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DESIGN

6.1

Visual Identity

Design in the broad sense is a process that achieves the end result of enhancing the user experience by presenting the content in a form that is easily understandable, navigable and searchable by the user, in addition to being visually appealing. Interface design is the design and layout of the websites graphic and textual elements. The branding of a website can be established by incorporating common design elements such as colours, logos, styles, etc., into every page. This presents a professional and consistent visual identity as well as an important signpost that tells visitors where they are.

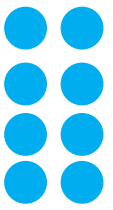
- 6.1.1** Therefore, visual/textual identity elements highlighting the Indian Government's ownership of the site **MUST** prominently stand out on the page.

6.2

Page layout

Page Layout is a significant consideration in the overall design interface of any website. Following are some guidelines to achieve well laid out pages :

- 6.2.1** A consistent page layout **MUST** be maintained throughout the site. This means that the placement of navigation and text elements should be uniform across the website.
- 6.2.2** Most important elements should be visible on the first screen and should not go inside a scroll.
- 6.2.3** Focus should be laid on a few important elements of the page, so that the visitor may be guided to those portions, which deserve most attention. If a lot of elements in a webpage are blinking/flashing or highlighted, the visitor will not be able to concentrate on the essence of the page.
- 6.2.4** There should be a clear demarcation of components. This can be guided by the Information Architecture where information of one kind is grouped together and presented visually at one point in the page.



6.3

Graphics, Buttons and Icons

Buttons and icons are symbolic representation of objects and the representation of actions that can be applied to objects. Icons if used properly can be a powerful technique for communication and attracting attention. They can hold the users attention, add interest to a website and quickly convey information. They are also free from the barriers of language.

- 6.3.1** While using national identity symbols like Flag, National Emblem etc., it **MUST** be ensured that the images are in a proper ratio and colour.
- 6.3.2** The graphic elements like buttons and icons should be simple and their meaning and symbolism should be self explanatory and relevant. This simply means that an icon should look like what it means.
- 6.3.3** Buttons and Icons should be large enough to be distinguishable on a high-resolution monitor, since the display size of components decreases with the increase in the screen resolution set by the user.
- 6.3.4** Graphics should not be used to present major content in an alternative style as those using text only browsers shall not be able to access the information thus rendering the site inaccessible to many. Wherever a graphic is used meaningful 'alt text' must be given.

6.4

Typography

- 6.4.1** The content of the site should be readable with default standard fonts.
- 6.4.2** Fonts like Verdana and Georgia that are suited for screen viewing may be used. Text that must be in a particular font for reasons such as branding may use an image and provide the same as Alt text.
- 6.4.3** When using Hindi/Regional language fonts the page **MUST** be tested on major browsers for any inconsistency (loss of layout). Further, links to download the font must be provided to the visitors.
- 6.4.4** Italic fonts are not legible in small font sizes. All capital characters and italics should be used sparingly as they hinder legibility in big blocks of text.



- 6.4.5 It is author's responsibility is to create Web content that does not prevent the user agent from scaling the content effectively therefore Except for captions and images of text, text MUST be resizable without assistive technology without loss of content or functionality.
- 6.4.6 Font properties should be such that the text MUST be readable both in electronic and print format and the page MUST print correctly on an A4 size paper.

6.5

Colour

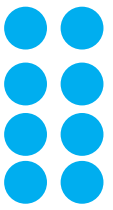
- 6.5.1 There MUST be adequate contrast between text and background. Using combinations like red text on blue background makes the text unreadable.
- 6.5.2 Use of colour should depend on the type of target audience. For example, a site for children may use bigger fonts and bright colours to grab the attention of kids while a site designed for researchers and academicians should focus on content with subtle use of colours.
- 6.5.3 Websites should ensure the colours used for text and graphics look good on a variety of platforms, monitors and devices by selecting them from the 216-colour web-safe palette.
- 6.5.4 Designers MUST ensure that all information conveyed with colour is also available without colour, for example from context or markup.

6.6

Images

6.6.1 Use of images should be limited

Though images add life to a website, they also increase downloading time. Images should only be used when it adds value to the content. Images should not be used to present text in an alternative style as those using text only browsers shall not be able to access the information thus rendering the site inaccessible to many. The use of text, rather than images, should be considered for headings and website navigation.



Commonly used images, such as those for website identity and navigation, should be re-used to decrease download time. Images stored in the browser's cache will not need to be re-loaded and will display faster.

6.6.2 Images should be created in an appropriate format

Images should be created in an appropriate format to minimise load time and maximise the display quality. There are three formats for displaying images in web browsers – GIF, JPEG and PNG. Use:

- GIF format for images that contain line-art and flat areas of colour such as icons and graphs.
- JPEG format for images that contain many colour variations, such as photographs. JPEG images can contain up to 16 million colours.
- PNG format does not have any patent restrictions and can be read and written freely by software developers and webmasters alike.

6.6.3 Size of image files should be minimised

The size of image files should be reduced as much as possible to minimise the download time of web pages. A variety of techniques can improve the download time of pages:

- Scaling of images should be avoided as they tend to distort. Instead a correct size should be prepared in image processing software .
- A thumbnail (a smaller version) for a large image and link to the full-size copy should be provided where appropriate.

6.6.4 Images should be made Accessible

- A meaningful explanatory text description **MUST** be specified for images, graphics and other non text elements using the ALT attribute. The ALT text for an image is displayed before the image is fully downloaded and also when cursor is over the image. It is the main source of image information for users of text-only browsers, users of browsers with graphics turned off, and users who are sight impaired. The description should summarise the content or purpose of the image. For example, to use the description 'Picture' to explain a graphic does not serve any purpose.
- The HEIGHT and WIDTH dimension attributes force the browser to allocate space for images and download the text first. The height and width specifications should be the same as the actual height and width of the image. This speeds up the time to download the web page and display the content.



- The LONGDESC attribute provides a link to a web page that contains a detailed description of the image. Screen readers that are used by the visually impaired can read this information. This attribute should be used for providing summaries of charts, tables etc. where brief 'alternate text' will not hold much meaning.

6.7

Audio/Video/Animation

The use of audio video clips in a website can enrich the content and render the communication more effective for the visitor, however, the following guidelines should be followed while including audio/video clips on the website.

6.7.1 Download Details for Video and Audio Clips

- a. Download information **MUST** be provided to help users determine whether they wish to access the video or audio clip. This includes the download and usage instructions, file size, and file format.
- b. If a specific software programme is required to access the multimedia file, a link to enable the user to download it **MUST** be provided.
- c. Formats of audio/video files should be common across a website and across the websites owned by a State/Ministry.
- d. As far as possible streaming audio/video should be used rather than forcing the users to download the entire file, which eventually may not turn out to be what they are looking for.

6.7.2 Text Equivalents for Video and Audio Clips

In order to ensure that content of video and audio clips is accessible to all, including those with impaired vision or those accessing the information on slow connections

- a. Government websites **MUST** provide equivalent information of audio/video clips (eg a text description of the audio /video). 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.
- b. All important 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 non-speech information conveyed through sound, including meaningful sound effects.

6.7.3 Animations

The use of animation can be an effective means for drawing attention to key aspects of a website. However, Government websites should ensure that animations used on the site do not distract or irritate users or lead to unacceptable download times. Animation should be used only if it adds value to a page. File sizes of animated images should be kept small by limiting the number of frames. Certain special effects such as spiraling, throbbing or flashing have been reported to cause epileptic seizures and should be avoided.

- a. Certain special effects such as spiraling, throbbing or flashing have been reported to cause epileptic seizures. Web pages **MUST** not contain anything that flashes more than three times in any one second period.
- b. For any moving, blinking or scrolling information that starts automatically and is presented in parallel with other content, there **MUST** be a mechanism for the user to pause, stop, or hide it (unless the movement, blinking, or scrolling is part of an activity where it is essential).
- c. If any audio on a Web page plays automatically for more than 3 seconds, there **MUST** be mechanism to pause or stop the audio. This is important because Individuals who use screen reading software can find it hard to hear the speech output if there is other audio playing at the same time. Also as screen reader's speech output is controlled via the same volume control as the system sound control the webpage **MUST** provide a means to control audio volume independently from the overall system volume level.

6.8

Navigation

Consistent navigation makes it easy to use a website since a visitor does not need to understand or remember different navigation styles for different sections. Therefore to promote ease-of-use for all citizens, Government websites must have a navigation scheme that is used consistently across the website.

The organisation and navigation scheme of the content in the website should be either categorised by subject (topic, tasks, services, life events), by audience group, by geographic location, or by any combination of these factors. The navigation should not be based on the Department's organisational structure, as it will render



the content from the Governments' perspective rather than the visitors'. Web information managers should analyze the wants and needs of citizens and other intended target groups when organizing the content of Government websites.

- 6.8.1** It **MUST** be possible for a visitor to reach the Homepage from any other page in the website.
- 6.8.2** The positioning and terminology and navigation scheme used for navigation items **MUST** be consistent across the website.
- 6.8.3** Navigation items of the same type should look and behave the same way. For example, if a set of pages on one topic has subtopic links in the left navigation bar, pages on other topics should also have subtopic links in the left navigation bar that look and behave identically.
- 6.8.4** Links to under construction pages **MUST** be avoided as far as possible.
- 6.8.5** Each page **MUST** be a stand alone entity in terms of ownership, navigation and context of content.
- 6.8.6** List of all levels between the homepage and current page should be provided on each page.
- 6.8.7** Navigation to external websites should be enabled in such a manner that the external website opens in a small sized browser window. This is to ensure that the context remains on the screen for the visitor.
- 6.8.8** Web pages and applications often have content that is repeated other pages or screens (for example navigation links, heading graphics, banner frames etc). A sighted user can ignore the repeated material by focusing on the main content area but it is not possible for a person using a screen reader. Therefore WebPages **MUST** provide a mechanism to bypass blocks of content that are repeated on multiple Web pages. This may be done by providing a skip to content link at the top of the webpage.

6.9

Site Search

“Search” is a standard facility on any website now as visitors expect to be guided to the desired information and service through an easy to use search facility. Effective search functionality is crucial for mining through the large volumes of information made available on Government websites. Following are some of the guidelines to achieve the



same :

- 6.9.1** Government websites **MUST** include either a “Search” box or a link to a “Search” page from every page of the website. The search box or link must be titled “Search”, as it is a standard term understood by web surfers world over. As per internationally accepted Usability principles, search boxes are most effective when placed in the same position on all pages (usually within the upper third part of the webpage).
- 6.9.2** Search results should be displayed in an easy-to-read format that, at a minimum, shows visitors the term(s) they searched for and may highlights the term(s) in each search result.
- 6.9.3** Departments should carefully determine the scope of its search index to determine which content should be included and which content should be excluded. This further implies that the content not meant to be in the public domain should not be included in any web-based file that could be retrieved through any search engine.
- 6.9.4** The frequency of indexing the content of a Government website should be pre-decided by the hosting provider. Content that is added and updated frequently, such as press releases, should be indexed more frequently.
- 6.9.5** Government Departments should regularly use traffic analysis tools to identify the common search terms used to reach their website. This shall enable a higher ranking of the site on search engines after due customisation.
- 6.9.6** Although usability research indicates that very few people use “advanced” search features, Departments should allow visitors to conduct more refined, focused searches to achieve more relevant results.
- 6.9.7** Considering the fact that many people are unfamiliar or unskilled at using search technology, the website should provide help, hints, or tips, and include examples, along with its search facility to aid the visitors.
- 6.9.8** Users may expect the site index /search to access all the appropriate content and not display content from outside the site. In case the search results reflect the results from outside the website, it should be clearly distinguished and mentioned on the top of the page.



6.10

Sitemap : Powerful Navigation Aide

The citizens visiting Government websites need to be able to find the information and services they seek, as easily and quickly as possible. A site map represents the structure of a website, textually as well as graphically, on a single page. A proper 'Site-Map' can provide a convenient and easy-to understand view of the contents in the whole site. It also facilitates quick access to the information that the citizens want. Following are some of the guidelines concerning site maps:

- 6.10.1** Every Indian Government website **MUST** have a 'Sitemap' link to Homepage as well as all important entry pages of the site.
- 6.10.2** The site map should be universally accessible and should be provided in plain text format.
- 6.10.3** Web information managers should establish a schedule or process for regularly reviewing and updating the Sitemap.

6.11

Frames

Frames are an HTML technique used by web site designers to display two or more pages in the same browser window. Each frame is built as a separate HTML file, but with one "master" file to identify each frame. When a user requests a page with frames, several pages are displayed as panes. Use of frames must be minimised as many search engines do not index framed web pages properly, however if frames are used each frame **MUST** be titled to facilitate frame identification and navigation.