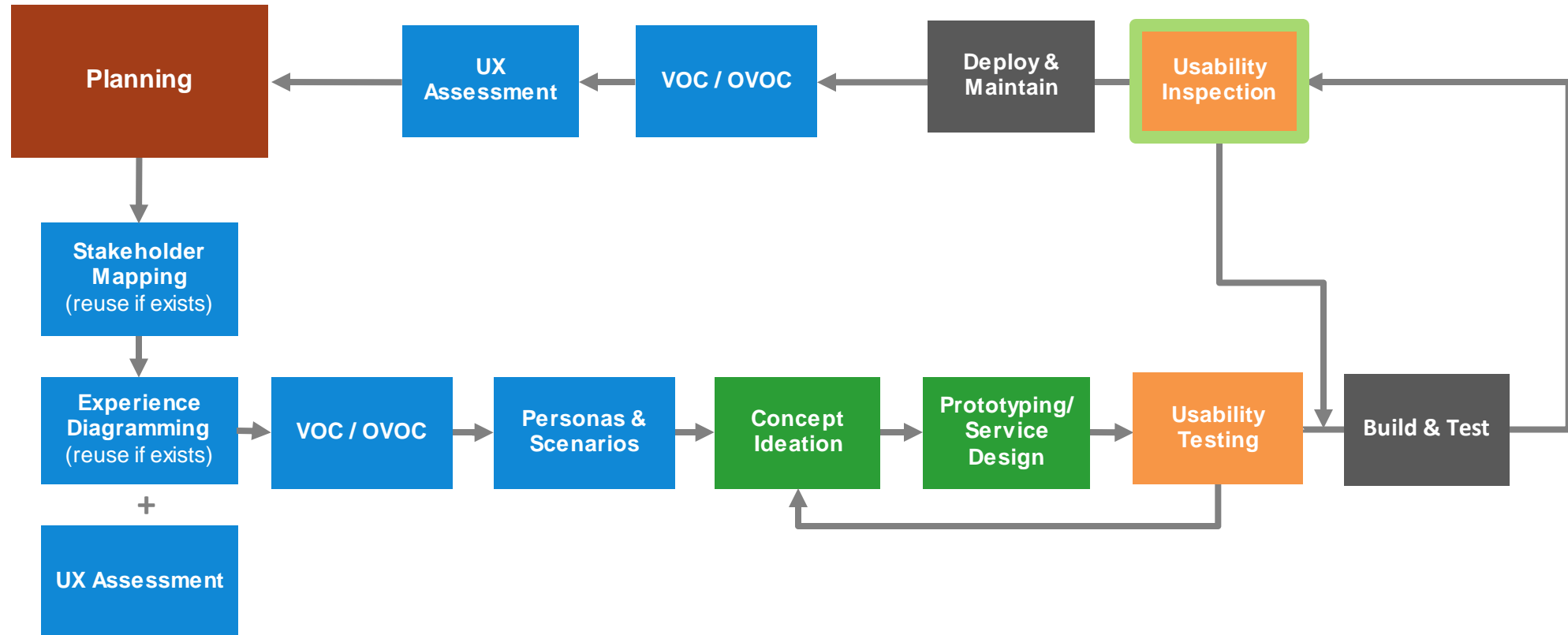


The IT HUE Process

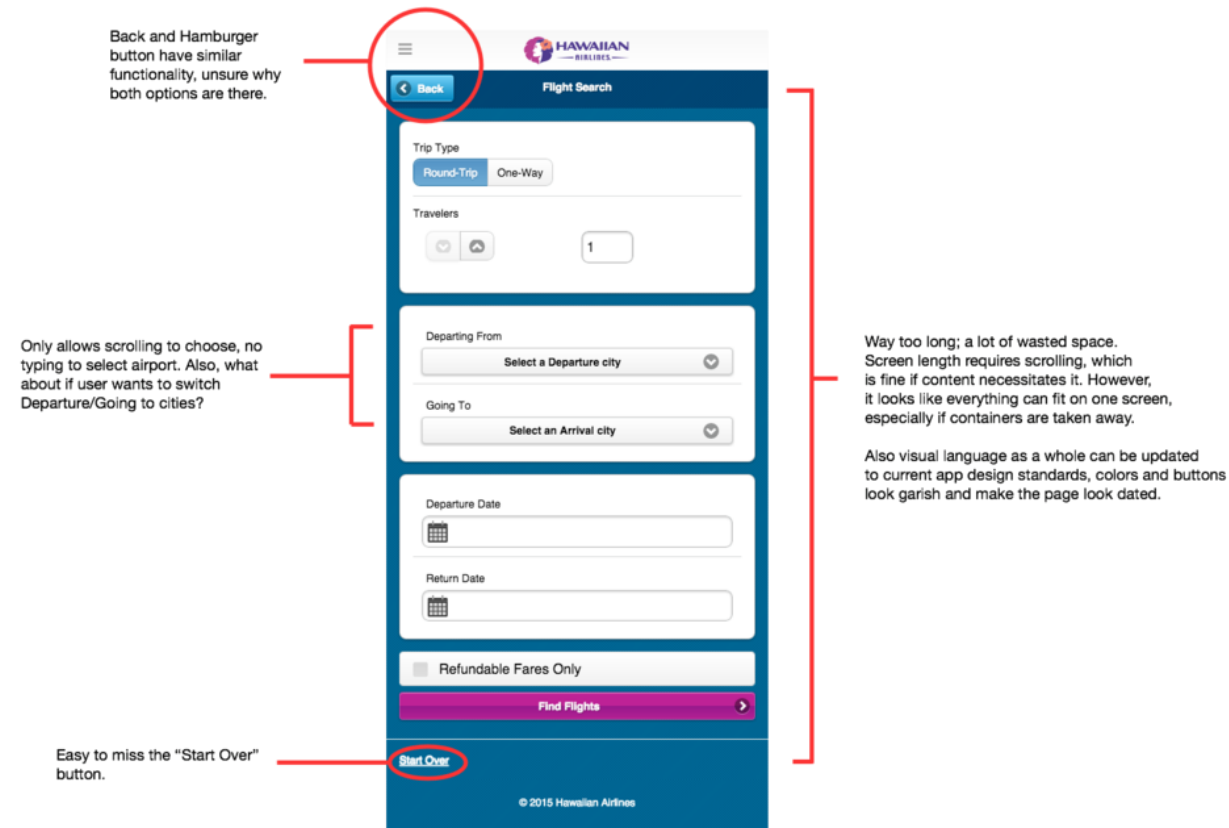


Heuristic Evaluation | What

A Heuristic Evaluation is a usability inspection technique where one or a number of usability experts evaluate the user interface of a product or website against a set of Heuristic Principles.

It is usually conducted by a group of experts because it is very likely that one person will not be able to find all usability problems.

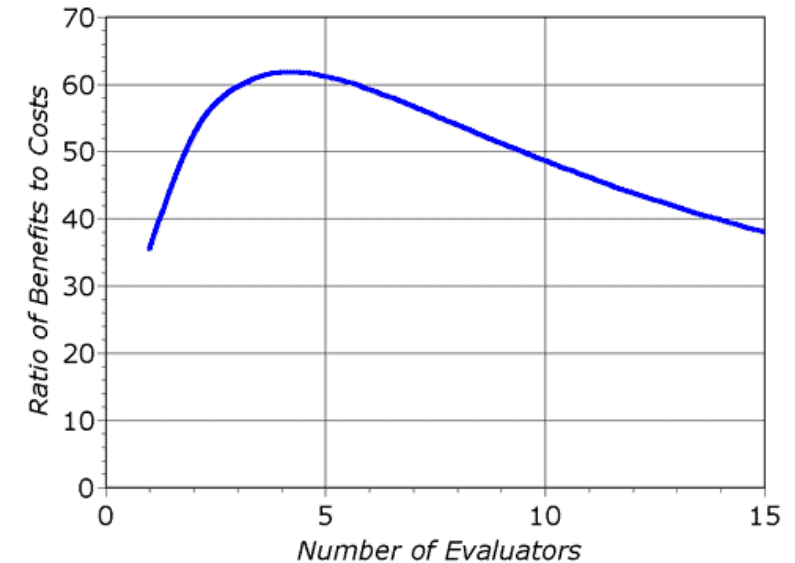
HAWAIIAN AIRLINES MOBILE UI EVALUATION



Heuristic Evaluation | What

Heuristic Evaluation = having a small set of evaluators examine the interface and judge its compliance with recognized usability principles (the “heuristics”)*

It is a usability engineering method for finding the usability problems in a user interface design so that they can be attended to as part of an iterative design process.



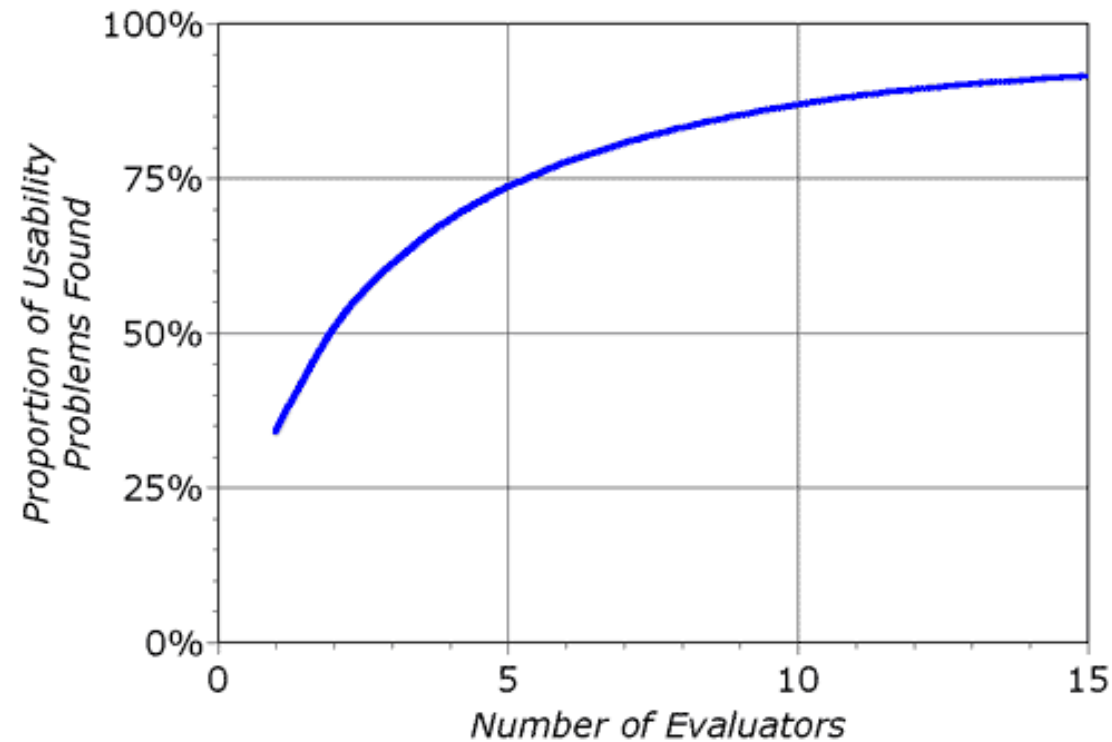
Curve showing how many times the benefits are greater than the costs for heuristic evaluation of a sample project. The optimal number of evaluators in this example is four, with benefits that are 62 times greater than the costs. Source:

<http://www.nngroup.com/articles/how-to-conduct-a-heuristic-evaluation>

*Nielsen and Molich, 1990; Nielsen 1994

Heuristic Evaluation | What

- This is a qualitative method – few evaluators work fine
- Curve of diminishing returns



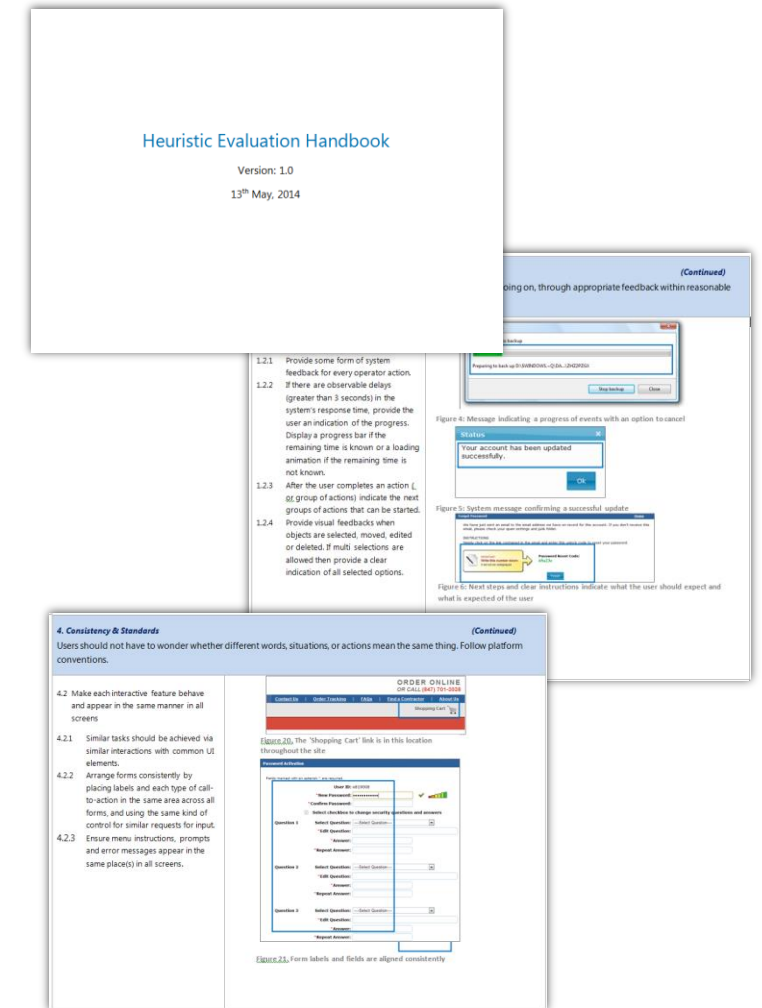
<http://www.nngroup.com/articles/how-to-conduct-a-heuristic-evaluation/>

Heuristic Evaluation | What

Heuristic Evaluation is characterized by:

- Small test scenarios that use paper mock-ups or screen shots, which can easily be changed from one test situation to the next
- An informal basis for assessment that doesn't require psychologists
- A high success rate so only a handful of testers are needed
- A few key guidelines

The guidelines that the interface is being evaluated against are outlined later.



Heuristic Evaluation | Why

The Challenge

Usability Testing is the single-best method for UX evaluation



But what if you don't have representative test users available?

- You can test with colleagues

- You can model the user-system interaction

- You can use heuristic evaluation

Heuristic Evaluation | Why

Heuristic Evaluation vs. Usability Testing

Heuristic Evaluation

***Experts** assess the offering based on design principles*

Evaluators are NOT the end users;
important problems may get missed

Usability Testing

*A small sample of **target users** are observed as they interact with the offering*

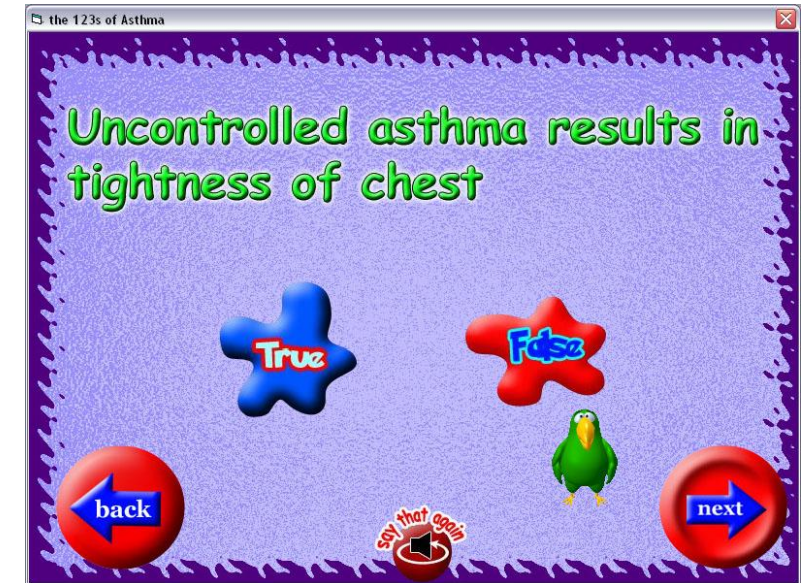
The single best thing you can do for HUE!

Heuristic Evaluation | Why

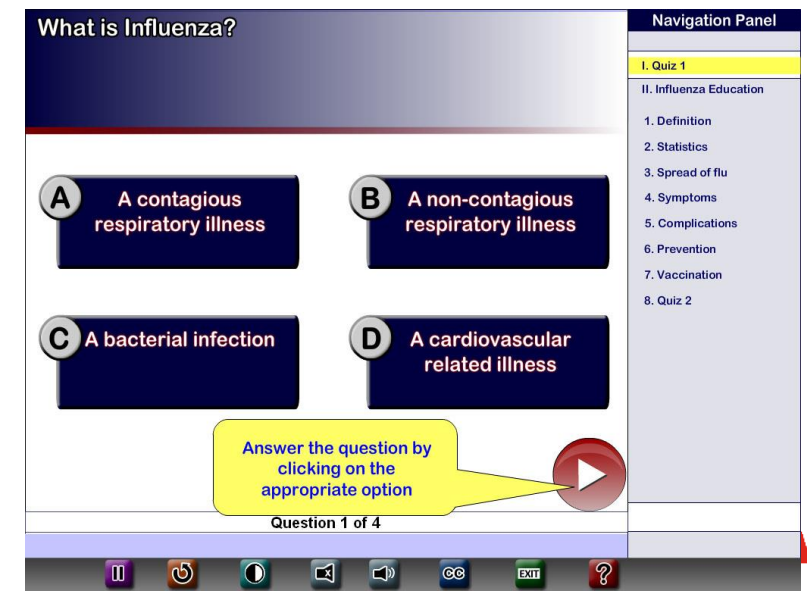
Advantages

- Few practical issues to consider, e.g., how long to run tests with participants?
- Few ethical issues to consider, e.g., need to have women running studies with women in walkthroughs because of culture rules separating sexes
- Heuristics have been shown to find a significant number of problems
- Heuristics cover a wide range of the types of problems that can occur
- **Biggest advantage**
 - Almost always cheaper than usability testing

Before HE



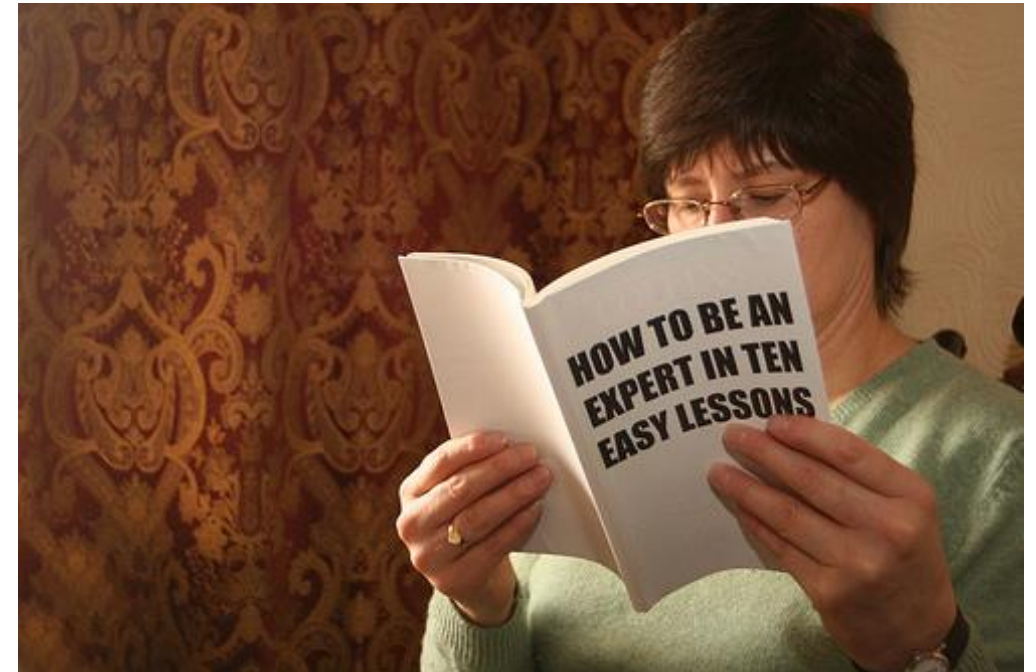
After HE



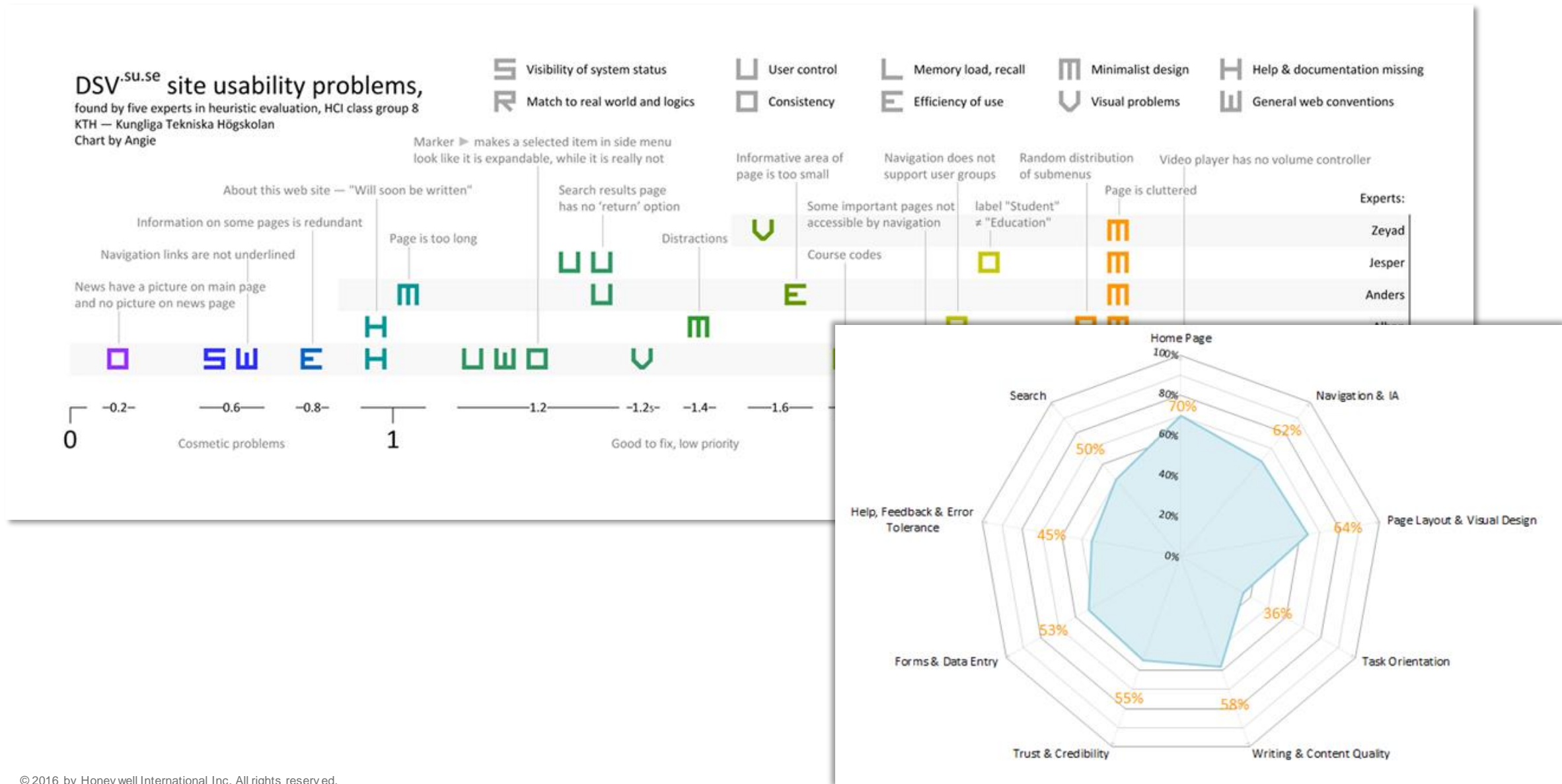
Heuristic Evaluation | Why

Disadvantages

- There is no established way of running an heuristics study
- No good definition of what defines an expert. Wide range of differences in amount of problems found by different experts
- Heuristics do not cover domain specific issues
- Domain specific experts may be required
- Sufficient experts may be difficult to find
- **Biggest disadvantage**
 - Validity – evaluators are NOT the end users
 - Important problems may get missed
 - Many trivial problems are often identified



No standard way to conduct or present HEs

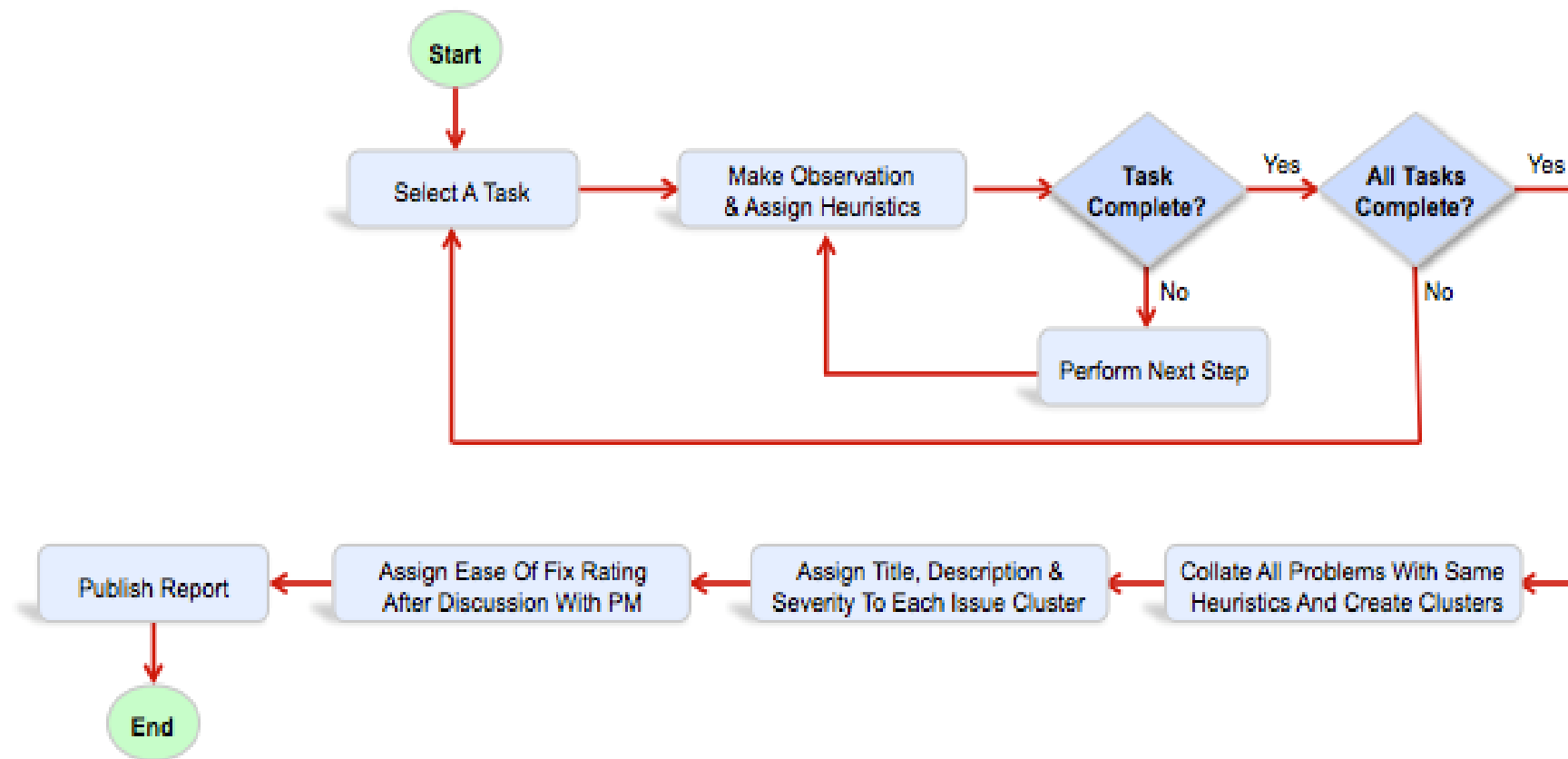


The Heuristic Evaluation Process

Heuristic Evaluation Process

Remember:

- You have user profiles and user tasks from earlier in process
- Use your best judgment when determining issues and recommendations



Heuristic Evaluation | How – The Process

The HE Data Capture spreadsheet will guide you through all the information you need to identify in your evaluation.

#	Heuristics	Description	Severity Rankings	Rating Definition
1	<u>Visibility of system status</u>	The system should always keep users informed about what is going on, through appropriate feedback within reasonable time	0	Violates a heuristic but doesn't seem to be a usability problem.
2	<u>Match between system and the real world</u>	The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.	1	Superficial usability problem: may be easily overcome by user or occurs extremely infrequently. Does not need to be fixed for next release unless extra time is available.
3	<u>User control and freedom</u>	Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.	2	Minor usability problem: may occur more frequently or be more difficult to overcome. Fixing this should be given low priority for next release.
4	<u>Consistency and standards</u>	Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.	3	Major usability problem: occurs frequently and persistently or users may be unable or unaware of how to fix the problem. Important to fix, so should be given high priority.
5	<u>Error prevention</u>	Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.	4	Usability catastrophe: Seriously impairs use of product and cannot be overcome by users. Imperative to fix this before product can be released.
6	<u>Recognition rather than recall</u>	Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.	Ease of Fixing Rankings	Rating Definition

Heuristic Evaluation | How - Process

When conducting the Heuristic Evaluation, you will use the data capture template (Excel) that will be made available to you.

S.No	Task	Step #	Step	Issue Description	Issue title	Heuristics Violated
1		1 a	View dashboard	The initial screen does not show any information about my past requests. It does not tell how to raise a request. It shows a list of links which are not relevant to the task in hand.	There are no standard information architecture of this tool.	visibility, match
6		2 b	Review and submit to BSC	There are multiple action buttons and the order in which they needs to be clicked is not clear	The taskflow and guidance to user is unclear	visibility, recognition
8		2 d	Hold the work packet	It is not clear how to hold the work packet. There are no specific button to hold the request. User needs to click on close and save changes to change the status of the request	The taskflow and guidance to user is unclear	recognition, recognit
9		2 e	Submit to BSC	It is not clear on how to Submit to BSC because it is available only when the user enters the business function page and button is enabled after certain rules are fulfilled. Ideally the flow should have been sequential without moving back and forth.	The taskflow and guidance to user is unclear	visibility, flexibility
10		3 a	Review	In order to reject the user is expected to click on BSC administrator button. The button CF administrator is confusing. By mistake if it is opened then there is no way to come back	The taskflow and guidance to user is unclear	recognition, recover,
2		1 b	Click on QMS in draft	The labeling of tabs, links and button does not match users expectations. The page is clearly un optimized with one single button. It adds to the number clicks to complete the task.	There are no standard information architecture of this tool.	match, felixibility
4		1 d	Edit the business specific form	The type field is same as the Activity field filled in the parent view. In that case it should have been prefilled and non editable. It is not clear what needs to be entered in ADEPT link? The box should have given clear indication of the expected data. As soon as the close and save changes button was pressed both the forms got closed. This was unexpected. Some messages confirming the submission should have been given. In case the user pressed the work packet info, it is not clear if the entry was saved or not. Now there are three buttons enabled creating confusion on what needs to be pressed. Ideally two buttons should have been present. Save as draft and Submit. On press of submit button a confirmation should have come.	There are no error recovery mechanism built in the interface	recognition, match, re
11		b	Reject	Once in the BSC Administrator screen, the instructions and actions to approve, reject and put on hold are all spread out. There is one clear button specific only to hold which is confusing. Clear option should be available throughout the form	Categorization and organization of page level information is unoptimized	Consistency, match
12		3		The review information is now part of the BSC administrator screen however there are no clear indication between content that needs to be reviewed versus content that needs to be edited to change the status.	Categorization and organization of page level information is unoptimized	recognition, visibility
3		4 a	Review	Related items are not placed together. It is not clear how many pages of data needs to be entered. Work packet name and draft type value should be part of the header. Draft ID Number and Draft Last Modified by should be part of the right hand side of second section instead of area and cancellation reason. It is not clear that in order to complete the process the Save as Draft button needs to be pressed and then the buttons under work packet have needs to be selected. The close & save changes is also	Categorization and organization of page level information is unoptimized	visibility, match, contr
		1 c	View and edit the form			

Heuristic Evaluation | How

Heuristic Guidelines:

Note: The guidelines are somewhat ambiguous and interpretive.

There will be **OVERLAP**

There will be **SUBJECTIVITY**

There will be **CONFLICTS**

As the Heuristic Evaluation experts, you should be able to get to the core intent of the guidelines.

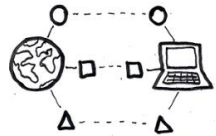
Heuristic Evaluation | How

Heuristic Guidelines: The 10 most general principles for interaction design.

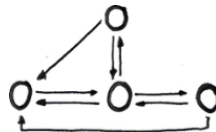
Developed in 1990 by Jakob Nielsen and Rolf Molich these heuristics have been refined by Nielsen based on a factor analysis of 249 usability problems to derive a set of heuristics with maximum explanatory power.



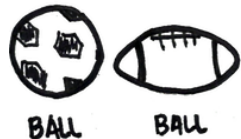
1. **Visibility of System Status**
Give the users appropriate feedback about what's going on.



2. **Match System & Real World**
Use real-world words, concepts, and conventions familiar to users in a natural, logical, order.



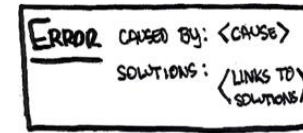
3. **User Control & Freedom**
Support, undo, redo, and exit points to help users leave an unwanted state caused by mistakes.



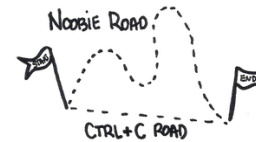
4. **Consistency & Standards**
Use consistent words, situations, and actions throughout.



5. **Error Prevention**
Eliminate error-prone conditions or check for them before users commit to an action.



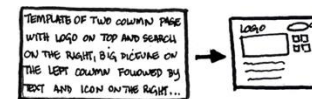
6. **Recognition Not Recall**
Make objects, actions, and options visible at the appropriate time to minimize users' memory load.



7. **Flexibility & Efficiency of Use**
Make the system efficient for different experience levels through shortcuts, advanced tools, and frequent actions.



8. **Aesthetic & Minimalist Design**
Don't show irrelevant or rarely needed information. Extraneous elements diminish the relevance of the others.



9. **Help Users Recognize, Diagnose, & Recover**
Express error messages in plain language and suggest solutions.

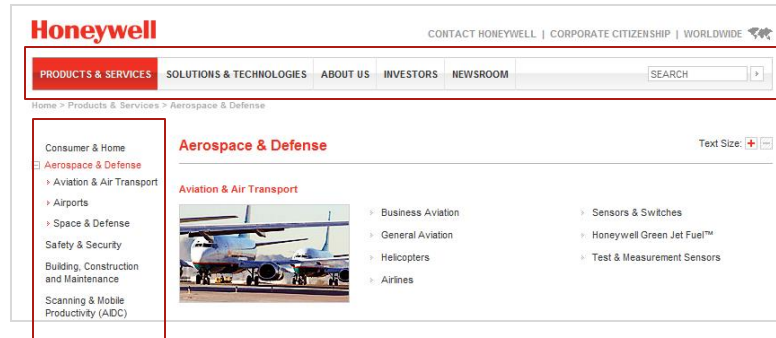


10. **Help & Documentation**
Make necessary help and documentation easy to find.

1. Visibility of System Status



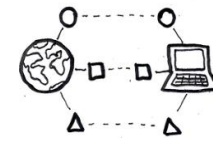
The system should always keep user informed about what is going on, through appropriate feedback within reasonable time.



Clearly mark the user's current location

Password	<input type="text"/>	⇒ 6 characters or more (be tricky!)
Password	<input type="password" value=".."/>	⇒ Too short
Password	<input type="password" value="....."/>	⇒ Too obvious
Password	<input type="password" value="....."/>	Weak
Password	<input type="password" value="....."/>	Good
Password	<input type="password" value="....."/>	Strong
Password	<input type="password" value="....."/>	Very Strong

2. Match System & Real World



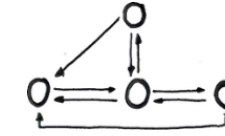
The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.



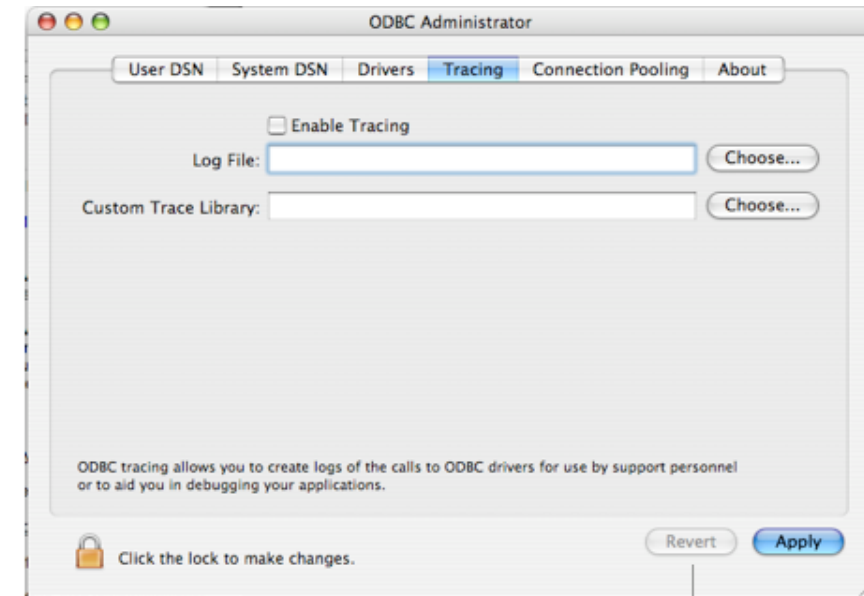
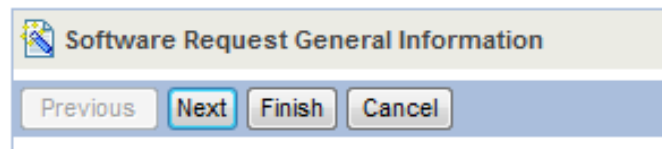
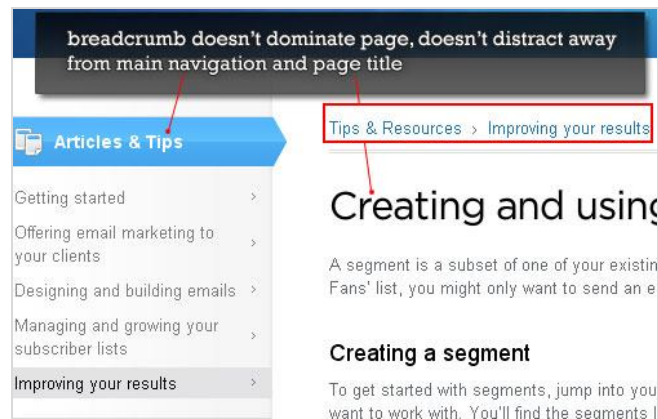
PRODUCTS	PROBLEMS WE SOLVE	SUPPORT	IN THE NEWS	ABOUT US	NEW
Thermostats Programmable 7 Day 5-1-1 Day 5-2 Day 1 Week Non Programmable Digital Manual	Accessories Entry/Exit Remote Indoor Temperature Sensor Wireless AquaReset Outdoor Reset Kit Wireless Outdoor Air Sensor Portable Comfort Control	Air Cleaning Whole-House HEPA Whole-House Enhanced Whole-House Electronic Whole-House Replaceable with Filter Reminder Whole-House	Humidifiers Whole-House Steam Whole-House Evaporative Whole-House Fan-Powered Whole-House Drum Replacement Parts	Dehumidifiers Whole-House (120 pint) Whole-House (90 pint) Whole-House (65 pint) Ventilation Energy-Efficient	

Use terminology in menus and content with words, phrases and concepts familiar to the user

3. User Control & Freedom



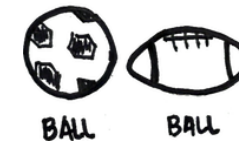
- Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.



The secondary action button is inactive due to its transparent look.

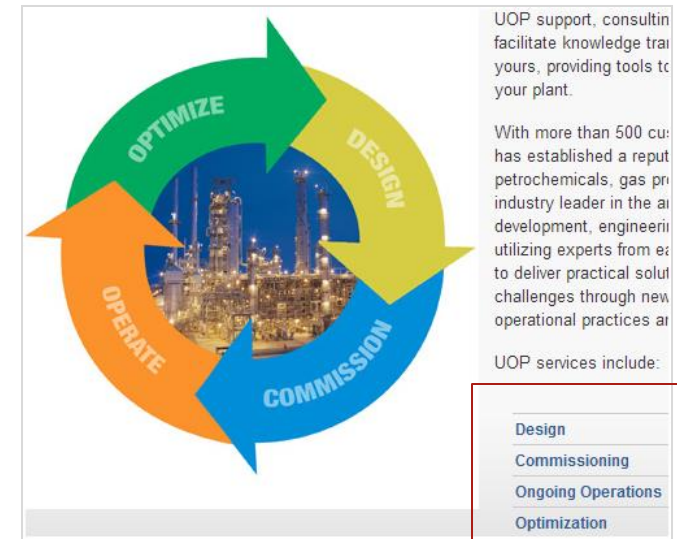
Clearly indicate the affordances available to the user.

4. Consistency & Standards



Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

Follow naming convention and design themes consistently





5. Error prevention

Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.

Name *

First Last

Time *

HH : MM AM/PM

Email *

Please use your office email address.

Date *

MM / DD / YYYY

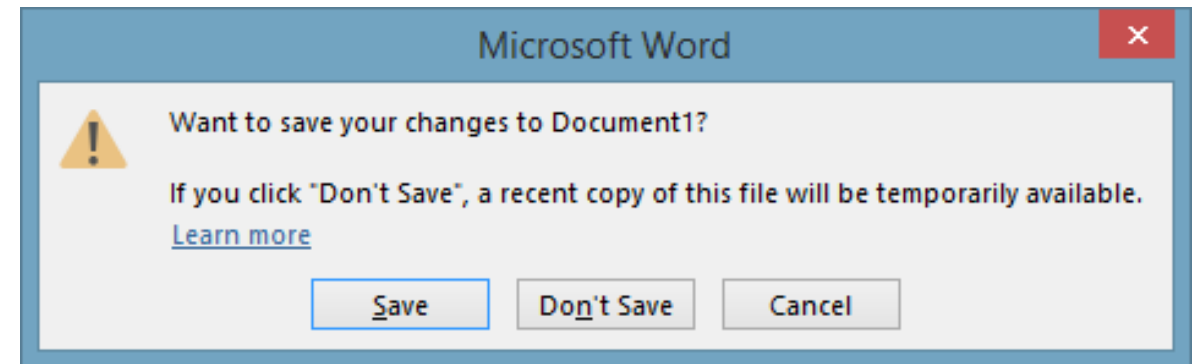
Address *

Street Address

Street Address Line 2

City Region

Reduce opportunities for errors by educating users affront

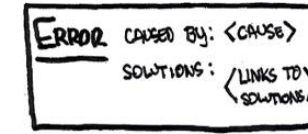


Attachments

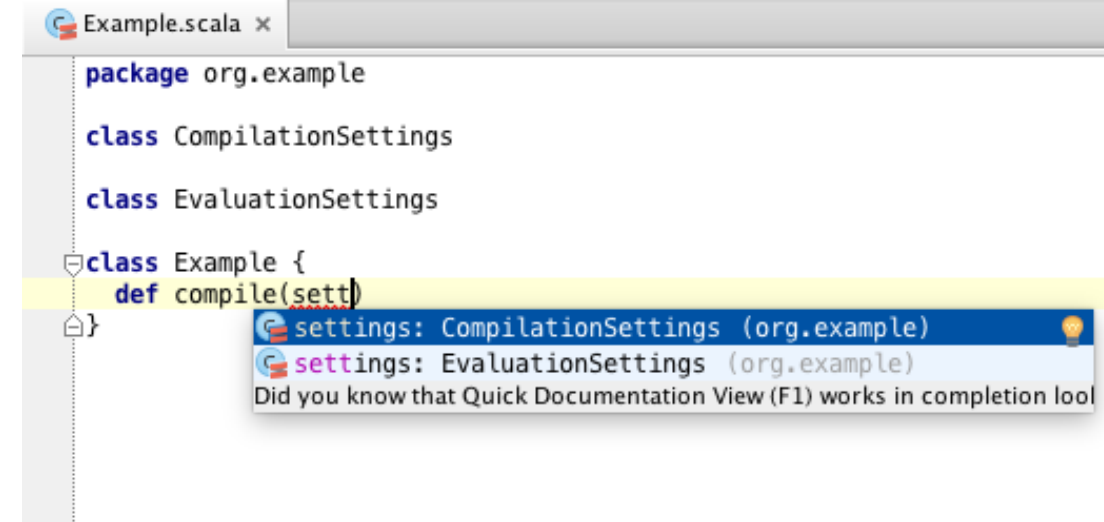
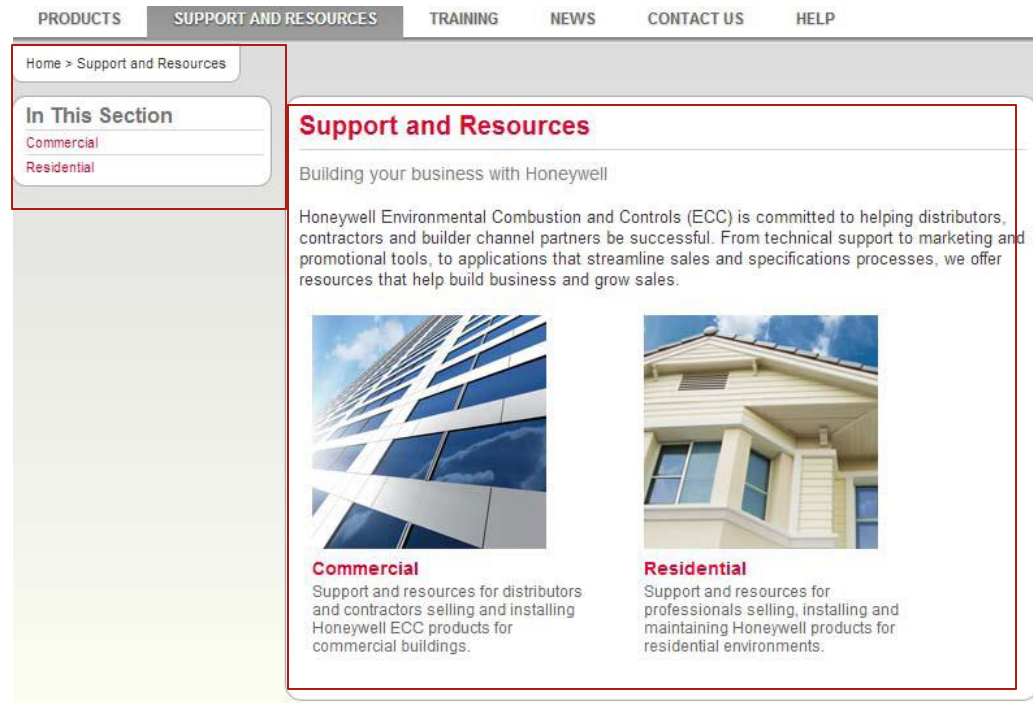
Browse...

- Maximum file size : 5MB.
- Supported file types : Word, PowerPoint, Excel, Text and PDF.

6. Recognition rather than recall

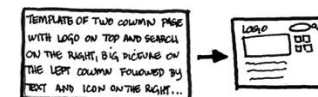


Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.



Use unique styles for each level of hierarchy on an interface.

Help users recognize, diagnose, and recover from errors



Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

Answer Rules

Each security answer must satisfy the following rules:

- Must be between 3 and 20 characters long
- Cannot contain any word in the question
- Cannot be the same as any other security answer

Note: Security answers are not case sensitive.

Error: The date is not in the correct format.
 Enter a date in the same format as this example: 29/Nov/1998
Example: 29/Nov/1998

* HireDate
 * JobId
 Salary

Give contextual, informative and concise error messages as soon as possible.

Complete Certificate Request

There was an error while performing this operation.
 Details:
 CertEnroll::CX509Enrollment::p_InstallResponse: ASN1 bad tag value met. 0x8009310b (ASN: 267)



7. Flexibility and efficiency of use

Accelerators -- unseen by the novice user -- may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.




Photoshop CS Keyboard Shortcuts

A-Z Index

Text Size:  

FILTER BY KEYWORD





Select A B C D E F G H I J K L M N O P Q R S T U V W X Y Z - All

2D Barcode Scanners

A/C Refrigerants

A-C® Performance Additives

Related Products & Solutions

- UOP Strategic Optimization Solutions
- UOP Process Optimization
- Honeywell Energy and Emissions Management Solutions

		File	Ctrl+W / Ctrl+F4	Type	Layer		Edit
Assistant	+	Close	Ctrl+W / Ctrl+F4	Align Left	Ctrl+Shift+L	Blending Options	Ctrl+Alt+Shift+O
Subtract Shape	-	Close All	Ctrl+Alt+W / Ctrl+Shift+F4	Align Right	Ctrl+Shift+R	Bring Forward	Ctrl+Shift+B
Preserve Transparency (toggle)		Exit Incompatibility	Ctrl+Alt+W	Auto Rasterize	Ctrl+Shift+B	Bring to Front	Ctrl+Shift+A
Decrease Brush Size	[	Exit	Ctrl+Q	Center Text	Ctrl+Shift+C	Copy Merge	Ctrl+Shift+M
Increase Brush Size	]	File Browser	Ctrl+Shift+O	Change Kerning by 100/1000	Ctrl+Alt+... +	Delete Layer (Set)	Ctrl+Shift+Q
Decrease Opacity by 20%	Shift+[	File Info	Ctrl+Shift+I	Change Kerning by 20/10000	Alt+... +	Disable Layer (no dialog)	Ctrl+Shift+G
Increase Brush Hardness by 20%	Shift+]	New Document	Ctrl+N	Decrease / Increase Baseline by 10pt	Ctrl+Alt+Shift+L	Duplicate Layer (Set)	Ctrl+Shift+Q
Previous Brush	-	New Document (set settings)	Ctrl+Alt+N	Decrease / Increase Baseline by 3pt	Alt+Shift+L	Duplicate Layer (no dialog)	Ctrl+Alt+Shift+Q
New Brush	+	Open	Ctrl+O	Decrease / Increase Leading by 10pt	Ctrl+Alt+Shift+L	Fill with Background Color	Ctrl+Shift+F
First Brush	Shift+[-	Open As	Ctrl+Alt+O	Decrease / Increase Leading by 3pt	Alt+Shift+L	Fill with Background Color	Ctrl+Shift+F
Last Brush	Shift+]+	Page Setup	Ctrl+Shift+P	Decrease / Increase Type Size by 10pt	Ctrl+Alt+Shift+... +	Fill with Background & Preserve Transparency	Alt+Shift+Background
Total Opacity (50% - 100%)	Pro	Print	Ctrl+P	Hyphenation (toggle)	Ctrl+Alt+Shift+H	Fill with Foreground & Preserve Transparency	Alt+Shift+Background
Flow / AutoRough Opacity (50% - 100%)	Shift+Pro	Print One Page	Ctrl+Alt+Shift+P	Isolate (toggle)	Ctrl+Shift+I	Fill with Background Color	Ctrl+Shift+F
Print / Paste Selection Tools	A	Print with Preview	Ctrl+Alt+P	Justify Paragraph (Align Last Line)	Ctrl+Shift+J	Free Transform	Ctrl+T
Print / Paste Tool	R	Reset	Ctrl+Z	Justify Paragraph (Align Left Last Line)	Ctrl+Shift+J	Free Transform (no dialog)	Ctrl+T
Copy Tool	C	Save	Ctrl+S	Move Cursor One Word Left or Right	Ctrl+... +	Free Transform (no dialog)	Ctrl+T
Default Colors	D	Save As	Ctrl+Shift+S	Move Cursor to Start of Line	Ctrl+End	Free Transform (no dialog)	Ctrl+T
Save As Color	Shift+D	Save As Copy	Ctrl+Shift+S	Move Cursor to End of Line	Ctrl+End	Free Transform (no dialog)	Ctrl+T
Cycle Screen Modes	F	Save for Web	Ctrl+Alt+Shift+S	Move Cursor to Start of Line	Home	Free Transform (no dialog)	Ctrl+T
Gradient / Pattern Bucket Tool	B			Move Cursor to Start of Line	Home	Free Transform (no dialog)	Ctrl+T
Hand Tool	H			Move Previous / Next Paragraph	Ctrl+... +	Free Transform (no dialog)	Ctrl+T
EyeDropper / Sampler / Measure Tool	I	All	Ctrl+A	Regular (toggle)	Ctrl+Shift+V	Free Transform (no dialog)	Ctrl+T
Healing / Patch / Color Replacement	J	Color Range	Ctrl+Shift+M	Select One Character to Left or Right	Ctrl+Shift+... +	Free Transform (no dialog)	Ctrl+T
Hand Tool	K	Contrast Selection	Ctrl+Shift+M	Select One Line to Left or Right	Ctrl+Shift+... +	Free Transform (no dialog)	Ctrl+T
Lasso Tool	L	Desaturated	Ctrl+D	Select One Line to Left or Right	Ctrl+Shift+... +	Free Transform (no dialog)	Ctrl+T
Marquee Tool	M	Expand Selection	Ctrl+Shift+A	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Pen / Auto Animation Tool	P	Feather	Ctrl+Shift+F	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Dodge / Burn / Sponge Tool	R	Increase Selection	Ctrl+Shift+A	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Pen / Freehand Pen Tool	P	More Duplicate of Selection types	Ctrl+Shift+... +	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Eraser / Quick Mask Mode	E	More Duplicate of Selection types	Ctrl+Shift+... +	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Blur / Sharpen / Smudge Tool	B	More Selection (with erasing)	Space	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Clone / Pattern Stamp Tool	U	More Selection types	Ctrl+Shift+... +	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Shape Tool	S	More Selection types	Ctrl+Shift+... +	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
More Tool	W	More Selection Area types	Ctrl+Shift+... +	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Text / Word Tool	T	Pen Tool	Ctrl+Shift+P	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Switch Colors	X	Transform Selection	Ctrl+Shift+A	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
History / Art History Brush Tool	Y			Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Zoom Tool	Z	View	Ctrl+V	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Hand Tool (toggle)	Space	Actual Pixels	Ctrl+Alt+P	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Zoom In (toggle)	Ctrl+Space	Color Channels	Ctrl+Alt+Shift+C	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Zoom Out (toggle)	Alt+Space	Export / Quick Output	Ctrl+Alt+Shift+E	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Panel / Direct Selection Tools	Shift+A	Fit on Screen	Ctrl+Shift+F	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Toggle Brush / Pencil Tools	Shift+B	Gamma Warning	Ctrl+Shift+W	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Eraser Tools	Shift+E	Grid (show / hide)	Ctrl+Shift+G	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Message (show / hide)	Shift+F	Guide (lock / unlock)	Ctrl+Shift+G	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Toggle Gradient / Pattern Bucket Tools	Shift+G	Guides (show / hide)	Ctrl+Shift+G	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Eyedropper / Sampler / Measure Tools	Shift+I	Guides	Ctrl+Shift+G	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Healing, Patch, Color Fill, Text Tools	Shift+J	New Window	Ctrl+Shift+N	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Lasso / Select Selection Tools	Shift+L	Proof Colors (CMYK preview)	Ctrl+Shift+P	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Lasso Tools	Shift+L	Rules (show / hide)	Ctrl+Shift+R	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Toggle New / Deleted Marquee	Shift+N	Snap (on / off)	Ctrl+Shift+S	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Toggle Notes / Auto Animation Tools	Shift+O	Target Panel (show / hide)	Ctrl+Shift+T	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Dodge / Burn / Sponge Tools	Shift+O			Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Toggle New / Freehand Pen Tools	Shift+P	Zoom In / Resize Window	Ctrl+Shift+Z	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Blur / Sharpen / Smudge Tools	Shift+S	Zoom Out	Ctrl+Shift+Z	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Gradient / Pattern Stamp Tools	Shift+S	Zoom Out / Resize Window	Ctrl+Alt+... +	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Type Tools	Shift+T			Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle History / Art History Tools	Shift+U	Windows	Ctrl+Alt+W	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
AutoRough (Brush Tool)	Alt+Shift+P	Tool Bar / Palettes (show / hide)	Shift+Tab	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
		Actions Palettes (show / hide)	F8	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
		Color Palettes (show / hide)	F6	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
		History Palettes (show / hide)	F10	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
		Info Palettes (show / hide)	F8	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
		Layers Palettes (show / hide)	F7	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
		Options (show / hide)	F4	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
		Styles (show / hide)	F11	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
		Zoom In / Zoom Out	Ctrl+Alt+... +	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T

Accel. Stroke	+	Close	Ctrl+W / Ctrl+F4	Type	Layer		Edit
Subtract Shape	-	Close All	Ctrl+Alt+W / Ctrl+Shift+F4	Align Left	Ctrl+Shift+L	Blending Options	Ctrl+Alt+Shift+O
Preserve Transparency (toggle)		Exit Incompatibility	Ctrl+Alt+W	Align Right	Ctrl+Shift+R	Bring Forward	Ctrl+Shift+B
Decrease Brush Size	[	Exit	Ctrl+Q	Auto Rasterize	Ctrl+Shift+B	Bring to Front	Ctrl+Shift+A
Increase Brush Size	]	File Browser	Ctrl+Shift+O	Center Text	Ctrl+Shift+C	Copy Merge	Ctrl+Shift+M
Decrease Opacity by 20%	Shift+[	File Info	Ctrl+Shift+I	Change Kerning by 100/1000	Ctrl+Alt+... +	Delete Layer (Set)	Ctrl+Shift+Q
Increase Brush Hardness by 20%	Shift+]	New Document	Ctrl+N	Change Kerning by 20/10000	Alt+... +	Disable Layer (no dialog)	Ctrl+Shift+G
Previous Brush	-	New Document (set settings)	Ctrl+Alt+N	Decrease / Increase Baseline by 10pt	Ctrl+Alt+Shift+L	Duplicate Layer (Set)	Ctrl+Shift+Q
New Brush	+	Open	Ctrl+O	Decrease / Increase Baseline by 3pt	Alt+Shift+L	Duplicate Layer (no dialog)	Ctrl+Alt+Shift+Q
First Brush	Shift+[-	Open As	Ctrl+Alt+O	Decrease / Increase Leading by 10pt	Ctrl+Alt+Shift+L	Fill with Background Color	Ctrl+Shift+F
Last Brush	Shift+]+	Page Setup	Ctrl+Shift+P	Decrease / Increase Leading by 3pt	Alt+Shift+L	Fill with Background Color	Ctrl+Shift+F
Total Opacity (50% - 100%)	Pro	Print	Ctrl+P	Decrease / Increase Type Size by 10pt	Ctrl+Alt+Shift+... +	Fill with Background & Preserve Transparency	Alt+Shift+Background
Flow / AutoRough Opacity (50% - 100%)	Shift+Pro	Print One Page	Ctrl+Alt+Shift+P	Hyphenation (toggle)	Ctrl+Alt+Shift+H	Fill with Foreground & Preserve Transparency	Alt+Shift+Background
Print / Paste Selection Tools	A	Print with Preview	Ctrl+Alt+P	Isolate (toggle)	Ctrl+Shift+I	Fill with Background Color	Ctrl+Shift+F
Print / Paste Tool	R	Reset	Ctrl+Z	Justify Paragraph (Align Last Line)	Ctrl+Shift+J	Free Transform	Ctrl+T
Copy Tool	C	Save	Ctrl+S	Justify Paragraph (Align Left Last Line)	Ctrl+Shift+J	Free Transform (no dialog)	Ctrl+T
Default Colors	D	Save As	Ctrl+Shift+S	Move Cursor One Word Left or Right	Ctrl+... +	Free Transform (no dialog)	Ctrl+T
Save As Color	Shift+D	Save As Copy	Ctrl+Shift+S	Move Cursor to Start of Line	Ctrl+End	Free Transform (no dialog)	Ctrl+T
Cycle Screen Modes	F	Save for Web	Ctrl+Alt+Shift+S	Move Cursor to End of Line	Ctrl+End	Free Transform (no dialog)	Ctrl+T
Gradient / Pattern Bucket Tool	B			Move Cursor to Start of Line	Home	Free Transform (no dialog)	Ctrl+T
Hand Tool	H			Move Cursor to Start of Line	Home	Free Transform (no dialog)	Ctrl+T
EyeDropper / Sampler / Measure Tool	I	All	Ctrl+A	Move Previous / Next Paragraph	Ctrl+... +	Free Transform (no dialog)	Ctrl+T
Healing / Patch / Color Replacement	J	Color Range	Ctrl+Shift+M	Regular (toggle)	Ctrl+Shift+V	Free Transform (no dialog)	Ctrl+T
Hand Tool	K	Contrast Selection	Ctrl+Shift+M	Select One Character to Left or Right	Ctrl+Shift+... +	Free Transform (no dialog)	Ctrl+T
Lasso Tool	L	Desaturated	Ctrl+D	Select One Line to Left or Right	Ctrl+Shift+... +	Free Transform (no dialog)	Ctrl+T
Marquee Tool	M	Expand Selection	Ctrl+Shift+A	Select One Line to Left or Right	Ctrl+Shift+... +	Free Transform (no dialog)	Ctrl+T
Pen / Auto Animation Tool	P	Feather	Ctrl+Shift+F	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Dodge / Burn / Sponge Tool	R	Increase Selection	Ctrl+Shift+A	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Pen / Freehand Pen Tool	P	More Duplicate of Selection types	Ctrl+Shift+... +	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Eraser / Quick Mask Mode	E	More Duplicate of Selection types	Ctrl+Shift+... +	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Blur / Sharpen / Smudge Tool	B	More Selection (with erasing)	Space	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Clone / Pattern Stamp Tool	U	More Selection types	Ctrl+Shift+... +	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Shape Tool	S	More Selection types	Ctrl+Shift+... +	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
More Tool	W	More Selection Area types	Ctrl+Shift+... +	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Text / Word Tool	T	Pen Tool	Ctrl+Shift+P	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Switch Colors	X	Transform Selection	Ctrl+Shift+A	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
History / Art History Brush Tool	Y			Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Zoom Tool	Z	View	Ctrl+V	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Hand Tool (toggle)	Space	Actual Pixels	Ctrl+Alt+P	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Zoom In (toggle)	Ctrl+Space	Color Channels	Ctrl+Alt+Shift+C	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Zoom Out (toggle)	Alt+Space	Export / Quick Output	Ctrl+Alt+Shift+E	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Panel / Direct Selection Tools	Shift+A	Fit on Screen	Ctrl+Shift+F	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Toggle Brush / Pencil Tools	Shift+B	Gamma Warning	Ctrl+Shift+W	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Eraser Tools	Shift+E	Grid (show / hide)	Ctrl+Shift+G	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Message (show / hide)	Shift+F	Guide (lock / unlock)	Ctrl+Shift+G	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Toggle Gradient / Pattern Bucket Tools	Shift+G	Guides (show / hide)	Ctrl+Shift+G	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Eyedropper / Sampler / Measure Tools	Shift+I	Guides	Ctrl+Shift+G	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Healing, Patch, Color Fill, Text Tools	Shift+J	New Window	Ctrl+Shift+N	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Lasso / Select Selection Tools	Shift+L	Proof Colors (CMYK preview)	Ctrl+Shift+P	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Lasso Tools	Shift+L	Rules (show / hide)	Ctrl+Shift+R	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Toggle New / Deleted Marquee	Shift+N	Snap (on / off)	Ctrl+Shift+S	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Toggle Notes / Auto Animation Tools	Shift+O	Target Panel (show / hide)	Ctrl+Shift+T	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Dodge / Burn / Sponge Tools	Shift+O			Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Toggle New / Freehand Pen Tools	Shift+P	Zoom In / Resize Window	Ctrl+Shift+Z	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Blur / Sharpen / Smudge Tools	Shift+S	Zoom Out	Ctrl+Shift+Z	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Gradient / Pattern Stamp Tools	Shift+S	Zoom Out / Resize Window	Ctrl+Alt+... +	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle Type Tools	Shift+T			Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Cycle History / Art History Tools	Shift+U	Windows	Ctrl+Alt+W	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
AutoRough (Brush Tool)	Alt+Shift+P	Tool Bar / Palettes (show / hide)	Shift+Tab	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
		Actions Palettes (show / hide)	F8	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
		Color Palettes (show / hide)	F6	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
		History Palettes (show / hide)	F10	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
		Info Palettes (show / hide)	F8	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
		Layers Palettes (show / hide)	F7	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
		Options (show / hide)	F4	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
		Styles (show / hide)	F11	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
		Zoom In / Zoom Out	Ctrl+Alt+... +	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T

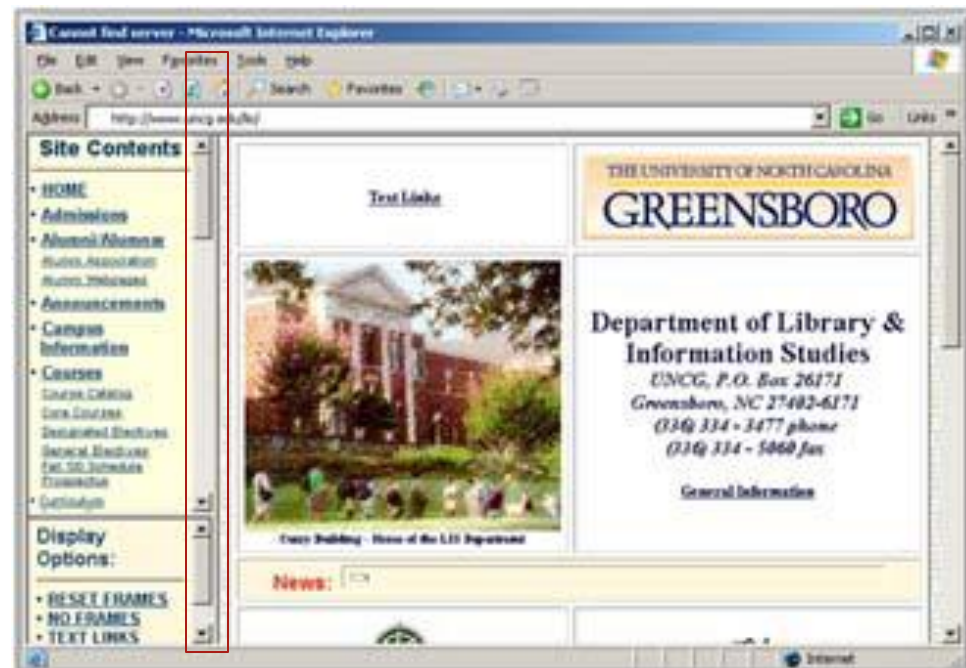
Accel. Stroke	+	Close	Ctrl+W / Ctrl+F4	Type	Layer		Edit
Subtract Shape	-	Close All	Ctrl+Alt+W / Ctrl+Shift+F4	Align Left	Ctrl+Shift+L	Blending Options	Ctrl+Alt+Shift+O
Preserve Transparency (toggle)		Exit Incompatibility	Ctrl+Alt+W	Align Right	Ctrl+Shift+R	Bring Forward	Ctrl+Shift+B
Decrease Brush Size	[	Exit	Ctrl+Q	Auto Rasterize	Ctrl+Shift+B	Bring to Front	Ctrl+Shift+A
Increase Brush Size	]	File Browser	Ctrl+Shift+O	Center Text	Ctrl+Shift+C	Copy Merge	Ctrl+Shift+M
Decrease Opacity by 20%	Shift+[	File Info	Ctrl+Shift+I	Change Kerning by 100/1000	Ctrl+Alt+... +	Delete Layer (Set)	Ctrl+Shift+Q
Increase Brush Hardness by 20%	Shift+]	New Document	Ctrl+N	Change Kerning by 20/10000	Alt+... +	Disable Layer (no dialog)	Ctrl+Shift+G
Previous Brush	-	New Document (set settings)	Ctrl+Alt+N	Decrease / Increase Baseline by 10pt	Ctrl+Alt+Shift+L	Duplicate Layer (Set)	Ctrl+Shift+Q
New Brush	+	Open	Ctrl+O	Decrease / Increase Baseline by 3pt	Alt+Shift+L	Duplicate Layer (no dialog)	Ctrl+Alt+Shift+Q
First Brush	Shift+[-	Open As	Ctrl+Alt+O	Decrease / Increase Leading by 10pt	Ctrl+Alt+Shift+L	Fill with Background Color	Ctrl+Shift+F
Last Brush	Shift+]+	Page Setup	Ctrl+Shift+P	Decrease / Increase Leading by 3pt	Alt+Shift+L	Fill with Background Color	Ctrl+Shift+F
Total Opacity (50% - 100%)	Pro	Print	Ctrl+P	Decrease / Increase Type Size by 10pt	Ctrl+Alt+Shift+... +	Fill with Background & Preserve Transparency	Alt+Shift+Background
Flow / AutoRough Opacity (50% - 100%)	Shift+Pro	Print One Page	Ctrl+Alt+Shift+P	Hyphenation (toggle)	Ctrl+Alt+Shift+H	Fill with Foreground & Preserve Transparency	Alt+Shift+Background
Print / Paste Selection Tools	A	Print with Preview	Ctrl+Alt+P	Isolate (toggle)	Ctrl+Shift+I	Fill with Background Color	Ctrl+Shift+F
Print / Paste Tool	R	Reset	Ctrl+Z	Justify Paragraph (Align Last Line)	Ctrl+Shift+J	Free Transform	Ctrl+T
Copy Tool	C	Save	Ctrl+S	Justify Paragraph (Align Left Last Line)	Ctrl+Shift+J	Free Transform (no dialog)	Ctrl+T
Default Colors	D	Save As	Ctrl+Shift+S	Move Cursor One Word Left or Right	Ctrl+... +	Free Transform (no dialog)	Ctrl+T
Save As Color	Shift+D	Save As Copy	Ctrl+Shift+S	Move Cursor to Start of Line	Ctrl+End	Free Transform (no dialog)	Ctrl+T
Cycle Screen Modes	F	Save for Web	Ctrl+Alt+Shift+S	Move Cursor to End of Line	Ctrl+End	Free Transform (no dialog)	Ctrl+T
Gradient / Pattern Bucket Tool	B			Move Cursor to Start of Line	Home	Free Transform (no dialog)	Ctrl+T
Hand Tool	H			Move Cursor to Start of Line	Home	Free Transform (no dialog)	Ctrl+T
EyeDropper / Sampler / Measure Tool	I	All	Ctrl+A	Move Previous / Next Paragraph	Ctrl+... +	Free Transform (no dialog)	Ctrl+T
Healing / Patch / Color Replacement	J	Color Range	Ctrl+Shift+M	Regular (toggle)	Ctrl+Shift+V	Free Transform (no dialog)	Ctrl+T
Hand Tool	K	Contrast Selection	Ctrl+Shift+M	Select One Character to Left or Right	Ctrl+Shift+... +	Free Transform (no dialog)	Ctrl+T
Lasso Tool	L	Desaturated	Ctrl+D	Select One Line to Left or Right	Ctrl+Shift+... +	Free Transform (no dialog)	Ctrl+T
Marquee Tool	M	Expand Selection	Ctrl+Shift+A	Select One Line to Left or Right	Ctrl+Shift+... +	Free Transform (no dialog)	Ctrl+T
Pen / Auto Animation Tool	P	Feather	Ctrl+Shift+F	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Dodge / Burn / Sponge Tool	R	Increase Selection	Ctrl+Shift+A	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Pen / Freehand Pen Tool	P	More Duplicate of Selection types	Ctrl+Shift+... +	Select One Line to End of Line	Ctrl+Shift+End	Free Transform (no dialog)	Ctrl+T
Eraser / Quick Mask Mode	E	More Duplicate of Selection types	Ctrl+Shift+... +	Select One Line to End of Line			

Allow experienced users to have access to information quickly

8. Aesthetic and minimalist design



Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.



Size and arrange screens for optimal viewing

9. Help users recognize, diagnose, and recover from errors

Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.



10. Help and documentation

Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.



Search Results

Searched for **diesel** found approximately **217** matches

Honeywell Green Diesel | Honeywell UOP

UOP's refining technology makes real alternative fuels from various biofeedstocks. Chemically similar to traditional **diesel**, Green Diesel is a drop-in **diesel** fuel for ...

Provide search as an effective navigation method.

Heuristic Evaluation | How – Severity Ratings

Severity Ratings (from Nielsen & Mack '94)

- 0 - don't agree that this is a usability problem
- 1 - cosmetic problem
- 2 - minor usability problem
- 3 - major usability problem; important to fix
- 4 - usability catastrophe; imperative to fix

Example

[Heuristic 4 – Consistency] [Severity 3]

The product uses the string "Save" on the first screen for saving the user's file, but used the string "Write file" on the second screen. Users may be confused by this different terminology for the same function.

Heuristic Evaluation | How

Severity Ratings Example

[Heuristic 5 - Error Prevention]

[Severity 1]

The redundancy of the notification is confusing. It should have been the second notification only. There is no need for the first one. This is a minor issue since it appears only once when opening app, it is not a persistence problem where it pops up each time you open the app.



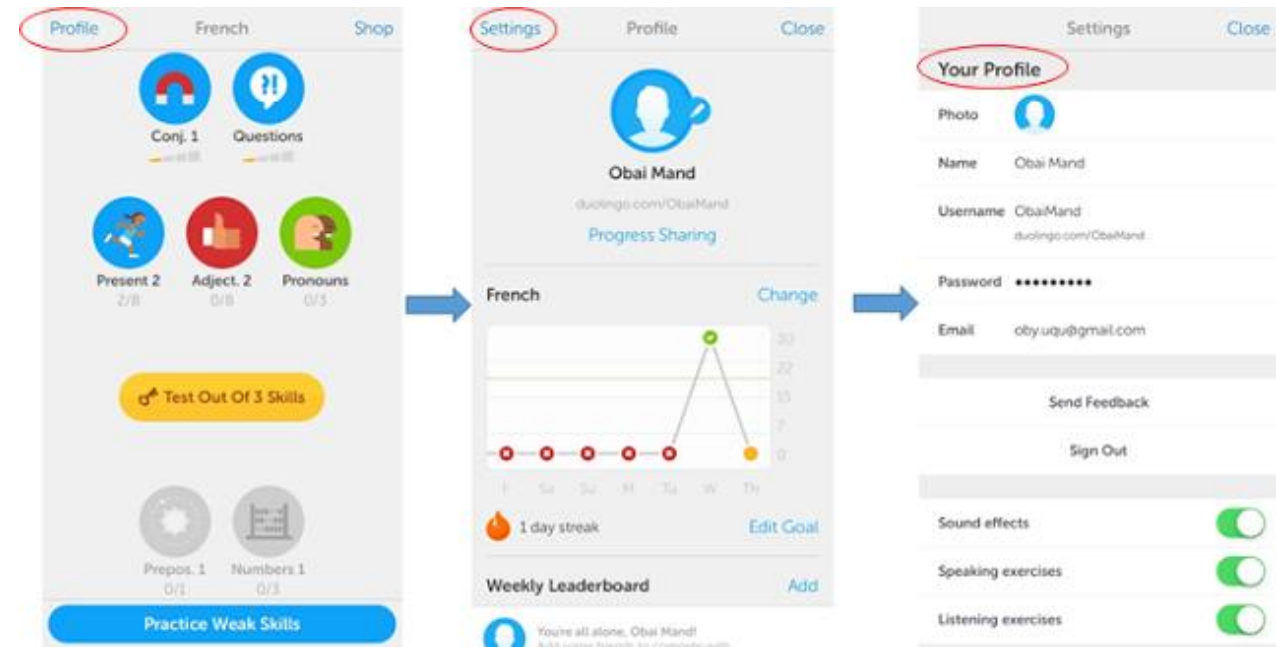
Heuristic Evaluation | How

Severity Ratings Example

[Heuristic 4 - Consistency]

[Severity 2]

When a user wants to go to the settings, he must go through the profile page first then go to settings page. This conflicts with common sense. If a user need to change some of the app settings, there should be a clear button in the main page, not hidden under another page.



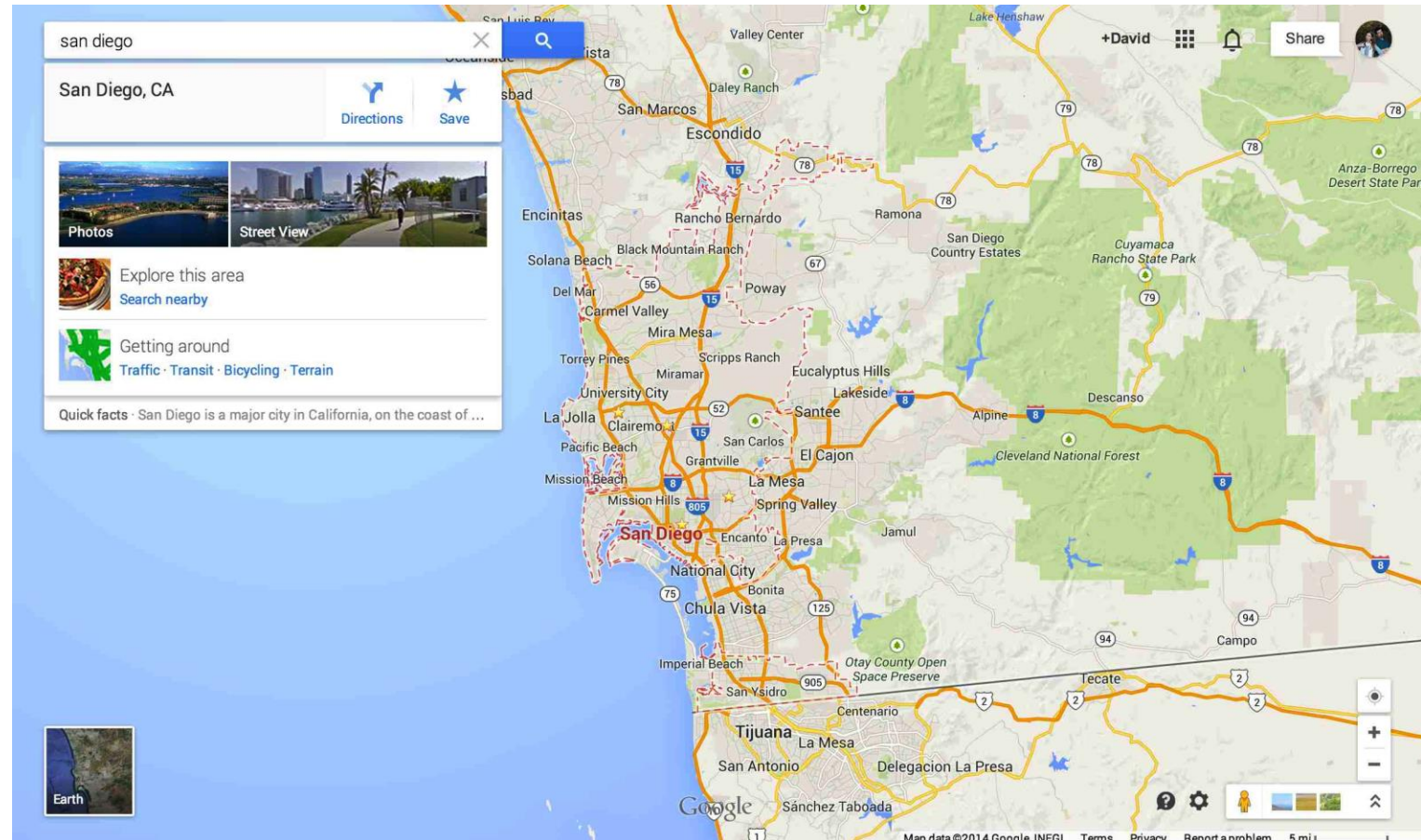
ACTIVITY: Spot the Violation

Scenario:

Let's evaluate Google Maps:
www.google.com/maps

Instructions:

1. Think about a task scenario
2. Go through the scenario step by step, make UX observations and assign to heuristics
3. Observations can be good and bad!
4. For those that are bad, think of ways to mitigate!



ACTIVITY: Spot the Violation

- What issues did you find?
 - Demonstrate the issue
 - Explain why it's an issue (positive or negative) – what heuristic(s) are affected?
 - What severity rating is it?
 - If it's negative, do you have an idea how to improve on it?



ACTIVITY: Make a Recommendation

On the next 10 slides, let's evaluate each heuristic example but propose a possible solution:

1. Think about a task scenario
2. Go through the scenario step by step, make UX observations and think of a solution
3. Does your recommendation violate another heuristic?

The 10 HUE Heuristics

1. Visibility of System Status

Give the users appropriate feedback about what's going on.

2. Match System & Real World

Use real-world words, concepts, and conventions familiar to users in a natural, logical, order.

3. User Control & Freedom

Support, undo, redo, and exit points to help users leave an unwanted state caused by mistakes.

4. Consistency & Standards

Use consistent words, situations, and actions throughout.

5. Error Prevention

Eliminate error-prone conditions or check for them before users commit to an action.

6. Recognition Not Recall

Make objects, actions, and options visible at the appropriate time to minimize users' memory load.

7. Flexibility & Efficiency of Use

Make the system efficient for different experience levels through shortcuts, advanced tools, and frequent actions.

8. Aesthetic & Minimalist Design

Don't show irrelevant or rarely needed information. Extraneous elements diminish the relevance of the others.

9. Help Users Recognize, Diagnose, & Recover

Express error messages in plain language and suggest solutions.

10. Help & Documentation

Make necessary help and documentation easy to find.

Examples

Example 1

- Consistency & Standards

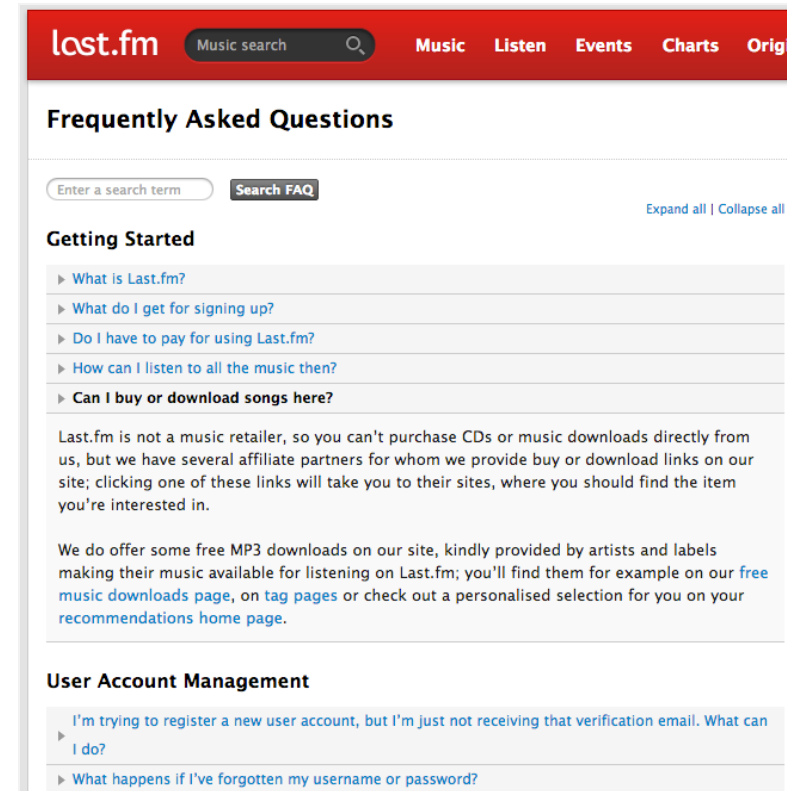
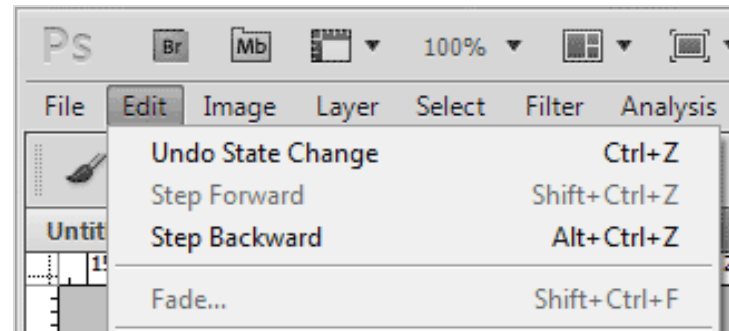
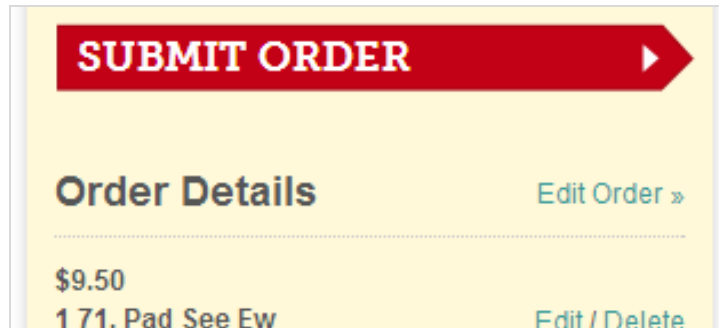
Email	<input type="text"/>	✖ Email is required.
First name	<input type="text" value="Ray"/>	✔
Last name	<input type="text" value="Cheung"/>	✔
Password should be atleast 6 characters and contain both lowercase and uppcase letters as well as numbers.		
Password	<input type="password" value="•••••"/>	✖ Please use numbers and lower and uppcase letters
Confirm	<input type="password" value="•••••"/>	✖ Please enter the exact same password
Country	<input type="text" value="Norway"/>	✔
Street address	<input type="text" value="15 High Street"/>	✔
Home phone	<input type="text"/>	
Office phone	<input type="text"/>	
Cell phone	<input type="text"/>	

ORDER ONLINE OR CALL (847) 701-3038				
Contact Us	Order Tracking	FAQs	Find a Contractor	About Us
Shopping Cart 				

Make each interactive feature behave and appear in the same manner in all screens

Example 2

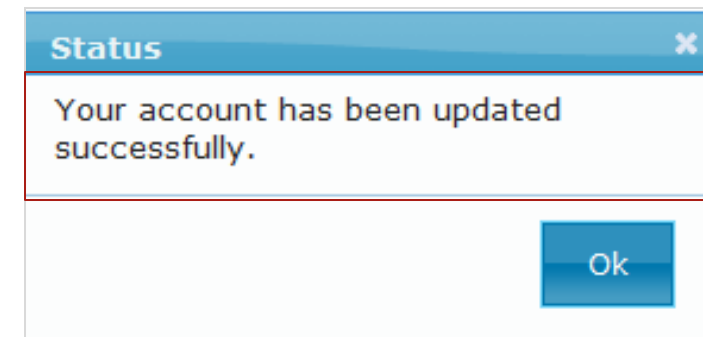
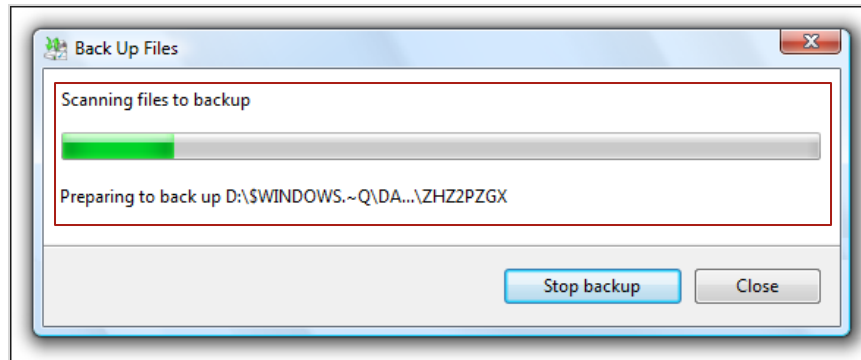
- User Control & Freedom



Offer user access to relevant content at relevant time

Example 3

- Visibility of System Status



Acknowledge Users' Actions & Communicate System Status

Example 4

- Error Prevention

Please sign in using your EID and LDAP Password.
Click [here](#) to add this page to your favorites.

Digital Forms will be unavailable on Saturday, 22nd June from 06:00 AM to 10:00 AM MST for Monthly OS Patching

Sign In [Help](#)

User ID:

Password:

[Forgot Password?](#)

☒ **Automatic alias**
An alias will be generated for you. If you wish to create your own alias below, untick this option. To control the format of the generated aliases, see the [Pathauto settings](#).

3. Submit Evidence of U.S. Citizenship

When applying for a U.S. passport in person, evidence of U.S. citizenship must be submitted **with** Form DS-11. All documentation submitted as citizenship evidence will be **returned** to you. These documents will be delivered with your newly issued U.S. passport or in a separate mailing.

Primary Evidence of U.S. Citizenship (One of the following):

- ☒ Previously issued, undamaged U.S. Passport
- ☒ Certified [birth certificate](#) issued by the city, county or state*
- ☒ [Consular Report of Birth Abroad](#) or [Certification of Birth](#)
- ☒ Naturalization Certificate
- ☒ Certificate of Citizenship

Honeywell and Manipal Institute of Technology Launch "Good Engineering" ...

Push beyond the first no to make the right product at the right time for HGR ...

*Reduce time lapse between technology adoption and business model formulations ...

Kate Adams, Senior Vice President, General Counsel, Honeywell visits HTS India

Minimize disruptions and indicate them to users before they happen

Example 5

- Flexibility and efficiency of use

Item 1 Of 50 | [Next](#)



PUB6438S-ILC-US/U
Spyder BACnet ILC Programmable Controller, 6 Universal/4 Digital Inputs, 3 Analog/8 Digital Outputs, Made in USA

[Product Info](#) [Literature](#) [Accessories & Replacement Parts](#)

Overview

The Spyder Family of controllers are for use in VAV (Variable Air Volume) and Unitary HVAC control applications. Each controller communicates via either LONWORKS® or BACnet MS/TP network communications. Each controller provides flexible, universal inputs (UI) for external sensors, digital inputs (DI), and a combination of analog outputs (AO) and digital Triac outputs (DO). The Sylk Bus is included in each controller which enables connection to other Sylk enabled devices. These controllers provide many options and advanced system features that allow state-of-the-art commercial building control. Each controller is programmable and configurable using the NIAGARA AX FRAMEWORK® software.

Product Specifications

Application	Unitary
Dimensions (in.)	5.45 in. high x 6.85 in. wide x 2.26 in. deep

New Client Setup

1 2 3 4 5 6
Step Name 1 Step Name 2 Step Name 3 Step Name 4 Step Name 5 Step Name 6

General

Company Name:

Username:

Password:

Password (again):

Terms & Conditions

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean euismod bibendum laoreet. Proin gravida dolor sit amet lacus accumsan et viverra justo commodo. Proin sodales pulvinar tempor. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Nam fermentum, nulla luctus pharetra vulputate, felis tellus mollis orci, sed rhoncus sapien nunc eget odio. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean euismod bibendum laoreet.

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☐ I agree to the Terms & Conditions of the Client Portal

[< Back](#)
[Continue >](#)

Display commonly used features and content by default, while still allowing advanced users to access less common features or secondary content


Example 6

- Help users recognize, diagnose, and recover from errors

Password Activation

Fields marked with an asterisk * are required.

User ID: e819008

*New Password: 

*Confirm Password:

☒ Select checkbox to change security questions and answers

Question 1 Select Question:

*Edit Question:

*Answer:

*Repeat Answer:

Question 2 Select Question:

*Edit Question:

*Answer:

*Repeat Answer:

Question 3 Select Question:

*Edit Question:

*Answer:

*Repeat Answer:

Give users the ability to reverse, undo, or pause their actions .

Example 7

- Match System & Real World



HON (Common Stock)	
Exchange	NYSE
Price	\$92.89
Change (%) ▼	0.86 (0.92%)
Volume	2,379,400
03/19/14 4:00 p.m. ET	
Minimum 20 minute delay	
Refresh quote	



Organize content in the most logical and natural order e.g by type, topics, tasks etc.

Example 8

- Help and documentation

Savings Interest Calculator *Required Field

*Type of savings account Savings ▼


Please enter the interest rate that your savings is currently earning. X

\$

*Interest rate (APY) %

Monthly deposit \$

Calculate

Live Help Settings / Configuration Center 

Live Help Control Center helps you configure Live Help to allow you to provide an optimal customer support and sales service.
 not required to configure Live Help prior to logging into your installation.

General

Appearance

Alerts

Images

HTML Code

Privacy

Connection

Advanced


Images / Campaign Link

Live Help Logo:

Campaign Image:

Campaign Link:

Status Image Preview



Live Help - Online

click for live support

Address:

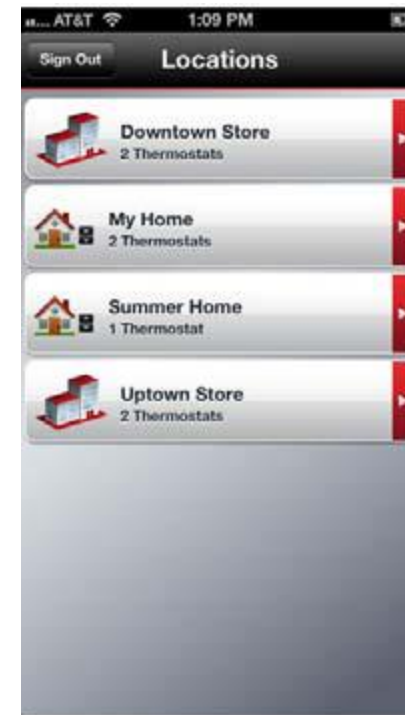
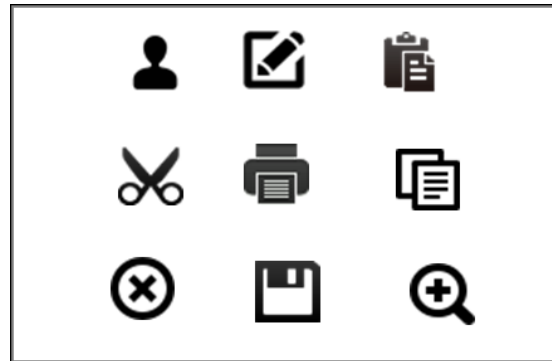
Preview

☒ Online
☐ Offline (Hidden)
☐ Offline w/o Email
☐ Be Right Back
☐ Away

Clarify complex tasks with contextual, helpful information.

Example 9

- Aesthetic and minimalist design



Add images only for clarification and emotional impact.

Example 10

- Recognition rather than recall



Provide visual cues to help users take decisions effectively.

Heuristic Evaluation Steps

Heuristic Evaluation Steps Overview

Evaluate	1	Select Items to Test	Select set of user tasks to use for the heuristic evaluation.
	2	Step through Task	Go through each task, make observation and map to heuristic(s).
Analyze	3	Strengths & Weaknesses	Collate all UX strengths and weaknesses applying to the same heuristics and create clusters
	4	Detail Clusters	Assign title, short description and severity rating to each cluster
	5	Create Report	Create report (refer to template)
Share	6	Review Results with Team	Review results with project team and determine action items
	7	Store & Share	Store report as project artefact on project share drive

Step 1: Select Items to Test

- Select set of user tasks to use for the heuristic evaluation.
- Identify and test the tasks that are critical to your site's success – you'll want all visitors to be able to perform these – and any elements expected to cause difficulty for your site visitors.
- An example might be “users should be able to find out how much product x costs.” You can then break this down into appropriate tasks, and test each in turn.

User Task: Set up a printer

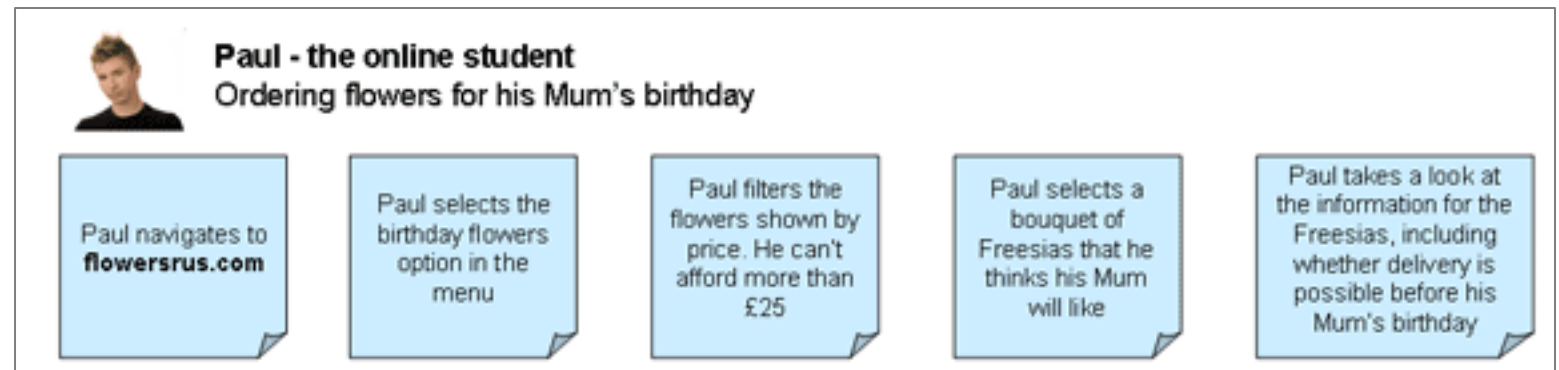
ACTION 1: Pull down the apple menu.

ACTION 2: Select "Chooser" from the menu.

ACTION 3: Click on current printer type, which is Laser.

ACTION 4: Click the On button under background printing.

ACTION 5: Click the Close Box in the upper left window.



Step 2: Select Items to Test

- Go through each task, make observation and map to heuristic(s).

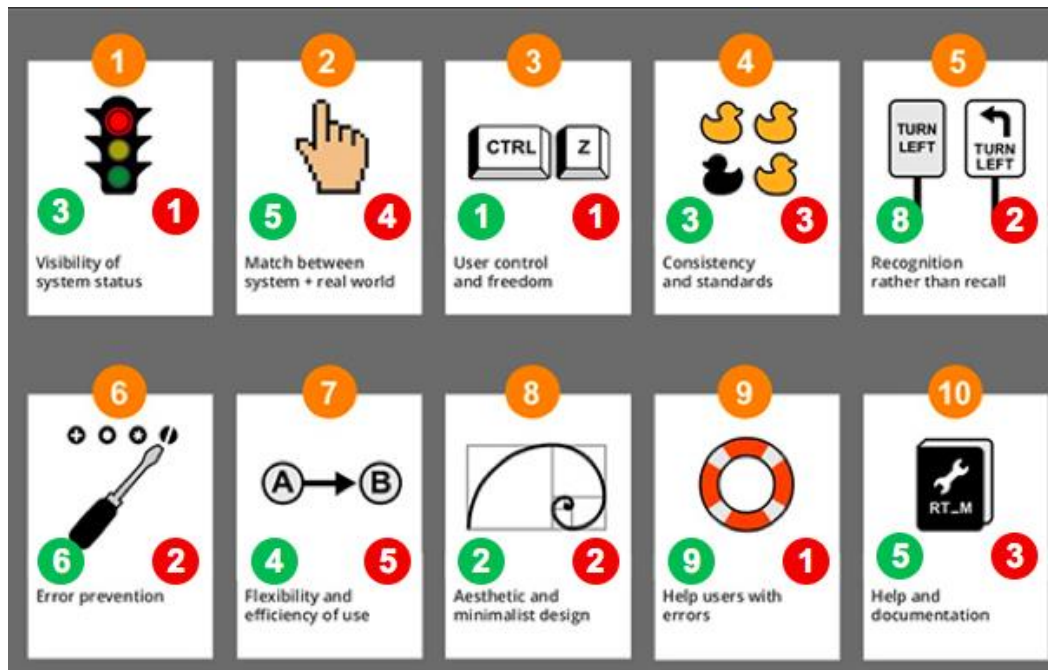
S.No	Task	Step #	Step	Issue Description	Issue title	Heuristics Violated
1		1 a	View dashboard	The initial screen does not show any information about my past requests. It does not tell how to raise a request. It shows a list of links which are not relevant to the task in hand.	There are no standard information architecture of this tool.	visibility, match
6		2 b	Review and submit to BSC	There are multiple action buttons and the order in which they needs to be clicked is not clear	The taskflow and guidance to user is unclear	visibility, recognition
8				It is not clear how to hold the work packet. There are no specific button to hold the request. User needs to click on close and save changes to change the status of the request	The taskflow and guidance to user is unclear	
9		2 d	Hold the work packet	It is not clear on how to Submit to BSC because it is available only when the user enters the business function page and button is enabled after certain rules are fulfilled. Ideally the flow should have been sequential without moving back and forth.	The taskflow and guidance to user is unclear	recognition, recognition
		2 e	Submit to BSC	In order to reject the user is expected to click on BSC administrator button. The button CF administrator is confusing. By mistake if it is opened then there is no way to come back	The taskflow and guidance to user is unclear	visibility, flexibility
10		3 a	Review	The labeling of tabs, links and button does not match users expectations	There are no standard information architecture of this tool.	recognition, recovery
2		1 b	Click on QMS in draft	The page is clearly un optimized with one single button. It adds to the number clicks to complete the task.		match, flexibility
				The type field is same as the Activity field filled in the parent view. In that case it should have been prefilled and non editable. It is not clear what needs to be entered in ADEPT link? The box should have given clear indication of the expected data. As soon as the close and save changes button was pressed both the forms got closed. This was unexpected. Some messages confirming the submission should have been given. In case the user pressed the work packet info, it is not clear if the entry was saved or not. Now there are three buttons enabled creating confusion on what needs to be pressed. Ideally two buttons should have been present. Save as draft and Submit. On press of submit button a confirmation should have come.	There are no error recovery mechanism built in the interface	
4		1 d	Edit the business specific form	Once in the BSC Administrator screen, the instructions and actions to approve, reject and put on hold are all spread out. There is one clear button specific only to hold which is confusing. Clear option should be available throughout the form	Categorization and organization of page level information is unoptimized	recognition, match, recovery
11		b	Reject	The review information is now part of the BSC administrator screen however there are no clear indication between content that needs to be reviewed versus content that needs to edited to change the status.	Categorization and organization of page level information is unoptimized	Consistency, match
12		4 a	Review	Related items are not placed together. It is not clear how many pages of data needs to be entered. Work packet name and draft type value should be part of the header. Draft ID Number and Draft Last Modified by should be part of the right hand side of second section instead of area and cancellation reason. It is not clear that in order to complete the process the Save as Draft button needs to be pressed and then the buttons under work packet type needs to be selected. The close & save changes is also	Categorization and organization of page level information is unoptimized	recognition, visibility
3		1 c	View and edit the form			visibility, match, consistency

Step 3: Strengths & Weaknesses

- Collate all UX strengths and weaknesses applying to the same heuristics and create clusters

The 10 HUE Heuristics

Strength & Weakness Clustering



● Strength
 ● Weakness
 ● Heuristic

1. Visibility of System Status
Give the users appropriate feedback about what's going on.

2. Match System & Real World
Use real-world words, concepts, and conventions familiar to users in a natural, logical, order.

3. User Control & Freedom
Support, undo, redo, and exit points to help users leave an unwanted state caused by mistakes.

4. Consistency & Standards
Use consistent words, situations, and actions throughout.

5. Error Prevention
Eliminate error-prone conditions or check for them before users commit to an action.

6. Recognition Not Recall
Make objects, actions, and options visible at the appropriate time to minimize users' memory load.

7. Flexibility & Efficiency of Use
Make the system efficient for different experience levels through shortcuts, advanced tools, and frequent actions.

8. Aesthetic & Minimalist Design
Don't show irrelevant or rarely needed information. Extraneous elements diminish the relevance of the others.

9. Help Users Recognize, Diagnose, & Recover
Express error messages in plain language and suggest solutions.

10. Help & Documentation
Make necessary help and documentation easy to find.

Step 4: Detail Clusters

Assign title, short description and severity rating to each cluster

Severity Rating Scheme:

- 0 - no usability problem; is a strength
- 1 - cosmetic problem
- 2 - minor usability problem
- 3 - major usability problem; important to fix
- 4 - usability catastrophe; imperative to fix

Scenario #	Task #	Step #	Step Name	Issue Title	Issue Description	Heuristics Violated	Severity Rating	Rating Definition
1	1	a	View dashboard	There is no standard IA for the tool	The initial screen does not show any information about my past requests. It does not tell how to raise a request. It shows a list of links which are not relevant to the task in hand.	Visibility of systems status, match system & realworld	2	Minor usability problem; may occur more frequently or be more difficult to overcome. Fixing this should be given low priority for next release.

Step 5: Create Report

- Create report (refer to template), include:
 - Key areas of issues/violations against the design principles
 - Key areas of compliance with the design principles
 - Recommendations for issue mitigation

Heuristics Violated	Severity Rating	Rating Definition	Strengths	Weakness	Recommendations
Visibility of systems status, match system & realworld	2	Minor usability problem; may occur more frequently or be more difficult to overcome. Fixing this should be given low priority for next release.	6	5	Add instructions on how to raise request and also display about prior request.

Step 6: Review Results with Team

- Review results with project team and determine action items

Scenario #	Task #	Step #	Step Name	Issue Title	Issue Description	Heuristics Violated	Severity Rating	Rating Definition	Strengths	Weakness	Recommendations
1	1	a	View dashboard	There is no standard IA for the tool	The initial screen does not show any information about my past requests. It does not tell how to raise a request. It shows a list of links which are not relevant to the task in hand.	Visibility of systems status, match system & realworld	2	Minor usability problem; may occur more frequently or be more difficult to overcome. Fixing this should be given low priority for next release.	6	5	Add instructions on how to raise request and also display about prior request.

Step 7: Store and Share

Store report as project artefact on project share drive.

Office 365

OneDrive

EXPORT CONTROL DATA PROHIBITED
RESTRICTED INFORMATION LIMITED
Click for Acceptable Use Policies

1

?

Search

New

Upload

Share

Get a link

Sync

Sort

Komischke, Tobias

Files

Our files

Files > IT HUE Team S... > 2 Projects > Project A

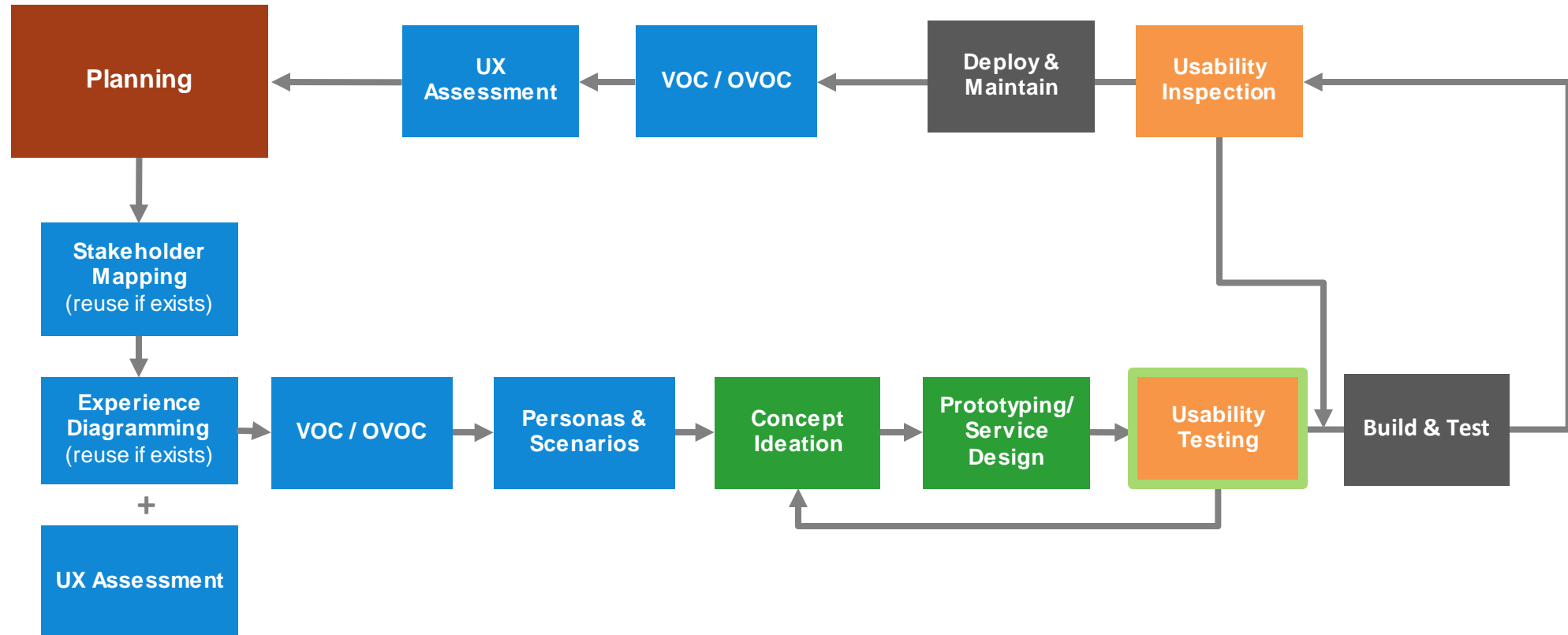
✓	↑ Name	Modified	Modified By	File Size	Sharing
	0 Project Intake	July 21	Callahan, Donald		Shared
	1 Project Management	January 5	Komischke, Tobias		Shared
	2 Work in progress	January 5	Komischke, Tobias		Shared
	3 Results	January 5	Komischke, Tobias		Shared
	4 Hero Summary Slides	January 5	Komischke, Tobias		Shared
	5 Post Mortem	January 5	Komischke, Tobias		Shared

Drag files here to upload

Heuristic Evaluation Templates

- [Heuristic Evaluation Handbook.doc](#)
- [Heuristic Evaluation Results.pptx](#) (*Includes examples*)

Next Steps



Feedback

- Have your expectations been satisfied?
- What did you like?
- What can we do better?



The End