INFORMATION & eGOVERNMENT AUTHORITY

Website Standards & Guidelines
Version 2.0

Contents

1.1 Introduction

The Web management framework aims to have a consistent and standardized website for all the Government entities in Bahrain. In order to introduce consistency in the way Bahrain Government websites are created, managed and decommissioned, Website Governance Framework is recommended to assist all Government entities to focus on delivering information and services that are aligned to the needs of citizens and business and to ensure there is a consistent approach to the development and management of websites across government.

Bahrain National Portal are envisaged as a mainstream channel through which Government entities deliver information and services to citizens and business. The existing web portals are generally Entity centric, inconsistent, and fragmented. These web portals should project a unified, positive image of the Bahrain Government locally, nationally and globally in order to better support the Government's optimized outcomes.

The Web Governance Framework encapsulates all of the facets of Website Life Cycle (WLC) and attempts to map best practices and standards in order to facilitate a consistent website across the ministries.

1.2 Scope

The purpose of this document is to establish a framework for the creation of professional Government websites that meet minimum criteria for best practice website usability and accessibility design.

The standards and guidelines outlined in this document apply to all public access web sites owned, established, and maintained by or for Bahrain Government entities.

1.3 Objective

- Improve the UN Online Service Index ranking
- Introduce level of consistency throughout all Government websites positioning and functionality of key website elements
- Designed to ensure user confidence in online services, and encourage their uptake by customers
- Better promote and foster the Bahrain Government identity, therefore making it easier for users to identify Bahrain Ministries' websites
- Make it easier for users to navigate thereby providing a more consistent user experience
- Reduce development and website maintenance costs
- Accessible to all intended audiences

1.4 Intended Audience

The *Bahrain Government Website standards and Guidelines* is a resource for staff and consultants involved in the development of Government websites. A basic understanding of website development is assumed. However, the guidelines can be applied by any organization that intent to improve the quality of its website and to improve the user experience. The criteria stated in this document address the following areas:

- Accessibility
- Usability
- Web standards
- Privacy
- Information architecture
- Information security

1.5 Release Summary

Release 2 – Year 2020
Release 1-- Year 2011

1.6 Implementation and Compliance Requirements

Existing Websites

Government Entities are required to ensure that all existing public access Web sites are to be assessed for the level of compliance, where existing Web sites do not conform to all of the mandatory requirements, it is expected that these Web sites will be updated to fully comply at the earliest opportunity. Non-compliance with these standards is at the sole risk of the entities.

New Websites

Government entities are required to ensure that all new public access Web sites are to be assessed for the level of compliance and ensure that they meet the standard requirements as stated in this document.

1.7 Guidelines Review

The website Governance Framework will be reviewed annually to ensure that they remain relevant in line with international standards and guidelines.

1.8 Feedback and Suggestions

Feedback and suggestions on the website Governance framework guidelines are welcome. Any suggestion/feedback will help in enhancing/refining the guidelines further thus making this document more comprehensive and relevant.

Feedback, suggestions, clarifications and queries on this document may be sent to qa@iga.gov.bh .

1.9 Website Governance Structure

The governance structure for the framework is stated below:
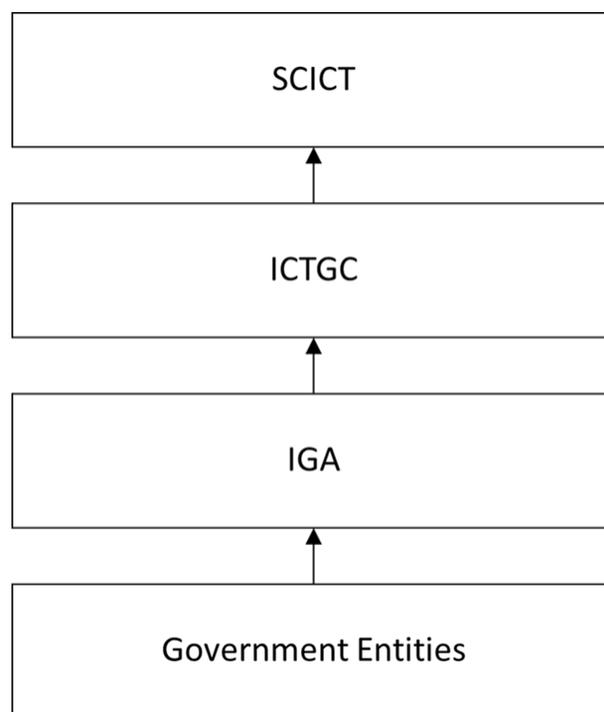
Key Roles and Responsibilities

The following elements are critical in achieving the effective Website Governance Framework

SCICT (Supreme Council for Information and Communications Technology)

Set the strategic direction for the development of website governance framework

ICTGC (Information and Communications Technology Governance Committee)

- Oversee the effective and consistent implementation of the website governance framework
- Approval authority for major changes in policies or standards resulting in significant impact on the government entities or whole of government
- Review and approve any deviations or exemptions requirements

iGA (Information & eGovernment Authority)

- Develop and document the website policies, standards and best practices
- Continuously review and enhance the website policies and standards
- Management, administration and maintenance of the policies and standards
- Communication, marketing, publication and awareness rising
- Auditing and reporting

Government Entities

- Compliance and adoption of the website polices and standards
- Responsible for ongoing maintenance of information and services delivered through website
- Responsible for planning, creation, operation, and retirement of the website

1.10 Guidelines Category

The Navigation elements described in chapter 3 is categorized as one of the following:

Required: Government entities are expected to comply with the guidelines which has been categorised as 'Required' in the following section. The websites will be checked against these guidelines when audits for compliance are undertaken.

Recommended: Government entities may refer to the guidelines as the industry best practice which has been categorised as 'Recommended' practices in this document. These have been drawn from good practices and conventions that have been proved successful and helped the organisation achieve high quality benchmark.

1.11 Priorities

Each of the standards in this document in chapter 4 is ranked with one of the following Priority Levels based on W3c standards:

[Priority 1]: Web developers must satisfy these requirements; otherwise it will be impossible for one or more groups to use the website.

[Priority 2]: Web developers should satisfy these requirements; otherwise some groups will find it difficult to use the website.

[Priority 3]: Web developers may satisfy these requirements, to make it easier for some groups to use the website.

Group mentioned in the above statements refer to the following:

- People with visual disabilities are individuals who are blind, have low vision, or have colour blindness.
- People with auditory, physical, speech, cognitive, and neurological disabilities
- People who work on the most commonly used assistive technologies – including screen magnifiers, screen readers and speech recognition tools
- People using a slow Internet connection, people with "temporary disabilities" such as a broken arm, and people with changing abilities due to aging.

1.12 Exemptions

Exemptions from the "required" elements identified within this document will not be granted unless compelling reasons for taking an alternative approach can be demonstrated. Requests for an exemption must be provided in writing and email to qa@iga.gov.bh .

WEBSITE MANAGEMENT
&
DEVELOPMENT PROCESS
Chapter 2.0

2.0 Website Management and Development Process

The Website Management Process depicted in the next page, forms the core of the website Framework. It defines the process Government entities must use for the:

- ✓ Development of new websites or the major redevelopment of existing websites
- ✓ Ongoing management of existing websites
- ✓ Decommissioning of existing website

Process Steps
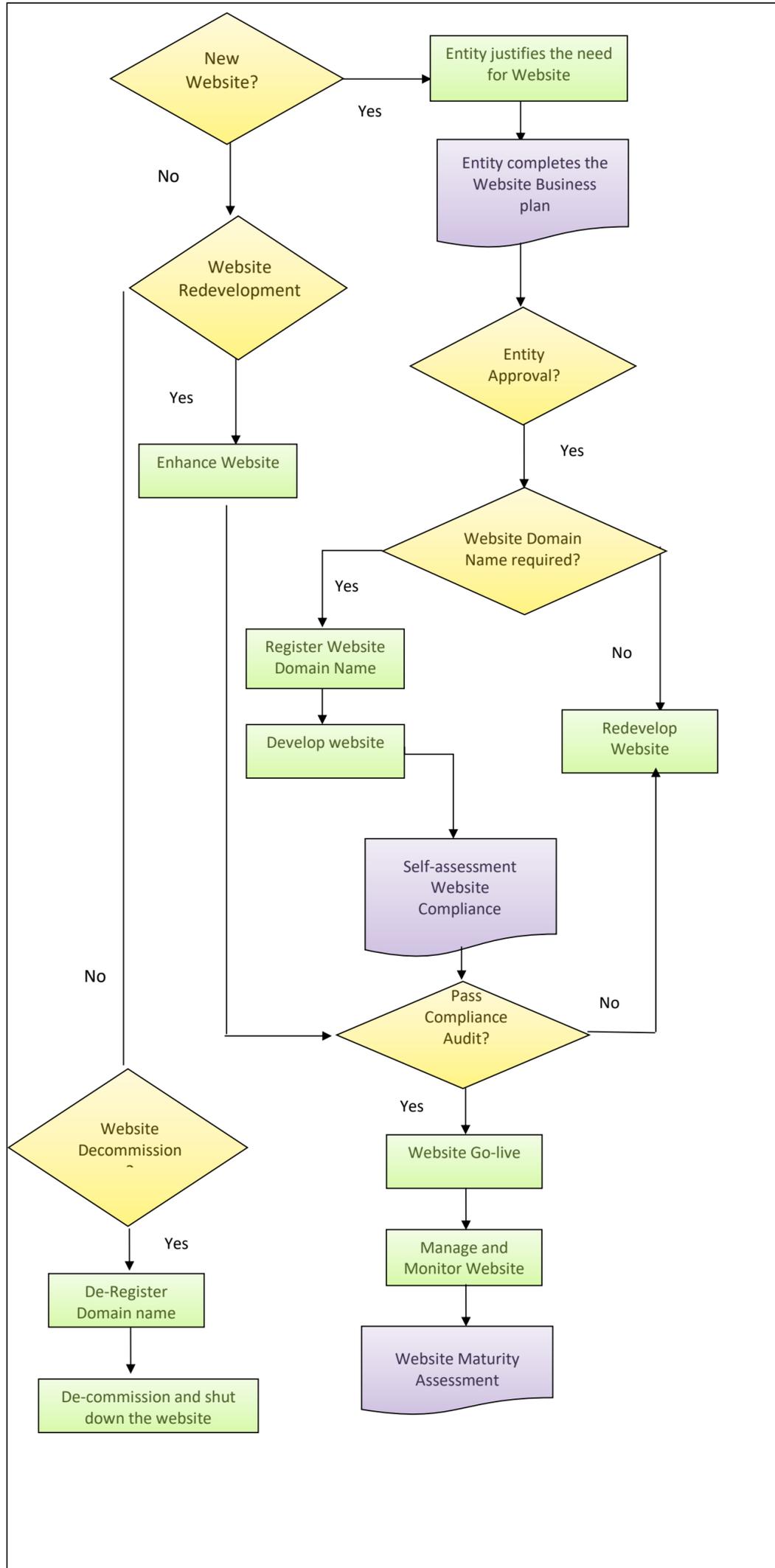
Required Roles and Responsibilities

1. Government entity justifies the need for the website
Responsibility: Business Owner
Action: Review and explore the options for alignment with government objectives

2. Website Business plan
Responsibility: Business Owner
Action: Entity completes website business plan, confirms domain name availability and submits to Entity for approval

3. Government Entity Approval
Responsibility: Higher Authority
Action: Review and Approve or Reject Website Business plan

4. Website Domain Name
Responsibility: iGA
Action: Review entity Website Domain Name justification to ensure compliance with Website domain name policy

5. Develop Website
Responsibility: Government Entities
Action: Develop website as per the Business plan, ensuring adherence with website policies, standards and guidelines

6. Redevelop Website
Responsibility: Government Entities
Action: Redevelop website as per the Business plan, ensuring adherence with website policies, standards and guidelines

7. Develop Website
Responsibility: Government Entities
Action: Develop website as per the Business plan, ensuring adherence with website policies, standards and guidelines

8. Self-Assessment Website Compliance
Responsibility: Business Owner along with the Project Manager
Action: Completes the self-assessment compliance checklist against website. For any non-compliance provide justification.

9. Compliance Audit
Responsibility: iGA
Action: check the self-assessment compliance checklist against website. For any non-compliance review the justification provided by the entity

10. Website Go-live
Responsibility: Government Entities
Action: Launch the website

11. Manage and Monitor the website
Responsibility: Business owner and Website administrator
Action: Maintain website, perform website measurement to ensure objectives are met, and gather user feedback

12. Website Maturity Assessment
Responsibility: Business owner and Website administrator
Action: Complete the website maturity checklist as part of website reporting requirements

13. Decommission Website
Responsibility: Business owner and Website administrator
Action: Review website objectives as per website business plan , determine next steps – decommission (go to step) or enhance (go to 14)

14. De-register domain name
Responsibility: IGA
Action: Re-register and update online web registration system

15. Decommission and shut down the website
Responsibility: Business owner and website Administrator
Action: De-commission and shut down website

2.0 Website Development Process

The steps outlined in this process represent commonly followed steps for website development. Each step described in this section will assist the entities to meet the website goals and requirements. However, the time it will take to complete each step will depend on the level of complexity of the site and amount of changes the entity wish to make to the website.

BASIC STEPS	PROCESS	GUIDELINES /TECHNIQUES
Step 1: Initial Planning	**Step 1: Initial Planning** -Understand the Organization mission - Identify the short term and long terms goals of the site - Identify the target audience of the website -Determine what services, functionality or information will be provided via the website -Describe how users will interact with the website to meet their needs	Interviewing (Refer 2.1.1)
Step 2: Define the Content	**Step 2: Defining the content** -Identify the content required to support the services that will be provided on the website -Create a list of content and content types that are needed on the website. - Evaluate for the content types such as static, dynamic, functional or transactional - Review the existing content and see that meet that user needs.	Brainstorming Technique (Refer 2.2.2) Personas (Refer 2.1.4)
Step 3: Grouping and labeling the content	**Step 3: Grouping and labeling the content** -Determine how content will be grouped on the website -Determine a logical content hierarchy -Identify other grouping methods -Identify related information	Content Inventory Card Sorting (Refer 2.1.3)
Step 4: Documenting the Information Architecture	**Step 4: Create a Visual blue print of the website** -Website blue print that provide the visual representation of the site structure -Blue print can be created using the software for flowchart, organization charts or graphics -A completed blue print can be in the form of a site map	Site Maps(Refer 2.1.5)
Step 5: Create simplified layout of the webpage	**Step 5: Create simplified layout of the webpage** - Identify all the page components -Prioritize the components on the page - Visually frame the page for the designer to be used during the final design	Wireframes (Refer 2.1.6)
Step 6: Writing Content	**Step 6: Writing content** - Organize the page content - Create the content for each page identified - Write Clearly	Writing Content (Refer 2.2)
Step 7: Create draft version of the websites	**Step 7:** Create draft version of the websites - Develop Templates for pages - Establish the look and feel of the site - Keep the content as close as the actual content of the website - Obtain approval from the Business owner on the prototypes	Prototypes (Refer 2.1.7)
Step 8: Development	**Step 8: Development** - Take all individual graphic elements from prototype and use them to create the actual, functional website - Take the content and distribute it throughout the website - Implement the elements such as interactive contact us form, flash animations and made functional - Finalize database connections	Design(Refer Chapter 4)
Step 9: Testing	**Step 9: Testing** -Create a comprehensive test plan - Test the site for functionality, accuracy and usability	Validation Techniques (Refer Chapter 4 & Chapter 5)
Step 10: Launch the website	**Step 10:** Launch the website - Conduct pre-launch Audit	Website standards Checklist (Refer Chapter 6)

2.1 Techniques

2.1.1 Interviews

Interviewing techniques used in step 1 during the planning phase in order to identify the user goal after prioritizing the target audiences of the site. While a strong preference, select a variety of interviewers from each audience to get a reliable sampling of visitor behaviors and characteristics.

Identify and Segment the Customers

To kick off the user interview process, determine first whom need to be interviewed. This will largely depend on the website's business objectives. For example, if the website's objective is to generate more leads, focus more on bringing in quality leads, not just any leads. Therefore, aim to interview and understand the best customers.

Make a List of Users to be Interviewed

Identify at least 8-10 High Value Customers that you would like to interview from each segment within the market. Inviting 8-10 interviewees per segment should translate into 3-5 interviews, as some will not be available, and some may not respond to your invitation.

Identify Decision Makers and Influencers

The next step will be to identify decision makers and influencers within each customer group to ensure to have a good representation of both. Decision makers are those who have the power to make final decisions, whereas influencers are advisors to those making the decision. It is important to identify these roles either before or during the interview.

Develop a List of User Interview Questions

It goes without saying, to develop a list of interview questions before conducting the customer interviews. It's impossible to suggest a comprehensive list of all the questions that will be asked without knowing the business objectives.

Schedule and Conduct the user Interview

Set up individual interviews with each of your interviewees. One-on-one interviews are necessary to avoid outside influences. Meet with the customers for in-person interviews. If this is not an option, phone or Skype interviews are still much better than no interviews at all. Allow each interviewee to answer in their own way but pay close attention to gather good details. Build rapport and trust. People generally love to talk if they feel supported in sharing what they truly think. Spend most of the time listening and only speak to probe deeper or clarify.

2.1.2 Brainstorming

Brainstorming activity is the technique used in step 2 of defining the content areas. This activity primarily helps in compiling important content areas for the website. Brainstorming technique works well in a small group of three to five people where one person will act as the facilitator and will guide the group through this exercise.

How to do it

Brainstorming can be done in several ways. One way is to take a semi-structured approach.

Planning

1. **Frame the topic statement.**

   Frame this so that participate can contribute ideas, not questions. The topic needs to be broad enough that participants feel they can offer something new and ideas aren't limited.

2. **Get the right people.**

   Invite people who will bring a variety of views and experiences. Balance out technical experts with more conceptual thinkers. Make sure you get the numbers right so that everybody will be able to contribute. If it is useful, provide people with light pre-reading.

3. **Choose your space.**

   Find a space with blank walls and room for people to move around. Make sure you have enough paper, sticky notes and felt pens.

Facilitating the session

Aim to spend 10 to 15 minutes generating ideas, and 10 minutes creating themes for each topic.

1. Set the scene.
   Before the session get started, create a sense of energy and enthusiasm. Spend a couple of minutes explaining relevant context, and what is expectation to achieve with the brainstorm.

2. Cover the brainstorming rules and give everyone permission to hold each other to the rules.

3. Re-state the topic.
   Have the topic clearly visible. The ideas participants come up with need to answer the appropriate question.

4. Start as individuals.
   For a few minutes, participants think about the topic and capture their ideas on sticky notes.

5. Progress as a group.
   Ask for all the ideas to be shared aloud and listed under the topic. Continue to build on ideas (10 to 15 minutes).

6. Group and theme ideas together.
   As a group, look for patterns or themes to group the ideas together. Name the groupings.

7. Identify obvious winners.
   As a way to end the brainstorm, ask participants to vote on standout ideas or themes. Depending on the reason for brainstorming (quick generation or progressing thinking) facilitator might ask participants to note why they did or didn't like the ideas.

8. Thank the participants.

Brainstorming rules

- Be open to all ideas — do not make judgements.

- Build on ideas — avoid 'but'. Use 'and', explore 'what if…'.

- Explore even the most outrageous ideas — do not jump to obvious solutions.

- Make thoughts and ideas visible — enable all participants to contribute and build on ideas.

- Stick to the topic — remember the purpose, focus on the outcome.

- One conversation at a time.

2.1.3 Card Sorting

Card sorting is a user centric design method (technique used in step 3 and step 5) which is used for creating and evaluating content and website structures. It is a low-cost, simple way to figure out how best to group and organize the content based on user input. Card sorting works by writing each content set or page on an index card, and then letting users sort them into groups based on how they think the content should be categorized. This technique helps to decide what to be put on the home page and label the home page categories.

Benefits of Card Sorting

Card sorting will help you understand your users' expectations and understanding of your topics. It is often most useful once you have done some homework to find out about your users and understand your content. Knowing how your users group information can help you:

- Build the structure for your website

- Decide what to put on the homepage

- Label categories and navigation

  The following section describe the basic process involved Card sorting

Planning

- ✓ Choose a tool for the card sorting exercise. You can use paper cards, individual card sorting software, or online software that allows remote card sorting.
- ✓ Develop a test plan that contains your sorting procedures, the analysis plan (whether formal or informal), a schedule, and your deliverables.
- ✓ Identify the participants
- ✓ Generate the items for the card sort. The items can come from many sources including user research, brainstorming, competitive evaluations, and task analysis.
- ✓ Write each statement on a separate card.
- ✓ Number each card with a unique code.
- ✓ Consider providing a definition because some participants may not know what a particular item means because of their background, culture, or any other limitations
- ✓ Ensure there is a large empty table for the informant to place their piles of cards on.
- ✓ Conduct a pilot test and refine your procedures.

Execution

- ✓ Brief the participants on the procedures for the specific type of card sort.
- ✓ Shuffle the cards and place them randomly on a physical surface. If you are doing virtual card sorting, most software will randomize the order of the cards to prevent an order bias.
- ✓ Give the informants a common understanding of the expected grain of analysis and the expected maximum number of piles. For example, you might tell the participants that they must have "at least 2 piles of cards and you might have as many 8-12 piles. They should be told that piles with many cards should be split up. Participants can be told that piles with a single item are permissible. Informants should be aware, that there may well be an 'unsortable' pile, but that they should attempt to place as many cards together into piles as they reasonably can.
- ✓ Then informants sort cards into piles on the table in front of them, using place mats if they are doing a closed sort.
- ✓ Ask the participants to give a name to each pile of cards. You might also ask the participant to describe the rationale for putting cards in particular piles.
- ✓ At the end, note which cards have been put together by the respondent by noting the numbers on the back of the cards.

After a card sort is complete, the groupings are used to define the structure of the pages within the site.

2.1.4 Personas

Creating personas, a hypothetical narrative of various website users, is another great way to figure out how best to structure the site's content.

In its very basic form, developing personas is simply figuring out the different types of visitors to the site and then creating "real" people that fit into each of these categories. Then throughout the design process, use the people who have been profiled as the basis for designing and testing the site's Information Architecture.

Benefits of Personas

Personas help to focus decisions surrounding site components by adding a layer of real-world consideration to the conversation. They also offer a quick and inexpensive way to test and prioritize those features throughout the development process. In addition, they can help:

- Stakeholders and leaders evaluate new site feature ideas
- Information architects develop informed wireframes, interface behaviors, and labeling
- Designers create the overall look and feel of the website
- System engineers/developers decide which approaches to take based on user behaviors
- Copy writers ensure site content is written to the appropriate audiences

Best Practices for Developing Personas

Personas development belongs at the beginning of the project, as personas can inform site functionality, help uncover gaps, or highlight new opportunities.

To ensure your personas are accurate representations of your users and have the support of your stakeholders throughout the process, you should:

- **Conduct user research**: Answer the following questions: Who are the users and why are they using the system? What behaviors, assumptions, and expectations color their view of the system?
- **Condense the research**: Look for themes/characteristics that are specific, relevant, and universal to the system and its users.

- **Brainstorm**: Organize elements into persona groups that represent the target users. Name or classify each group.
- **Refine**: Combine and prioritize the rough personas. Separate them into primary, secondary, and, if necessary, complementary categories. Should have roughly 3-5 personas and their identified characteristics.
- **Make them realistic**: Develop the appropriate descriptions of each personas background, motivations, and expectations. Do not include a lot of personal information. Be relevant and serious; humor is not appropriate.

Elements of a Persona

Personas generally include the following key pieces of information:

- Persona Group (i.e. web manager)
- Fictional name
- Job titles and major responsibilities
- Demographics such as age, education, ethnicity, and family status
- The goals and tasks they are trying to complete using the site
- Their physical, social, and technological environment
- A quote that sums up what matters most to the persona as it relates to your site
- Casual pictures representing that user group

2.1.5 Site Maps

Site maps are a visual representation of content areas which are quick and easy ways to visually denote how different pages and content relate to one another. This technique is used in step 4 of Information Architecture and it is an imperative step that "mocks up" how content will be arranged.

These content outlines show how all the pages on the site are grouped, what order they appear in, and the relationships between parent and child pages. This is often a simple document to prepare and may be created after a round or two of card sorting.
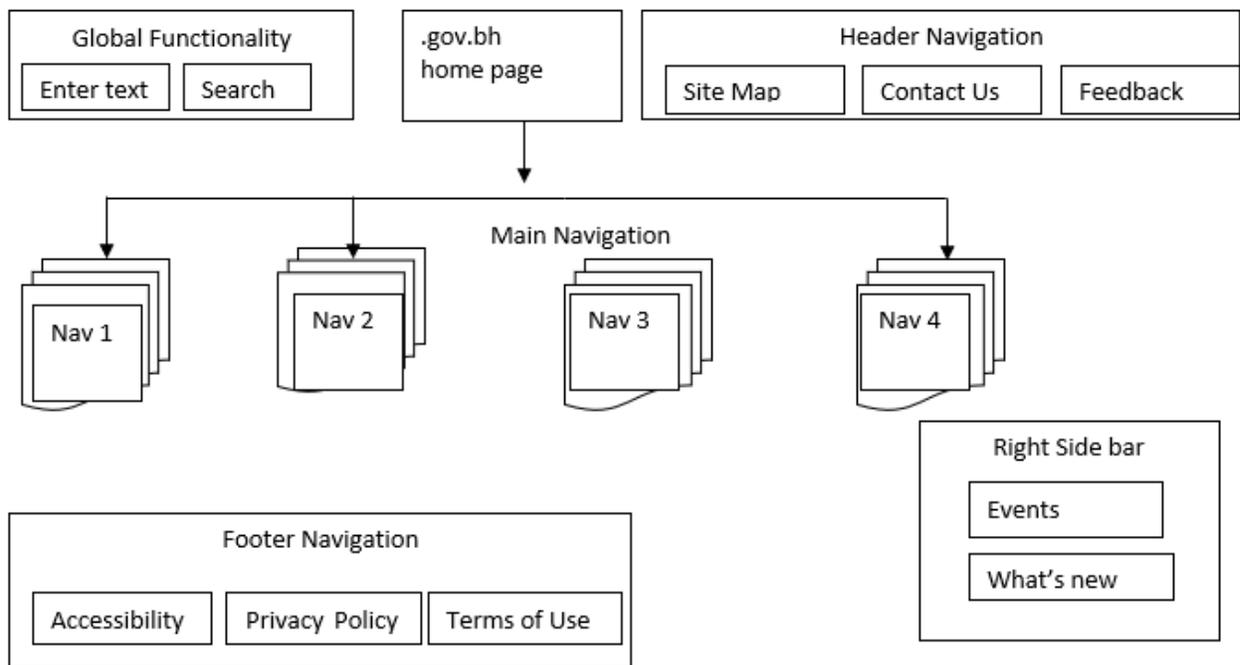
A Sample Site map

2.1.6 Wireframes

A wireframe is a visual illustration or a blueprint of a web page that closely represents how the area of the page will be organized. Basic wireframes can do a lot more than just give us an outline of the design layout of a site. Putting content into wireframes and prototypes gives us a good sense of how the content is arranged in relation to other content and how well our information architecture achieves our goals.

The following describes the purpose of a wireframe. A wireframe

- Identifies all features on a page
- Prioritizes the features so that the most important features are prominently positioned on the page
- Visually represents the information architecture

Functional Wireframe

Each wireframe should contain the following information and description

Title: This describes the purpose of the wireframe

How to get there: This section describes how the user got to this panel

Concept/purpose/objective: This describes the objective and purpose of this panel

Content/data: This section describes all the content

Navigation/links: This section describes the navigation links on the page

Error condition: This describes any error that may result from a user behavior

2.1.7 Prototypes/Screen Designs

The higher-fidelity screen designs are created after designers review the wireframes. Screen designs are full-color prototypes that illustrate the visual design of various page templates of a website, including the intended placement of various elements of the web page. For example, page content should be as close as possible to the actual intended content for the next stage of user testing. During user testing, screen designs may be used as they are (as paper-prototypes), or they can be turned into working wireframes by adding links that actually work.

Functional template	Login	1.0 Login

How to get there: User selects the URL

Concept Purpose/Objective: To provide user with Username and password for authentication

Content/Data:

User Name Field

Password Field

Submit button

Help

Welcome to HRMS application! Please enter your username and Password.	
Login	
User Name:	
Password :	
	Submit
Help	

If   **Then:**

Users enter correct user name and   Go to 2.1 HR
password and select submit button   application main page

Users enter incorrect username and   Go to 1.2 login failed
password and select submit button

If user selects help   Go to 1.3 login help

Navigation links/Buttons

Help

Error Condition

If users enter incorrect user name and
password they should receive a
message

A sample wireframe

2.2 Writing content

Effective content writing is one of the most critical aspects of all web design. Website content writing involves the use of special writing skills in the use of carefully chosen words to convey a message that can capture the attention of the readers and get the desired results. Moreover, site visitors want their information quickly and accurately, it is essential that online content be presented in a clear, concise, concrete and scalable manner.

Guidelines:

The following guidelines should be taken into consideration while developing, updating and changing content for the web:

- ✓ Understand target audience
- ✓ Present only Current, Valuable Information
- ✓ Organize large pieces of text into logical, smaller segments of material
- ✓ Use customer-focused language
- ✓ Avoid redundant content
- ✓ Avoid using jargon
- ✓ Use words that are frequently seen and heard
- ✓ Avoid exclamation marks
- ✓ Spell out abbreviations, acronyms, and immediately follow them by the abbreviation, in the first instance.
- ✓ Do not use justified text
- ✓ Compose sentence in active voice rather than passive voice
- ✓ While giving instruction, strive to tell users what to do, rather than writing what to avoid doing
- ✓ Use consistent capitalization and other style standards
- ✓ Use Bullets for highlighting information within large blocks of text
- ✓ Watch the white space; the page containing too little text and too much white space can look visually unappealing
- ✓ Only use imperative language such as "Enter a City or Zip Code" for mandatory tasks, or qualify the statement appropriately
- ✓ Use all uppercase letters sparingly or not at all as a formatting style
- ✓ Use headings/subheading to chunk large blocks of text into smaller and more manageable lengths
- ✓ Ensure that content presented on the website is up-to-date
- ✓ Ensure content is free from spelling and grammatical errors

Validation Technique:

Testing the written content should be an integral part of the Planning and Design phase. It is especially important if content is written for hundreds, thousands, or even millions of people.

Paraphrase testing: Works best for short documents, short web pages. Request the participants to read a specific section or page and ask them to explain in his or her own words what the section means to them. Take notes, review and analyze them; if they have misunderstood the document then revise it and retest again.

Usability Testing: Best technique for documents where people have to find the information before understanding it. This test is to be initiated as soon as the content draft is ready. Identify the participants with relevant experience and suggest a scenario to find specific information and listen to what they understand from what they have found.

2.3 Website Domain naming standards

The standard aims to establish a web domain naming guideline for government and semi-government entities throughout the Kingdom of Bahrain to ensure that all websites are more usable and familiar to the public and that domain names are under the direction of the Kingdom. This will reduce the possibility of undesirable domains being misinterpreted as official government sites and also to obtain public trust in government websites through the use of the .gov.bh domain. In the Kingdom of Bahrain, domain name registration for Government and semi-Government organization is handled by the Information and eGovernment Authority (IGA).

A domain name is the name that identifies a Web site. It is rather easy to remember and associated with one or more IP addresses. The domain name for the Information and eGovernment Authority website is: ***iga.gov.bh.*** *The domain name has three different levels separated by a period "." within the domain name.*

-Top level domains are the last part of the domain name; for example," bh"
-Second level domains are directly below top-level domains: for example, "gov.bh"
-Third level domains are directly below the second level domains: for example, "iga.gov.bh"
-Sub domains are written before the domain names: for example, "services.iga.gov.bh"

Objectives

The objectives of this standard are to:

- Align all governmental websites with the official government domain (.gov.bh)
- To ensure that all governmental public websites are clearly branded
- Promote the Kingdom's government brand for all online services, and present them as the authoritative sources of trusted and accurate content
- To enable the creation of effective and easy to remember URLs (Uniform Resource Locator)
- To assure the citizens that public government websites are accountable for the website content

- ✓ Domain names should be unique and not conflict with other network registration and naming conventions.
- ✓ Government domain names must be meaningful, i.e. reflect the name of the government body to which it is assigned, or an abbreviation of it.
- ✓ . gov.bh domains should not be granted for personal websites and for any function that promotes a commercial activity, even indirectly.
- ✓ Choose abbreviations when they are easy to remember e.g. mof.gov.bh
- ✓ . gov.bh domains should only be provided to websites hosted by the GDN (Government Data Network).
- ✓ The .gov.bh domain will only be given for websites that provide official content related to the Kingdom of Bahrain, (such as any site that provides information to the public related to any ministries, e-government services etc.)
- ✓ Domain names should comply with the below:
  - ▪ Should not contain obscene or offensive language or that will threaten the reputation and credibility of the.gov.bh domain
  - ▪ Domain names must be at least 2 characters
  - ▪ Domain name should contain only letters (a-z), numbers (0-9) and hyphens (-), or a combination of the mentioned.
  - ▪ Should start and end with a number or a letter and not a hyphen
  - ✓ In case of changing the existing domain name, the old domain name should exist for the period of 8 months with a redirection page to the new domain name with notification to the users of the new domain

URL Standards and Naming Conventions

A URL (Uniform Resource Locator) goes into much more detail than domain name, which identifies specific web page, file or document on the internet. It is unique and is composed of the following four parts

Part	Example
Protocol Type	http; https
Domain Name	www.iga.gov.bh
Directory Path	/en
File Name	achievements.php

Example: ***http://www.iga.gov.bh/en/achievements.php*** is the achievement's page of the eGovernment Authority's Website.

URL Guidelines

- ✓ Keep the URL obvious, i.e. use the name of the ministry or abbreviation.

- ✓ Keep the web address short, this will allow site users to remember it easily and will enhance usability.

- ✓ When creating URLs with multiple words in the format of a phrase, it's better to use hyphens to separate the terms (e.g. Electronic Government can be Electronic-Government).

- ✓ It is not recommended to have URLs(Universal Resource Locator) that contain both uppercase and lowercase characters that are more difficult to type, remember and say.

- ✓ Dynamic URLs (Universal Resource Locator), especially over 100 characters, are difficult for search engines to continuously recognize.

- ✓ Short URL's are easier to type, write, remember, and say

- ✓ URLs (web addresses) must remain stable to remain reliable to link to and feature well in search engines.

- ✓ Avoid using Capital letters as URL

NAVIGATION ELEMENTS
&
BRANDING REQUIREMENTS
Chapter 3.0

3.0 Navigation Elements and Branding Requirements

The term navigation refers to the **menus and links which allow users to move from one page to another within the website**. Designing a well-structured and user-friendly navigation system is one of the most important stages in the development of a website so that users can interact with the website easily and quickly to find the information they are looking for.

Having **clear, consistent, and well-structured navigation** is essential. In order to be easy to find and use, all navigation links should be clearly labeled. The four main types of navigations are

1. Global Header Navigation
2. Top Level Navigation
3. Body Elements or Utility Navigation
4. Footer Navigation

On the other hand, **branding** is pivotal to the state's goal of providing a consistent, seamless look and feel to the Web presence. Branding encompasses matters of site architecture, navigation, layout, graphics, colors and fonts, minimum page elements, and consistent terminology, usage, and spelling.

Global Header Navigation
Top Level Navigation
Banner Space

	Body Elements or Utility Navigation
Left Navigation	Body Content Area
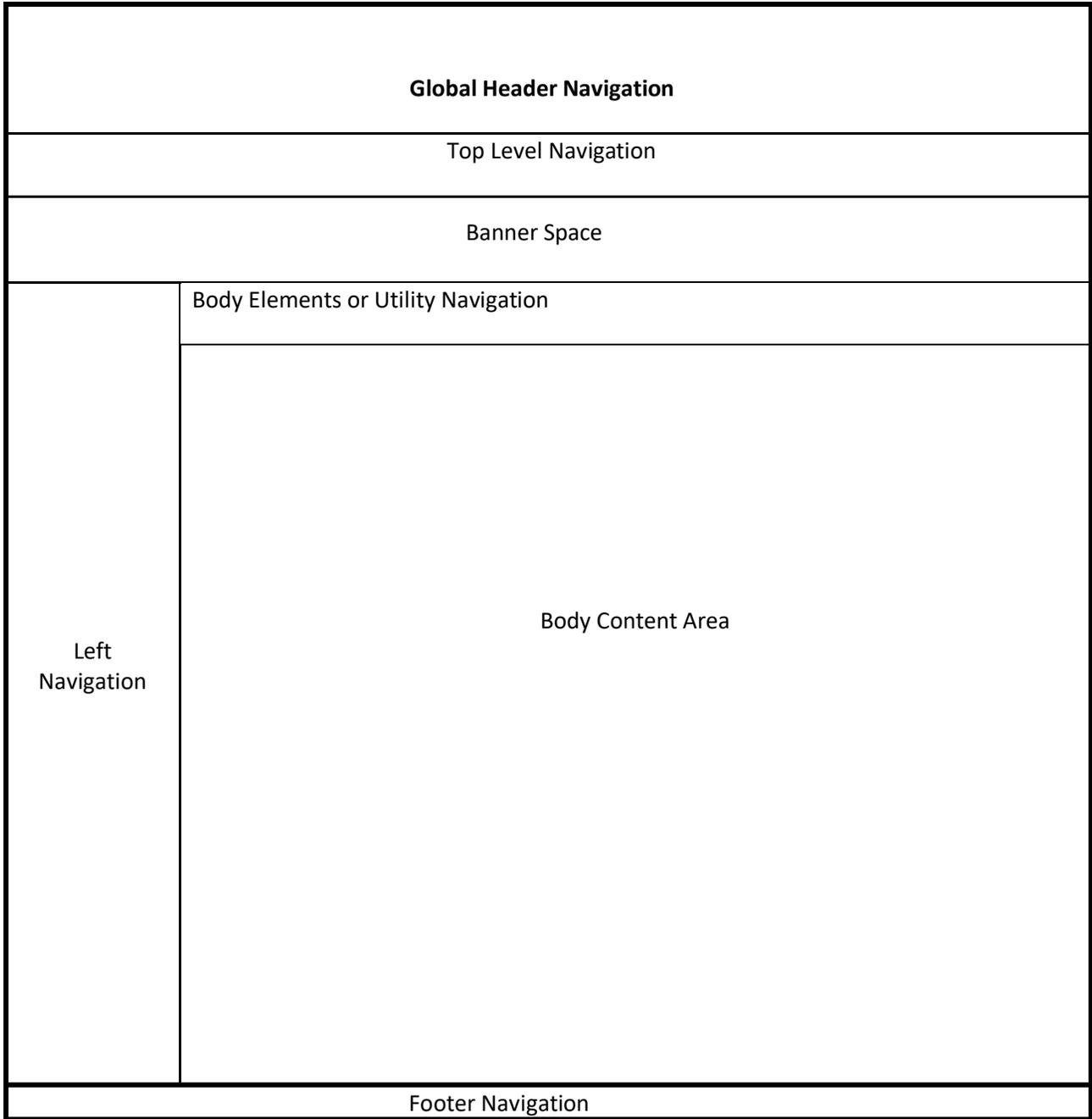
Footer Navigation

3.1 Global Header Navigation Elements

Global header navigation elements usually appear on the top of the page and should appear in all pages of the website. The term header navigation is used to describe links to important links which user tend to access very frequently such as links to search functions, site map and user accounts.

The global header navigation elements such as Home, Contact Us, search, sitemap etc. should appear in the same place on every page of the website.

Guideline:

- Global Header Navigation to have the following:

- **Site map**
- **Contact us**
- **Feedback**
- **FAQ**
- **Search**

- The position should remain consistent from one page to another.
- All headings should be in sentence format, with the first letter of the first word capitalized and all remaining letters in lower case (with the exception of proper nouns)

3.1.1 Link to Bahrain National eGovernment portal

The Government entity website should provide direct access to the eGovernment portal.

Guidelines:

All Government websites should follow the following stated guidelines:

- Position the Bahrain eGovernment programme Logo at an appropriate place that is easily accessible to the visitors
- The eGovernment website should be loaded in a new browser window
- Logo must have an Alt text
- Show the logo in a reasonable size and should be prominent than the items around it so it gets first attention when users enter the site
- GIF file of resolution 72 pixels/inch is recommended
- Should be scalable to any size without losing any image quality or visual impact

- It should be used as an official symbol and any alteration, distortion, re-creation, translation, or misuse should be prohibited

Location: Global Header Navigation

Required/Recommended: Required

3.1.2 Site Map

A site map provides a visual overview of the site's areas in a single glance and allows site visitors to see all available content areas on one page in order to provide them instant access to those site pages. Site maps should be provided with a clean, simple view of the user interface and the available content by providing links to every page in one place.

Objective:

- To assist site visitors to quickly find the required information.
- By providing links to every page in one place (a site map), it is then guaranteed that the search engines will be able to index every page.

Guidelines:

- All Government websites must have a 'Sitemap' linking to the Homepage as well as all important entry Pages of the site.
- The site map should be universally accessible from every page.
- Web site owners should establish the process of regularly reviewing and updating the sitemap.
- Site map should be up-to-date to reflect the present site structure and contents
- Differentiate from visited and un-visited links
- Grid structure will be better than a simple long list of links
- For small websites having one level of navigation, a site map is not needed

Location: Global Header Navigation

Required/Recommended: Required for sites having more than one level of navigation

3.1.3 Feedback

Customer feedback whether positive or negative should be source of constructive information, useful for improving the customer relationship and retention.

The Government entity should be committed to have clear communication and understand the concerns of the customers. Complaints should not be viewed negatively, but as the source of rich customer feedback and an opportunity to identify how to improve performance. This will let the Government entities to know what went wrong and identify the potential opportunities to make the services better.

Feedback forms with predetermined fields, to be filled in by visitors, enable a much more structured way of receiving the feedback and hence make it easy to categorize or analyze the same.

Objective:

- ✓ Generate/collect ideas from the users
- ✓ To closely be connected with the users
- ✓ Cure frustration/difficulties the users may be experiencing
- ✓ Make the site visitors feel more important

Guidelines:

- The link to feedback forms should appear prominent on the website
- As soon as the user submit the feedback, an acknowledgement should be sent to the user
- Inform the site visitors whether they will be receiving a response on their feedback and if so by when.

Location: Global Header and Footer Navigation

Required or Recommended: Required

3.1.4 Frequently Asked Question (FAQ)

As the name implies, it is a type of webpage that list questions frequently asked by users, usually about different aspects of the website or its services. The detailed answers are typically shown with the common set of questions which are highly useful for the website audience.

Objectives

- ✓ To make finding answers easy for the users
- ✓ Assist people to use the website without the need for outside assistance
- ✓ To provide enough instructions and guidelines for potential newcomers to complete their tasks and get familiar with the site.

Guidelines:

- ✓ The Government websites having frequent interaction with citizen for various services/schemes should have a 'Frequently Asked Questions' module linked to the home page and all other relevant places on the website.
- ✓ Research the questions with the audience
- ✓ Group questions together such as top 10 questions or group by topic
- ✓ For long pages, consider using a 'back to top' anchor link

Location: Global Header Navigation

Required/Recommended: Required

3.1.5 Contact Us

Site Visitors expect to be able to contact any government organization to ask questions, get information, or report problems. The "Contact Us" page provides a means for site visitors to find the information necessary to contact the entity through channels such as telephone, fax, email, and postal address. A list of the types of queries handled, and information provided, should also be included. This will assist users to determine if the customer contact center is the appropriate point of contact for their enquiry.

Objective:

To enable the customers to communicate/suggest /enquire the services of the Government entities.

Guidelines:

- ✓ Contact us links can be provided at the top and bottom of every page.
- ✓ Both links should point to the same page
- ✓ Must include the following means of contacting the entity
    - building address
    - postal address
    - switchboard phone number
    - fax number
    - email address
    - contact details for Media Liaison Officer (if applicable)
- ✓ Where the primary point of contact for site visitors is a customer contact center, relevant contact details should be provided including:
    - ✓ telephone and fax numbers
    - ✓ hours of service
    - ✓ A generic email address

Location: Header or Footer Navigation

Required /Recommended: Required

3.1.6 Search Function

The Search box must be clearly visible, quickly recognizable and easy to use. This should have two simple elements: an input field and a submit button. Ideally, the search box would fit the website's overall design perfectly yet manage to stand out slightly when site visitors need it.

Adding advanced search options may have benefits if users are looking for very specific information, but simple search usually works best.

Objective:

To assist the site visitors in quickly finding the information they are after.

Guidelines:

- ✓ The basic search box should appear on every page of the website
- ✓ The search box text field should be large enough to allow a maximum of 20 characters to be entered
- ✓ The font size in the box should not be smaller than 8 points
- ✓ The right of the search box should be a button labeled "Search"
- ✓ The search should begin with either touch of the return key or the click of the "search button'
- ✓ Should allow the site visitors to search with familiar terms
- ✓ Provide clear search results page

Location: Global Header Navigation

Required /Recommended: Required

3.1.7 Language Selection

All Government organizations should publish all the content on their website in Arabic and English. However, there should be an option for site visitors to select the language they prefer to view the website in.

Objective:

The site visitor to be able to select the preferred language option.

Guidelines:

All Government websites should follow the following stated guidelines:

- ✓ All Government websites primarily to support Arabic and English
- ✓ The default language option should always be Arabic.
- ✓ Place the language selector in a clearly visible portion of the page – the top right-hand portion of the web page is often best for English as that is where site visitors are likely to look for it first.
- ✓ Should be available in all pages
- ✓ The Language selector can be provided with a series of translated name (in their own language itself) with separators for the site visitor to select their preferred option.
- ✓ If website is updated in one language the content should also be updated in other languages

Location: Global Header Navigation

Required /Recommended: Required

3.1.8 Skip Navigation Link

As the main content is not usually the first thing on the page, screen reader users are often forced to listen to a long list of navigation links and other elements before they reach the main content. Even keyboard users are forced to tab through all the top links in order to reach the main content. A skip navigation link should be provided to allow site users to go directly to the main content of the webpage bypassing the navigation.

Objective:

✓ To allow screen reader users and persons with motor disabilities to go directly to the main content, without pressing the arrows or tab key multiple times.
✓ To allow keyboard users to go directly to the main content, without pressing the arrows or tab key multiple times.

Guidelines:

All Government websites should follow the following stated guidelines:

✓ The skip navigation link is to be positioned at the top of the page in regular text.
✓ Put the corresponding anchor (link destination) at the beginning of the main content.
✓ Ensure that the link is the first item that screen readers hear and the first item that keyboard users tab to.
✓ Use Cascading style sheet(CSS) to render the link invisible if it is not required for the link to be displayed in visual browsers, however making it visible when it receives the focus

Location: Header Navigation

Required/Recommended: Recommended

3.2 Brand identity elements

"Branding" means providing clear, unified identity standards that allow the Government entities to leverage the greatest strength of individual entity name and reputation in ways that support the mission of each individual unit. Brand Identity elements comprise of Entity logo, Entity free space and banner space.

Objective:

- ✓ Build sense of shared identity, community, and pride
- ✓ To create brand awareness, and develop emotional and intellectual associations
- ✓ To create consistent experience
- ✓ Increased accessibility and readability

3.2.1 Entity Logo

The Entity logo promotes brand identity and should be displayed at top left corner. It must be linked back to the respective home page and must have an Alt text.

Objective:

- To promote visual identity
- To achieve consistent use

Guidelines:

All Government websites should follow the following stated guidelines:

- ✓ Position the Entity logo in the upper left corner
- ✓ Must link back to the respective Entity home page and must have an Alt text
- ✓ Show the logo in a reasonable size and noticeable location
- ✓ For maximum impact and legibility, the logo must always be surrounded by a minimum clear space area which must remain free from other elements.
- ✓ It should be used as an official symbol and any alteration, distortion, re-creation, translation, or misuse should be prohibited
- ✓ GIF file of resolution 72 pixels/inch is recommended
- ✓ Should be scalable to any size without losing any image quality or visual impact

✓   Do not combine multiple logos or visual marks. For example, do not use the individual ministry logo next to the eGovernment programme logo

✓   Should be bilingual for bilingual websites

Location: Global Header Navigation

Required/Recommended: Required

3.2.2 Entity Name and Banner space

This space is where the name of the Entity is to be displayed.

Objective:

To promote the brand identity

Guidelines:

All Government websites should follow the following stated guidelines:

✓   The Entity name if provided can be right aligned or center aligned but not left aligned.

✓   The name of the Entity should include the name of the country. For example, Ministry of Health, Kingdom of Bahrain. This will not only facilitate an easy and unambiguous identification of the website but would help in more relevant and visible presence in the search engine results.

✓   The Entity name must all be bold or regular type; it cannot be a mixture

✓   The Alt text on the image must use the same text that is displayed in the image

✓   If the image is used to display the name, then use the same text as the alt text

✓   The Banner image used in this space should not be too large and should avoid animation/flash movies

✓   The colors used in the image of banners must achieve high contrast, when viewed by someone having color deficits or when viewed on a black and white screen

Location: Header Navigation

Required/Recommended: Required

3.3 Top Navigation Elements

The "'Top Navigation" is the main form of navigation within any website. The elements of this navigation is generally included horizontally and it is designed to support the primary aim a user has when he or she visits the site.

Guideline:

There are some considerations that should be taken when creating the Top Level navigation, including;

- ✓ It should be positioned at the top of the page.
- ✓ Links should be organized into recognizable and logical groups using submenus and/or headings.
- ✓ There should not be too many links per group.
- ✓ It should contain a link to the home page at the top of the menu
- ✓ Should use structured semantic markup; i.e. H1 tags for main titles , H2 tags and lower for subtitles
- ✓ One suggested guideline in user interface (UI) design is to have no more than 8-10 primary pieces of navigation.

3.3.1 Home

The Homepage is the important page of any website and gets more page views than any other page. More emphasis should be given to the home page to have a memorable and distinct look, so that users can recognize it as their starting place from other parts of the site. The home page must clearly indicate which organization is responsible for the website as well as guide the visitor to its different parts. It is important that site visitors quickly understand the entity activities and the services offered to them.

Objective:

- To guide the visitor to the different parts of the website
- To enable users to access the homepage from any page of the website
- To facilitate users return to the homepage to begin a new task or to start a task over again

Guidelines:

All Government websites should follow the below stated guidelines:

- ✓ Clearly establish the organization identity on the home page
- ✓ The "Home" link must point to the home page of the Entity web site.
- ✓ Design the home page to be clearly different from all the other pages on the site.
- ✓ It is important that all pages have links to the "Home" page as well as to other pages that are important for orientation.
- ✓ Ensure that the homepage downloads quickly by avoiding unnecessary large imagery, animations and plug-ins
- ✓ Disable the links to the homepage on the homepage itself
- ✓ Ensure that site visitors never face multiple "Home" buttons or links that go to different places.

Location: Header Navigation

Required/Recommended: Required

3.3.2 About Us

All websites need to provide a clear way to find information about the Entity as site visitors like to know with whom they are dealing with, and also details about the organization give credibility to the site. This is one way to build trust and establish relationship with customers.

Objective:

-To provide basic information about the Entity -To present to the site visitors that the entity has a solid record as a reputable, experienced and customer focused organization

-To engage the audience in a personal and friendly way

Guidelines:

All Government websites should follow the below stated guidelines:

- ✓ The site visitors expect to see a link to "About Us" page from every page of the website.
- ✓ About Us link is to be placed on the top navigation bar or banner area of the website.
- ✓ About Us should include the following:

  1. The organization overview

  2. Vision/Mission statement

  3. A brief overview about the entity functions , including the services offered to the customers

  4. Organization structure

  5. Profile, who's who

Location: Header Navigation

Required/Recommended: Required

3.3.3 News and Press Releases

News having national importance and significance for the Citizens as well as Government Press Releases issued by Entities should be published on the website of the concerned Department. News and Press Releases should carry the date and should be organised as per the Archival Policy of the website. News and Press releases should be published in RSS format so that associated offices and Departments can also consume them on their websites with due permission or based on their access policy

Guidelines:

- ✓ News listings should have Title of article, A blurb (summary of the article), Date of publication, Name of publication

- ✓ Show the most recent press releases on the main press page.

- ✓ Organize the list of press releases so that the most recent one is first in the list.

- ✓ Feature dates on all press releases and articles.

- ✓ Make a distinction between press releases and news.

- ✓ Press releases and news articles should be labeled with concise titles and titles should start with a meaningful keyword.

- ✓ Press releases should be interesting and insightful.

- ✓ Archive all past press releases on the site, with release dates for each item.

- ✓ Make it simple to search press releases and archived press releases independent of the rest of the site.

- ✓ If the press releases cover highly technical information, provide an easy way to get definitions or simple explanations.

Location: Header Navigation

Required/Recommended: Required

3.4 Body Elements

This area must contain the following elements

- ✓ Content Area: usually structured in multiple paragraphs with headings, dates and/or subtitles that relate to the main topic of the page
- ✓ Bread crump trails
- ✓ Body links

3.4.1 About Content Area

In the center of all these elements is the page content. While the header, footer and menus stay the same throughout the site, the content changes from page to another. This section also serves as the primary source of information for website site visitors and the content varies depending on which section of the website the users are viewing.

Objective:

- ✓ The content area serves as the user's primary information source and work area.
- ✓ Increase readability

Guidelines:

- ✓ Content page should begin with page title followed by text
- ✓ Content must be left aligned for English and right aligned for Arabic
- ✓ Page title should be the same as the corresponding link in the navigation column
- ✓ Longer pages are broken up with "Top of page" links located on the right side of the page.
- ✓ Should have last modified date to indicate the recent date on which the content was formally issued, substantially changed or reviewed.
- ✓ Avoid tables and if used should be used for tabular data only
- ✓ If graphics are included, they should have ALT-TEXT description
- ✓ Leave enough margins at the left and right edges of the content area to prevent it from butting directly against the border

Location:– Body Area

Required / Recommended: – Required

Reference- Please refers to section <2.2 > for more details

3.4.2 BreadCrumbs

Breadcrumbs give users an alternative method of navigation, allow them to see where they stand in the hierarchy of a website, and reduce the number of steps needed to navigate to a higher-level within a website.

Objective:

- ✓ Breadcrumb navigation will greatly increase the usability of a website
- ✓ Breadcrumbs provide an additional means by which users can easily navigate a website.
- ✓ It allows users to jump from one level of a website to the next without having to use the "forward" or "backward" buttons on the browser.

Guidelines:

All Government websites should follow the below stated guidelines:

- ✓ Breadcrumbs should be shown at the top of the content area
- ✓ Use Breadcrumbs consistently across all pages in the website
- ✓ Flow should go from the highest level to the lowest level
- ✓ Clearly separate each level by using separators. The symbol that could be used is the greater than character.
- ✓ Single out the current page. I.e. the currently viewed page can be distinguished by making the item bold or changing its color.
- ✓ Do not make a current path a link.

Example:

Home > About Us

Required / Recommended:– Recommended

Location:– Body Area

3.4.3 Share/Bookmark/Email/Print buttons

The Share media icons should be used to indicate the ability to share the content through multiple source and/or destination channels. This will assist the user to share any webpage anytime with services of Facebook, Twitter, LinkedIn, Google Mail etc.

Add to favorites icon helps users to bookmark the page using any browser. (Internet Explorer, Firefox, Chrome, Safari, Opera etc.)

The email button or tab makes it easy to share the information via Google mail, Yahoo Mail, Hotmail, and any other web-based mailer or desktop program.

Guidelines:

All Government websites should follow the below stated guidelines:

- ✓ The body links to be used on the content page must be located right aligned, directly underneath the heading 1-page title.
- ✓ The print icon is used for easily printing the current page that is viewed.
- ✓ Webpage core information must be able to print in whole or using standard sheets of paper.
- ✓ Note that the following non-core elements should be excluded from printing:
    - Primary content navigation
    - Secondary content navigation
    - Banner
    - Breadcrumbs
    - Search box

Required/Recommended: Required

Location : Body Area

3.4.4 Resize font

Text resizing allows those who are visually impaired to increase the size of the content without using assistant technology while maintaining access to the content. Site Visitors can easily increase the size of the text on the website by having the font resizing tool on every page.

Alternatively, the site visitors may change the font size using options in the browser menu system as stated below.

Internet Explorer
Choose View, Text Size and then one of largest, larger, medium, smaller or small.

Firefox
Choose View, Text Size and then Increase or Decrease.

Objective:

To select the preferred text size by the site visitors.

Guidelines:

All Government websites should follow the below stated guidelines:

- ✓ Should be located in the top right corner noted with the different sized letter A's i.e(AAA) or A+ A-
- ✓ The size of the text should be persistent across different visits to the site.
  A - Small font
  A - Medium font
  A - Large font

- ✓ The font resizing tool should appear in every page of the website

Required /Recommended: Required

Location: Body Area

3.5 Secondary or Left Navigation

The terms "Secondary", "subpages", "2 tier", "second level" can mean the same thing. Secondary navigation refers to menus that do not appear on every page of the website. However, it is important that these are organized logically so that users can easily find the content they are looking for. For example, a site with a primary navigation called "About Us" may have secondary navigation consisting of organizational history, board of directors, staff, and so on. Most secondary content pages are well suited to the two-column page layout that allows for left menu navigation and a large area where content is presented.

Objective:

- ✓ To help visitors navigate through the site
- ✓ To dive deeper into the content and progress from one part of the site to another

Guideline:

All Government websites should follow the below stated guidelines:

- ✓ Secondary Navigation content may be localized for each site page or remain consistent for all site pages
- ✓ Used when the site has a handful of main navigation elements
- ✓ Headings and navigation links must be in scalable text exclusively
- ✓ All text must be displayed in a foreground/background color combination that achieves high contrast when viewed by someone having color deficits or when viewed on a black and white screen.
- ✓ Graphical buttons and decorative items, for example, bullets based on images and other non-informational elements, must not be used.
- ✓ Menu title should have short names; otherwise menu will break out of the column.

3.6-Footer Navigation Elements

Extra links to help users move around a website are also often found at the bottom section of a website (the footer). It is highly important that web developers give plenty of thought and consideration to what will go into the footer navigation. Footer navigation usually repeats some of the primary navigation links as well as containing links to pages such as the Terms and Conditions, Copyright and Privacy Policy.

By using Fat Footers, the site visitor can be provided with an easy and natural way of browsing to a new page and while staying on the website. The Fat Footer is placed at the bottom of a page: where the user ends up, once he or she has finished reading it. Here, the Fat Footer can provide an overview of the website and inspiration for the user to continue browsing.

Guidelines:

All Government websites should follow the below stated guidelines:

- ✓ The footer should have links to:
    - Privacy policy
    - Accessibility Statement
    - Terms and Condition
    - Disclaimer
    - Copyright statement
    - FAQ
    - Contact us
- ✓ The above links should appear in all pages of the website

- ✓ If Government entities uses social networking application such as Twitter, Facebook, YouTube, and/or Flickr the links can be included in Fat footer space

3.6.1 Accessibility statement

Accessibility statement is the commitment made by the Entity for the site visitors to be aware of the fact that the website owner do care about accessibility, and plan to create and maintain a website which is accessible to people with disabilities, and to any other groups.

Objective:

Commitment is given to the people visiting the website especially those with disabilities to ensure that accessibility is a key driver for the website.

Guideline:

All Government websites should follow the below stated guidelines:

- ✓ An open commitment to providing an accessible website.
- ✓ An outline of the key guidelines and standards which the website follows.
- ✓ Any known exceptions to the intended level of web accessibility.
- ✓ Contact information for reporting difficulties with the website.
- ✓ Mention the details of the access keys if used

Required / Recommended: – Required

Location: – Footer Navigation

3.6.2 Privacy Policy Statement

Every website must incorporate a privacy policy statement that states how the Government entities respects and protects the privacy of its users.

Objective:

- To inform the visitor about what information is collected on the site, how it will be used and to whom it will be disclosed.
- Commitment to the visiting population that the Government entities understands privacy concerns.
- It shows that Government entities value open communication about privacy and are willing to articulate and stand by the privacy practices.

Guidelines:

All Government websites should follow the below stated guidelines:

A website should have a privacy statement if:

- ✓ Government entity offer an e-service
- ✓ The personal information is collected or processed on the website, for example applications.
- ✓ If the personal information is sent as an e-mail to the Government entities
- ✓ Statement concerning whether cookies, or any other data, are placed on the site visitor's machine, the type of cookies used (session or persistent), a definition of each type and how they are used.
- ✓ An explanation of any security use of information for purposes such as tracking suspected intrusions or the source of a computer virus or controlling access to the system.
- ✓ A description of any privacy-enhancing technologies in use or available for use, such as the Public Key Infrastructure (PKI) or the Secure Socket Layer (SSL).

Required / Recommended: – Required

Location: – Footer Navigation

3.6.3 Terms and Conditions

The terms and conditions statement should indicate the ownership of the particular piece of content and the relevant details for further queries and information may be provided. It should also be mentioned that in case of dispute arising out of the content of the government website, the matter shall be heard in a court of law within the jurisdiction where the concerned owner of the website is located.

Guideline:

All Government websites should follow the below stated guidelines:

- ✓ Should be located in the footer navigation
- ✓ Should cover ownership, usage policy of content , legal aspects of the scope and operation of the website
- ✓ Should be available/accessible from all pages of the website
- ✓ If the content is linked or sourced from other governmental website, the Terms and Conditions statement should clearly disclaim the responsibility for its accuracy
- ✓ If the content is linked or sourced from other non-governmental website, the Terms and Conditions statement should clearly state the fact and disclaim the responsibility for its accuracy

Required/Recommended: Required

Location: Footer Navigation

3.6.4 Disclaimer

Every website must include a disclaimer to limit or attempt to limit the liabilities that a website owner or publisher may suffer arising out of the website. If the website provides links to web pages that are not part of the particular gov.bh domain and these sites are managed by organizations, companies, or individuals and not under their control, the disclaimer statement should be added in order to convey to the user that these lined sites are merely provided as a convenience and the presence of these links is not an endorsement of the respective site owner. It should also clearly imply that once the user is linked to another site, they are subject to the privacy policy of the new site, and the site visitor should read that site's policies on privacy and information collection.

Objective:

- The objective of including an internet disclaimer on the website is to limit the extent of liability in the event of visitor dissatisfaction.
- Acknowledging that the website provides information to help site visitors but cannot guarantee universal satisfaction is a reasonable precaution to take in the event that a very unhappy person attempts to hold the entities accountable for unrealistic outcomes.

Guidelines:

All Government websites should follow the below stated guidelines. A disclaimer should contain the following general clauses:

- ✓ To be used on sites where there are lot of user submitted content that it is not moderated by site owners or where there are a large number of links to external pages
- ✓ The information provided on the website is for reference only
- ✓ If links to other government websites or links to third party websites are present, the Government will not be responsible for the content of such websites
- ✓ The Government entity gives no express or implied warranty to the accuracy of information provided in the websites

Required / Recommended: Required

Location: Footer Navigation

3.6.5 Copyright

An internet copyright notice sets out the copyright position of the website content. It is one of the major intellectual property rights used to assert the ownership of copyright in website materials, and to assist a website owner in licensing and managing rights in those materials.

Objective:

- To protect the original material and stop others from using the work or content without the permission.
- To stop others from trying to exploit the website material. However, If they do, it gives the individual entity right to take legal action to stop them exploiting the copyright, and to claim damages.

Guidelines:

The statement should state that:

✓ The material on the website is protected by copyright.

✓ Anyone can utilise any of the material available on the website free of charge and without permission of the Government entity provided that the source and copyright status of the material is acknowledged

Required / Recommended: – Required

Location: – Footer navigation

3.6.6 Using chatbots and webchat tools

Connect your citizens with the public services 24/7 from their desktop and mobile. Use the Chatbot to support citizens and provide instant answers for laws, regulations, policies, community-level activities, requests processing, events, public holidays pull out relevant records and more. The Chatbot Artificial Intelligence (AI) machine learning helps it learn new questions and feedback from conversations with real citizens and give you useful insights about your citizens' needs.

Objective:

- To help users find the information they need
- To help users in completing tasks in an alternative way to what the entities /organisation currently offers.

Understanding the difference between chatbots and webchat

A webchat (also known as live chat) is an online conversation between a user and a human advisor. Webchat usually requires a trained team of advisors to handle user inquiries.

A chatbot is an online application that can help users solve problems without a human advisor. They are usually programmed to recognize phrases or words and use them to provide answers or links to information. They are sometimes known as a virtual assistant (VA).

Chatbots are not limited to the preloaded databases. They can learn by remembering the most commonly used data, content, and services. This makes it much easier for users to work with the portal.

Some bots do more than just answering questions and can perform some functions. For example, the bot can change the user status or create a template for paying utility bills (if requested by the user). Thus, the work of applications becomes much more efficient and faster.

Guidelines:

Good conversation style for both tools should include:

- Keeping text simple, concise, and easy to follow

- Asking questions to keep users engaged and feel supported during the session

- Taking turns during the conversation and giving the user time to respond

- Listening cues to give users confidence that the tool has correctly interpreted their message

- Avoid providing large amounts of information all at once and keep the information relevant.

Required / Recommended: – Required

Location: – Footer navigation

3.7 eParticipation

Government entities need to work with citizens and businesses to identify and test ways of giving them more of a stake in the policy-shaping process, as well as getting their best possible satisfaction regarding public services and how they are introduced through developed channels such as the Internet, mobile phones, etc.

It is required that each government entity apply the electronic sharing information and communication technologies available and enable its customers to connect with it and with one another through its portal. This will broaden and deepen community participation.

eParticipation Tools:

The most popular eParticipation tools include Discussion Forums: Government Entities can use discussion forums to raise certain issues and seek responses from the public. Users can also raise their own issues and questions and ask responses from the government entity as well as from other users.

Web Logs (Blogs):

The government entity may create one or more blogs and use them as a platform to convey its mission, news and updates. Users' comments are to be published after a reasonable degree of censorship.

Live Chat:

Government entities should give the user the option to chat live with one of its staff to answer their queries regarding their services during office hours.

Customers Satisfaction Surveys:

These surveys are posted periodically on the government entity's website. They help gauge users' satisfaction in a precise manner.

Opinion Polls:

Opinion polls on the government entity's website explore users' opinions on certain issues in order to help the decision-makers.

Feedback Forms:

These forms allow users to voice their opinions on different issues ranging from the entity's services to the content of the website.

3.8 Other Menu elements

Elements	Navigation Elements	Mandatory /Optional	Comments
Login	Header	Optional	If required, must be located on the top right corner
Career	Top Navigation elements	Optional	Job vacancies must be posted in this section which enable the fresh graduates and experienced professionals to apply to vacancies. Government entities should ensure that this section is relevant and up-to-date
Tenders	Top Navigation elements	Optional	
Customer charter	Footer elements	Optional	
Opinion Poll	Main page	Optional	
Rate your Website/page	Content pages	Required	

General Requirements

Currency: The mention of Bahrain currency should be uniformed across any Bahrain Government website. As per the international convention, any monetary value should be in terms of Bahrain currency and described as BHD.

Time: To mention timings in any context, specify the time zone information. The standard reference is with respect to the more widely known internationally GMT may be mentioned.

Phone Numbers: The format for mentioning the phone numbers should be according to international conventions (+country code –phone number). International numbers should be represented as (+Country code – Area code – phone number).

Date: The format for date across all pages of Bahrain Government websites should be dd/mm/yyyy to ensure uniformity in all Government websites

Postal and Physical address: While capturing address information, area, block no., road and mailbox no. should be included.

Language:

All pages on the website should be translated in Arabic and English. Agencies should ensure that documents/pages in multiple languages are updated simultaneously so that there are no inconsistencies, at any point, between the various language versions.
In cases where it is practically difficult to update the versions in all languages simultaneously due to delays on account of translation etc., it is advisable to remove the obsolete information from the site until the latest versions are available .

Locations:

Provide complete details and avoid using abbreviations that may only be understood locally.

Browser Requirements:

In order to cater for different target audience using different browsers, the web pages should be functional in commonly used browsers. The following are required to support a minimum (or higher) web browser for the below listed operating systems:

- ✓ **Windows 2000:** Firefox 3.0 and above
- ✓ **Windows Vista:** IE9, Firefox 3.0 and above
- ✓ **Mac :** Safari 3.1, Firefox 3.0 and above
- ✓ **Linux :** Mozilla Firefox

The above list of approved browsers will be reviewed periodically as new browser versions are released.

Screen Resolution:

The web pages should be designed so that they do not require horizontal scrolling. The screen layout should be flexible for different screen sizes from 800x 600 pixels and up. All pages should be optimized for 1024 X 768 pixels resolution.

Page auto-refresh:

Periodical page auto-refreshing is discouraged. It can be disruptive and frustrating for users if a page refreshes (particularly if content and/or structure also changes) before they had time to finish reading the content of their interest on the page. If the page refreshes after 5 minutes, provide instruction that it will do so e.g. "This site will time out after five minutes of inactivity then you must log in again".

Cascading Style Sheet (CSS):

The formatting and design of websites has to be separated from content as much as possible by using Cascading Style Sheets (CSS). The CSS files must follow w3C CSS-4 standards and must pass the W3C CSS Validator.

Plug-ins:

Entity websites that require browser plug-ins, such as Real Video, Adobe Acrobat Viewer, JAVA JDK , etc. should identify the plug-in required on the website and provide a link to the location where the user can download the plug-in.

JavaScript:

Many State Web applications use JavaScript and/or Java applets on the Web site. All browser versions in use by State agencies must be Java enabled to utilize either JavaScript or Java element features on the Web site.

Directory Structure and file Naming:

Create all file and directory names in lowercase to avoid broken links and improve the portability of the website. File names not to include spaces, if required to be split, it is generally recommended that the hyphen character is used. The directory structure and site structure should match to make it easier to find and organize files thereby improving the maintainability of the site.

Bandwidth conservation:

Most website visitors do not have the luxury of high-speed ISDN Internet connections. The total size of the web page must be kept to the minimum to ensure acceptable download times for all users:

The total size of the home page should not exceed 100k

The total size of all other pages should not exceed 70 K

Site Markup:

Government websites should validate against the following techniques for published grammars:

HTML 5

XHTML 1.1

XML 1.0

Design Guidelines

Chapter 4

4.0 Design Guidelines

Government websites should aim to be inclusive to all users, bearing in mind the wide range of customers' circumstances, computer capability and technical knowledge. The recommendations in this section assist site visitors to gain access to government information and services in a more effective and efficient manner.

This following section describes the minimum standards to be followed by Government websites. In addition, this document contains recommendations and where appropriate, explanations and references for further information. Each of the following standards and recommendations address one or more of three major areas:

- ✓ Accessibility
- ✓ Usability
- ✓ Functionality

Structure of the Guidelines

Each guideline is composed of several sections including:

- ✓ A general description of the guideline
- ✓ List of the guideline's criteria
- ✓ Validation technique

Accessibility

Web accessibility is about designing sites so that as many people as possible can access and interact with them effectively and easily, independent of whom they are or how they access the Internet. Accessibility issues address the need to make all state web pages accessible to three groups:

- – People using various technologies (for example, browsers, search engines, operating systems, wireless systems),
- – People with disabilities (including visual, mobility, and cognitive/language impairments), and
- – People accessing our pages from other countries.

Usability

A usable website is one that users can easily navigate in a such a way that they can find what they are looking for quickly and efficiently.

4.1 Alternative text

Purpose

The main objective of alternative text is to provide textual replacement for pictures which helps the visually impaired individuals while using the speech synthesizers to read the text which will be able to describe the picture. Also, for slower modem, computer users may not be able to download images or may have set their browser to ignore large graphic files. The "longdesc" attribute should be used when an image conveys important information such as pie chart or a scientific discovery.

Many browsers display the Alt text when the customer rests their mouse on the image. A textual equivalent should be provided for every non-text element including

- Images
- Graphical representation of text
- Image map regions
- Animations
- Applets and programming objects
- ASCII art
- Frames, scripts, images used as bullets
- Spacers
- Graphical buttons
- Sounds
- Standalone audio files
- Audio tracks of video
- Video

Use empty alt text for any images that are purely decorative – for example rounded corners of boxes.

Benefits

- ALT text enhances the browsing experience of visitors with disabilities.
- ALT text is useful for the people using a mobile phone, PDA, or hand held devices that don't display images
- Enhance the search engine ranking
- ALT text is useful for the people who turn off the image downloading because they have slow internet connection
- Provide valuable information to all visitors with descriptive link titles and descriptive text about other page elements.

Guidelines:

- ✓ Provide text equivalent for all images that convey information, such as picture of a person, place, or thing
- ✓ If an image is not a link and carries no information use null alt-text(alt="")
- ✓ Keep ALT-text under 100 characters.
- ✓ If the ALT-text exceeds 100 characters provide text equivalent adjacent to the image that leads to a separate page, which provides a longer description
- ✓ Avoid using words such as image or graphic at the beginning of the alt-text. The screen reader user will know it is an image without such prompts.
- ✓ Try to describe the image as you would describe it to a friend over the telephone.

Validation Technique:

- View the page in the browser with the image viewing functionality disabled
- Listen to the page using a screen reader, Braille display or speech synthesizer
- Evaluate whether the page is readable and functional in a text browser like Lynx, or in author mode in Opera with CSS, JS and images disabled
- View the page using the WAVE accessibility validation tool

4.2 Use valid, standard web programming code

 The World Wide Web Consortium (W3C) sets and publishes standards for most web programming languages, including HTML 5, XHTML 1.1, CSS Level upto 4, DOM, and SMIL. W3C languages are designed with accessibility in mind. Programming code is considered "valid" when it follows all the rules and conventions specified in the published standards.

Objective:

- ✓ Screen readers and other assistive technologies can more accurately interpret and interact with web pages that are built using valid, standard code.
- ✓ To ensure that the site is compatible with a wider range of web browsers and devices used by the general public.

Guidelines:

- – HTML code should begin with DOCTYPE[A]
- – Indicate the programming language that is used by starting your code with a document type declaration such as: <!DOCTYPE html PUBLIC "-//W3C//DTD HTML 5.00 Transitional//EN">[A]
- – Refer to the W3C site for full specifications and documentation.
- – Use appropriate markup to convey document structure [A]

Validation Technique:

Use W3C Markup Validation service

4.3 Specify the Language of a document

HTML uses the language attribute ("lang") to specify the language in a web page. It can be set for any HTML element thereby assisting a browser in rendering the language content. The "lang" attribute is used to ensure the following:

- To orient and adapt to the pronunciation and syntax that are specific to the language of the page.
- Screen readers can pronounce words in the appropriate foreign language if it is specified.

Guideline:

- ✓ Use the language attribute on the <html> element to identify the primary language of each document, for example, <html lang="en">, for English. Use the language attribute on <span> or other elements to identify words or phrases in other languages[A]

Note: Not all screen readers support automatic language changes, but setting the "lang" attribute will not negatively affect those.

Validation Technique:

- ✓ If the content is HTML, check for the html element's lang attribute
- ✓ If the content is XHTML 1.0, check for both the html element's lang attribute and XML: lang attribute
- ✓ If the content is XHTML 1.1 or higher, check for the html element's XML:lang attribute

4.4 Use W3C HTML and CSS Validation Service

Markup comprises of set of symbols, or a language, that can be used to provide instructions. HTML includes markup (programming code) to identify the structural elements of a document. Markup provides instructions to the software used for viewing a webpage on how the page should look and work. For example, the <p> element identifies a paragraph and <h1> identifies a first-level heading. Other elements would include lists, tabulated data, anchors, images and quotations.

Objective:

 Screen readers use structural elements to help make reading a web page more efficient. For example, some screen readers can skip from heading to heading to allow the user to "skim" the document.

Guidelines:

- ✓ Identify section headings, paragraphs, lists, quotes, etc. using the appropriate tags instead of relying on formatting commands to distinguish these elements. For example, use <h1> tags to identify top-level headings rather than simply applying font-size or bold formatting commands [A][U]
- ✓ Do not misuse structural elements for formatting effects, such as using <h1> to make text bold or <blockquote> to indent a paragraph that is not actually a quotation [U][A]
- ✓ <h1> should be the first header on the page and subsequent headers should follow the logical order [A]

Validation Technique:

Use W3C Markup Validation service

4.5 Use style sheets to control layout and presentation

Cascading Style Sheets (CSS) is a style sheet language used to describe the presentation of a document written in a markup language. The use of CSS allows various styles to be defined and modified independent of the website content. While HTML is designed to identify a document's structure, CSS defines the formatting and presentation. Pages must be usable and function properly when CSS is not supported.

Objective:

✓ The use of style sheets separates structure and presentation which brings several benefits, including improved accessibility, manageability, and portability

✓ To enable the separation of document content from document presentation

✓ The use of CSS for formatting also tends to facilitate the proper use of HTML to identify document structure.

✓ To allow the same markup page to be presented in different styles for different rendering methods, such as on screen, in print, by voice or on Braille based devices

Guidelines:

✓ Global Style sheets should be employed to ensure consistency in presentation across the Bahrain Government websites[U]

✓ Government websites should be functional even if the style sheet settings are ignored [U][A]

✓ Style sheets must be used to govern how texts, headings and links will appear in the visual presentation

✓ Use of style sheet attributes to define style sheets directly in HTML code should be avoided [A]

Validation Techniques:

- Disable style sheets in Mozilla Firefox and Opera browsers

- Text based browsers such as Lynx ignore styles sheets

- Plug in tools like Web Accessibility Toolbar can be used in IE

- Validate using W3C CSS Validator

- Some older web browsers, notably Internet Explorer 3 and Netscape 4, have problematic support for CSS

- Be sure to test pages using CSS in multiple browsers.

4.6 Avoid deprecated features of W3C Technologies

A "deprecated" feature is one which the W3C wants to remove from the official standard for a given technology, but which has not yet become officially obsolete or removed. Even though they are part of the official standard, the W3C discourages the use of deprecated features. For example, the "font" tag and color attributes in HTML are an example of a deprecated feature in HTML 4.0. Using deprecated elements instead of newer elements will make the site incompatible with the latest version of HTML and may, despite your best intentions, decrease its accessibility.

The depreciated elements should not be used due to the following reasons:

– -They may not be supported by current and future browser technologies

– -May make the pages less accessible

Guidelines:

✓ Should not use the deprecated elements and attributes[A]

✓ Consult the W3C list of HTML elements and attributes. The index of HTML elements and attributes lists all elements in HTML 4.0. Deprecated elements are indicated with *

Validation techniques:

– Test with W3C HTML Validator

– Otherwise, each page should be initially tested manually for <font> and <Center>. If the page does not have any of these tags the other tags are checked. The presence of any deprecated features will result in the page failing the check

Using Links

4.7 Distinguish links and non-linked text

The Webpage often contains clickable areas such as text links, images and buttons. In order to facilitate the user to recognize what is clickable, the text links should be underlined. Underlines are very important for users with low vision and are easier to see when the page is magnified.

Guidelines:

- ✓ The links should be underlined [A]
- ✓ The colors used for links must be clearly distinguishable from the colors used for non-linked text[A]
- ✓ Preferred color for links is blue[U]

Good Example

Find out what <u>new features</u> have been added to the site

Bad Example:

Find out what new features have been added to the site

In this case for a person affected by color blindness, it is virtually impossible to tell which word a link and which words is are normal texts.

Validation Techniques:

- ✓ Check for the font color between the linked and non-linked text
- ✓ Verify for the links that are underlined

4.8 Use different colors for visited and unvisited links

By changing the color of visited links, users are provided with a visual clue as to where they've already been on the website. If sites use the same color for visited and unvisited links, this will cause misinterpretation for the users or overlook the difference between two similar links as they are unsure about which one they have already visited.

Being able to see if a link leads to a page that the user has already visited can be very valuable for inexperienced users and users with certain types of cognitive disabilities.

Guidelines:

- ✓ Underline the hyperlink[A]
- ✓ Unvisited links should be blue and visited links should be differentiated using alternate color[A]
- ✓ Use consistent colors for all pages[U]
- ✓ It is not necessary to distinguish between visited and unvisited links in menus[U]
- ✓ Clickable links on mouse hover should show hand pointer[A] [U]
- ✓ The two colors used for visited and unvisited links should be different [U]
- ✓ The color used for unvisited links should be more prominent and brighter than that used for visited links[U]

Example:

Link Text – Unvisited

Link Text – Visited

Validation Techniques:

-Click on any link in a page and observe the color change

-Observe the unvisited links and check for the color difference between the visited and unvisited links

4.9 Enlarge clickable areas

Enlarging the clickable area of an element has obvious benefits for visitors, making it easier to get from one page to another without having to target small links with the cursor.

Leaving enough space between links and buttons helps to eliminate the following problems:

- Mouse users with limited fine motor control may have difficulty pointing to and clicking on links that are small, especially if the links are close together.

-Sighted users very often accidentally hit the wrong links when links appear too close together.

Good Example

In a list of paginated results for example, users can click on the number of the page they want to view, or they can click on the object chosen to symbolize the next page: a button, an arrow, or a hypertext link. The latter is preferable because its obvious format makes it easier to click on.

1 │ 2 │ 3 │ 4 │ 5 │ 6 │ 7 │ 8 │ 9 │   Next   >>

Bad Example

1 │ 2 │ 3 │ 4 │ 5 │ 6 │ 7 │ 8 │ 9 │ Next

The clickable area in the above example is very small.

Guidelines:

- ✓ If texts and images are combined in menu options, make sure it is possible to click on both the text and the image. However, avoid making separate links for images and texts. [A] [U]
- ✓ Ensure that links and images are of decent size and not too close to each other. For example, a 'Go' button on a 'Search form' should be of a good size so that it is obvious to the users. [A] [U]
- ✓ Separate adjacent links by several pixels – not just by one or two [A]
- ✓ Use standard or enlarged font sizes for text links [U]
- ✓ Avoid using text links that are shorter than four characters in length [U]

Validation Techniques:

-Click on the link to ensure that the link is activated

-Click outside the link to ensure that link is not activated

- Adjust the text size in IE to ensure that the menu text is enlarged

4.10 Write clear descriptive text for links

Providing clear descriptive text for links is highly important to people with cognitive disabilities or blindness. Often visitors look for noticeable highlighted keywords, therefore, texts with keywords are preferable. Screen reader users often tab through links in order to "scan" a page. Unique names facilitate the search.

Good Example:

More information

Bad Example:

Click here for more information

Guidelines:

- ✓ Link text should give the user a clear idea of the destination and make sense when read out of context [A]
- ✓ Avoid the use of 'click here', or 'Read More' for example. This is particularly important for screen reader users who may use a list of links to navigate the page [A]
- ✓ Avoid repeated usage of same link text which leads to different pages. For example, if a 'Read More' link is repeatedly used on the same page, then each link must be clarified with title text. [A][U]

Validation Techniques:

- ✓ Scan through the page for links and verify the links for highlighted keywords
- ✓ Verify for repeated usage of same link text.
- ✓ Alternatively, use JAWS screen reader software, press Insert + F7. This will list all the links in the page. These can then be sorted alphabetically so that it can be checked for repeated link text.

4.11 Evaluate the links to external sites

Links to external sites must be evaluated against certain criteria before being added to the pages on the website. If Government entity cannot guarantee the quality and integrity of sites to which they link, the site's manager should judge the quality and presentation of data before establishing a link to it.

The major search engines use many metrics to validate the external link. Some of the metrics include the following:

-The relevancy of the content between the source page and the target page

-The popularity of the linking page

- The anchor text used in the link

- The trustworthiness of the linking domain

Guidelines:

While adding links to another site, ensure of the following:

- ✓ The content of the site is relevant to the page being linked [U]
- ✓ The content of the site is not illegal nor offensive[U]
- ✓ The content of the site is suitable for the likely audience[U]
- ✓ Must ensure that information contained in external links is not in conflict with the mission, programs and existing policies[U]
- ✓ Ensure that any website being linked has posted privacy policy that clearly describes the information handling practices[U]

Validation Techniques:

Scan through the page using W3C link checker tool

4.12 Inform users when a link is opened in a new window

Novice users often do not understand the concept of stacked windows and this will cause the potential problem of breaking the browser's Back button, or previous page functionality.

This is confusing for users who use screen readers as the focus shifts automatically to a new window and also the users are not being informed about this. Non-visual users may not know that a new window was opened and this can lead to significant confusion.

Guidelines:

- ✓ Warn users in advance that a new window will appear [U]
- ✓ Remove the back button from the new window [U]
- ✓ Say what type of document or application it is[U]

Example:

- Text with link option:

  Help (This link will open the page in a new browser window)

- Icon with ALT text example:

⌷Help

Validation Technique:
- ✓ Browser- View the source code of the page in the browser and search the code for keywords to locate links that may need to be given additional information. Terms such as _blank, window using a .pdf, .doc, .txt, . wav etc. can be used to search for file types.
- ✓ Manually check each link by following it to ensure that no new window or application is launched without warning.

4.13 Limit the length of link text

Use the minimum amount of text needed to understand where the link leads

Do not use the URL unless the intention is for the page to be a handout.

Good Example:

Refer to the statement of budget for the year 2020

Bad Example:

Refer to the statement of budget for the year 2020

4.14 Provide anchor links for Long pages

Long pages which require a lot of scrolling up and down must include anchor links at the top of the page and "Return to top"links throughout the page. Additionally, for long pages with several distinct sections that are not visible above the fold, there should be clickable list of ANCHOR links which helps users to jump to different parts of the page.

Thus, Anchor links provide an outline of a page so users can quickly determine and navigate to the desired information.

Guidelines:

- ✓ For long pages that are not visible above the fold, provide a 'list of contents' with links that redirect the user to the corresponding content[U]
- ✓ Provide 'Return to top'at the end of each section or at regular intervals to redirect the user back to the list of contents[U]

Example:

Below is an example of a content for a Help section and is divided into four sections. If users click on any specific section, they should be directed to the corresponding section:

Help

      How to

      Hints and tips

      Examples

      Background

How to

---   ------------ ------------------------ ------------------------------

---   ------------ ------------------------ --------------------------------

<div align="right">

Return to top
</div>

Hints and tips

---   ------------ ------------------------ ------------------------------

---   --

<div align="right">

Return to top
</div>

4.15 Links to email addresses

An email address to which the message will be sent must be visible in the link text. Such links will help site visitors to send emails from the web page. When clicking on the email link, the user's email software setup should start with a mail composition form ready, and the email address is automatically populated into the destination address box.

Guidelines:

- ✓ Do not provide email address in the plain text[A]
- ✓ Use mail to tag to create an anchor link for the email addresses[A]
- ✓ When providing email addresses, link to the person's name, not the address[U]
- ✓ Show the email address as unlinked text in parentheses following the name[U]

Good Example:

For more queries please contact eGA customer care (contactcentre@ega.gov.bh)

Bad Example:

Contact customer care (contactcentre@ega.gov.bh)

Send Email to contactcentre@ega.gov.bh

4.16 Indicate file sizes and file types in links which activate downloads

Provide users with details of the file size and document type in the link title. If possible, it is useful to provide estimates of the download times for various types of connections alongside the download links. For example, "56K modem - 3 minutes".

Good Example

Report PDF (153K)

Bad Example

Report

4.17 Provide Non-Link character for adjacent Links

Not all user agents such as desktop graphical browser, text browser, voice browser etc. could differentiate between the hyperlinks that appear adjacent to each other, unless they are separated by a text character which is not part of the links.

When using the screen reader, it can sometimes be a little difficult to tell when link text ends and when another begins. One solution is to provide a non-link character between each link.

Guidelines:

Use vertical bar (I) between adjacent links.

Good Example:

Privacy Policy | Disclaimer | Terms of Use

Bad Example

Privacy Policy Disclaimer Terms of Use

Validation Technique:

- Check each anchor elements for a following adjacent anchor element
- If two anchor elements are adjacent, then check if there is printable character (not space or tab) between the two elements

4.18 Provide meaningful Page Titles

The page title is the most important navigation aid, as it confirms to site visitors where they are within the site. The page title appears in the title bar (top left) of a browser. When meaningful, this information can be used to enhance the navigation of the site and assist in understanding the website structure, just as a breadcrumb trail.

If no page title is defined, the full web address or a default name assigned by the page authoring software, such as "Untitled" will appear in the title bar. The person using the speech or Braille software will hear the title of the page first.

Guidelines:

- The page title should indicate the page topic

- Use short and meaningful titles

- Choose a unique and logical name for each page

-Viewers coming to the page from a search engine should be able to understand where they are within the site by reading the page title.

- Reverse the order of the information in the title, so that first information to be heard is the most relevant to that particular page

Bad Example:

Page without title:

Validation Technique

Accessibility Toolbar - Go to Doc info, page information (opens in a new window)

Browser - Perform visual checks by simply loading the page into a browser and reading what is displayed in the title bar

Screen Reader - Using Jaws, hear what the page title sounds like, press INSERT + T

4.19 Using fonts

Presentation is crucial to all forms of communication. There are several factors to be considered while designing a website and selecting the appropriate font type constitute a major decision as whatever content is written must be easy on eyes and readable. The selected font for a website should accomplish the following:

1) Focus attention
2) Enhance readability
3) Establish a tone
4) Project an image

Guidelines:

✓ Use CSS to apply the corporate fonts through controlled style sheets [A]

✓ Make the default font size reasonably big (at least 10 point equivalent) [U]

✓ If the site is targeted to senior citizens users, use bigger default font sizes (at least 12 point equivalent). [U]

✓ If possible, avoid text that is embedded within a graphic, style sheets and font size buttons do not have any effect on graphics[A]

✓ Have font size adjuster prominent on the website[U]

✓ Set the font sizes using relative measurements or avoid setting font sizes altogether [A].
Relative or flexible units can be chosen from:

1. Percentages (%) increase or decrease from the browser font size set

2. Em (relative to the size of the capital M)

3. Ex (relative to the size of the capital X)

4. Keywords (small, medium, larger, smaller, etc.)

5. Signed units (+1, -2, etc) (HTML only)

✓ Avoid font sizing based on absolute or fixed units such as points (pt), pixels(px), centimeters(cm), millimeters(mm) and inches(in).Instead, use % and "em"[A]

✓ In sites where it is necessary for users to read a lot of information, use lower-case fonts and appropriate capitalization to ensure the fastest possible reading speed[U]

✓ Use bold text only when it is important to draw the user's attention to a specific piece of information[U]

Validation Techniques:

Change the browser text size settings to "largest" and "smallest" to ensure that all text is still legible

4.20 Colors

Color is an important element of design and should naturally be used. If the information is presented using only color, a person who cannot distinguish color will not have access to the information. For example, use color-coded asterisks to indicate required values on a form page, not color-coded field labels.

Objective

✓ To assist users who have difficulties in perceiving differences in colors

Good Example

(* on required fields)

* First Name

Bad Example

(Required fields are in red)

First Name:

Guidelines:

✓ The information available with color should also be made available without color[A]

Validation Technique:

✓ Test using the visually impaired and color-blind individuals

✓ Test the website using black and white color scheme

✓ Listen to the web page using a screen reader or speech synthesizer

✓ Alternatively, Go to Tools > Internet Options > Accessibility and check "Ignore colors in the page". Always check graphs and charts to see if there is a clear alternative description of the content in a text format elsewhere on the page.

✓ Use Wave tool Or Google Lighthouse

4.21 Contrast between foreground and background colors

Color contrast between the background and foreground affects the readability of the content.

If the contrast is too small, the text and background can flow into one another and so the text disappears or becomes difficult to read for people with different types of color deficits or people who are using monochrome displays.

Guidelines:

- ✓ Ensure that foreground and background color combinations provide sufficient contrast for navigation[A]
- ✓ Dark and light contrast shall be used on all occasions[A]
- ✓ The contrast ratio should be at least 5 to 1 for normal text, and 3 to 1 for large bold text[A]

Validation Technique:

- Run the image through Vischeck or color contrast analyzer to simulate how the page will look if viewed by a color-blind person.
- Print the web page to a black and white printer
- Listen to the web page using a screen reader or speech synthesizer
- Observe page contrast - light characters on a dark background or dark characters on a light background

Foreground		Background								
		Red	Orange	Yellow	Green	Blue	Violet	Black	White	Gray
Foreground	Red		Poor	Good	Poor	Poor	Poor	Good	Good	Poor
	Orange	Poor		Poor	Poor	Poor	Poor	Good	Poor	Poor
	Yellow	Good	Good		Poor	Good	Poor	Good	Poor	Good
	Green	Poor	Poor	Poor		Good	Poor	Good	Poor	Good
	Blue	Poor	Poor	Good	Good		Poor	Poor	Good	Poor
	Violet	Poor	Poor	Good	Poor	Poor		Good	Good	Poor
	Black	Poor	Good	Good	Good	Poor	Good		Good	Poor
	White	Good	Good	Poor	Poor	Good	Good	Good		Good
	Gray	Poor	Poor	Good	Good	Poor	Poor	Poor	Good	

Graphics, Images and Multimedia

Images can set the tone of a page. A good image can help to make the page more visually appealing and reinforce the message in the page. Generally, web images take up the majority of the download time in most web pages. This can be improved by making the graphics as small as possible.

4.22 Image Type and Size:

The image should be in .JPG, .GIF or .PNG format. Choosing the appropriate compression format will ensure for visual integrity. Smaller images make our site quicker and less expensive to visit. For visitors who use dial-up connections, low-cost broad band access or mobile internet access have a usage limit which large images can eat into.

	.JPG	.GIF	.PNG
Used for	Images with color shading and more than 256 colors	Images used with few colors and with areas of solid colors.	Images which need not be displayed on the mobile device
Color restrictions	Use millions of colors	Restricted to 256 colors so they are not best for intricately colored images	If no color restrictions are available, include none.
Advantages	Complex colors where colors blend into each other are best compressed as JPGs	Can be transparent and animated	If no advantages are available, include none.

The image type TIFF can be used for topographical and hydrographical images.

Guidelines

While choosing the image, ensure of the following:

- ✓ Image type as .JPG, .GIF or .PNG
- ✓ Image is not too dark, blurry or out of focus[A]
- ✓ Scaling of image should be avoided as they tend to distort[A][U]
- ✓ Single image size should not exceed 30 KB on the main page[U]
- ✓ Image chosen should clearly relate to the subject on the page/content
- ✓ Alt text within the range of 100 characters[A]
- ✓ Height and width attributes of the image are specified in the image element
- ✓ Ensure using the .GIF format or .JPG format, do not turn .GIF files into .JPG files and vice versa

Validation Technique

Use a color contrast analyzer to check this function

Use Wave tool Or Google Lighthouse

4.23 Image maps

Image maps are picture on a webpage that are divided into multiple areas, and each area having its own hyperlink to other webpages, depending on which area the user clicks.

4.23.1 Client-Side Image Maps

If every link region within an image can be contained using simple geometric shapes, such as squares, rectangles, circles, triangles, or some polygons, the image map can be converted in the client side.

However, there are some circumstances where an image map might not be rendered by the User Agent. Also, some User Agents do not render content that is placed inside <object> tags. Therefore, it is strongly recommended that alternate links and/or text be placed separately.

Client-side image maps are accessible taken that they contain corresponding alternative text (alt tag) that provides the link's information.

Unlike server-side maps, client-side maps do take textual information thus providing the opportunity to assistive technologies to read the assigned information loud.

4.23.2 Server-side Image maps

When an image requires regions that cannot be defined by an available geometric shape, a server-side image map is used.

The server-side image maps do not take text but instead use horizontal and vertical coordinates of the cursor location and send information to the web page server, which then calculates in which region of the image the user's cursor is located. This makes it inaccessible since no meaningful information is read by the screen readers. Also, server-side image maps rely on "point and click: interaction with a mouse, making them unusable by keyboard only navigation, i.e. for users of laptops without a mouse, screen readers, touch screens or special pointing devices.

Example:

Therefore, the recommendation is to use redundant text links if server-side maps are used. In the above example, each town/city in the Bahrain map could be a hot spot. To make the image accessible, list each of those towns/cities as hypertext links as follows:

Muharraq | Manama | Sanabis | Riffa | Isa Town

Guidelines:

- ✓ Use alternate text to indicate the function or destination of the link of each area of a client side map[A]
- ✓ The alt attribute should match with the wording on the image[A][U]
- ✓ Wherever possible use client side map instead of server side map[A]
- ✓ If server-side map is to be used, provide text links that duplicate all functions/destinations for all hot spots included in the image map[A]

Validation Techniques:

- ✓ Try using the site with mouse plugged out. If you cannot navigate, insert redundant links.
- ✓ Test the site with a text only browser.
- ✓ Go to View > Source > Edit > Find and search for "map" then read the code to see if all links within it have ALT texts.
- ✓ Manual checks can also be done to check for ALT text.

4.24 Graphical text

The images representing or conveying critical information must be supported by a text description. The information contained in images may cause the following problems:

- ✓ Cannot be read by text only browsers
- ✓ Cannot be detected by search engines
- ✓ Cannot be easily made larger or smaller
- ✓ Unlike normal text , images of the text become pixilated when enlarged by users having low vision

Guidelines:

- ✓ Images of text should be limited to logos and not to be used for items such as headings and navigation[A][U]
- ✓ If used, the information contained in the image must also be available as text on the page[A]
- ✓ This standard is applicable to organization charts, flow diagrams, pie charts etc..

Validation Technique:

-Turn off the images on the browser and verify whether the site navigations are visible and identifiable

- Run the site through an automated testing tool to flag up pages with images that lack an ALT attribute.

- Manually assess the appropriateness of ALT text where present.

- use Wave tool Or Google Lighthouse

4.25 Animated images and Content

Adding animation to a page can potentially cause performance issues. It can also cause distraction and confusion to the users with certain visual or cognitive disabilities. Moreover, screen readers are unable to read the moving text and this may distract and annoy them. Animation should be used only if it adds value to the page, not to be used just for decoration.

Guidelines:

The following aspects should be considered while using animated images.

- ✓ File size of the animated image should be kept small[A][U]
- ✓ For moving, blinking or scrolling information, there must be a mechanism for the user to stop, pause or hide that information[A]
- ✓ Support the user by providing a skip or hide animation function and provide the equivalent content in an alternative format[A]
- ✓ Text should not be marked up to blink with the use of the <BLINK> or <marquee> tags[A]

Validation Technique:

- ✓ Pages should be physically checked for blinking animations

- ✓ If the page has an animation, pages should be scanned for the <BLINK> and <marquee> tags

- ✓ If the page has a flash animation, look for user-controlled pause button

4.26 Audio and Video

The use of audio and video clips in a website can enrich the content and render communication more effective for the visitors; however, providing a text equivalent is important for disabled users and is also beneficial to those in a noisy environment.

In case of video clips, audio description of the video may be provided in place of text. This makes it possible for users with and without vision impairment to review content with equal ease. Care should be taken to synchronize the alternatives with the actions taking place on the screen.

Audio clips MUST be accompanied with captions for the benefit of hearing impaired or those who do not have access to audio. Captions must not only include dialogue, but identify who is speaking and include speech information conveyed through sound, including meaningful sound effects.

Guidelines:

- ✓ Provide text equivalent for audio and video content (eg. via alt ,longdesc)[A]
- ✓ The visitors should be provided with the download and usage instructions, file size and file format in order to help them determine whether they wish to access the audio or video files.
- ✓ If specific software is required to access the audio or video content, a link to download that software must be provided
- ✓ The formats of audio/video files should be common across the website
- ✓ Instead of forcing the user to download the entire file, possible streaming of audio/video files should be used.
- ✓ If any audio on a web page plays automatically for more than 3 seconds, there must be an option provided to users to pause or stop the audio. Individuals using screen readers can find it difficult to hear the speech output if there is another audio playing at the same time.

Validation Techniques:

- - search the site for all audio files - check that there is a text transcription provided in the immediate vicinity of the audio file
- - view all video clips and evaluate whether captioning is embedded
- - use up-to-date JAWS or Window-Eyes screen readers to listen to flash animations

4.27 PDF Documents

PDF is a quick and convenient way to put an existing document on a Website. Information in PDF or word formats is much more difficult to access while using the service via mobile phone or if the user does not have the specific software needed to view the document format. PDFs are used on Websites for many reasons, some of the most common today are:

- Brochures and information fact sheets.
- Large public documents that contain charts and images, such as annual reports.
- Documents that exist in hard copy but have a very short life e.g. press releases.
- Fax-back order/request forms for the user to print out.
- Contracts and agreements for the user to print.
- Secure password-protected documents.

Guidelines:

- ✓ PDF file included for download should show the size of the file on the page.
- ✓ Notification to the user that the file is in the .pdf format should always be shown
- ✓ The means to download the free Adobe Reader should always be shown on the page containing the PDF file
- ✓ Provide alternative text for images, proper headings, appropriate link text, etc.
- ✓ The explicit specification of logical reading order
- ✓ If tables are used, ensure that the construction of tables is using the appropriate markup tags
- ✓ The appropriate use of paragraphs, headings, and list tags.
- ✓ Author should always include as many details as possible within the metadata
- ✓ section when saving the .pdf files
- ✓ Avoid the use of dark colored backgrounds to text.
- ✓ Incorporate security features wherever required.
- ✓ Prior to allowing visitors to download the .pdf file, government websites should check for viruses and clear them

Validation Technique:

- ✓ Test the .pdf file for accessibility using screen readers
- ✓ Unplug the mouse; this provides an insight as to how individuals using keyboards only would navigate the PDF file.

Scripting and Applets

Scripts and applets are used to add dynamic content to a web page. They are also used to validate entries in forms and to add highlighting and other text effects.

4.28 Scripts, applets and other programmatic objects turned off

Ensure that pages are accessible when scripts, applets, or other programmatic objects are turned off or not supported. If this is not possible, provide equivalent information on an alternative accessible page.

Guideline:

Scripting languages i.e. client-side scripting should be used where required. If scripting or an applet must be used, then

- ✓ All information and services on a government web site must be available whether scripting is available to the user[A]
- ✓ Text based alternative to be provided as scripts, applets and objects may not run on all systems [A]
- ✓ For scripts, applets, and objects, do not specify device dependent event handlers. For example, choose onFocus rather than onMouseOver or onKeyPress[A]

Validation Techniques:
- ✓ Test programmatic elements with assistive technologies such as screen readers and screen magnifiers.
- ✓ Test programmatic elements with keyboard only or mouse only navigation.
- ✓ Test programmatic elements with audio browsers.
- ✓ Turn off JavaScript and test the functions
- ✓ Check the presence of an object or an applet on a web page by reading through the source code for the <object> and/or <applet> tag. Where the applet or object is found it should have an alt attribute.
- ✓ Scan the pages for <script> tags. Where <script> tags are found, look for <noscript> tags. The number of <script> and <noscript> tags must be equal; otherwise the page will fail the test.

4.29 For scripts and applets, ensure that event handlers are input device-independent

Some individuals are restricted to the input devices they can use. Some can only use the keyboard or the mouse while others must use other devices such as head pointers and virtual keyboards. Scripts which use device dependent attributes such as "onmousedown", "onmouseup", "onclick", "ondblclick", "onkeydown", "onkeyup" and "onkeypress" may not be accessible to some of these individuals. Instead device independent attributes should be used such as "onfocus", "onblur" and "onselect". Moreover, it may be possible to use both the mouse and keyboard handlers to achieve the same accessibility.

Guidelines:
- ✓ Use application level event triggers rather than user interaction level triggers
- ✓ If device dependent attributes are used, provide redundant input mechanism i.e. provide two handlers for the same event. For example, use "onmousedown" with "onkeydown" and use "onmouseup" with "onkeyup"
- ✓ Do not write event handlers that rely on mouse coordinates
- ✓ If java applets and flash is used, apply the accessibility guidelines accordingly

Validation Techniques:
- ✓ Pages using scripts could be checked using Notepad for the strings 'onMouse', 'onKey', 'onClick' and 'onDblClick'. Where device dependent attributes exist, they must be complemented by an alternative device script. Otherwise, the page will fail the test.
- ✓ Try to navigate through the form using only mouse or keyboard. All functionalities should be reached in both cases

FORM GUIDELINES

4.30 Mark the required fields

Use the * character to mark which fields are required. Place the character in the end of the input field. Also, provide information in the form about what is required by writing "Items marked with * are required". Coloring a required field indicator in red, or another color that stands out will make it more visible for visually impaired users.

Guidelines:

- ✓ An explanation that * denotes a required field must precede the data entry form or element [U][A]
- ✓ Required fields must not be indicated by color alone[A]
- ✓ The * character must be placed inside the label element[A]
- ✓ On hover, the asterisk title should state as "Required" and the cursor changes to help [U][A]

Example:

Name * [   ]

Validation Technique:

- ✓ For any form that is used, manually confirm that the required fields are clearly marked as mandatory
- ✓ In addition to a visual identification such as *, ensure that the information is conveyed to the user when the user receives the focus by using the title attribute

4. 31 Form fields should be associated with labels

Many websites use online forms. In order for screen readers, talking browsers and Braille devices to work efficiently, the devices need to able to associate a form label with the correct form control such as a text field or text control.

Form fields should always have a text-based label indicating what information should be entered in that field for greater accessibility. The following are the advantages:

✓ Screen readers are able to inform users what each field represents for those wishing to use them to fill out forms

✓ When the user clicks on the label, the associated form field receives the focus. Thus providing a larger "target" area for clicking.

Guidelines:

✓ All form fields must be associated with their labels using the <label> html tag[A]

✓ If a form cannot be labeled, it must include the title attribute to give a brief about what the form field is[A]

✓ Associate a label with a form element for list boxes, combo boxes, radio buttons, and check boxes [A]

✓ Reading bold labels is a little bit more difficult for users, so it's preferable to use plain text labels. [U]

✓ Input field size should be kept relevant to the expected user input[U]

Example:

If a screen reader accesses a form element e.g. First Name that has a <label> element associated with it, it will be read as 'First Name' and indicate the type of form item as "First Name. Text Box".

Validation Technique:

✓ Use the screen reader software while filling out the form and observe whether it reads out what the field represents

✓ Validate this function using the WAVE Tool bar

✓ Or Google Lighthouse

4.32 Use title attributes to identify the form controls when <Label> element cannot be used

Use title attributes to label form controls when the visual design cannot accommodate labels. In this case, tooltips must be used to display the title attribute of a form element when the user places the mouse over that element. Whenever the tab focuses the appropriate fields the screen readers announce the title attribute to the user. However, if a label is not present, the field is not accessible for a screen reader user because they hear no information about how to complete the form.

Guidelines:

- ✓ Use the `<title>` attribute to identify form controls when the `<label>` element cannot be used
- ✓ If both <label> element and < title> attribute are specified, the< label> element will override the <title> attribute
- ✓ If both title attribute and alt attribute are specified, the title attribute will override the alt attribute
- ✓ The title attribute specified should be meaningful

Example:

In this example, users enter their phone number into three separate fields. The first input field is labeled *Phone*, so the <label> element identifies the label. The other fields have no visual labels, so the title attribute provides information about the fields. If the<label> element is not provided, the screen reader reads the title attribute.

Phone: [_____] - [_____] - [_____]

Validation Technique:
Use screen reader software to test this function. Navigate through the form using the Tab key to move from one control to the next and listen to how the screen reader announces each control when it receives the focus.

4.33 Group related form elements using the <fieldset> element

The FIELDSET and LEGEND elements should always be used together, which allow the user to create and name groups of related input fields in HTML forms.

The FIELDSET element allows grouping the related controls and labels which helps the user to understand the purpose and makes the document more accessible.

The LEGEND elements allow the authors to assign a caption to a FIELDSET. This legend improves accessibility when the FIELDSET is rendered non-visually.

Objective:

- ✓ To organize large forms with many different areas of interest in a logical way without using tables
- ✓ Assist the user to understand how the input fields are related to each other
- ✓ To facilitate easy tab navigation for visual users agents
- ✓ Easy speech navigation for speech oriented user agents

Guidelines:

- ✓ Do not use the FIELDSET and LEGEND elements ,create a graphical border around some content on a page[U]
- ✓ Only use them to logically group related form controls, always use both elements together, and keep legend texts short.[U] [A]
- ✓ Legend chosen should be relevant to every single form field in the FIELDSET [U]

Example:

Validation Technique:

-Check that groups of logically related input elements are contained within a field set element

-Check that any group of input elements of type ='radio' or type ='checkbox' with the same name attribute is contained within a <fieldset> element

-Check that each <fieldset> has a <legend> element that includes the description of that group

4.34 Position of Fields and Field labels closely

It is important not only to label every single field but to appropriately position that field label close to the field. The excessive distance between some labels and their input fields forces users to unnecessarily take time to interact visually with the form.

If a form field label is positioned far away from its field, it may be impossible for a screen magnifier-user to view both the field and its label at the same time.

Therefore, labels should be positioned as close as possible to their fields which help users scan quickly the left-hand side in order to determine what type of information they have to provide.

Guidelines:

- ✓ Position labels immediately adjacent to fields, preferably in standard locations, such as on the left or above text boxes and list boxes
- ✓ The labels for checkboxes and radio buttons should always be positioned immediately to the right or immediately above the associated field

Validation Technique:

Pages which have form elements must be checked manually for compliance. Where pages do not comply with the above stated guidelines, it is deemed to fail the check.

4.35 Make sure that form fields are in a logical tab order

Site visitors use the tab key to move between the fields in a form. In order to enable the screen reader and keyboard users to move between form fields (and links), the logical order of the form for tabbing should be determined. The order in which form fields receive focus is called the tab order. By default, the tab key will start at the top and works its way down the page. Failing to provide a logical tab order is highly confusing and makes the task of navigation very difficult.

Guidelines:

- ✓ Navigation should be logical, generally from left to right, top to bottom
- ✓ Ensure that all interactive elements can be accessed simply without the use of a mouse
- ✓ Make sure that fields appear in the HTML code in a logical order and/or use the <tabindex> attribute to set the appropriate order.
- ✓ Do not remove the focus rectangle surrounding a link or the possibility of focusing on a link.

Good Example:

First Name   Last Name

Email ID   Confirm Email ID

Bad Example:

Below is the example of an illogical tab order, in a two column CSS layout. This order could easily confuse someone with a cognitive disability or someone using screen reading software.

First Name   Email

Last Name   Contact No

Validation Technique:

- ✓ Use the "tab" key to navigate the site
- ✓ Ensure that the movement to each location follows in a logical order.

Note: The Tabindex attribute is only supported by Internet Explorer 4 and up and not every link on the page needs to have a **Tabindex** attribute. Try to minimize the use of this attribute. Instead, rely on the natural order of the links as much as possible.

4.36 Using Radio Buttons

A radio button is a user Interface element which is used to choose a single item from a list of items. It consists of a round interaction element and a descriptive text.

Guidelines:

- ✓ Ensure that the description of the label is meaningful[U]
- ✓ Ensure that radio buttons are used to select a single item from a list of items and cannot be used in isolation[U]
- ✓ Should have one option checked as default[U]
- ✓ Each radio button has one label, placed to the right of the round selection element. [A]
- ✓ If the meaning of a radio button is not immediately obvious, for example because its text is an abbreviation, then create a tooltip[A]
- ✓ Use only one label for each radio button. Do not split the label into multiple labels
  - o If a label is split into two or more labels, a screen reader may not be able to recognize and read the relationship between the second (or subsequent labels) and the radio button. [A]
- ✓ Create a meaningful title for a group of radio buttons, and the field set attribute must be used to group related inputs. [A] [U]
- ✓ Horizontal radio buttons should be avoided[U]

Validation Technique:

- ✓ Use w3C Accessibility tool
- ✓ Wave tool
- ✓ Or Google Lighthouse

4.37 Using Checkboxes

Checkboxes are to be used to select one or more options from a known set of options. This allows users to select one or more options as desired in a group of checkboxes.

Guidelines:

- ✓ A checkbox should be a small square that has a checkbox or an X when selected[U]
- ✓ Use positive and active wording for checkbox labels[U]
- ✓ Associate each checkbox with a label which helps in achieving a large clickable area [A]
- ✓ Align checkboxes vertically, not horizontally[U]
- ✓ List checkboxes in a logical order, such as grouping highly related options together or placing the most common options first [U]
- ✓ Ensure that the checkbox input precedes the descriptive text[A]
- ✓ Use a title element duplicating the descriptive text[A]
- ✓ Use a FIELDSET attribute to group related inputs

Validation Techniques:

Use W3C Accessibility tool

4.38 Using CAPTCHAS

Captchas are used in forms to make sure that the user filling out the form is a human being rather than a computer program that was written to submit forms. One type of CAPTCHA is to take a random string of characters, generate a distorted image of the text and ask the user to type the letters in the image. This works because it is easier for a human being to solve than a computer.

However, relying solely on visual perception present an accessibility barrier to some users, for example, those with visual impairments. Therefore, forms with CAPTCHAs should provide an alternative audio version in addition to the Visual text. For example, an audio file such as MP3 is provided with the letters spoken by different speakers with background speech. Again the idea is that the test is easier for a human being to pass than a computer.

4.38 Tables

Tables are an HTML structure designed to present information in a tabular format. Web designers use tables to hold data and to structure the layout of a page.

Data Tables as their name suggests, are used to represent information in a tabular format. Table markup has several components and attributes that can be used to identify the elements in a standard data table: column headings, row headings, captions, and content summary. When these elements are used properly, a data table can be understood by both visual and non-visual users.

Layout Tables are used to organize information in the web page. The layout tables are used to make the web content appear visually logical. Generally, layout tables are recommended due to the following reasons:

- ✓ Tables are slow which makes loading the webpage very slowly
- ✓ Expensive and labor intensive
- ✓ Less accessible pages to humans, user devices, and search engines

Guidelines:

- ✓ If data table is used, it is very important to use the table header. The header information can be indicated by using the <th> tag.
- ✓ If data table is used, use the <THEAD> , <TBODY>, <TFOOT> tags to indicate the head, body and footer areas
- ✓ Do not use tables for layout unless the table makes sense when linearised.
- ✓ For tables with two or more levels, use the header and ID attributes.
- ✓ Summary attribute to be used in order to provide a brief description of the content of the table
- ✓ Use the caption element to describe the title/nature of the table
- ✓ Use Scope attributes to associate table cell data with its corresponding column or row heading
- ✓ Do not use any accessible data table markup (TH, scope, headers, caption or summary) on a table used for layout.

Validation Techniques:

-Inspect the source code and look for the <TH> tag for header information and the <TD> tag for table data.

-If they have been used correctly, the page will pass the check. If the tags are not present or used incorrectly, the page will fail the check.

-To verify the layout tables, use the Lynx browser and verify if tables make sense when linearlized. If the text is garbled or not displayed in any instance, the page will have failed this check

4.39 Using Frames

Nowadays it is becoming very common for web designers to use frames to divide the browser window into several independent parts each containing a different HTML file. Frames are often used to break the page into two sections – one containing information which does not change as users travel through the site while the other presents more dynamic information.

The following are the drawbacks of using frames:

✓ Frames cause problems for search engine. In order for search engines to index the frame-based website, the links to all the content pages should be provided

✓ Frames break bookmarking – Most web browsers cannot bookmark a page inside a frame-based website.

✓ Printing becomes difficult – Many browsers require the visitor to activate the frame before they print it

✓ Difficult to send the link to a page via e-mail

✓ Most difficult for users with screen readers or text browsers to use the website

Guidelines:

If frames are used ensure of the following:

✓ Do not use the frames purely for presentation purposes

✓ Frames if used, should be identified by a name attribute and each page contained within the frame is identified by its title element

✓ Describe the purpose of the frame by using the title attribute

✓ Use the <noframes> element at the end of each frame set in order to provide alternative information to users whose browser cannot manage frames

✓ Target links to the correct frame

Validation Technique:

- Check the content of each frameset for the presence of a <noframes> section.

- Each frameset element is expected to contain a valid <noframes> section.

- use Wave tool Or Google Lighthouse

4.40 Error Messages

It is important that all situations that are likely to result in error or anticipated, detected, and explained. Error messages should provide a clear explanation (free of any technical terms eg. "404 Not Found") of the problem and offer instructions for overcoming the problem.

Guidelines:

User-centered error messages must be generated for:

- ✓ Forms that contain incomplete or incomplete values
- ✓ Requests for web pages that do not exist
- ✓ Search requests that fail to return any results
- ✓ Cases where mandatory input fields have been left blank
- ✓ As soon as the errors are corrected, the error summary must be updated next time the validation page is presented
- ✓ The error message for Authenticated fields should be generic
- ✓ The error message should not primarily tell what is done wrong, but must point out how to fill it out correctly.

Good Example:

'Enter a Valid Block Number "

Bad Example:

"Block Number is invalid"

Validation Techniques:

- ✓ Enter incorrect information into the form, submit it, and note the error message(s), if any .
- ✓ Check that error messages are provided and that they adequately describe each error.

4.41 Social Media Guidelines

Overview

Using social media tools such as Facebook, Twitter, and Blogs has become an effective way to expand reach, foster engagement, promote discussion and build relationships with citizens. Social media and other emerging communication technologies are used as a channel for the two-way form of communication which enables the government to be more active in its relationship with the citizens thereby increasing the speed and frequency of public engagement.

Social Media can:

- ✓ Increase citizen access to government
- ✓ Facilitate interactive communication
- ✓ Encourage active participation in the government decision making process
- ✓ Promoting the use of service by personalizing the messages and can target to particular audiences based on the nature of the service
- ✓ Increase the level of trust in government
- ✓ Identify trends before take off

4.41.1 Twitter

Twitter has become an important tool for connecting people and extending the reach of existing services and corporate messages by building the relationship with the relevant audiences. An Government entity can use this media to promote its products and services and also be used to enhance the brand image. Twitter is more than a platform to disseminate information; it provides opportunities to listen to conversations and gather information in real-time.

Guidelines:

- ✓ Each Government entity should have a unique profile name
- ✓ The profile name should be short and concise (Maximum of 15 characters)
- ✓ Should have a biography description of the profile
- ✓ If logo is present, it should represent the organization or Entity
- ✓ The theme should promote the Government entity brand identity
- ✓ Recommends having 120 characters per message so that messages can be easily re-tweeted.
- ✓ Abbreviations when used should be very common and should be clear for the user

- ✓ Proofread the Twitter messages not only for typos and grammar, but also for any politically incorrect implications
- ✓ Ensure that the communication message is legal, decent, honest, and truthful
- ✓ People might ask questions that cannot be answered; refer them to someone who can.
- ✓ When there is a need to share more information, provide a link back to the main website by providing short URL's
- ✓ Keep the followers engaged by setting the regular posting schedule at least once weekly
- ✓ Respond to twitter messages which can add more value to the conversation
- ✓ Use hash # before creating a topic
- ✓ Use @ before a username

4.41.2 RSS

RSS or Really Simple Syndication is an easy way to stay informed by retrieving the latest updates from the site's visitors are interested in. Instead of visiting the site to see if it has fresh contents, the subscribed users will get automatic alerts to check out the updates that have been added to the favorite sites without having to remember the site URL or regularly checking their email.

RSS is an efficient way to obtain the latest news and information without having to search/surf the website

Guideline:
- ✓ Subscribing to RSS feed should be on the main page by having the RSS icon
- ✓ The XML code used should follow the specification of W3C
- ✓ If images are included in the feed, ensure not to use excessive graphics which will negatively impact the amount of time it takes to load the feed
- ✓ Use "absolute" URL's for images, websites and links instead of "relative" URLs
- ✓ Use meaningful titles for the RSS feed items
- ✓ Ensure that dates used are properly formatted
- ✓ The user should also be given an option of unsubscribing the page
- ✓ The download information or link for RSS reader should be provided to the user
- ✓ Must use the orange square icon

- ✓ RSS Validator can be used
- ✓ Test starting and concluding a subscription

4.41.3 Facebook

Facebook is another social media networking site which majorly focuses on building online communities of people who share a common interest. Government entities can create their own Facebook profile and use it to post information about their events, people, services, and activities.

- ✓ The content can reach large audiences very quickly
- ✓ Fast way to gauge public opinion
- ✓ Posted comment can facilitate lively discussion

Guidelines:

- ✓ Allow comments to have two-way communications
- ✓ Moderate the comments before posting
- ✓ Delete inappropriate comments
- ✓ If a video is uploaded, ensure that it is captioned

4.41.4 Discussion Forums

A discussion forum, built on a blogging platform, is an on-line site where readers are invited to respond to the formal or semi-formal concepts or questions. It differs from a blog. A discussion forum is created expressly to generate discussions or solicit opinions around a specific topic. Government entities can use a forum to provide information about any specific topic, issue or policy and invite discussion comments from the community.

- A discussion forum is built on the blog platform and, therefore, provides a mechanism for the target audience to provide their thoughts on the topics presented.

- Because the blog "comments" mechanism is familiar to many people, and because it is fairly simple even for those to whom it is not familiar, the barrier to leaving comments is relatively low.
- The discussion forum should be set up to display comments only after approval.
- A discussion forum can be ongoing, like a blog, or it can be open for responses for a limited time. At the end of the submission period the forum can be closed for discussion, but can continue to be readable as long as necessary

Guidelines:

- ✓ Create a basic "intro" page that explains the purpose and content of the forum.
- ✓ Communicate open and close dates if applicable and what will be done with the responses.
- ✓ State that is read, but not necessarily respond to, all comments posted on the discussion forum
- ✓ Write the topics or questions in a plain language
- ✓ Avoid questions with Yes/No answers
- ✓ Moderate all the comments before it is being posted
- ✓ Do not reveal the personal information
- ✓ Update the text on the discussion forum if a follow up action is taken
- ✓ When disagreeing with others opinions, keep it appropriate and polite
- ✓ Separate the topics so that each one can stand alone
- ✓ When the discussion forum is closed for comments, clearly state that it is no longer active
- ✓ Thanks those who participated

4.42 Search Engine Optimization

Search Engine Optimization is the technique which helps search engines find and rank the website higher than the millions of other sites which improve the visibility of website or a webpage. In order for the website to be search engine user friendly the elements such as website designs, menus, content management systems, images, videos, titles should be optimized for the purpose of search engine exposure.

Guidelines:

- ✓ Not cloaking with malicious/manipulative intent
- ✓ Not hiding text with CSS
- ✓ Site is not created in full flash
- ✓ Site is not created with frames
- ✓ Broken links and images fixed
- ✓ HTML validation to W3C standards
- ✓ CSS validation to W3C standards
- ✓ CSS table-less templates used
- ✓ Average "time on site" duration greater than 2 min
- ✓ Keyword-focused anchor text from internal links
- ✓ Duplicate titles and meta description corrected
- ✓ Custom 404 page added
- ✓ 301's being used for all redirects?
- ✓ Dynamic URL's replaced with static or fixed
- ✓ Use of XML sitemaps
- ✓ Java scripts extracted to JS folder
- ✓ CSS styles extracted to CSS folder
- ✓ Use of feeds on domain
- ✓ Use of external links to reputable, trustworthy sites/pages
- ✓ Google Analytics installed
- ✓ Keep pages up to date
- ✓ Use of ROBOTS.txt
- ✓ Are title tag Descriptive? Do they contain keywords?
- ✓ Are duplicate title tags corrected?
- ✓ Are meta tag Descriptive? Do they contain keywords?
- ✓ Are the duplicate meta tags corrected?
- ✓ Are Keywords used in URL's , Headings, Body text, Bold
- ✓ Are keywords used in internal links?
- ✓ Are Keywords used in Image ALT text?

4.42 CrossBrowser Compatibility

As much as possible, web site should support the users' web browsers. Different web browsers interpret web content and functionality differently. The website should support the newest versions of Chrome, Firefox, Safari, and Internet Explorer 9 and up. Entity should examine the web analytics for browser usage to establish the cross-browser compatibility goals to meet the needs of the audience.

Guidelines:

- ✓ Keep the layouts simple

- ✓ Use HTML for content, not style

- ✓ Validate the code, both HTML and CSS, before going live.
  (For example, use W3C Markup Validation Service)

- ✓ Make sure each page includes a valid DOCTYPE

- ✓ Include CSS reset rules at the start of the CSS file

- ✓ Test in as many browsers as possible

- ✓ Test using various mobile browsers and devices

4.42 Mobile Responsive Design Guidelines

With the rise of mobile, it is important that web content is usable on the widest range of technologies and devices that the citizens use. Websites have traditionally been designed for presentation on full-scale PCs or laptops, using desktop browsing software. Accessing this content on mobile devices often results in a poor or unusable experience.

To be usable by the widest range of people, sites need to work well on mobile and tablet devices at least at a basic level. Higher levels of functionality on these devices will offer convenience and better user experience to a wider range of users. Aim for platform neutrality, using techniques that adapt each site version to a range of screen sizes and capabilities

Objective:

- Lower website development and maintenance costs.
- Better and consistent user experience.
- Easier website management.
- SEO (Search Engine Optimization) boost.

Guidelines:

- Build the layout of a website with a flexible grid. Flexible grids are created using CSS. Web layout consists of columns that automatically rearrange themselves to fit the size of the screen or browser window.
- Media queries allow web designers to create condition checks to adjust web designs based on the properties of the user's device. They also allow web designers to specify different styles for individual browser and device circumstances.
- As viewports begin to change the size, images, videos, and other media types should be scalable, adjusting their size as the size of the viewport changes. A simple way to make media content scalable is to use the max-width property with a value of 100%.

5.0 WEBSITE TESTING

5.1 Validation Testing

Validation testing should be undertaken by website developers to ensure that their mark-up conforms to W3C guidelines and specifications. The outcome of the validation test results, code can be validated for what errors are present and how the errors are corrected. Once the website is validated completely for no errors, it means that the website will behave the same way as it was planned or designed on most of the standard web browsers.

Steps for Validating HTML

The URL to be tested for Markup should be entered; enabling w3c website validation service to validate the HTML page. A results page will then be sent to the user with either a congratulatory message or a list of errors.

a. STEP 1:

There are three options on the Mark Up Validator tool that can be used.

i) Validate by URL - Check validation by giving in the direct URL of the website or webpage
ii) Validate by File Upload - Check validation by directly uploading the file to be validated
iii) Validate by Direct Input - Check validation by copy-pasting the entire code

If webpage to be validated already hosted and live on the website, just opt the first option (default) and provide the URL of the webpage and click "Check".

You can also add more options by clicking on the "More Options" link, where you can suggest the markup type etc. In addition, can always leave it to default settings, which will automatically detect the setting of the page.

b. Step 2

On clicking "Check", the validator tool scans the entire code on the file/webpage url/uploaded file for errors. It might take a while but after the check you should (in most of the cases) see a screen similar to the one below.

If you have a fully valid code, a screen similar to the one below will be shown.

c. Step 3

If you have failed validation like in the first picture, if you scroll down, you'll see all the errors highlighted in red with the code shown clearly, like in the picture below.

Now, edit the code and re validate the code by following step a through step c.

We recommend that you re validate the document/code as much as possible until you get a "green signal" from the validator, which means that you are good to go.

Validate the CSS

CSS can be validated with for example the [W3C CSS validator](). The considerations here are much the same as HTML validation.

Validate the Links

http://validator.w3.org/checklink

The Link Checker analyzes anchors (hyperlinks) in a HTML/XHTML document. Useful to find broken links.

5.2 Accessibility Testing Tools

Accessibility automated testing tools are used to determine whether the website upholds some of the checkpoints of the w3c web content accessibility Guidelines. There are number of free and commercially available automated tools that provide a way to measure the conformance to some of the W3C guidelines. Although these tools check for a relatively small proportion of the W3C guidelines, they can be used for analyzing a whole site for technical accessibility.

[WAVE]()

WAVE, the Web Accessibility Evaluation Tool, is a simple, free tool that can quickly check the WCAG 2.1 accessibility of an URL. In addition, download a WAVE toolbar for Firefox that allow to locally analyze web pages. This is particularly helpful if there are sensitive pages you don't want to transmit over an unencrypted connection or you have a small, local site you need to analyze.

Web Accessibility Toolbar (free): The Web Accessibility Toolbar offers a suite of tools to manually check all types of possible accessibility problems, from low contrast areas to incorrect scripting. The toolbar works in both Internet Explorer and Opera. This tool is very useful for low-vision accessibility testing as well as to validate HTML for typical accessibility errors.

Vischeck (free): Vischeck is a visual simulator that can simulate how a web page looks to someone with either of three types of color blindness. Vischeck is a quick way for you to tell if your images, navigation

buttons or color selections may be confusing to these people. You can either upload a picture or have Vischeck analyze a specific web page.

Firefox Accessibility Extension (free): The Firefox Accessibility Extension brings an array of accessibility tools together in one extension. It stands out for its ability to validate dynamic content through Web 2.0 applications. As a standard, it uses iCITA HTML Best Practices, which is a combination of Section 508 and WCAG 1.0.

Juicy Studio (free): The *Colour Contrast Analyser*, developed by Juicy Studio, is a Firefox extension (currently in alpha) that checks all the elements for color contrast to insure that content is accessible by people who are color-blind or affected by other visual-impairments. This helps to find areas with low contrast that could make the website difficult to read by color blind individuals as well as those with visual impairments.

5.3 Usability Testing

Usability testing helps to replicate the experience of the average web site users and correct problems before online visitors find them.

Approaches for determining usable accessibility include:
- ✓ User testing to identify any usability and accessibility problems real-world users may have.
- ✓ Expert reviews, involving specialists in usability and accessibility, to evaluate the website in order to find potential problems
- ✓ Conformance inspections to determine the Web Content Accessibility Guidelines(WCAG) conformance level for the website or check that it meets a specialized WCAG conformance level

6.0 Website Standards Checklist

No	Elements Category	Guideline Reference	Compliance – Yes/No	Comments
A	**Content Guidelines**			
1	All publicly available information is accessible			
2	Documents are published in an appropriate format (HTML, Word, PDF, etc..)			
B	**Titles and Headings**			
3	Meaningful text in <TITLE> tag			
4	Effective headings provided			
C	**Writing Style**			
5	Content is concise			
6	Content is scannable			
7	Content is free from vulgarities and is non-discriminatory			
D	**Text Formatting**			
8	Paragraphs are left justified for English and right justified for Arabic			
9	Text is not underlined unless it is a link			
E	**Spelling and Grammar**			
10	Content is free from spelling and grammatical errors			
11	Correct wording is used			
	Design Guidelines			
F	**Site Structure**			
12	Site structure is user-centric			
13	Site structure ensures content can be reached within 3 mouse clicks			
G	**Page Layout**			

14	Visual identity established and applied throughout			
15	Prominent link to the eGovernment portal provided			
16	Web pages are free standing (ie no "dead-ends")			
17	Footer details provided (ie contact details, date last updated, document URL, copyright link, disclaimer link, privacy link)			
H	**Home page**			
18	Informative and inviting design			
19	Fits within a single screen			
20	Prominent link to the eGovernment website portal is provided			
21	Resolution-independent design			
I	**Navigation**			
22	Navigation is predictable and consistent			
23	Navigation labels are easily understood			
24	Key navigation labels appear on all pages			
25	Use title headings and/or breadcrumb trials to indicate user's location within a website			
26	All links to external websites are accompanied by the Disclaimer			
27	Is sitemaps provided as an additional tool for navigation			
J	**Accessibility**			
28	Accessibility maximized			
29	Compliance with W3C Content Accessibility Guidelines			
K	**Browser Compatibility**			
30	Site displays and operates correctly under different web browsers			

L	**Bandwidth Conservation**			
31	File sizes are minimized to ensure pages are loading quickly			
M	**Metadata**			
32	Metadata applied to all pages			
N	**Hyperlinks**			
33	Labels accurately reflect the destination of links			
34	Links are easily recognizable			
35	Consecutive links are separated			
36	Links to non-government sites have been carefully evaluated for appropriateness			
37	Permission obtained from website owners for links to external sites			
O	**Colors and Backgrounds**			
38	Colors selected from the 216-colour safe palette			
39	Colors contrast well on screen and paper			
P	**Images**			
40	Correct format used for images			
41	ALT text provided			
42	HEIGHT and WIDTH attributes specified			
43	Is LONGDESC specifies a link to a long description page			
Q	**Multimedia and Animation**			
44	Text equivalents provided for audio and video clips			
45	Alternate versions provided for pages relying on scripting languages or Java applets			

R	**Forms**			
46	Forms are easy to understand and complete			
47	Is necessary text instructions been provided in the beginning of the form that describes the necessary input			
48	Is logical tab order created for links, form controls and objects?			
S	**Labels**			
49	Is label elements used to associate text labels with form controls			
50	Provide a description for group of form controls using FIELDSET and LEGEND elements			
51	Is title attribute used to identify the form controls when the label element cannot be used			
T	**Mailing Lists**			
52	Users can subscribe and unsubscribe easily			
U	**Discussion Forums**			
53	Discussion forums are mediated			
V	**Downloads**			
54	Information concerning downloadable materials provided (eg file size, file type, etc..)			
W	**Error Messages**			
55	Error messages are clear and informative			
X	**Management Guidelines**			
56	Website Naming			
57	Compliance with Domain Guidelines			
Y	**Website Promotion**			
58	Website registered with search engines			

Z	Customer Support			
59	Contact information provided on every page			
AA	Content Management			
60	Authorisation obtained prior to publishing			
61	Regular backups made			
62	Information management and record-keeping strategy implemented			
63	Contractual Arrangements			
64	Service level agreement for website hosting implemented			
AB	Quality Guidelines			
65	Quality attributes identified and addressed			
66	Users involved in the development process			
67	Performance testing conducted			
68	Quality assurance testing conducted			
69	Accessibility testing conducted			
70	Links checked			
71	Website usage monitored			
72	Customer feedback monitored			
73	Content reviews undertaken			
AC	Legal Guidelines			
74	Legal obligations and responsibilities addressed			
75	Copyright, Disclaimer and Privacy notices accessible from every page			

7. References

Web Accessibility Initiative (WAI)

http://www.w3.org/TR/WAI-WEBCONTENT/

http://www.w3.org/WAI/

Checklist of Checkpoints for Web Content Accessibility Guidelines 2.0

http://www.w3.org/TR/WCAG10/full-checklist.html

Overview of Web Content Accessibility Guidelines (WCAG) 2.0

http://www.w3.org/WAI/intro/wcag20.php

HTML Techniques for Web Content Accessibility Guidelines 2.0

http://www.w3.org/TR/WCAG10-HTML-TECHS/

Section 508

http://www.section508.gov/

Usability guidelines

http://www.usability.com