



Software Engineering

ROCHESTER INSTITUTE OF TECHNOLOGY

Senior Projects

Poster Presentation Design for Engineering Students

Note: This presentation was assembled for the Software Engineering undergraduate Senior Projects. I have marked up the document to indicate what elements are specific to Capstone Posters.
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School of Design

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Poster Presentation Design

A poster presents a concise story about your project work.

Depicting a “story” through text and images



Poster Presentation Design

- **Popular for presenting**
- **Fosters interaction**
- **Great for showing:**
 - (Experimental) results
 - Successful and unsuccessful approaches
 - Lessons learned



Content

Your poster will have information about your project's

- Purpose
- Activities
- Results



Content

Depending on the project, different aspects may be emphasized more than others:

- Motivation
- Background Information
- Process (Methodology)
- System Features
- Design
- Technologies Utilized & Rationale
- Delivered Product
- Future Work / Lessons Learned



Content Process

Prepare the content of your poster similar to how you prepare a paper or presentation:

- Gather the main points to be presented
- Write an outline of the main points you want to highlight
- Gather the graphics/visual aids that will supplement your points.



Content

You will most likely have more information than you can present on the poster:

- Refine the text and graphics to create a concise, cohesive message
- Leave out unnecessary details
- Use graphs instead of tables.



Content

Discuss your proposed poster with your faculty coach and project sponsor.

Advisor



Visual Organization: Hierarchy

Hierarchy

Visual hierarchy is the organization and prioritization of content as a means to communicate a message.



Visual Organization: Hierarchy

Elements that help with visual hierarchy:

- Focal Point
- Level of Importance: Primary, Secondary, Tertiary
- Visual Movement/Flow
- Proportion
- Balance
- Repetition/Consistency
- White Space
- Alignment/Grid
- Contrast
- Typography



Visual Organization: Typography

Typography

Readable fonts:

- readable at text size and at headline size
- only use 1 or 2 fonts
- *do NOT use more as that creates visual clutter.*

Visual Organization: Typography

Georgia

Georgia

Helvetica

Helvetica

Avenir

Avenir

Myriad

Myriad

Century

Century

Century Gothic

Century Gothic

Stay away from these fonts:

Times Roman

Arial

Script fonts – these are a NO-NO
in effective visual communication for
presentation

Hand written effect fonts

Verdana or Tahoma



Visual Organization: Typography

Readable fonts – readable at text size and at headline size

Use **weight** and **size** to create hierarchy and organization

Average line lengths – lines of type should not be too long/wide

Use **Flush Left** type for the best readability



Visual Organization: Typography

Use **weight** and **size** to
create hierarchy and organization

Your Title is Most Important *Subtitle is second most important*

Heading Section 1

Sticking to a single type family will help add variation to your designs, while keeping it consistent and uniform. Designers might use various fonts within one family to create a sense of hierarchy -- designing so that the most important elements, such as headlines and quotes, stand out above the rest of the text.

Heading Section2

Kerning is the modification of the space between two letters. For an example, see the image below: Here, I used Franklin Gothic Medium to showcase the natural space you see between two letter T's. It looks a little too snug, right? By customizing the spacing between just these two letters, you'll be able to increase



Average line lengths – lines of type should not be too long/wide, nor too narrow

A line length that essentially traverses the majority of the horizontal width of a standard 8½ x 11-inch page is so long that when your eye finally scans to the end of the line on the right side, returning to the left reference margin where you began is difficult, fatiguing, and can result in re-reading lines of type or having to use your finger to keep track of the line you are reading so you don't make the mistake of re-reading a line of type or losing your place. For any significant amount of prose text, excessively long lines are disastrous. This is pretty tedious, isn't it?

A line length that essentially traverses the majority of the horizontal width of a standard 8½ x 11-inch page is so long that when your eye finally scans to the end of the line on the right side, returning to the left reference margin where you began is difficult, fatiguing, and can result in re-reading lines of type or having to use your finger to keep track of the line you are reading so you don't make the mistake of re-reading a line of type or losing your place. Looks snug, right?

A line length that essentially traverses the majority of the horizontal width of a standard 8½ x 11-inch page is so long that when your eye



Visual Organization: Typography

Use **Flush Left** type for the best readability

Sticking to a single type family will help add variation to your designs, while keeping it consistent and uniform. Designers might use various fonts within one family to create a sense of hierarchy -- designing so that the most important elements, such as headlines and quotes, stand out above the rest of the text. Kerning is the modification of the space

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Justified type creates "rivers", making it harder to read (*unless you know how to track and kern*).



Visual Organization: Typography

Use appropriate **leading** (**linespacing**)

Tight leading (11/11)

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Too much leading (11/21)

see the image below: Here, I used Franklin Gothic Medium to showcase the natural space you see between two letter T's. It looks a little too snug, right? By customizing the spacing between just these two letters, you'll be able to increase

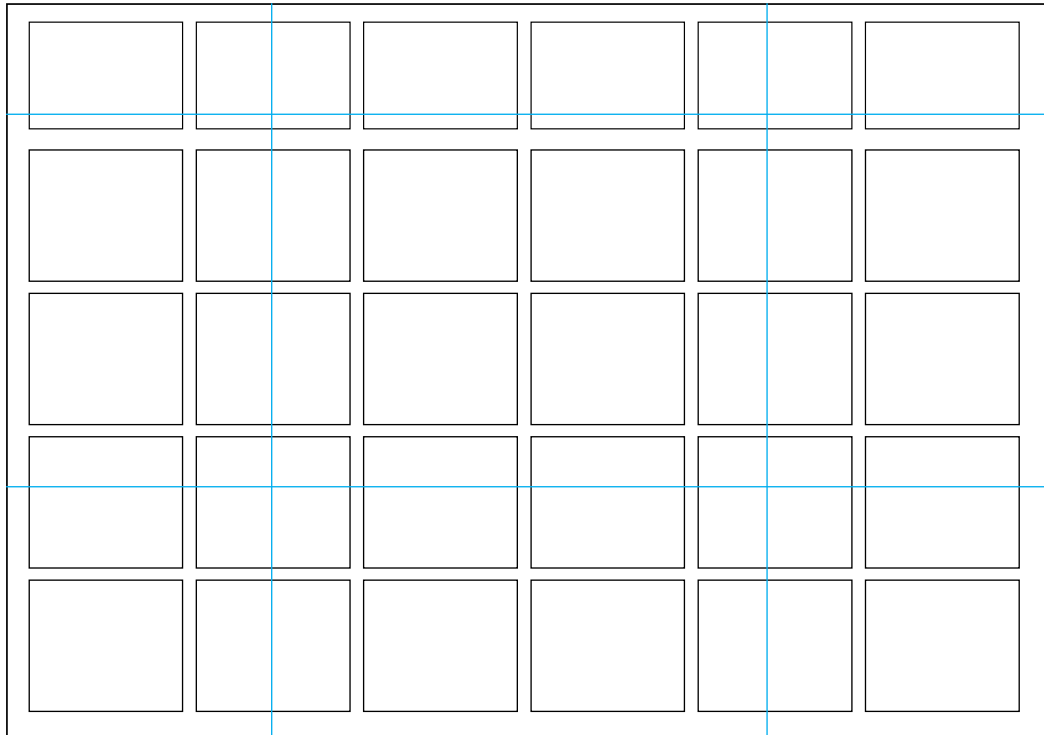
between two letters. For an example, see the image below: Here, I used Franklin Gothic Medium to showcase the natural space you see between two letter T's. It looks a little too snug, right? By customizing the spacing between just these two letters, you'll be able to increase readability.

3 points of leading (11/14)



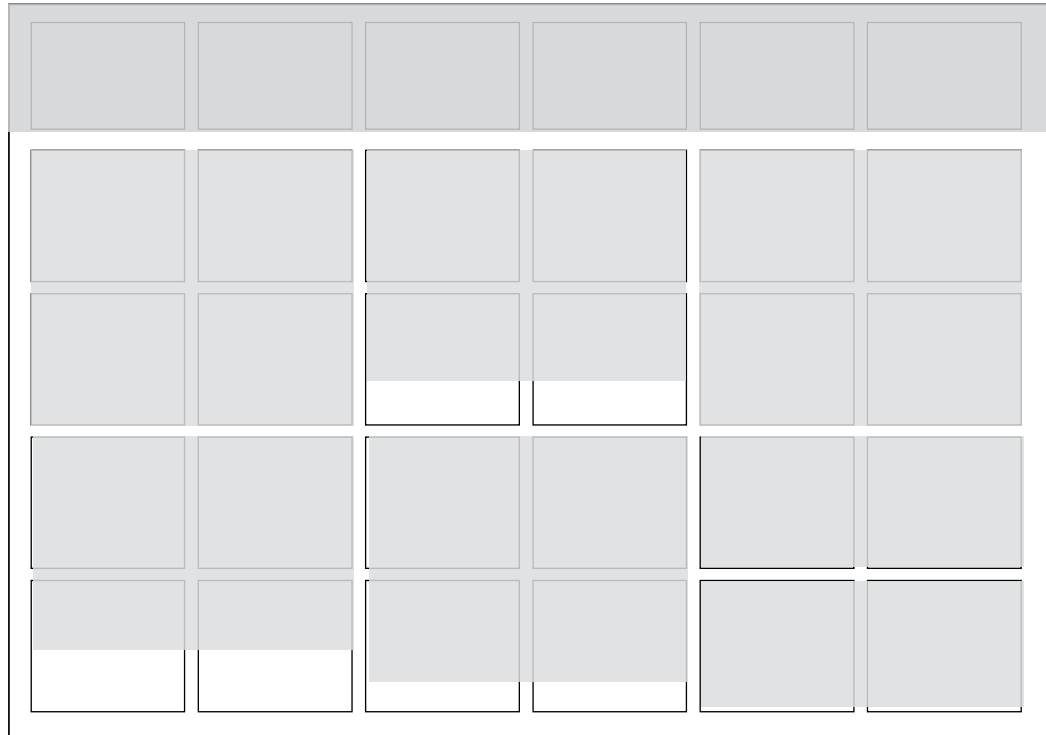
Grids & Guidelines

A grid helps organize content and flow.



Visual Organization

A grid helps organize content
and flow.



Poster Constraints

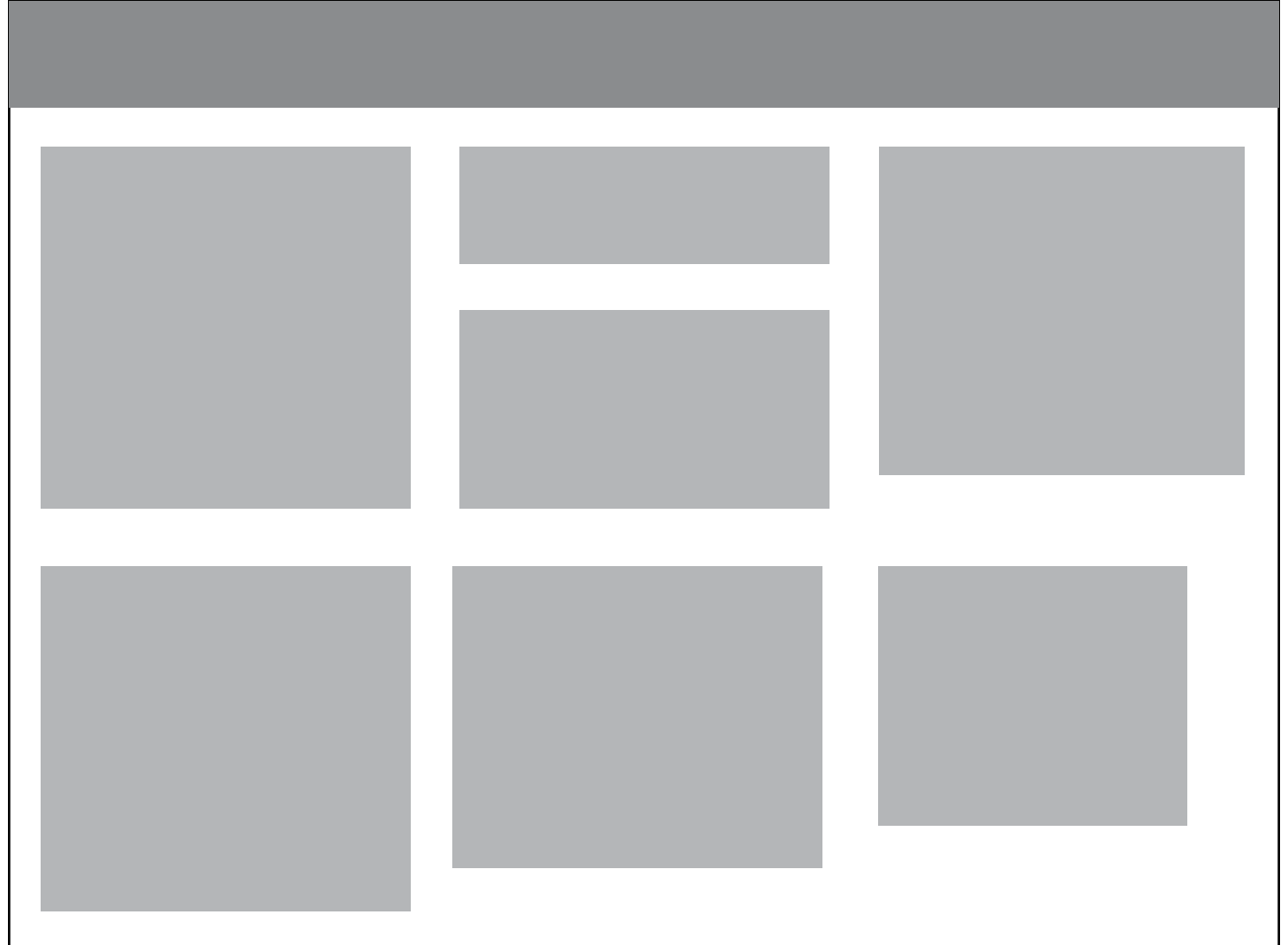
SIZE

30"H x 40"W

Keep the flow of content organized; use conventional reading standards:

- **left to right**
or
- **top to bottom**

Also consider numbering steps



Poster Constraints

This band/area along the top is required, fixed content. Text info on the left; Logos on the right.

Need to read the poster at up to a 4 foot distance from poster

TITLE
(Approx 1" to 2" / 70–120pt)
~~Team name, team members,
sponsors, faculty coach, year~~

Logos: RIT, Software Engineering, Sponsor(s)

Your name, faculty advisor's name, year

Poster Constraints

30"H x 40"W

This band along the top is required, fixed content.

Text info on the left; Logos on the right.

Color banding can also provide control of flow.

Graphics should be clean, clear, easy to read.

TITLE

(Approx 1" to 2"/ 70–120pt)

Team name, team members, sponsors, faculty coach, year

LOGOS

RIT, Software Engineering, Sponsor(s)

CO-OP EVALUATION SYSTEM

The Co-operators, Class of 2015

Tyler Geery, Maddison Hickson, Casey Klimkowski, and Emma Nelson

Faculty Coach

Samuel Malachowsky

Project Sponsors

Jim Bondi and Kim Sowers



Motivation

The purpose of the Co-op Evaluation System (CES) is to allow students to provide feedback on their most recent co-op, and for employers to provide feedback on a student's performance during their most recent co-op. Additionally, the system is used by faculty to approve or reject a student's co-op, and is also used by OCSCE staff to gather data on students' co-ops.

Background

The purpose of this project is to re-engineer the Co-op Evaluation System in order to leverage newer web technologies while also improving performance and user interaction. The current system uses outdated, under-documented technology, which makes it difficult to maintain. Furthermore, the random errors that occur do not give users confidence that their information was submitted properly. Significant improvements to the user interface needed to be made, but the existing database structures were used as a reference for modifications.

Technologies



High-Level System Features

- Students**
 - Complete work report evaluating co-op experience
 - Review previously submitted work reports
 - View employer's evaluation of co-ops
- Employers**
 - Complete evaluation of student co-op work
 - Review previously submitted evaluations
- Departments**
 - Search and review submissions for a given department
 - Approve or reject student co-op evaluations
 - View and edit email notifications for the department
- Administrators**
 - Create, update, and archive forms
 - Search and review all submissions
 - User and college administration
 - View, edit, and send email notifications

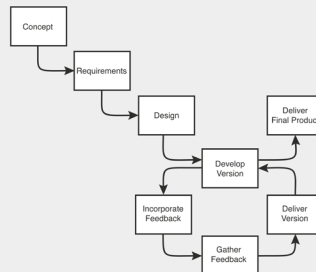
Future Work

As the Co-op Evaluation System is critical to the RIT co-op program and the original system is in poor shape, this project will be followed through to completion by the ITS Enterprise Web Applications Development team, possibly with the aid of another Senior Project team or student workers.

Process Methodology

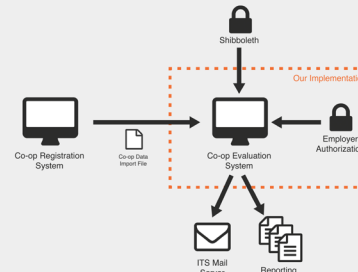
Evolutionary Delivery

Evolutionary delivery is a lifecycle model that straddles the ground between evolutionary prototyping and staged delivery. It hits the perfect balance between plan-driven and agile methodologies in such a way that it works well for this type of project, giving the sponsors the visibility they want and the developers the agility they need.



System Architecture and Context

Co-op data is imported into the Co-op Evaluation System via the Co-op Registration System. Students, department users, and administrators are authenticated into the application through Shibboleth, while employers are authenticated through a custom log-in process. The system sends emails to users using ITS's mail server, and generates reports using an external tool.

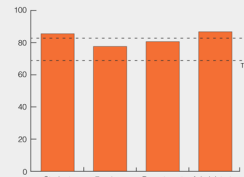


Measurements and Metrics

Software Usability Scale

The SUS is a set of 10 Likert questions that is a quick, reliable way to measure usability for the product and each individual user role. A score of 68 or above is considered better than average.

We achieved a score of 86 for Student, 78 for Employer, 87 for Department, and 81 for Administrator. We achieved an average score of 82.



Task Breakdown by Hours

To our surprise, less than half our effort on this project was devoted to implementation. We spent more time on documentation and other managerial tasks than we thought we would.

Another realization was to write tests early and often. Our delay in testing caused issues to go unnoticed for extended periods of time. We all wanted to prioritize functionality, but quality should have been our top concern.

Poster Constraints

TEXT

Headers: 28 to 36pt

Body text: 18-24 pt

Linespace: add 3-4 points of
leading (*or 1.5 to
double space*)

GRAPHICS

Diagrams: 8 x 10

Graphs: 6 x 8, 8 x 10

Photos: 3 x 3, 4 x 5

Screen shots can also be used.



Color

Contrast

Make sure type is readable against any background color.

Avoid colors that create visual vibration, or are too **bright** and **distracting** from the content



Color

Black (or dark color) on white (or light colored) background is easiest to read.

White type on colored background should be used for highlighting info, but **not for large amounts of text.**

Creates eye fatigue

Avoid

Red-green

Red-black



Color

Color can be used for:

- Demonstrating a point
- Accent
- Borders
- Grouping of information/
separating regions of
the poster
- Backgrounds



Color sites to help you check your color combinations:

Color Vision (simulation of text)
<http://iamcal.com/toys/colors/>

Vischeck (images or web pages)
<http://www.vischeck.com/vischeck>

Color sites to help with color schemes:

<https://color.adobe.com>

<http://www.colourlovers.com>



Software for Layout

Graphic designers would use either **Adobe Illustrator or InDesign** for laying out these posters, and **Photoshop** for image manipulation.

But some of you might not know how to use these.



Software for Layout

Use either **Sketch** (digital layout software), **or Keynote or PowerPoint** (presentation software) if you do not know other layout software.



Software for Layout

If using **Sketch** software, there are some measurement issues to be aware of as Sketch was designed for screen design, not print. So review some tips at

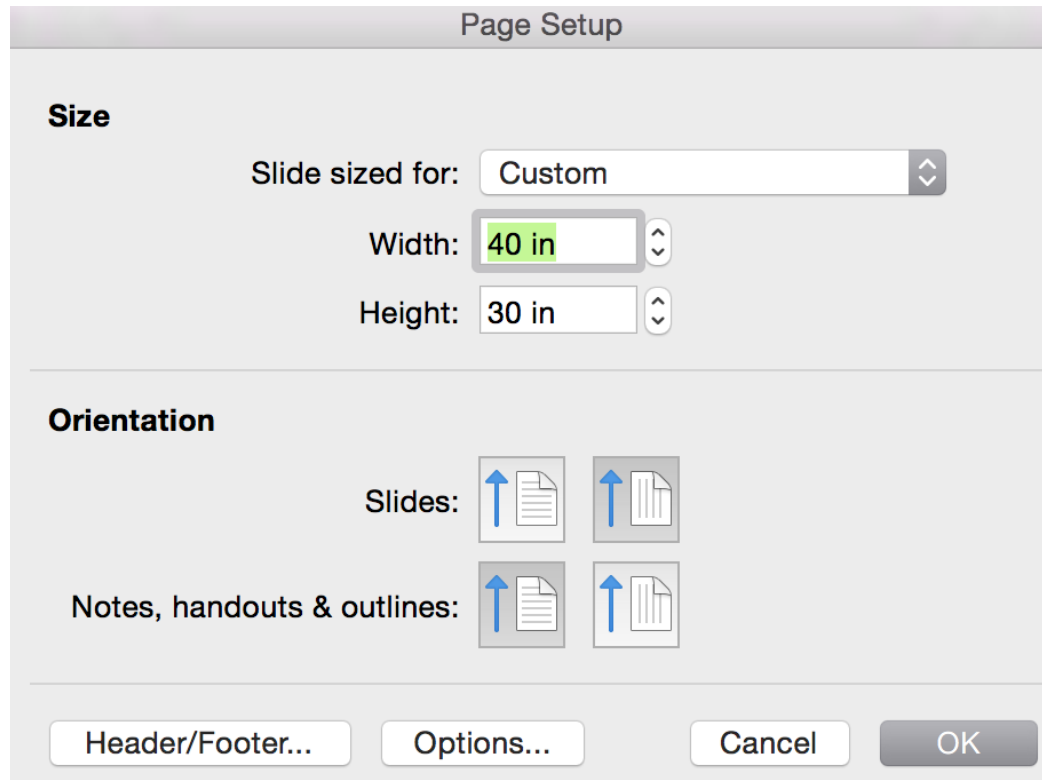
<https://medium.com/sketch-tricks/sketch-for-print-design-d165b92cb3a#.phl0c8sqs>

*Do not use **Word**. It is not a layout program. Use it for typing your text and your formal paper.*



Software for Layout

In PowerPoint, set size for portrait orientation, 30" x 40"



Delivery of Files

~~Each team will deposit their poster files in an online directory.~~

~~Submission instructions will follow shortly after this presentation from Prof Vallino.~~



File Format

~~Provide the following files:~~

- ~~• Native **original format**, i.e. PowerPoint, Keynote, Illustrator, Photoshop, ...~~
- ~~• Be sure to "package the files"~~
- ~~• Full-size **PDF** (30h x 40w inches)~~
- ~~• **JPEG** thumbnail (225h x 300w pixels)~~
- ~~• Full-size **TIFF**, if you can easily create it full size~~



Posters

- ~~Posters will be printed & mounted for you~~
- ~~Some posters will be framed and hung in the department (after the presentations)~~

You are responsible for printing your poster.
Department will provide easels and foam boards to clip the poster to.



Design Advice

- Don't overuse boxes for content.
- Have **margins** and follow a **grid**.
- Consider **graphic lines** for helping organize flow of content.



Design Advice

- **Do NOT use centered type for your main body text!** Causes busy “shape” and makes it harder for audience to read.
- Visual **contrast** is important
- Remember: primary, secondary, & tertiary information (**hierarchy**)

See next screens for examples of do's and don't's.



Design Advice

Avoid underlining text.
Use **Weight** and **size**
to show hierarchy or
emphasis →

Use **margins** so type
does not touch edges
of areas. →

Use **proportion**. Would
rather see the Process
chart be more visible
and the logos for
Technologies be smaller.

Positive aspects: some
contrast , three column
organization. Overall
organization of content.

Too many black box
outlines. Makes the
poster visually busy
and heavy. ↓

TEAM ROOM RESERVATION SYSTEM

Steamroom: Daniel Moody, Dennis Liang, Nicholas Weller

Sponsor: Jim Vallino, RIT

Faculty Coach: Larry Kiser

Year: 2015



Problem

- The Software Engineering department at RIT is growing every year.
- Senior Project teams require their use.
- Professors use rooms during class time for projects.
- Students use them for projects or studying
- Rooms are no longer available on demand.

Solution

- Reservation system for users on desktop or mobile
- Different functionality for different users.
- Single or Multiroom reservations.
- Priority system for privileged users.
- Admin functionality to configure and extend system.

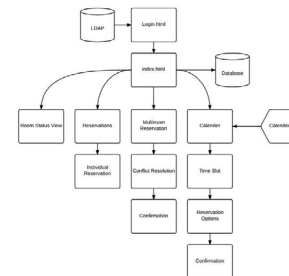
Users

Student: Single room
Faculty: Multiroom
Labbie: Room Status View
Admin: Configuration Tools

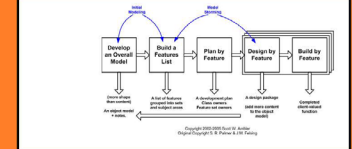
Features

- Single room reservation
- View current reservations
- Multiroom reservation: Recurring and Simultaneous
- Room Status View
- Admin Tools:
 - Reservation changes
 - Permission Class changes
 - System Configuration
 - Reporting

Architecture



Process



Technologies



Platforms



Design Advice

Starting to get a bit **busy** in the layout. Too many different styles of elements

Try to **avoid hyphenation** when possible



Inconsistent margins and gutter spaces



Flow is organized and fairly clear to follow


Avoid Centering the type.
Creates too busy of a visual shape and odd spaces. Use flush left to keep it visually organized



Positive aspects: organizes into sections; order of information is sequential. Use of highlight color.

TRILLIUM HEALTH GRANT MANAGEMENT

Team Ulysses - Akshay Karnawat, Brian To, Matthew Metcalf, Shannon Trudeau
Faculty Coach - Daniel Krutz
Sponsors - Russell James and AJ Blythe
Software Engineering Department Senior Project - 2015



Care designed with you in mind
Software Engineering Department

Background

Trillium Health is a non-profit organization that provides a variety of health care services. Most funding is based on grants received from federal, state and local authorities

Objectives:

- Allow users to manage active and potential grants
- Alert users when a certain task is due
- Store documents and revision history throughout the grant process
- Gather all the documentation for auditing and compliance purposes

Design

We use the **Spring** framework in the application layer to integrate together the **REST Services**, DAOs, and the Model which includes **Hibernate** and JPA annotations to persist objects to the database. The client layer uses **Angular JS** to interact with the services.

Controllers





Services

Controllers

Services

Data Access

Persistence



System Features

- Grant** Keep track of grant status (Active, Potential), award information, and contacts
- Documents** All grant related documents can be stored within the grant document library or specific tasks
- Tasks** Create your own tasks for each grant and workflow with due dates and custom reminders
- Workflows** Create and repeat grant workflows for different stages (Apply, CFA, Audit, etc)
- LDAP** Connect with Trillium's currently in place Active Directory system for users and account info
- Reminders** Send emails and update on Microsoft Outlook Calendar when tasks are due

Delivered Product

Modify Existing Grant

Name: Trought, Franz Ferdinand

Primary Funder: Ulysses S. Grant

Award: \$ 1775.00





Description: La la la la la Ulysses I've found a new way I've found a new way, baby

Grant Status: POTENTIAL

Links: Address: https://www.youtube.com/watch?v=31a29a2z_Ew

Close Update

Technologies

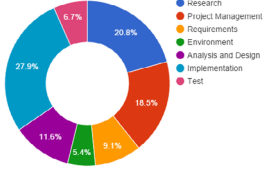


Rational Unified Process

Risk Mitigation; Iterative Development; Upfront Scoping in the Inception Phase

Iterative Development
Business value is delivered incrementally in time-boxed cross-discipline iterations.

	Inception	Elaboration	Construction	Transition
Business Model	T1	P1	C1	T2
Requirements	Analysis & Design	Implementation	Test	Deployment



- Research
- Project Management
- Requirements
- Environment
- Analysis and Design
- Implementation
- Test

* As of 4/14/15

Retrospective

- Code Reviews helped with team synergy
- Not revisiting original risk estimates was costly
- Using Trello to assign tasks has gone well
- Great customer involvement and feedback

Future Work

- Further integration with Outlook
- Document tagging for categorization
- Recycling bin features for deleted documents/tasks/grants
- The ability to proxy as another user
- Viewing documents within the system

Design Advice

↓ **Header** area is too busy ,
needs rearranging

Positive aspect organizes
into section; order of
information is sequential.
Use of highlight color.

Don't over **bullet**
content.
Headers, weight, size
can help distinguish





Overall organized and
clear flow.

Eliminate some of the
box outlines.

Let the **color contrast**
work for you!

MUSEUM EXPERIENCE SURVEY

Team MESSE - Andrew Mueller, Edward Dinki, Jonathon Shipping, Robert Vrooman
Faculty Coach - Larry Kiser
Sponsors - Lockheed Martin - Paul Mittan and Tom Monaco
Senior Project 2015



Background

About the Museum

- The Discovery Center of the Southern Tier is a non-profit children's museum located in Binghamton NY.

What They Want

- The Discovery Center wanted a fast, easy, and configurable way to gather data from their guests, with an equally as easy way to view that data.

What We Made

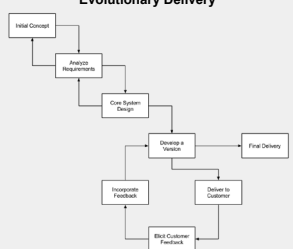
- The Museum Experience Survey is a web application built for touch-screen tablets to be run at kiosks set up within the museum, with an easy-to-use survey creator and ability to view visitor data.

System Features

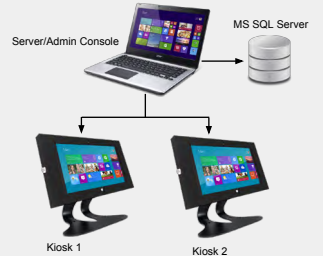
- Taking Surveys
 - Adult and Child Themes
- Admin Console
 - Creating/Editing Surveys
 - Managing Exhibits
- Reporting Visitor Data
 - Bar Graphs
 - Pie Charts
- Exporting Data to CSV

Methodology

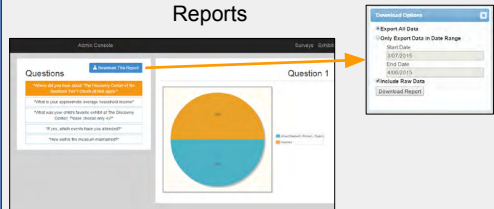
Evolutionary Delivery



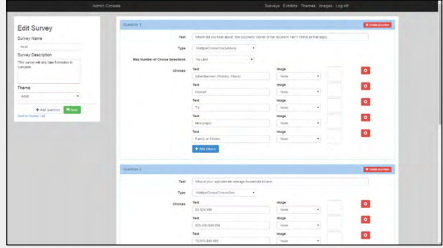
Device Setup




Reports



Survey Creation



Technologies



Future Work

- Easier theme customization
- More report features
- Improve deployability
- Survey questions that depend on the answers to previous questions.

Design Advice

Overall, nicely organized. Use of **flush left headers** helps.

Don't use flush right text for body copy.
Too difficult for audience to read because of the visual shape (ragged left edge)



Type too tight to edge of white boxes.

Positive aspects: clear hierarchy. Good use of type sizing and weight. Organized.

Proportion of **logos** could be better (RIT is too large. Use visual sizing vs. mathematical sizing) ↓

MOUNTAIN MEDIC

TEAM: Out Cold (Justin Bassett, Dorrene Brown, Greg Knox, Dan Smith, Kyle Storck)
SPONSORS: Kate Ackerman, Bob André
COACH: John Loser
YEAR: 2013



WHY MOUNTAIN MEDIC?


Time is vital when performing patient care. Gathering health and legal data from a patient is time-consuming and often repetitive.

Mountain Medic consolidates patient information, reduces time spent in care, and reduces time/labor needs for ski patrollers.

DATA

Tracking wounds is as easy as drawing on a model body.

Once injuries have been recorded, the patroller is reminded to ask the right questions for proper documentation.




OUTPUT

- Microsoft Access automatically creates and populates patient forms for external use.
- To meet HIPAA regulations, logs of user activity are kept for review.
- Excel charts are autogenerated to easily and quickly analyze incident data.
- Data is exported in a variety of formats for backup.

REQUIREMENTS

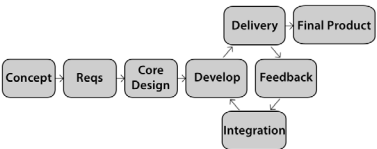
Initial requirements were gathered during the winter. Weekly feedback cycles during the spring tweaked specifics for our final release.



JIRA was used to track defects and completion progress.

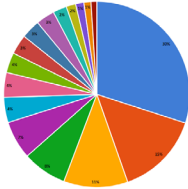
DEVELOPMENT

The Evolutionary Delivery model allows for rapid iterations while accommodating user feedback.



Weekly spring iterations enabled invaluable user testing.

EFFORT



- New Feature
- Improvement
- Department Deliverable
- Meeting
- Requirements
- Design
- System Administration
- Bug
- Domain Research
- Sponsor Request
- Technology Research
- Sub-Task
- Program Management
- UI Design
- Task
- Metrics
- Sponsor Meeting

Example: Original from client

Leading Institutional Transformation through Collaboration

Rochester Institute of Technology

- Private Institution
- 15,000 Students
- 1,000 Faculty

Traditionally, a teaching institution
Move to research emphasis for faculty

NSF Advance at RIT

- Catalyst Grant
- 2006 – 200
- IT Grant
- 2012 – 2017



RIT 2012 (prior state)

- **Barriers** for women STEM faculty:
 - career navigation, climate, work/life balance.
- Percent of women STEM faculty **applicants** below national pool availability
- **Upon hire**, women faculty receive less credit towards tenure and are less likely to be hired at a rank above Assistant professor.
- Percent of women STEM **faculty** below national averages.
- **Attrition rate** of women faculty nearly twice that of male faculty.
- 2010 faculty salary study found **unexplained salary differences** along gender lines.

AdvanceRIT Project

- 5-Year NSF Funded Project
- Primary Goals:
 - Increase the recruitment, retention, and advancement of women STEM/SBS faculty from diverse ethnic, social, and cultural backgrounds.
- Social Science Research:
 - Themes: Networking, Voice to Value
 - Subpopulations: Women of Color, Deaf/Hard-of-Hearing Women
- **Change Strategy:**
“Working Together to Succeed”



AdvanceRIT Structure

- Leadership Team
- Social Science Research Teams
- Executive Advisory Committee
- Resource Allocation Committee
- COACHE Taskforce
- Connect Grants
- DHH and WoC Connectivity Series

Executive Advisory Committee

- Engages Top Campus Leadership
 - Monthly strategy meetings
 - Campus partners report out
- Co-led by Advance co-PI and RIT CDO

Benefits of ExAC Structure

- Upper Admin more invested in Advance activities

Challenges

- Getting others to put “skin in the game”

Change Drivers

- Successes recognized, obstacles identified

Resource Allocation Committee

- Engages Faculty and Admin across campus
 - Understand allocation concerns & perceptions of process
 - Conduct study in which campus constituents can have high confidence
 - Members from Advance core team, VP Strategic Planning, Sr Assoc Provost, IR, HR, Dept Head, Assoc Dean

Benefits of RAC Structure

- Checks & balances promote trust in process and outcomes
- Reduces risk for individuals involved in sensitive initiatives

Challenges

- Process “owners” are not accountable to Advance
- Relationships strained by differing objectives
- Development of funding processes

Change Drivers

- Formal RFP drives consensus



COACHE Taskforce

- Engages Faculty and Admin across campus
 - Understand results of COACHE survey
 - Dig deeper into data
 - Disseminate results
 - Members from Advance core team, Assoc Provost, Assoc Dean, faculty

Benefits of COACHE Taskforce Structure

- Broader audience for the message

Challenges

- Moving beyond the data to learn “why”

Change Drivers

- Generating conversation and LISTENING

Core Grant Team

Margaret Bailey: mbbene@rit.edu
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Social Science Researchers

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Working Together to Succeed



ADVANCERIT

AdvanceRIT Leadership Team

Core Grant Team

- PI and co-PIs
 - “Shine a Light” on barriers & opportunities
 - Provide structure for change initiatives
- Social Science Researchers
 - Study DHH and WoC sub-populations
 - Inform project activities to meet the needs of the sub-populations

Campus Partners

- Faculty Career Devel Svcs
 - Administer mentoring program, grants, and award
- Office of Diversity & Incl
 - Co-sponsor events, share best practices
- Human Resources
 - Recruitment processes, work/life balance support, exit interviews

Benefits of Leadership Team Structure

- Collaborations between Core Grant Team and Campus Partners develop processes for change

Challenges

- Process “owners” are not accountable to Advance
- Relationships strained by different objectives
- Development of funding process

Change Drivers

- Further develop successful campus structures
- Learn lessons from prior diversity initiatives
- Develop new programs in place (i.e. where they might reside after the grant)

Connect Grants

- Funds support leadership and career development
- Empowering faculty and department heads
 - Broaden opportunities to promote career advancement
 - Support creative efforts to guide faculty through career stages
 - Fund projects that facilitate institutional transformation
 - Proposals must support an AdvanceRIT project goal

Benefits of Grants Structure

- Gives the power to the people!

Challenges

- Establishing promoting funding process
- Balancing grant goals (women STEM/SMS faculty) with support for all faculty

Change Drivers

- Formal process to support informal change initiatives

Social Science Research Teams

- Examining the Lived Experiences of Women Faculty
 - What is the impact of institutional climate and personal/professional influences on advancement of women faculty?
- Two Research Teams
 - Each teamed by a member of the core grant team
 - Deaf and Hard of Hearing Women
 - Women of Color

Benefits of Social Science Team Structure

- Greater acceptance of this research among small sub-populations

Challenges

- Establishing trust between the researchers and participants
- Letting the lived experiences set the research direction

Change Drivers

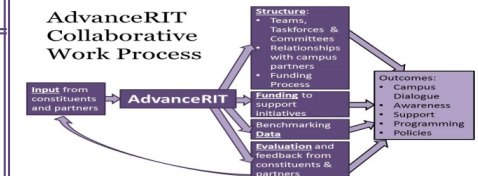
- Research participants created programming for themselves
- New research path generated, Giving Voice 2 Values

Collaboration

- Can provide better results than working solo
- Requires
 - Courage to let go of control (or what “should” be)
 - Trust that your team can achieve results
 - Sharing resources, funding, and credit
- Doesn't work in all circumstances or for all people



AdvanceRIT Collaborative Work Process



Connectivity Series

- Series of events to develop strategies and competencies related to:
 - career satisfaction
 - career navigation
 - work-life balance
 - leadership
 - recognition of work
 - scholarship (research and dissemination efforts)

DHH and WoC

- Connectivity events developed by and for each sub-population

Benefits of Self-Design

- Increased chance of success

Challenges

- Establishing trust within the groups

Change Drivers

- Tools and guidance encourage faculty to develop self-advocacy

This material is based upon work supported by the National Science Foundation under Grant No. 1209115

RIT Leading Institutional Transformation through Collaboration

Rochester Institute of Technology

- Large private institution
- Faculty focus has recently moved from teaching to research
- Private, coeducational university with nine colleges:
 - College of Computing and Information Sciences
 - College of Science
 - College of Applied Science and Technology
 - College of Engineering
 - College of Health Sciences and Technology
 - College of Imaging Arts and Sciences
 - College of Liberal Arts
 - College of Business
 - National Technical Institute for the Deaf
- Emphasizing career education and experiential learning
- Approximately 15,000 undergraduates and 3,000 graduate students
- 1,049 full-time faculty
 - 755 Tenure, Tenure-Track Faculty – 72%
 - 294 Non Tenure Track Faculty – 28%
- 32% Tenure, Tenure-Track Women Faculty

AdvanceRIT Project

- 5-year Institutional Transformation Project
- Goals**
- Recruitment, retention, advancement
- Social Science Research**
- Themes: Networking, Voice to Value
 - Subpopulations: Women of Color, Deaf/Hard-of-Hearing Women
- Change Strategy**
- "Working Together to Succeed"

RIT Women STEM Faculty Prior to 2012

- Barriers**
- Career navigation, climate, work/life balance issues
- Applicants**
- % below national pool availability
- Upon Hire**
- Less credit towards tenure, fewer hired above Assistant Professor rank
- Faculty**
- % below national averages
- Attrition rate**
- Twice the rate of male colleagues
- Unexplained salary differences**
- By gender (2010)

Collaboration

Can provide better results than working solo

Requires

- Courage to relinquish control
- Trust that your team can achieve results
- Sharing resources, funding, and credit

Not suitable for all circumstances or all people

AdvanceRIT Structure

- Leadership Team
- Social Science Research Teams
- Executive Advisory Committee
- Resource Allocation Committee
- COACHE Taskforce
- Connect Grants
- DHH and WoC Connectivity Series

AdvanceRIT Leadership Team

CORE GRANT TEAM

"Shine a light" and provide structure

- Reveal barriers & opportunities
- Collaborate on change initiatives
- Study DHH and WoC sub-populations

CAMPUS PARTNERS

Develop processes in their areas

- Faculty Career Development Services
 - Administer mentoring program, grants, and awards
- Office of Diversity & Inclusion
 - Co-sponsor events, share best practices
- Human Resources
 - Recruitment processes, work/life balance support, exit interviews

Benefits

- Collaborations develop processes for change

Challenges

- Process "owners" not accountable to Advance
- Relationships strained by differing objectives

Change Drivers

- Development within campus structures
- Lessons from prior diversity initiatives

Social Science Research Teams

Lived Experiences of Women Faculty

- Impact of institutional climate on advancement
- Deaf and Hard of Hearing Women Team
- Women of Color Team

Benefits

- Greater acceptance of this research among small sub-populations

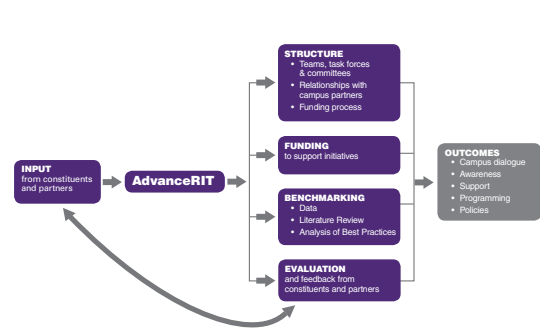
Challenges

- Establishing trust between researchers and participants
- Letting the lived experiences set the research direction

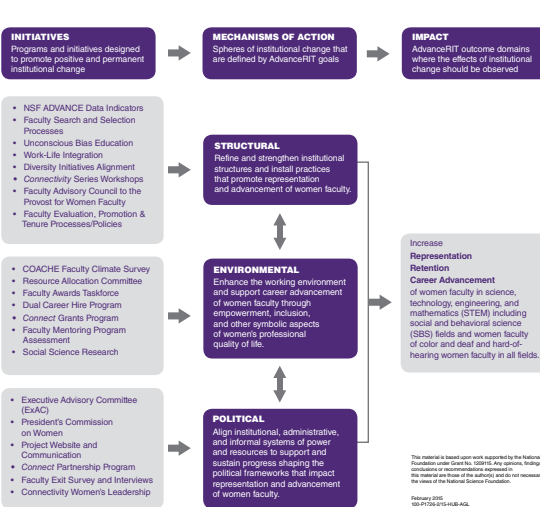
Change Drivers

- Research participants create programming for themselves
- New research path: Giving Voice 2 Values

AdvanceRIT Collaborative Work Process



AdvanceRIT Logic Model



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Executive Advisory Committee

- Engages Top Campus Leadership
 - Monthly strategy meetings
 - Campus partners report out
 - Co-led by Advance co-PI and RIT CDO

Challenges

- Getting others to put "skin in the game"

Benefits of ExAC Structure

- Upper Administration more invested in Advance activities

Change Drivers

- Successes recognized, obstacles identified

Resource Allocation Committee

Engages Faculty and Administrators

- Resource allocation concerns
- Perceptions of processes
- Salary equity analysis

Benefits of RAC Structure

- Checks & balances promote trust in process and outcomes

Challenges

- Sensitive issues, varied perspectives
- Transparency is elusive

Change Drivers

- Formal RFP drives consensus

COACHE Taskforce

Engages Faculty and Admin across campus

- Understand results of COACHE survey
- Dig deeper into data
- Disseminate results

Benefits of COACHE Taskforce Structure

- Broader audience for the message

Challenges

- Moving beyond the data to learn "why"

Change Drivers

- Generating conversation and LISTENING

Connectivity Series

Develop strategies and competencies:

- Career satisfaction
- Career navigation
- Work-life balance
- Leadership
- Scholarship
- Recognition

DHH and WoC

Connectivity events developed by and for each sub-population

Benefits of Self-Design

- Increased chance of successful events

Challenges

- Establishing trust

Change Drivers

- Faculty develop self-advocacy

Connect Grants

- Support leadership and career development
- Empower faculty and department heads
 - Broaden opportunities
 - Support creative efforts
 - Facilitate institutional transformation
- Support AdvanceRIT project goals

Benefits of Connect Grants Structure

- Gives the power to the people!

Challenges

- Establishing and promoting funding process
- Balancing grant goals with support for all faculty

Change Drivers

- Provost funds for grants to non-STEM/SBS and men faculty
- Formal process supports informal change initiatives

Partnership Grants

Designed to provide funding to campus partners to support activities closely aligned with project goals and objectives

Benefits

- Supports collaborative administrative and faculty research projects to build capacity and understanding of faculty challenges

Challenges

- Oversight across various types of independent faculty research, evaluation and data analysis projects

Change Drivers

- Inform existing research and evaluation efforts

nsfadvance.rit.edu

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Presentation Guidelines

You will present your poster at ~~Senior Project Poster Day in conjunction with the annual IAB meeting.~~

Capstone Report Poster Session

- Be prepared for *"So tell me about your project."* Four-minute "lightening talk"
- Practice your "elevator talk" reply to this question
- Let the viewer's questions drive the detailed discussion
- ~~Two team members stationed at the poster at all times~~



Presentation Guidelines

~~The faculty and IAB will judge
your presentation and poster
for a Best Senior Project prize.~~

Several qualities considered,
in general:

- Project Discussion
- Poster Content
- Aesthetic Appeal / Design



Follow-up

If you need any feedback, suggestions, or have questions regarding your **visual design aspects**, please contact me @

Prof Nancy Ciolek

CIAS/School of Design

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