

ServiceNow Training and Certification

Service Portal Design

Service Portal Fundamentals



Topics

Documenting Service Portal Requirements

User Experience Design (UX)

Interactive Design

User Interface Design (UI)



Documenting Service Portal Requirements



Goals and Objectives of a Service Portal

- First step in the project is to understand what you are building and why
- A Design Brief records the goals and objectives of the Service Portal
 - Document between project-sponsor and developer to ensure understanding between both parties
 - Lists all design, functional, and informational requirements
 - Guides the development process
- Examples of details to include:
 - Business objectives of the portal
 - Expected users
 - Branding information
 - Due date



The first step in developing a new Service Portal is to document the business requirements to ensure the requestor and developer are on the same page.

A **requirement** is a statement specifying exactly what the Portal must include/do. It must be specific and clear (e.g. users must have a button to select on the ServiceNow Training and Certification homepage that will immediately take them to book their training).

- **Functional Requirements:** specific functionality must be built into your Service Portal to enable users to accomplish their goals.
- **Non-Functional Requirements:** Standards the system must comply with *(e.g. maintainability, usability, manageability, and more...)*

The more detailed the **Design Brief**, the better chance you have of fulfilling the requirements.

- Saves time and rework.
- Can be a living document that is discussed and updated as requirements change throughout the development process.

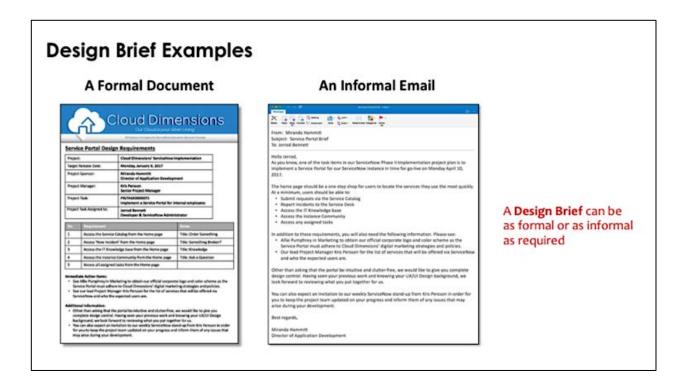
Some developers may also refer to the Design Brief as a Requirements Document.



IMPORTANT

You may have very specific design guidelines or requirements that must be adhered to based on corporate policies, marketing strategies, legal requirements, etc... These requirements must be included in the Design Brief. This situation is very common in large companies. The responsibility of obtaining the information varies in every organization.





Check to see if a Design Brief template exists in your organization before creating one from scratch.



Design Brief Example 1 - A Formal Document



A Fictitious Company for ServiceNow Education Services Courses

Service Portal Design Requirements

Project:	Cloud Dimensions' ServiceNow Implementation
Target Release Date:	End of next month
Project Sponsor:	Miranda Hammitt Director of Application Development
Project Manager:	Kris Persson Senior Project Manager
Project Task:	PRJTASK0000075 Implement a Service Portal for internal employees
Project Task Assigned to:	Jerrod Bennett Developer & ServiceNow Administrator

No.	Requirement	Notes
1	Access the Service Catalog from the Home page	Title: Order Something
2	Access 'New Incident' from the Home page	Title: Something Broken?
3	Access the IT Knowledge base from the Home page	Title: Knowledge
4	Access the instance Community from the Home page	Title: Ask a Question
5	Access all assigned tasks from the Home page	

Immediate Action Items:

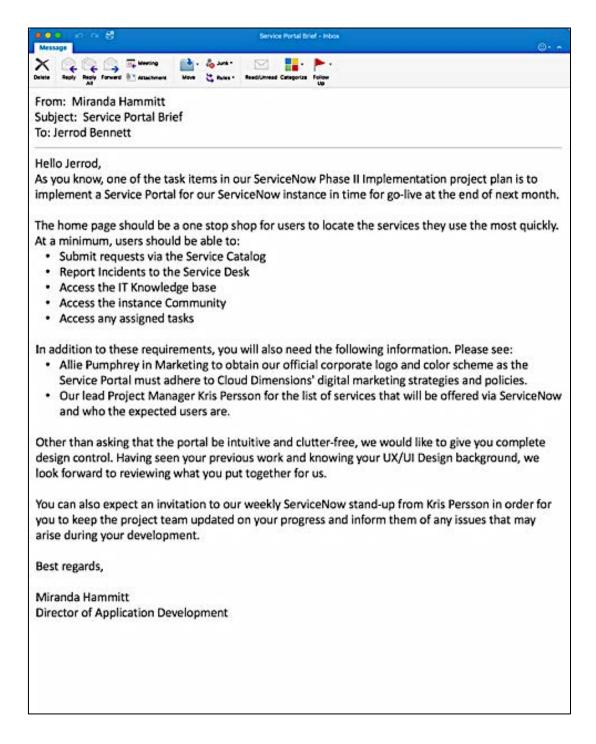
- See Allie Pumphrey in Marketing to obtain our official corporate logo and color scheme as the Service Portal must adhere to Cloud Dimensions' digital marketing strategies and policies.
- See our lead Project Manager Kris Persson for the list of services that will be offered via ServiceNow and who the expected users are.

Additional Information:

- Other than asking that the portal be intuitive and clutter-free, we would like to give you
 complete design control. Having seen your previous work and knowing your UX/UI Design
 background, we look forward to reviewing what you put together for us.
- You can also expect an invitation to our weekly ServiceNow stand-up from Kris Persson in order for you to keep the project team updated on your progress and inform them of any issues that may arise during your development.



Design Brief Example 2 - An Informal Email





User Experience Design (UX)



User Experience (UX) Design

- · Process of enhancing user satisfaction
- Focuses on how the user feels about using the portal
 - What makes users enjoy using their favorite websites?
 - Are users happy using your design?
- The goal of UX is for users to connect with the Service Portal and find using it to be a delightful experience



In addition to understanding the business requirements, it is equally important to understand end-user design requirements before developing anything!

UX Design is the response and perception a user has when they interact with a Service Portal.

- What are these **users** hoping to accomplish through the Service Portal?
- What delights the **users**?

If a user feels connected to the Service Portal, it changes their behavior, their thinking, their speed of persuasion, and even their physical reactions.

Benefits of UX Design:

- Detect and resolve usability problems early in the development process.
- Minimize and eliminate the need for voluminous documentation.
- More time is spent developing only the functions users want and enhance high rate of early adoption.

UX is NOT:

- The responsibility of just one person in your organization
- · Stationary or rigid
- Only about the interface of your Service Portal
- Only about Usability
- Focused on just technology, but on people

Can you think of an example of high profile UX news in recent years? (e.g. When the Miss Universe host incorrectly announced the wrong contestant as the winner. The root cause was determined to be the bad design of the winners announcement card.)



User Research: Who Are Your Users?

Only way to understand your users is to ask and research

- Interview a diverse group of Portal users
- Conduct a survey
- Watch users perform their tasks
- Gather existing analytics from ServiceNow







Surveys



Analytics





Observation

User research lets you collect real information to make effective design decisions.

Here are some ways to gather data and information from your users:

- Polls/Surveys/Questionnaires used to obtain initial responses and can be analyzed to choose people to interview. Obtain opinions and views about specific context with interviews.
- Focus Groups/Interviews semi-structured or unstructured meetings to conduct user research in-person. Ensure you meet with a diverse group of users.
 - Employees from every department who will use the Service Portal (e.g. IT, HR, Finance, etc.).
- **Direct Observation** observing users in their everyday setting in order to comprehend the nature of what they do and the context in how they perform their tasks.
- **Data Analysis** analyze historical ServiceNow data.

Let the users way of thinking influence your design!



User Research: What Do they Do?

- Task Analysis is the process of learning how users perform their work
- · Helps identify activities with poor user experience
 - Current task analysis documents the current process
 - Optimized task analysis documents the new process
- · Where to get information
 - Subject matter experts
 - Stakeholder with authority
 - Observational studies
 - Interview and persona data



One way to evaluate if the Service Portal is intuitive and easy to use is to determine how it matches against the way the person using it wants to perform a particular task.

Questions that can be included in user interviews include:

- What tasks do you perform?
- How are they currently performed?
- How would you like to perform them?

Documenting how often a task is performed is also important to your design as it can help you decide where to provide access to a particular task (e.g. you may want to make the tasks performed the most often the easiest to find on the page).



User Research: Personas

now.

Represent the goals and behaviors of a group of users

- Analyze the data from user research and interviews
- Look for patterns in the output
- Create a Persona to represent a common pattern
- Include how the Persona will use the Service Portal

Persona design eliminates the need to make assumptions about your users







Joe Employee Sales



Aileen Mottern Finance



Beth Anglin
IT Operations



Jerrod Bennett ServiceNow Admin

To create a Persona, describe a specific group of Service Portal users. When deciding what data to include, pick the information that distinguishes between one group of users and the other. The look of the Personas depends on the type of data collected. Of course, there is no limit to the number of Personas you create or how detailed you want the information to be.

Include information on HOW the Personas perform daily tasks and will use the Service Portal.

Document what each Persona will do when they visit the Service Portal. Analyze what is important, what is frequently visited, and what are critical requirements to the user. This information gathered will be essential to decisions when designing the Service Portal and will also help prevent *feature overload*.

The personas you create are mainly for you to design from.

Once created, **validate your Personas**. Ensure the information is still relevant at the time you use it. A very important step that is often missed. Your personas should be able help you answer the question "did I get this right?"

- Refine the Personas as things change in your organization or as the staff changes.
- Compare your Personas against the original data sources. The data should be done from a large sample.
- Let experts closest to your users review the results.



Include Additional Persona Information



Abel Tuter Product Management

Age: 28

Location: Brazil office **Education:** BSc in Computer Science, NC State University

Remote: No

Device Pref: Phone

User Goals: Ensure all the product meeting rooms are booked for Product demos with customers.



Joe Employee Sales

Age: 34

Location: Netherlands Office **Education:** BSc in Computer Science, Cambridge UK

Remote: Yes

Device Pref: Tablet & Phone **User Goals:** Uses the Service Portal to record sales leads and to to log and monitor all system demonstrate Cloud Dimensions

services.



Beth Anglin IT Operations

Age: 37

Location: San Diego

Education: Masters in Computer

Science, USC Remote: No

Device Pref: Desktop

User Goals: Use the Service Portal events and ServiceNow

maintenance.



Aileen Mottern **Finance**

Age: 39

Location: New York office

Education: MBA Remote: No

Device Pref: Desktop

User Goals: Ensure all Business is running with

profit.



Jerrod Bennett ServiceNow Admin

Age: 56

Location: San Diego

Education: Masters in Research Theology

Remote: Yes

Device Pref: Desktop

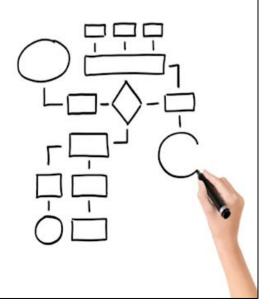
User Goals: Innovation of new systems that

meet the needs of users.



User Research: Document Processes

- Ensures the designer thinks through a design before developing anything
- · Choose a diagram method that works for you
 - Task Flow
 - User Flow
 - Work Flow



Task Flows – visual representation detailing specifically how users travel through the system to perform a task. Assumes a common entry point and are appropriate when the task to be performed is similarly executed by all users. When creating Task Flows, some UX designers assume consistent actions on visited portal pages with no exceptions or decision splits, where as other UX designers show all the possible paths including any branching.

User Flows – emphasizes that different users may perform different tasks or travel different paths to accomplish the same goal.

Work Flows – summarized a task at a high-level when it involves many sub-tasks or when different users have different preferences as to how to accomplish the goal. In this case, documentation moves from the lower level *Task Flow* to the higher level *Work Flow*.



TIP

The **Task Flow Elements** pages in your book provide a list of standard shapes used to build Task Flows, User Flows, and Work Flows.



Task Flow Elements

	Page: Pages are the basic unit of presentation on the web and not a unit of implementation. A page in your diagram may correspond with multiple HTML files or multiple units of code.
	File: Files are a collection of data that does not have navigational properties. Examples of files are audio and video files, stand-alone documents like PDFs or executables. Files are normally delivered to the user and are to be used outside the web browser area.
	Page Stack: A group of pages that are functionally similar and have navigational properties that are not relevant to the micro-structure.
	File Stack: Represents a collection of files that receives similar navigational treatment and can as well be classified as a single entity. (For example, a library of PDF manuals or a collection of digital assets).
	Continuation Points: Enables easy separation of diagrams into digestible sections and is normally used to bridge the gaps between sections. One point of continuation can contain a list of required sources and destinations. The kind of orientation used depends on the aesthetic judgment of the architect.
<u></u> →	Connectors Depicts relationships between elements with Connectors. Users are directed on how to move through the system with the help of connectors that uses arrows show directions. Crossbars are used on the opposite end of the arrows to stop upstream movement.
	Conditional Connectors Conditional connector uses arrows to indicate directionality and shows how the user can move through the system. A crossbar is used on both the opposite ends of the arrow to hinder movement upstream.
	Area: Identifies a collection of pages that share common attributes like having a unique design treatment or appearing in a pop-up window.



Task Flow Elements



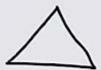
Conditional Area: Used to indicate when various conditions apply to a group of pages. Can be applied in circumstances that involve access permissions like when a valid login or encrypted connection is required. Conditional areas are often linked to a result generated in case the conditions are not fulfilled.



A concurrent set: Use this in situations where an action by a user generates multiple, simultaneous results. E.g. Displaying a page when a file is being downloaded. Upstream elements then connect to the curved side as the downstream ones connect to the flat side.



A decision point: Use this to indicate that the action of a user can generate a number of results with the system deciding on the result to be presented. Arrows should be used alongside decision points in order to clarify direction of associated elements.



A conditional branch: Refers to when the system must select one path amongst mutually exclusive options to be presented to the user. Upstream elements connect to one point of the triangle as downstream elements also connect to the opposite side.



Conditional selectors: Functions in a similar way as the conditional branch apart from one difference.

The various downstream paths are not mutually exclusive and any number of the paths that fulfil the conditions may be presented to the user.

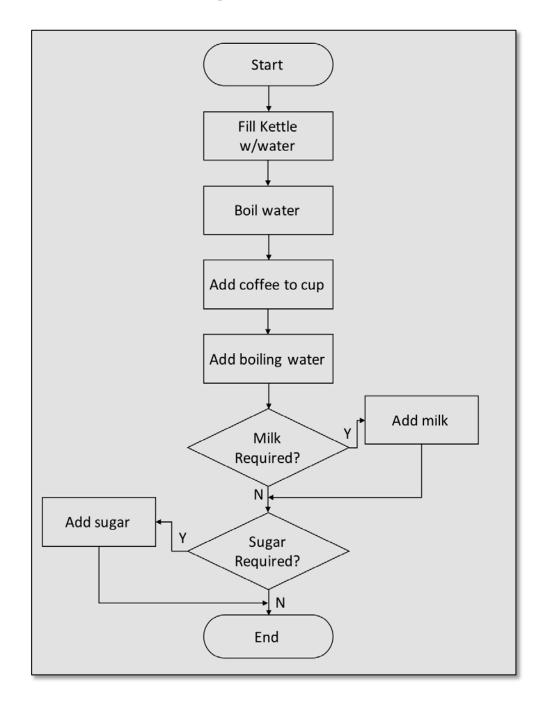


A cluster: Used when a system presents more than one path and is dependent upon certain conditions. The cluster can appear downstream from either a conditional selector or conditional branch.



Task Flow Diagram Example

Make a cup of instant coffee





Interactive Design



Interaction Design

- · Practice of designing an interactive Service Portal
- · Focuses on functionality, efficiency, and usability
 - Rather than analyzing how things currently are, Interaction Design also searches for how users think things ought to be
- · Geared towards producing a design satisfying the majority of users



Keep the **number of mouse-clicks** (or phone screen taps for mobile users) in mind when designing the usability of your Service Portal. Too many mouse-clicks to locate what users are looking for and they may become frustrated and leave. Consider moving content many clicks away onto closer pages, or provide an easier navigation path.



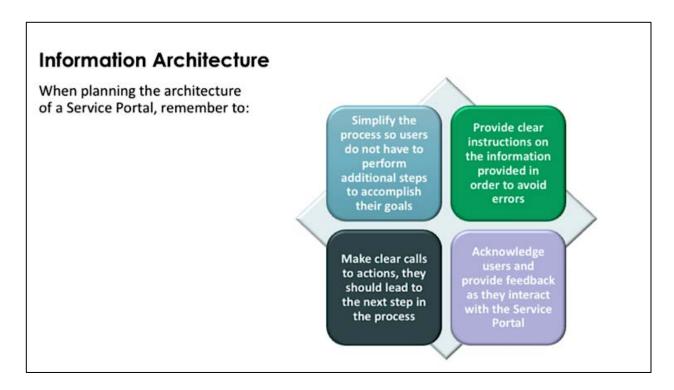
Interaction Design: Information Architecture • The structured design of shared information environments • Organize and present content to support usability — Quality of the user experience when interacting with the Service Portal VS UX V Minimizes steps to execution V Removes road blocks V Makes user's tasks easy and intuitive V Make tasks meaningful and of value

Always keep usability (a key component that influences UX) in mind when designing a Service Portal. A products ease-of-use does not mean it has a good user experience and a beautiful design will not automatically be intuitive to use.

√ Gives users a delightful and meaningful experience

✓ Allows users to easily accomplish their goals





A simple layout and a great typography make a Service Portal easy to navigate.



Information Architecture: Card Sorting

now.

- · Helps to create menu structures and navigation paths
- Users arrange cards to represent how they best see the structure
- · Provides insight to user expectations to make informed design decisions
 - Identifies common navigation patterns
 - Assists with menu labelling
 - Helps determine what to include



There are two types of Card Sorting:

- Open Card Sort used to learn how users group content and the terms or labelling they themselves give each category. Participants are required to:
 - Organize topics of portal content into groups that make sense to them.
 - Then name each content group as they feel best describes the information.
- Closed Card Sort used to learn how users sort content items into a set of pre-defined categories. Participants are asked to organize topics of portal content into the category names provided by the designer.

Card Sorting can be done manually with flash cards, paper, or post-it notes. There are also Card Sorting tools available online.

How to Conduct a Closed Card Sort:

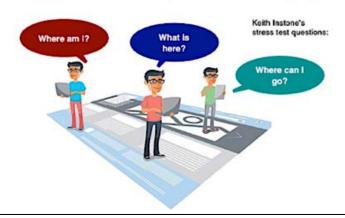
- 1. Prepare the list of portal content and category names. (If your Service Portal is new, list the topics you will most likely use.)
- Provide the users with the instructions on how to perform the Card Sorting exercise. Ask them to speak out loud while working. This will help you to understand their thoughts, rationale, and any frustrations they may encounter.
- 3. Take notes as the participants work.
- 4. Record the end-result of each session. If you used physical cards, either photograph the sort or write down how the participants grouped topics under which category.
- 5. Analyze the data. Use your notes as well. Which topics appeared under which category most often?

Use the results of the Card Sort to design the navigation of the Service Portal.



Information Architecture: Visual Hierarchy

- · Arrangement of elements on a page to signify importance
- Influences the order in which the human eye perceives what it sees
- Seek to satisfy the initial questions a user has when they first arrive on a page
 - Where am I?
 - What is here?
 - Where can I go?



Reduce noise and clutter. Objects and content with the most distinct contrast to their surrounding are the most recognizable by the human mind. The lack of a distinct Visual Hierarchy could result in users becoming disorientated or frustrated, which could lead to deterring them from using the Service Portal.

Examples of Visual Hierarchies best practices:

- Implement a banner at the top of the site to notify users exactly where they are in the portal.
- Place your company's logo or name in the top-left section of the homepage. Use this top-left hand section for the sole purpose of answering the question 'Where am !?'.
- Increase the impact of your logo or company name by adding some empty space between your homepage banner and the rest of the site contents.

Other Types of Location Signposts you can use are:

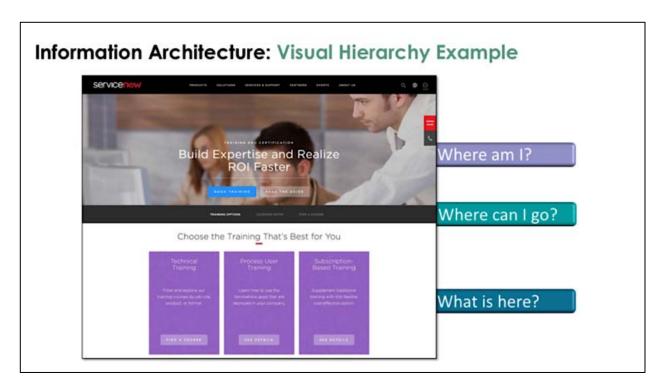
- Titled sections
- Breadcrumbs
- Navigation tabs
- Simple headers and selectors

Align and space content based on:

- Navigation devices
- Margins
- Line spacing
- Clearly defined boundaries
- Spaces between distinct groups of items, and different user interface design patterns

Position all of the content into the most logical arrangement.





Without organization, content is simply a random assembly of items requiring the user to scan much larger areas of the display to identify target items. Ensure users can easily answer *Where am I?*, *What is here?*, and *Where can I go?* to make your information more effective and directional.

Ensure all three questions are answered within the first few seconds of a user arriving to the Service Portal, otherwise they may find the Service Portal difficult to use or find what they need. These difficulties may lead users to simply abandon the Service Portal and seek an alternative source for the information.



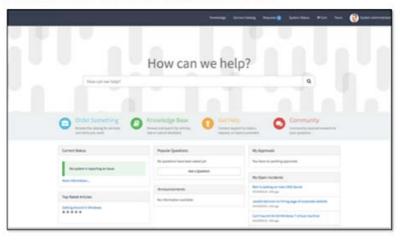
User Interface Design (UI)



UI Design

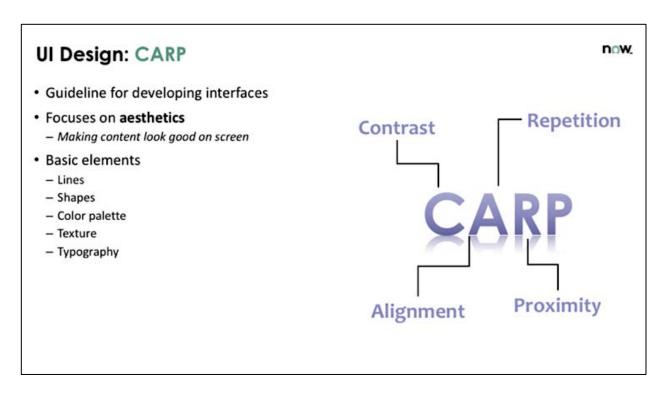
Focuses on the Service Portal's interface

- The design of the Graphical User Interface (GUI) presented to users



User Interface Design for your Service Portal should incorporate elements users have become familiar with. Be predictable and consistent when making choices for your interface layout. The interface should have elements easy to access and understand. (e.g. Include a search element on a homepage to provide users with an online element they are familiar with using, as well as assisting them locate what they need quickly.)





Contrast – purpose is to create focus. Make the objects of attention very different from the other elements that surround it. Avoid blending with other aspects of the design. You can achieve contrast in many ways like color selection, manipulating more space, text selection like the use of bold and narrow, by positioning of elements like top and bottom. Contrast is what the eye looks at first.

Alignment – nothing in your design should look like it is randomly placed. Everything on the page should be connected visually by an invisible line. Create strong lines to ensure viewer focus and to make sure the page looks clean and sophisticated.

Repetition – means to use the same elements (e.g. fonts, colors, images, etc.) throughout your design. Repetition ensures your screens and applications have a firm resemblance and consistency to them.

Proximity – refers to moving elements closer or further apart in order to achieve an organized look.

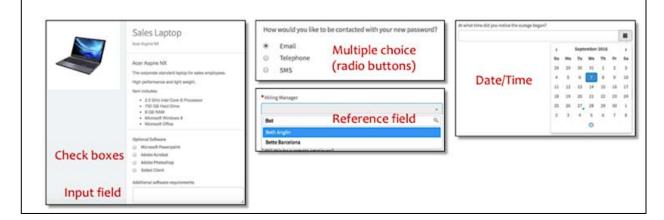
Visual Design is about how to organize your page structure and navigation in sync with your organizational theme to get the best usability results. It is important to understand when users describe how great a user interface is, they actually refer to a collection of linked pages that share a common graphical and navigational look and feel.

People perceive attractive design as **easy to use** versus unattractive designs!



UI Design: Controls

- Check boxes, input fields, radio buttons, reference fields, date/time and hyperlinks are fundamental components of good UI
- Users can struggle with interfaces that do not use standard controls



Users love interacting with interfaces that provides the right tools.



TIP

Before implementing a Text field, check to see if the data is unstructured (*free-form text*). If you use Text fields for structured data users will waste time checking the data. Instead, use a control that matches the data type. (*e.g. If you are asking users to input a date, provide them with a calendar if possible, not a blank text field.*)



UI Design: Images

- · Humans are very visual
- · Images offer an effective way to communicate a message

Symbols



- Commonly recognized images that represent another idea
- Be aware symbols common in certain industries may not be common to everyone

Icons



- Image physically resembles the item it represents
- Easy to understand the meaning of an icon without any prior knowledge of the topic

Indexes



- Indicates the meaning of what it represents
- E.g. A clock could represent time, a shopping cart could represent the Service Catalog, etc.

Large images are visually appealing, but can harm the user experience if not appropriately prioritized. The following factors help ensure images are appropriately used:

- Identify and prioritize all goals of the page
- Assign visual weight based on goal importance
- Select images with a strong relationship with brand goals

At the time of this publication, these websites may assist you in sources images:

- Flickr.com (use the **Commercial use allowed license**)
- Pexels.com
- Picmonkey.com (editing images)
- Shutterstock.com (paid subscription)

For icons:

- fontawesome.com/icons (already loaded in ServiceNow)
- openclipart.org
- flaticons.net



UI Design: Color

- · Color plays an important role in the design of a Service Portal
- · Use complementary colors in your design
- · Monochromatic (one color) and achromatic (no color) designs can be effective strategies



At the time of this publication, these websites may assist you with color selection:

Color Pickers

- w3schools.com/colors/colors_picker.asp
- color-hex.com
- html-color-codes.info/colors-from-image
- chrome.google.com/webstore/detail/colorpick-eyedropper/ohcpnigalekghcmgcdcenkpelffpdolg

Color Schemes

· coolors.co

Keep your users with visual difficulties in mind when designing colors on your Service Portal pages. Be compliant as distortion is real for a lot of people around you!



UI Design: Legibility, Readability, and Comprehension

Legibility

- Measures whether users are capable of seeing, distinguishing, and recognizing the characters and words in the text
- · Guidelines:
 - Use of large default fonts
 - Ensure high contrast between characters and the background
 - Use a clean type face

Readability

- Measures the complexity of the words used
- Long drawn out sentences are harder to understand than simple bullet points
- Guidelines:
 - Use common words
 - Use short sentences
 - Write in the active voice

Comprehension

- Measures whether users can understand the intended meaning of the given text
- · Guidelines:
 - Use terminologies for the target users
 - Reduce the users need to remember things
 - Pictures can be worth 1000 words

It is considered best practice to write in the active voice. Examples:

- Active voice: Click here to run a report.
- **Passive voice**: A report can be run by clicking here.



UI Design: Prototyping

- · Test design ideas with users
- · Paper prototyping is useful to test for
 - Concepts
 - Navigation
 - Content
 - Page layout
- · Electronic prototyping is useful to test for
 - Functionality
 - Download/Response time
 - Colors fonts and icons
 - Intricate interactions



Prototyping a Service Portal page can help answer questions and help you understand if your design is moving close to meeting user requirements.

By prototyping you are adopting three important design principles:

- 1. Acknowledge the user defines the success or failure of the design.
- 2. Gauge how things are working which in turn helps to make adjustments earlier.
- 3. Get the right design before getting the design right.

You can create interactive dynamic prototypes with paper. Paper prototyping helps you to be creative and work fast. You do not need to be artistic to create paper prototypes; you simply need to write legibly. As long as people can read your handwriting, you can prototype!

There are also many online tools available for electronic prototyping such as those found at:

- mogups.com
- axure.com
- invisionapp.com

Select the prototyping method that works for you!



Pre-development Checklist

Have what you need to build your Service Portal at your fingertips

· Portal design



Images



· Company logo



 The text to be used on every page



 Corporate color scheme



 Corporate copyright Information (if including)



Having these items ready to use will ease the development process.



Summary

- ✓ Document the Service Portal requirements in a Design Brief
- ✓ User Experience (UX) Design is the process of enhancing user satisfaction - it focuses on how the user feels about using the Service Portal
- ✓ Interaction Design is the practice of designing an interactive Service Portal – it focuses on functionality, efficiency, and usability
- ✓ **User Interface (UI) Design** is the practice of developing an interface pleasing to the eye it focuses on the presentation of Graphical User Interface (GUI) presented to users