @ Research Commons

Bring any visual work related to your research—including figures, diagrams, data plots, presentations and posters—and receive help from a designer on staff. (Not for software help)

Design consultants are Design Division graduate students.

Tuesdays, 5:30-7:30pm

Research Commons, Allen Library

No appointment necessary, drop-in only

<http://depts.washington.edu/deshelp/>

Additional Resources

Design Help from UW Posters

http://depts.washington.edu/uwposter/design_help.html

Undergraduate Research Program

<http://www.washington.edu/research/urp/symp/participants.html>

Washington NASA Space Grant Consortium

http://www.waspacegrant.org/for_students/student_internships/wsgc_internships/posterdesign.html

Additional Resources

Microsoft PowerPoint (Open Office Impress)

<http://faculty.washington.edu/robinet/poster.html>

LaTeX

<http://nxg.me.uk/docs/posters/>

OmniGraffle

<http://www.omnigroup.com/applications/omnigraffle/>

UNC The Graduate School Poster Presentation Resources

<http://guides.lib.unc.edu/posters>

Northeastern University Web Guru

<http://www.webguru.neu.edu/communicating-science/communicating/preparing-poster-presentation>