



# Designing a Government Intranet User Experience

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The Maskery Edge process delivers effective Intranet site design by managing decision making. Design decisions are tied to the business goals that need to be achieved. Design options that best support the business goals are chosen given this strategy.

## The Situation

Does the government organization you work for require an intranet overhaul? How to tell?

- Is it difficult to find even simple information on your intranet?
- Is the information out of date by 6 months, 1 year, more than 1 year?
- Does the search engine return small sets of meaningful search results?
- Is information broken up into meaningful categories that can be browsed easily?

## How did you score?

Intranets are often used to post vastly different information that includes such things as:

- Pension details
- Operations policy
- Hiring policy
- Discrimination policy
- Regional office locations
- Where to recycle inkjet cartridges
- Lunch room storage facilities
- United Way campaign
- Project notes (projects 1-N)
- Employee equity
- Computer help
- Software training
- Up-and-coming events
- Training Manuals
- Sick Leave
- Report Templates
- Expense policy/ expense forms
- Hotel listings
- Phone directory
- Corporate hierarchy/Organization chart
- Work place safety policy and procedures
- Worker Performance Evaluation policy/ procedures
- Training policy (language training)
- Committees
- Travel booking procedures
- And much more

If your organization is experiencing problems with its intranet, read on to learn about a process for fixing it that can be used on any product design/development project.

## The Maskery Edge

The Maskery Edge is a process that enables effective decision making. It accounts for human performance, motivation and technology when making decisions. It delivers iterative information architecture and interaction designs that ensure business goals remain the primary focus of any design/development project.

Following the Maskery Edge to redesign an intranet would take these steps:

### Step 1 - Determine the Goals of the Organization

It is imperative that any design works toward well defined organizational goals. These goals provide a mechanism for discussing priority and focusing design work on what is important to the organization. Goals are determined through discussion, observation, interviews, or focus groups. A set of goals must be small in number and easy to determine whether they have been achieved. Below is a set of organization goals which will be used in this exercise to guide the intranet site improvements.

#### Government Intranet Goals might be:

- Improve visibility/access to all important information.
- Provide a location to put important notices/bulletins
- Provide a location for collaboration on projects
- Create an opportunity for community building

Are these goals being realized today? If not what is preventing the realization of each of these goals?

#### Improve visibility/access to all important information

Prevented by:

- Ineffective organization of information prevents finding information
- Ineffective search engine technology is unable to return meaningful results.
- Ineffective information classification prevents accurate search tables from being constructed

#### Provide a location to put important notices/bulletins

Prevented by:

- Ineffective rollout and removal strategy means time sensitive information is not posted/removed in a timely manner making staff distrust and not use the current mechanism

#### Provide a location for collaboration on projects

Prevented by:

- Ineffective organization of information prevents storing of project related information together in a single location
- Lacking automated tools for tracking discussions, reviews

## **Create an opportunity for community building**

Prevented by:

- Lacking tools for tracking discussions, reviews and communication forum

It is usually not possible to focus on all Organization Goals simultaneously as time is always a constraint for any design/development project. To maximize the impact it is important to prioritize goals based on organizational need/impact and work on the top one or two goals first.

### **Government Intranet Goals Prioritized:**

1. Improve visibility/access to all important information.
2. Provide a location for collaboration on projects
3. Provide a location to put important notices/bulletins
4. Create an opportunity for community building

## **Step 2 - Achieve the Top 2 Organizational Goals First**

Goals are achieved when the tasks which support them are successfully completed by users of a product or system. It is important to examine in detail:

- tasks that support goal achievement
- technical constraints that support/deter goal achievement
- human motivations that encourage/deter goal achievement

It is possible to understand the tasks that support a goal by performing task analysis.

### **Tasks Analysis**

Hierarchical task analysis involves capturing all the steps performed to complete a task. Even if the way a task will be performed in a future will change it is important to capture how it is done today to ensure that no important information is overlooked.

To begin, task analysis involves the capturing of high-level tasks which support a goal. Each task is examined in detail to determine the steps needed to complete the task. The steps needed to complete a task can be listed verbally or drawn in the form of a flow chart diagram.

Examine the top 2 Goals with supporting tasks:

#### **Improve visibility/access to all important information tasks:**

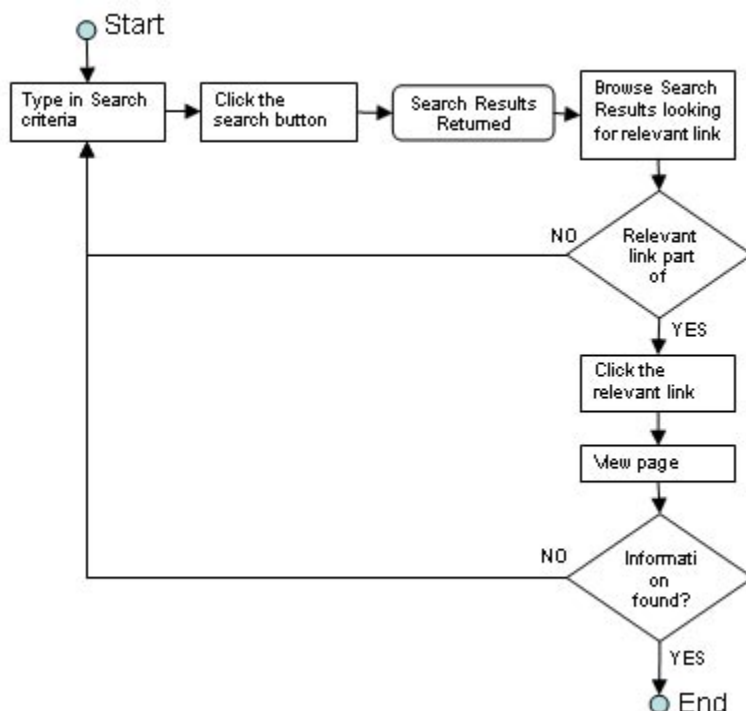
- Search for information
- Browse for information
- Add information
- Edit information
- Delete information
- Archive information

**Provide a location for collaboration on projects tasks:**

- Search for a project
- Browse for a project
- Add new project
  - o Add new project content
  - o Edit project content
  - o Delete project content
  - o Discuss project content
  - o Review project content
  - o Link/associate project content (to another project)
- Edit existing project
  - o Add new project content
  - o Edit project content
  - o Delete project content
  - o Discuss project content
  - o Review project content
  - o Link/associate project content (to another project)
- Delete existing project
- Archive project
- Link/associate projects

**Example Task Analysis Diagram**

Search for Information - Task Analysis Diagram



- Search for information
  1. Type the search criteria in the search box in the upper right hand corner of the web page
  2. click the search button (search results are returned)
  3. browse the search results looking for the relevant link
  4. click the relevant link to view the page

## Technical Constraints

In any design/development project the technology cannot be ignored as it is the technology that has the biggest impact on the cost and development schedule. So each task must be considered along with the technical constraints.

### Improve visibility/access to all important information tasks:

- Search for information

The quality of search results is governed by two technical aspects, the power of the search engine used and the quality of the meta-data that describes data components.

The first aspect is purely a technology issue. Sound technical solutions for searching intranet content are commercially available at relatively low cost. Unless there are specific needs that cannot be met by a commercial search engine; purchasing an available solution is usually chosen above building something in-house.

The second aspect relies on the mechanisms for adding new content to the intranet. As new pages are added meta-data that describes the page is entered. The meta-data used to describe data components should follow the recommendations for whatever commercial search engine is used. This will optimize search performance using the metadata crawler and the search engine.

## Human Motivation

Human Motivations surrounding the use of a product is determined through observation, and interviews.

### Improve visibility/access to all important information tasks:

- Search for information

When searching for information within an intranet site, user's motivation to find information is dependent on:

- o Urgency of information use
- o Knowledge & experience with system (or similar systems)
- o Expectation that the information is there
- o Expectation that the information is current/ up-to-date
- o Expectation that it is easy to find
- o Expectation that the information will satisfy their need

This motivation will determine how persistent a user is if they do not find what they are looking for immediately

## Step 3 – Prioritize Tasks

It is necessary to prioritize tasks toward achieving organizational goals. Prioritization should be based on the frequency a task will be performed. For intranet sites frequency is the standard criteria used to prioritize tasks however for medical devices priority might be given to tasks which impact data integrity.

“How do I determine task frequency of an intranet site?” Intranet webpage statistics are a good mechanism to help determine task frequency. Through web statistics it is possible to determine how much traffic each page receives, when pages are posted, when pages are updated. Speaking with the current web masters for an intranet site (if you are not the webmaster) is usually interesting to find out what areas people complain about most frequently because usually these are the areas that receive the most traffic. The last way to determine task frequency is by interviewing users about the frequency for which they perform certain tasks.

It is not necessary to have rigid numerical priority on tasks but instead classify them as high, medium, low, or primary and secondary.

### **Improve visibility/access to all important information tasks:**

- Search for information (high)
- Browse for information (high)
- Add information (medium)
- Edit information (medium)
- Delete information (low)
- Archive information (low)

### **Provide a location for collaboration on projects tasks:**

- Search for a project (medium)
- Browse for a project (medium)
- Add new project (high)
  - Add new project content (high)
  - Edit project content (high)
  - Delete project content (low)
  - Discuss project content (medium)
  - Review project content (medium)
  - Link/associate project content (to another project) (low)
- Edit existing project (high)
  - Add new project content (high)
  - Edit project content (high)
  - Delete project content (low)
  - Discuss project content (medium)
  - Review project content (medium)
  - Link/associate project content (to another project) (low)
- Delete existing project (low)
- Archive project (low)
- Link/associate projects (low)

## **Step 4 – Design for High Priority Tasks**

Design is always a balancing act between human performance, motivations and technology. Usually several

competing designs are examined on route to finding the best solution. The 'best solution' is the one that works within the technology constraints while providing the best possible human performance. The best designers are those who are capable of weighing human performance, motivations and technology equally. Developers don't make the best designers because they have too much interest in the technical concerns. Users don't make the best designers because they have too much interest in the human performance and motivations. Human interaction designers have equal interest in the technology and human concerns, allowing them to make tough decisions that take all concerns into consideration.

Take the first organizational goal and the first high priority task and begin the design process. Use a design technique that provides quick results with sufficient detail so that the look and feel as well as the interaction can be understood. Wireframe diagrams are used to specify the layout and interaction of a design quickly because they are drawn using geometric shapes and text only. Wireframes can be hand sketched using paper and pencil or drawn using a simple computer software package such as MS PowerPoint. The examples provided are produced in MS PowerPoint.

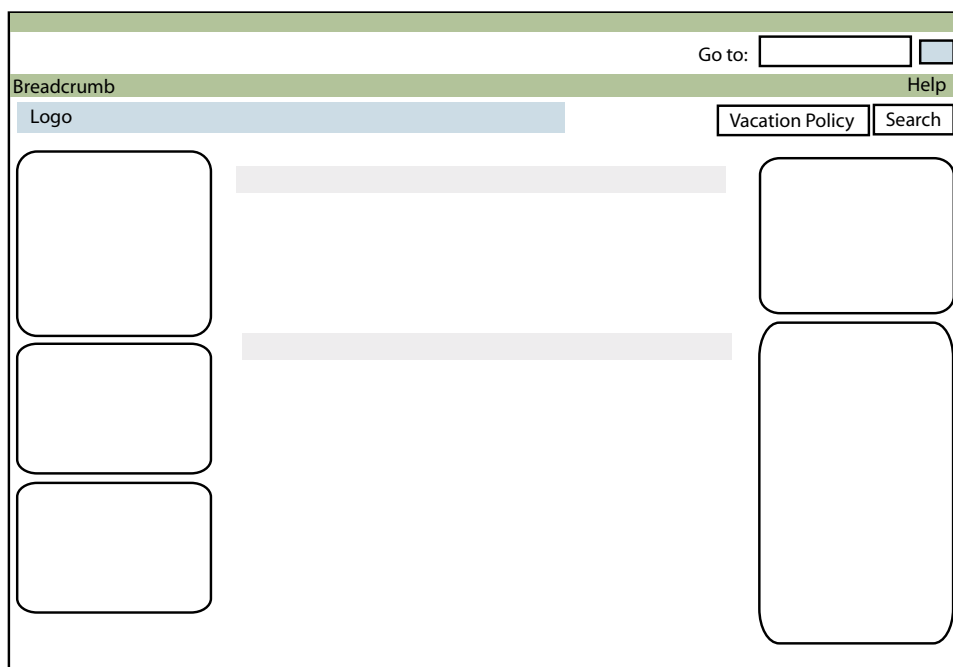
### **Improve visibility/access to all important information tasks:**

- Search for information (high)

### **Design Guidelines**

- Follow standards and conventions
- Make similar things similar
- Prevent errors or recover gracefully
- Provide timely, informative feedback
- (For Maskery's complete set of design guidelines click here)

### **Design 1 – Search from any Page**



## Design 2 – Search Results Formatted

The screenshot shows a web interface for search results. At the top right, there is a 'Go to:' field with a search button. Below this is a green breadcrumb bar with 'Breadcrumb' on the left and 'Help' on the right. Underneath is a light blue 'Search Logo' bar. A search input field contains the text 'Vacation Policy' and has a search button to its right. Below the search bar, a grey bar indicates 'Results: 1-10 of 2158 for **Vacation Policy**'. Three search results are listed, each with a title and a brief description:

- Organization XYZ Vacation Policy - Document  
Vacation days are accrued using a formula based approach that allows for 1.66 days per month.
- Vacation Notice - Bulletin  
During the Christmas holidays anyone taking extra vacation days must report those days to their manager.
- Organization Policy Committee Decisions - Document  
Vacation days are accrued using a formula bases approach that allows for 1.66 days per month.

## Step 5 -- Prototype areas with High Impact or Uncertainty

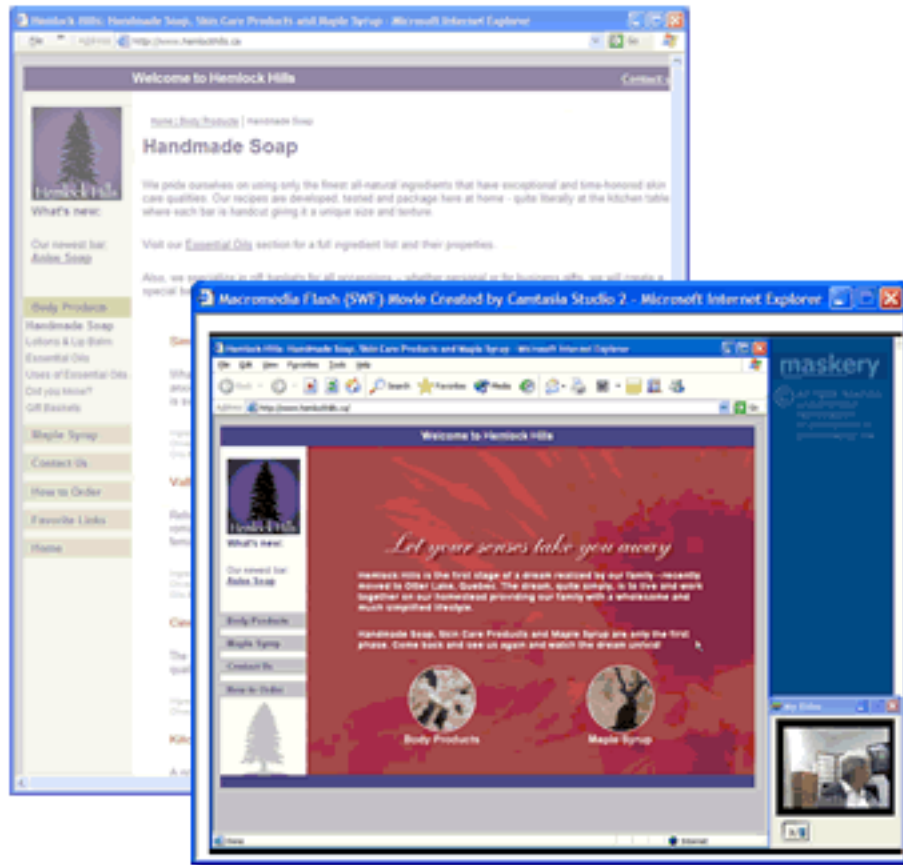
Rapid prototypes are used to mitigate risk in areas of the design which have large impact or where uncertainty about design elements exists. When building prototypes the emphasis is on speed. A prototype should only be built with enough detail to express the area of risk. Paper, html, PowerPoint, flash, or director prototypes can always express enough details of interaction to allow usability testing to be performed.

For intranet sites it is often possible to create interactive wireframes diagrams in PowerPoint to facilitate usability testing of areas of risk. The emphasis in prototyping is speed. Developing a prototype in html for intranet sites must only focus on the components that require testing and should not include production graphics (must give the impression that this is a prototype – not the real product).

## Step 6 – Usability Test with Users in a Real Work Setting

Usability testing is used to mitigate risk in areas of design which have large impact, where uncertainty exists, or to facilitate design decisions when a choice between two competing designs is not obvious.

Mitigating risk means uncovering issues in interaction, terminology, placement, flow, messaging, and error recovery, before a product ever gets into development. Making design changes through prototyping and usability testing is 100 times faster than discovering, discussing, redesigning and deploying changes to a system that is already deployed.



Usability testing will use the tasks captured during task analysis as a basis for devising realistic tasks to carry out during usability testing. If you are unfamiliar with usability testing click here to learn more.

## Step 7 – Iterate, Iterate, Iterate

Usability testing will provide qualitative and quantitative results that will allow decisions regarding opposing designs to be made and uncover issues in areas of risk. Usability testing invariably always uncovers some problems that were not considered during the design phase.

Iteration of a design relies on the goals, tasks, technology, and motivations used to generate the original design coupled with the new qualitative results provided during usability testing to evolve a design. Issues uncovered during usability testing must be solved in the iteration of the design and (time permitting) usability tested again to ensure the redesign solves the issue but more importantly does not introduce any new issues.

## Step 8 – Work with Development

Development teams are experts in their domain and are responsible for building a product right. Unless they have been directly involved in the organizational goal definition, task analysis and motivation determination developers will only be concerned with the technical constraints of the product. It is necessary to manage the design/development process such that designs leave little room for interpretation. Any interpretation about product design is managed through continuous discussion with the interaction designers. This model forces a close relationship between the interaction designer and development team. This relationship is beneficial to ensure that organizational goals are the focus throughout design and continue on into development. New technical constraints always surface once actual development begins and it is the continued focus on the business goals which will allow sound decisions to be made regarding design tradeoffs.

## **Step 9 -- Deployment**

Deploying a product to a user community requires careful planning to ensure that the product will be well received. It is necessary to set expectations for what is included in a product release and what is not. It is imperative during release of a redesign of something familiar that users know what the new design is intended to achieve. This is where the organizational goals defined in step 1 and carried throughout the design process are communicated to the user community. By communicating the organizational goals users are made aware of what the focus of the work was and what will be included. Knowing the business goals allows a user to see the strategy by which the intranet is to evolve.

## **Conclusion**

The Maskery Edge process enables effective decision making when redesigning intranets by accounting for human performance, motivation and technology when making decisions. The process delivers iterative designs that ensure business goals remain the primary focus of any design/development project.