

**INSURANCE MEDICAL SERVICES DEPARTMENT
IT DIVISION**

**WEBSITE REVAMPING – GUIDELINES, CONSTRAINTS, STANDARDS
AND GOVT POLICIES TO BE FOLLOWED**

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1. INTRODUCTION

1.1 Background

India, the largest democracy in the world, is set to emerge as an ICT Superpower in this millennium. Realizing the recognition of 'electronic governance' as an important goal by Governments world over, Indian Government has also laid a lot of emphasis on anytime, anywhere delivery of Government services. As of today, there are over eight thousand Government websites in India. A close look at these websites, belonging to both Central and State Government reveals that most of the important Government entities have already made headway in establishing their presence on the internet and others are in the process of doing so. Every other day, there is a new Government website, be it of a Department of a Ministry, Task forces set-up by the Government, new project, citizen service initiative, State Government Department or even a remote district of India. Awareness about the fast changing ICT world and keenness to keep pace with the latest has ensured that almost all the State Governments in India already have their websites up and running. In fact each state has multiple websites belonging to different Departments.

However, these websites follow different Technology Standards, Design Layouts, Navigation Architecture, or, in simple terms, different look and feel as well as functionality. This invariably requires a common citizen to familiarize himself/herself with the functionality of each individual website which results in a lot of inconvenience, thus defeating the very purpose of these initiatives.

The need for standardization and uniformity in websites belonging to the Government cannot be stressed enough, in today's scenario. Ideally, properly audited technical 'Standards' should form the foundation of the web efforts of any Country's Government but it shall take some time for any Country, no matter how developed and advanced it is in terms of ICT levels to reach that stage of maturity. It is therefore imperative that a 'phased approach' be adopted to bring out a set of recommended guidelines and policies based on common knowledge and accepted National and International norms. It is suggested that the Indian Government websites adhere to certain common minimum standards which have been derived, in the form of guidelines discussed in this document, as prerequisites for a Government website to fulfil its primary objective of being a citizen centric source of information & service delivery.

Insurance Medical services department has already hosted its official website as www.ims.kerala.gov.in website by fulfilling the standards as described in the above paragraph. Now a revamping of the website is about to begin and this document describes why, what, and how the revamping has to be done.

1.2. Definitions & Conventions

- (a) Insured Person (IP) :** A person who is employed in private sector and enrolled with ESI Corporation of India through his employer
- (b) Employer :** An institution /company/ organization in private sector which is registered with ESI corporation of India, Employees of such institutions having a pay of Rs 2000/- are insured persons
- (c) Beneficiary :** An insured person or his dependants (father, mother, wife/husband/spouse and the children of IP) who are enrolled along with IP with ESIC corporation
- (d) Insurance Number (IP NO):** A nine digit unique number assigned to each employee registered with ESI Corporation of India. For all the communication and treatment , this IP No is necessary
- (e) ESI Dispensary:** This is the primary contact institution for IPs and beneficiaries for treatment, Reference and medical reimbursement. There are two types of Dispensaries in Kerala, Single doctor type and multi doctor type dispensaries. Single doctor type dispensaries have only one doctor and multi doctor type dispensaries have more than one doctor. Single type dispensaries work in Morning shift only and multi doctor type work in two shifts.
- (f) ESI Hospital:** These are the higher centres of ESI Dispensaries. These hospitals work in 24 hrs on shift basis and having in patient treatment facilities as well.
- (g) Speciality (S) & Super Speciality (SS) Treatment:** The medicine departments are basically classified as Speciality (S) & Super Speciality (SS) Treatment. Super speciality treatment includes Cardiology, Nephrology, Urology, Neurology, Oncology, Dermatology, Plastic Surgery

while Speciality treatment includes Orthopaedics, General Surgery, Dental Medicine, Gynaecology, Ophthalmology

- (h) Branch Office/ Local Office:** The insurance Medical Services Department is run by State Government of Kerala but, as the ESI Scheme is belong to Central Government of India, they have several types offices in each states. The basic unit office of ESI Corporation is the Branch offices/ Local offices. They provide services like Entitlement Certificate, Eligible Leave encashment etc. To the IPs.
- (i) Entitlement Certificate:** These are certificate issued by the ESI Corporation to the IPs which certifies the eligibility of IP to avail different medical benefits. The next section of this document speaks about the different kinds of medical benefits those IP and his dependants can avail from ESI Corporation. This certificate is issued in two times a year. One from Jan 1st to 30th June and the second certificate is from 1st July to 31st December of every year. A copy of Entitlement Certificate is attached as **Annexure 1** in this document.
- (j) Medical Reimbursement Claim (MRC):** For those medicines and services availed by an IP outside the ESI dispensaries, in certain defined conditions the IPs are eligible to reimburse expenses incurred by submitting a set of documents to the dispensaries. The set of documents along with the bills of medicines and documents are called MRC bills
- (k) Visitors:** - Throughout this document, the broad term 'visitors' encompasses all those who visit and use the Indian Government websites for their needs with regards to government information and services.
- (l) Departments:** - All Government entities owning a website, including Ministries, Departments, Administrations, Organizations, Corporations et.al. shall be commonly addressed as 'Departments' or 'Entities' in this document for the purpose of simplicity.
- (m) The Constituent :-** Means any apex officers, Secretariate Departments, Directorates, Commissionerate, Administrations, Organizations, Co-operative Institutions, LSGs of the Government of Kerala.
- (n) The Solution Provider SP:-** Means the total solution provider (TSP) for Government of Kerala as the Government Order GO (MS) No: 3/2000/ITD dt 22/02/2000 or any other third party agency selected through the competitive bidding process.

2.0. Requirements of Insurance Medical Services

Department for The Existing Website

www.ims.kerala.gov.in

12.1. Existing Website www.ims.kerala.gov.in

The IT Division of the Insurance Medical Services department designed, developed, tested, and hosted its official website in the above address and the same is linked to kerala.gov.in domain. This official web site followed almost all the guidelines of Government of India and Government of Kerala. (Refer 2.0.. and 11.0. of this document)

As the website has been already hosted the following works related with the project has already been completed.

- ✓ Content of the website is already made entered.
- ✓ Domain Name is registered.
- ✓ Domain is linked to kerala.gov.in.
- ✓ Basic layout is there in the existing website.
- ✓ Media content is also there in the website.
- ✓ Hosting of the website is the already done and the revamped website can use the same hosting space in the data center.

12.2. Exact Requirement of Revamping the Website

The existing web site of Insurance Medical Services is required to be re-vamped with a new theme and some additional features by applying all security features and data sharing policy following W3C and WCAG guidelines. These guidelines are described in detail in the 2.0 and 11.0 of this documents.

12.2.1. Conditions:

- a. All the data of the existing website should be kept unchanged.
- b. All the rules and guidelines issued by the Central and State Government should be followed strictly while revamping the website.
- c. After obtaining the authorized Security Certificate from the CERT empaneled agency, all the user credentials and configuration parameters must be handed

over to the Insurance Medical Department. The TSP is required to conduct the security audit.

- d. Not required to develop a new website , the existing website developed in Drupal – 8/ Or Laravel needs to be updated with new theme and security patches. The platform should be the latest version.

12.2.2. Changes required:

1. Theme -Simple, mobile enabled, user friendly theme
2. Website should have all the latest patches including security patches
3. Web site should allow the users to choose at least two languages i.e Malayalam & English
4. The default language of the website should be Malayalam
5. The website should be mobile (android &ios) compatible
6. Add a user feedback module in the website.
7. The necessary Security testing of the website after the revamping has also to be done by the TSP
8. Provide Dashboard based on the form data.

3.0. GUIDELINES GOVERNMENT WEB SITE – BY
GOVERNMENT OF INDIA

3.1. Compliance to Guidelines

These Guidelines have been framed with an objective to make the Indian Government Websites conform to the essential prerequisites of UUU trilogy i.e. Usable, User- Centric and Universally Accessible. They also form the basis for obtaining Website Quality Certification from STQC (Standardization Testing Quality Certification), an organization of the Ministry of Electronics & Information Technology, Government of India. And Government of Kerala.

These Guidelines are based on International Standards including **ISO 23026, W3C's Web Content Accessibility Guidelines (WCAG 2.0) Rights of Persons with Disabilities Act 2016 as well as Information Technology Act of India.** Further, the long-standing experience of the authors in design, development and management of Government Websites as well as their knowledge of the ground realities and challenges faced by the Government Departments in developing and managing their websites have helped significantly in drafting these Guidelines.

These guidelines are being circulated amongst all Indian Government Departments at all levels (Central, State, District). These should be followed and implemented on priority so that the overall aim of making all Indian Government websites citizen focused and visitor friendly may be realized.

The vendor must satisfy all these guidelines without fail while planning, designing, developing, revamping and hosting the website.

3.2. Mandatory, Advisory and Voluntary

Guidelines are divided into three categories viz. mandatory, advisory, and voluntary. Explanation and requirement of each of these categories is given as follows:

Mandatory: The usage of the term '**MUST**' signifies requirements which can be objectively assessed and which the Departments are supposed to mandatorily comply with. It is anticipated that there will be no exceptions for a Department not complying with these. In the case of any Department, these guidelines shall apply to all the Webpages/websites under the ownership of that Department. The websites will be checked against these guidelines when audits for compliance are undertaken or for the purpose of quality certification. It is the responsibility of each Department to address and bring into compliance, any non-compliant issues found in any website under their ownership.

Advisory: The usage of the term 'should' refer to recommended practices or advisories that are considered highly important and desirable but for their wide scope and a degree of subjectivity these guidelines would have otherwise qualified to be mandatory. Departments are, however, expected to comply with these advisories.

Voluntary: The usage of the term 'may' refer to voluntary practice, which can be adopted by a department, if deemed suitable. These have been drawn from good practices and conventions that have proved successful and can help a department achieve high quality benchmarks for their web endeavors.

3.3. Accessibility

Web accessibility means that people with disabilities can also perceive, understand, navigate, and interact with the Web, and that they can contribute to the Web. It encompasses all disabilities that affect access to the Web, including visual, auditory, physical, speech, cognitive, and neurological disabilities. Thus, the impact of persons with disabilities is radically changed on the Web because the Web removes barriers to

communication and interaction that many people face in the physical world. When websites, web technologies, or web tools are badly designed, they can create barriers that exclude people from using the web. The Website and apps should be designed and developed in such a way that they are accessible by all people, whatever may be their hardware, software, language, culture, location, or physical or mental ability.

Legal Provisions

The United Nations General Assembly adopted its Convention on the Rights of Persons with Disabilities on the 13th day of December 2006. India is a signatory to the Convention and has ratified the Convention on the 1st day of October 2007. To implement the Convention India has enacted the Rights of Persons With Disabilities Act, 2016 on 27th December, 2016.

Regarding ICT one of the important provisions in the act is that all contents available in audio, print and electronic media must be in accessible format.

International Guidelines and Standards (WCAG)

Web Content Accessibility Guidelines (WCAG) covers a wide range of recommendations for making Web content accessible. Following these guidelines will make content accessible to persons with disabilities. Further Web accessibility also benefits people without disabilities as a key principle of Web accessibility is designing Websites that are flexible to meet different user needs, preferences, and situations. This flexibility benefits people without disabilities in various situations such as slow Internet connection, presence of “temporary disabilities” such as a broken arm and people with changing abilities due to ageing.

The WCAG are organized around the four principles, which lay the foundation necessary for anyone to access and use Web content. These require the web content to be;

- a. **Perceivable:** users must be able to perceive the information being presented i.e. it cant be invisible to anyone who visits the website
- b. **Operable:** users must be able to operate the interface and the interface cannot require interaction that a user cannot perform.
- c. **Understandable:** users must be able to understand the information as well as the operation of the user interface.
- d. **Robust:** users must be able to access the content as technologies advance.

Under each principle there is a list of guidelines. There are 12 guidelines that address these principles. The guidelines provide the basic goals that authors should work toward to make content accessible to persons with disabilities. These guidelines are not objectively

testable however, under each guideline, there are Success Criteria that describe specifically what must be achieved to conform to this standard. Each Success Criterion is written as a statement that will be either true or false when specific Web content is tested against it. The Success Criteria are written to be technology neutral.

GIGW and Accessibility

One of the major focus areas of the Guidelines is web accessibility. With respect to accessibility focus is on the following:

- Addressing the needs of the Persons with disabilities.
- Ensuring that the sites are accessible with equal ease to all users on all the major browsers and across all platforms and bandwidths i.e. universally accessible.

GIGW aims to ensure that people with disabilities can perceive, understand, navigate, interact, and contribute through the Web. GIGW has been developed in accordance with W3C's Web Content Accessibility Guidelines 2.0 which are internationally accepted standards on accessibility. GIGW ensures compliance with level AA of WCAG 2.0. [The guidelines relating to web accessibility can be found on later sections of this document.](#)

Compliance with these guidelines will make the websites accessible to persons with various disabilities like low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech disabilities and combinations of these which may otherwise hinder access to the web. Compliance with these guidelines ensures that any disabled person using assistive technology can easily navigate the website. Compliance matrix lists all the accessibility guidelines in a separate section along with the reference numbers.

3.4. GOVERNMENT OF INDIA IDENTIFIERS

Visitors to a Government website are very particular about ensuring the veracity and authenticity of the official status of the website before trusting its contents. Hence, it is important to convey in some way to the visitors that the Indian Government officially sponsors and owns the information and services being provided in the concerned website. All websites and Portals belonging to the Indian Government Domain at any hierarchical level (Apex Offices, Constitutional Bodies, Ministries, Departments, Organizations, States/UTs, District

Administrations, and Village Panchayats et al) must prominently display a strong Identity and ownership of Indian Government. The above objective can be achieved through the following:

- 3.4.1.** State Emblem of India **MUST** be displayed on the Homepage of the websites of Central Government Ministries/Departments. The usage of State Emblem of India on an Indian Government website **MUST** comply with the directives as per the 'State Emblem of India (Prohibition of improper use) Act, 2005'. Further, the State Governments should also display their Emblems (or the State Emblem of India in case the State has adopted it as its official Emblem) as per the Code provided in the above Act. Public Sector organizations and autonomous bodies should display their official logo on the Homepage of the website to reinforce their identity. These logo images **MUST** be accompanied by proper alternate text so that the screen reader uses may be informed of the same.
- 3.4.2.** The Homepage and all-important entry pages of the website **MUST** display the ownership information, either in the header or footer.
- 3.4.3.** The lineage of the Department should also be indicated at the bottom of the Homepage and all-important entry pages of the website. For instance, at the bottom of the Homepage, the footer may state the lineage information, in the following manner:

3.4.3.1. 'This Website belongs to Department of Heavy Industries, Ministry of Heavy Industries and Public Enterprises, Government of India' (**for a Central Government Department**).

- 3.4.3.2. 'This Website belongs to the Department of Industries, State Government of Himachal Pradesh, India' **(for a State Government Department)**.
- 3.4.3.3. 'This is the official Website of Gas Authority of India Limited (GAIL), a Public Sector Undertaking of the Government of India under the Ministry of Petroleum and Natural Gas' **(for a Public Sector Undertaking)**.
- 3.4.3.4. 'This is the official Website of the District Administration of Thanjavur, State Government of Tamil Nadu (India)' **(for a District of India)**.

3.4.4. All subsequent pages of the website should also display the ownership information in a summarized form. Further, the search engines often index individual pages of a website and therefore, it is important that each webpage belonging to a site displays the relevant ownership information.

3.4.5. In case of those websites which belong to Inter-Departmental initiatives involving multiple Government Departments which are difficult to list on the Homepage, the Government ownership should still be reflected clearly at the bottom of the page with detailed information provided in the 'About the Portal/Website' section.

3.4.6. The page title (the title specified by the HTML <title> tag which appears on the top bar of the browser) **MUST** describe the topic and purpose of the page. Page title should be complete with the name of the country included, for instance, instead of the title being just Ministry of Health and Family Welfare, it should state, Ministry of Health & Family Welfare, Government of India. Alternatively, in case of a State Government Department, it should state 'Department of Health, Government of Karnataka, India'. This will not only facilitate an easy and unambiguous identification of the website but would also help in a more relevant and visible presence in the search engine results. Further, it is important since the screen readers used by the visually impaired users first read the title of the page and in case the title is not explanatory enough, it may confuse or mislead them.

3.5. Building Confidence

3.5.1. Content Copyright

Copyright is a form of protection provided to the owners of “original works of authorship” in any form or media. It is implied that the original information put up on the website by a Government Department is by default a copyright of the owner Department and may be copied, reproduced, republished, uploaded, posted, transmitted, or distributed only if the copyright policy of the concerned Department allows so.

3.5.2. Hence, the information, material and documents made available on an Indian Government website **MUST** be backed up with proper copyright policy explaining the terms and conditions of their usage and reference by others. The copyright policy of a Department could be liberal, moderate, or conservative depending upon their preferences based on the kind of information available on their website. However, since it is a duty of a Government Department to provide all the information in the public domain freely to the citizens, the Departments should aim to have a liberal copyright policy.

3.5.3. In cases where the document is in public domain and there is no restriction on its reproduction, the copyright statement may be worded as follows:

3.5.4. The Departments should also be sensitive towards publishing any information having a third-party copyright. The Government Departments **MUST** follow proper procedures to obtain the permission, prior to publishing such information on their websites.

3.5.5. If any published Government Document/Report is being reproduced on

any website, whether as excerpts or in full, the source of the same i.e. Full Title of the Report/Document along with the name of the concerned Department and year of publication **MUST** be provided

3.6. Content Hyperlinking

- 3.6.1.** Since Government websites often receive queries and requests from owners of other websites who might want to provide a hyperlink to their web pages, every Indian Government website **MUST** have a comprehensive and clear-cut hyper linking policy defined and spelt out for those who wish to hyperlink content from any of its sections. The basic hyper linking practices and rules should ideally be common across the websites of a State/Ministry.
- 3.6.2.** The hyperlinking policy enumerating the criteria and guidelines with respect to hyperlinks with other sites may be made available under the common heading of 'Hyperlinking Policy' and displayed at a common point on the Homepage of all sites under the ownership of a State/Ministry.
- 3.6.3.** In case the concerned Department has no objection to anyone providing a hyperlink to their website, the policy statement may be worded as:

Sample Hyperlinking Policy

"We do not object to you linking directly to the information that is hosted on our site and no prior permission is required for the same. However, we would like you to inform us about any links provided to our site so that you can be informed of any changes or updating therein. Also, we do not permit our pages to be loaded into frames on your site. Our Department's pages must load into a newly opened browser window of the user".

3.7. Terms & Conditions

- 3.7.1.** With the increased proliferation of the Internet, more and more citizens are accessing information from Government websites. Clearly defined Terms & Conditions including well-worded disclaimers regarding the usage of websites **MUST** be present on every Indian Government website.

Terms & Conditions shall address the following aspects:

- Ownership Details
- Usage Policy of Content
- Legal Aspects
- Responsibility towards hyperlinked Sites

- 3.7.2.** Since it is the responsibility of all Indian Government Departments to uphold and maintain the trust imposed in them by the visitors to the sites, the Government websites should not outrightly 'disclaim' the content of another Government website. Instead, a politely worded statement clearly indicating the ownership of the piece of content and the relevant details for further queries and information may be provided. Once all Indian Government websites follow standard content practices, the visitors should be able to move from one Government website to another in a manner as seamless as possible.

- 3.7.2.1.** The Terms & Conditions should also clarify whether the information available on the website may be construed as a statement of law to be used for any legal purposes or not. It should also be mentioned that in case of any legal dispute arising out of the content on the Government website, the matter shall be heard in a court of law within the jurisdiction of the State where the concerned owner Department of the website/portal is located.

- 3.7.3.** In case the content is sourced/linked from a non-government website at the other end; the Terms & Conditions should clearly state this fact and disclaim responsibility for its accuracy and currency.

- 3.7.4.** In case the website involves any e-payment features where electronic transactions are involved, appropriate disclaimers, worded in consultation with the involved agencies (bank, payment gateway service provider etc.) and the legal cell of the Department should be placed on the site.

Sample Statement for Terms & Conditions

This website is designed, developed and maintained by (Name of Department), Government of India.

Though all efforts have been made to ensure the accuracy and currency of the content on this website, the same should not be construed as a statement of law or used for any legal purposes. In case of any ambiguity or doubts, users are advised to verify/check with the Department(s) and/or other source(s), and to obtain appropriate professional advice.

Under no circumstances will this Department be liable for any expense, loss or damage including, without limitation, indirect or consequential loss or damage, or any expense, loss or damage whatsoever arising from use, or loss of use, of data, arising out of or in connection with the use of this website.

These terms and conditions shall be governed by and construed in accordance with the Indian Laws. Any dispute arising under these terms and conditions shall be subject to the jurisdiction of the courts of India.

The information posted on this website could include hypertext links or pointers to information created and maintained by non- Government/private organizations. (Name of Department) is providing these links and pointers solely for your information and convenience. When you select a link to an outside website, you are leaving the (Name of Department) website and are subject to the privacy and security policies of the owners/sponsors of the outside website.

(Name of Department), does not always guarantee the availability of such linked pages.

(Name of Department), cannot authorize the use of copyrighted materials contained in linked websites. Users are advised to request such authorization from the owner of the linked website.

(Name of Department), does not guarantee that linked websites comply with Indian Government Web Guidelines.

4.0. Scope of Content

4.1. Information in Public Domain

The content of a Government website is its soul as the citizens rely heavily upon a Government website to access authentic and up-to-date information. Ideally, an Indian Government website ought to have the following kinds of content:

a. Primary Content:

Primary content shall be the original content that is sought by the target audience of the website which could be citizens, business community, overseas citizens, or other Government Departments or even Government employees. Examples of such content are information about the Department, various Schemes and programmed of the Department, Documents, Forms etc. Besides regulatory content mandated by legislation such as IT act, RTI or even Directives from apex offices shall also form a part of this category e.g. parliament question and answers.

b. Secondary Content:

Secondary content is generated from the assortment, packaging of primary content to suit the

requirement of different audiences, events, and occasions. Examples of such content are Advertisements/Banners/Spotlight/Media Gallery/Related sites etc.

C. Tertiary Content:

Information about the 'Primary' and 'Secondary' content forms a part of the tertiary content. This includes sections like About the Site, Online Help, Terms and Conditions and Frequently Asked Questions (FAQ).

Departments/Organizations should compile their own list of contents/sub contents which they feel should be in public domain or needed by their intended audience.

Information could be free to access by all or part of information (due to concerns of privacy & sensitivity) could be made available only to registered users.

A generic list of content is given at the following pages:

Primary Content

- About The Ministry/Department/State
- Program & Schemes
- Documents
- Forms
- Services
- Sectoral Profile
- Regional Profile
- Contact Information
- News
- Tenders
- Recruitments

Secondary Content

- Special Interest Group/Audience Specific Views
- Events / Announcements
- Discussion Forum
- Spotlight
- Related Links
- Media Gallery
- Greetings
- Advertisements & Banners

Tertiary Content

- About The Portal
- Sitemap, Search
- Terms and Conditions
- FAQ
- Feedback (General/Content Specific)
- Help
- Registration
- Content Contributor, Source & Validity

Guidelines pertaining to compilation of content in some of the common content categories have been given in the following sections.

4.2. Primary Content

Primary Content forms the focus of any Government website as it comprises the information for which the citizen has visited the website. Examples are information about the Department, Schemes and Programmes, Contact Information, Forms, Documents, Tenders etc. Broadly, the following subcategories encompass most of the Primary Content that ought to be made available on an Indian Government Website.

4.2.1. About

(Ministries/Department/State Govt./Organization/District Administration)

This essentially refers to the content describing the owner Department of the website and comprises the following information:

- Profile
- Mission/Vision Statement
- History/Background
- Departments/Divisions/Cells
- Role/Functions/Responsibilities/Activities
- Agencies under the Administrative Control
- Organizational Structure
- Who's Who

This content should be reviewed frequently to ensure delivering accurate and updated information. All information concerning the Legislative/Government officials **MUST** always be kept up to date.

4.2.2. Profile of a Sector/Region

Some websites/portals shall also be required to include a section on the overview of the sector(s) they deal with, naming all information concerning that sector present on their website or website of other Government entities working in that sector. This should be made accessible to give a comprehensive view to the visitors. Similarly, some of the portals are required to publish a profile of a region e.g. National Portal publishes a profile of India. States Portals should publish a profile of the respective States while District websites should publish a profile of their respective district.

Detailing of this segment should be done by each Department and included in their web content policy. Policy must also include the frequency/event of updating as well as officers responsible for updating this content.

4.2.3. Programmes & Schemes

The Government Departments at the Centre and State have welfare programmes and schemes benefiting the individuals, groups of citizens (e.g. women, persons with disabilities etc.) or community at large running in different regions and sectors across the country. Information about all such schemes of the Centre as well as State Governments is included in this category. These schemes could be Centrally Sponsored or being run by the State/District Administration itself. It is important to note that these schemes should be directly benefiting the individuals, special interest groups of citizens (e.g., widows, persons with disabilities etc.) or the community at large. Also, information should only be highlighted about those schemes which are currently active and ongoing, and not about schemes which are no longer open/available to the public.

4.2.3.1. The complete official title of the Scheme **MUST** be reflected and should be self-explanatory. The correct title would lead to an accurate search output for information on that scheme and it would be easy for the users to locate it. Any abbreviation in the title should be expanded.

4.2.3.2. This site should enlist all those who are eligible to receive benefits under the scheme e.g. women, children, persons with disabilities, poor etc.

Also, the details of the eligibility criteria for availing those benefits should be clearly mentioned.

- 4.2.3.3.** Information should be given about whether the scheme entails monetary or non-monetary benefits. Also, what are the specific kinds of non-monetary benefits that can be availed e.g. Subsidy, Training, Land Allotment, etc.
- 4.2.3.4.** Procedure to be followed, whom to contact, supporting documents to be carried etc. for availing benefits under the scheme **MUST** form a part of this content.
- 4.2.3.5.** For schemes that are valid for a particular period of time, the validity of the scheme **MUST** be mentioned so that the information could accordingly be moved to archives after the expiry date.

4.2.4. Services

Many citizen services are being provided by various Ministries, Departments and State/UT Governments. Information about these services as well as the interface to access and use them (if it is available online) should be made available on their websites.

- 4.2.4.1.** It is important to clearly understand what constitutes the term 'services' in this context. Information about all services provided by the Government, whether fully online, partially online or available offline but whose description and details exist online can be called services. For example, if the complete details about how to apply for a birth certificate in a particular State are given along with the facility to download the requisite application form, it shall be categorized as a Service. However, just information about things like a programme of any Department, or access to some searchable database without any service associated will not constitute a 'Service'.
- 4.2.4.2.** The complete title of the Service **MUST** be reflected and should be self-explanatory. The correct title would lead to an accurate search output for information on that service and it would be easy for the users to locate it. Any abbreviation in the title should be expanded.

- 4.2.4.3.** The websites should prominently display the most often used/accessed services, so that visitors can locate and access them quickly.
- 4.2.4.4.** The website **MUST** provide a complete description of what the service is, how it is useful for the citizens, how it can be availed, who is eligible to avail the service, who is to be contacted and during which hours. This is important for the common citizens to understand the significance of the service and the steps to be followed for availing it.
- 4.2.4.5.** If the service is delivered online then it should be developed as a web service so that other websites and portals can access it seamlessly, subject to authorization of the owner Department. All online services should be made available through the Government Services Portal.
(<https://services.india.gov.in>)

4.2.5. Application Forms

Visitors to Government websites want fast, easy service at 24x7 basis. They do not want to wait until an organization is open for business. They do not want to wait in line to get forms and documents to avail the desired service. Therefore, all application forms existing in the public domain and meant for applying for licenses, certificates, scholarships, grants, services, information, loans, utilities etc. should be published on the concerned Government website for the convenience of citizens.

- 4.2.5.1.** All Forms **MUST** be provided in an accessible format. The format along with the file size **MUST** be mentioned in the download link. (Ref. Section 7.4.2)
- 4.2.5.2.** The title of the form **MUST** be clearly indicated and should be self- explanatory and devoid of any abbreviations which may render it incomprehensible. The correct title would lead to an accurate search output for information on that Form and it would be easy for the users to locate it. Also, in case the Form is popularly known by a number (e.g. Form 16 for Income Statement or Form 4 for Driving license), the same should also be mentioned along with the title.

4.2.5.3. It should be specified whether the language of the form is English, Hindi or any other Regional language. In case of the latter, the name of the concerned language **MUST** be mentioned clearly. If the form is bilingual/multilingual, it is important to mention the languages in which it is available.

4.2.5.4. Information assisting the user in filling up the application form should also be provided such as where to submit and supporting documents to attach etc.

4.2.6. Documents/Reports

4.2.6.1. All documents developed/published and issued in the Public Domain by Government Departments, Ministries, State/UT Governments, Public Sector Units and Organizations **MUST** be published on the website. The following list gives an idea of the category of Government documents that can be covered under this:

4.2.6.1.1. Five-year Plan documents

4.2.6.1.2. Annual Reports

4.2.6.1.3. Budget Documents

4.2.6.1.4. Guidelines by Government

4.2.6.1.5. Citizen Charters

4.2.6.1.6. Census Documents

4.2.6.1.7. Survey Outcomes/Reports

4.2.6.1.8. Statistical Reports etc.

4.2.6.2. This content should be reviewed regularly to ensure the accuracy and currency of the information.

4.2.6.3. The complete official title and date of the document **MUST** be mentioned on the website. The correct title would lead to an accurate search output for that document and it would be easy for the users to locate it. For example: 'Policy on Promotion of Tourism in the State of Manipur' is a more appropriate title than just 'Tourism Policy.' Any abbreviation in the title should be expanded and the title should not be formulated on just a document number/date.

4.2.6.4. In case any reference to a document of another

Government Department is given, it should be clearly specified as with whom lies the ownership of the document i.e. which is the exact Ministry/Department at the Central or State level which has produced/published/issued the concerned document.

4.2.6.4.1. It should be specified whether the language of the document is English, Hindi or any other Regional language. In case of the latter, the name of the concerned language **MUST** be mentioned clearly. If the document is bilingual/multilingual, it is important to mention the languages it exists in.

4.2.6.5. It is important that if the document is valid only for a certain time period, the validity **MUST** be clearly mentioned on the site. In fact, the document should be removed or moved to the archives after expiry of the validity period.

4.2.6.6. Documents **MUST** be made available in an accessible format. (Ref. Section 7.4.2)

4.2.7. Circulars/Notifications

There are various Circulars/Notifications that are released from time to time by the Indian Government at the Central or State level. Information about all the Circulars/Notifications of the Centre as well as State Governments should be made available on the respective websites.

4.2.7.1. The official title of the Circular/Notification **MUST** be mentioned and should be self explanatory. The correct title will also help in accurate search output for information on that circular and thus, it would be easy for the users to locate it.

4.2.7.2. The ownership of the concerned circular should be specified i.e. Ministry/Department and also the level i.e. Centre/State etc.

4.2.7.3. Circulars/Notifications **MUST** be made available in an accessible format.(Ref. Section 7.4.2)

4.2.7.4. If the Circulars/Notifications are valid only for a certain time period, the validity **MUST** be clearly mentioned on the site.

In fact, the Circulars/Notifications should be removed or moved to the archives after expiry of the validity period.

4.2.8. Tenders

As directed by the Central Vigilance Commission (CVC) all Government and Public Sector Procurement/Tenders/Notifications issued by the Central and State Governments and other public bodies across India for goods, services and works **MUST** be made available/linked through the websites.

4.2.9. Recruitment

All Indian Government websites **MUST** provide complete and transparent information about their recruitment policies for the benefit of those who would like to join the Government and serve the nation. In case the recruitment is through some Central or State level examination or recruitment agency such as UPSC, SSC etc. that should be highlighted along with a link to respective pages of those organizations' websites. In either case information about the recruitment should abide by the following guidelines.

- 4.2.9.1.** The title of the recruitment notice **MUST** be self-explanatory.
- 4.2.9.2.** This site **MUST** enlist all those who are eligible for a particular recruitment. Also the details of the eligibility criteria should be clearly mentioned.
- 4.2.9.3.** All required application forms should be made available on the website so that the interested person can download and submit the same.
- 4.2.9.4.** Procedure to be followed, whom to contact, supporting documents to be carried etc. for the particular recruitment **MUST** form a part of this content.
- 4.2.9.5.** All currently open vacancies may be highlighted on the Homepage of the website.
- 4.2.9.6.** All recruitment notices should also be registered with the National Portal for wider access by target audience.
- 4.2.9.7.** Information for those recruitment notices in which the last date is over

MUST be either removed or moved into the archives section.

4.2.10. News and Press Releases

News having national importance and significance for the Citizens as well as Government Press Releases issued by Departments and organizations at the Centre and State level should be published on the website of the concerned Department. News and Press Releases should carry the date and should be organized 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.

4.2.11. Contact Information on Government Websites

Citizens would like to contact any Government Department or entity to ask questions, get information, seek clarifications, or sort out problems. Therefore, it is essential that Government websites provide them with the means to do that.

- 4.2.11.1.** All Indian Government websites **MUST** have a 'Contact Us' page, linked from the Homepage and all relevant places in the website.
- 4.2.11.2.** The 'Contact Us' page should be categorized according to the various divisions handling different kinds of queries; e.g. grievance redressal, file status, procedural details etc.
- 4.2.11.3.** The contact details for the Important functionaries in the Department **MUST** have the telephone numbers/fax numbers, postal address as well as email address along with the timings specified for personal/public dealing (if applicable). The content policy of the department should enlist the functionaries whose details are to be given on the contact us or who's who/directory page.
- 4.2.11.4.** There should be a clear-cut policy for redressal (correction) of inaccurate information found on the website. The contact details of the Web Information Manager, who is overall responsible for the content on the website, should be provided.

4.2.12. Presence on the National Portal

Mechanism should be in place to ensure that metadata for all important information and Services, have been provided to the National Portal.

4.3. Secondary Content

Secondary content is generated from the assortment and packaging of primary content to suit the requirement of different audiences, events and occasions. Examples of such content are advertisements / banners / spotlight / media gallery / related sites.

4.3.1. Special Interest Group Corner

In case of an event or on special occasions, Government departments may introduce a section for a particular target group e.g. during result time a special section for students may be put up or the Department of Social Welfare may open a section for senior citizens on its website. It must be noted that the original content that is sourced from various sections of the website to make up this section should remain as such so that it may be referred to, once the section has been removed.

4.3.2. Events and Announcements

Government websites should have a section to cover various Events & Announcements such as:

- Announcements having International/National/State level importance.
- Announcements related to important upcoming Government events being organized by a Ministry/Department/State/UT.
- Announcements related to schemes/grants/scholarships/fellowships etc.
- Warnings of Natural disasters/Epidemics etc.
- Calls for relief funds during disasters. Other help from citizens or civic agencies.
- Display of important helpline numbers in case of crisis.

Guidelines relating to events and announcements are as follows:

- 4.3.2.1.** Announcement **MUST** be taken off/archived once it loses its relevance or after the expiry of the time period attached to the event or happening.
- 4.3.2.2.** All important announcements should also be published on the National Portal for wider access.
- 4.3.2.3.** Announcements should be worded in simple

English/Regional language depending on whom it is meant for.

4.3.3. Discussion Forums & Chat Rooms

Discussion forums are becoming an increasingly popular tool for sharing viewpoints and information. Discussion Forums could be initiated by a Department on any relevant topic of public interest and can prove quite useful in obtaining opinions and viewpoints of the citizens on issues important for policy making. Departments should use MyGov platform to conduct discussions. While initiating an online discussion forum through any platform, the following should be kept in mind:

- 4.3.3.1.** The purpose and objective of the Discussion Forum should be clearly defined. Preferably, an initiating document or background paper explaining the topic of the forum may be provided on the site.
- 4.3.3.2.** Clear-cut Terms and Conditions for posting content in the Discussion Forum should be indicated. Policy related to content that must not be posted in the discussion forum (see box) should be defined.
- 4.3.3.3.** The discussion forums on a Government website should be moderated so that there is some control to avoid publishing unwanted content on the website. All the inputs submitted by the users may be reviewed by the moderator for context and appropriateness of the language or a provision for marking the post as spam may be provided to the users of the forum.
- 4.3.3.4.** The discussion forum should be open for a limited period of time and the validity of the same should be prominently indicated on the site. However, rather than closing the forum abruptly, it is advised that a summary of the inputs received as well as an Action Taken Report, if possible, should be provided on the website so that the visitors are assured that their inputs are being seriously considered and valued by the Department.

Chat Rooms

Chat rooms on a website could be used by citizens to exchange their viewpoints on some common topic amongst each other as well as by the Departments to facilitate an online conversation between a senior functionary and citizens. Like Discussion Forums, Chat rooms should also follow a Policy related to content that must not be posted by the users (see box). It is desirable that the participants of an online chat through a Government Department's website be registered before they are allowed to login and post their messages. Permanent chat rooms should be monitored frequently. In case of temporary or special occasion chat sessions with a senior functionary, it is advised that questions be submitted to the interviewee, before being published in the chat room.

Online Discussion Forum: Usage Policy

A Usage Policy should be established and published alongside all online discussion forums and chat rooms on a Government website. This policy should be prominently displayed to any new user who should be made to pass through a page with this information before being able to input data. The usage policy should clearly specify that the following is forbidden:

- Insulting, threatening, or provoking language.
- Inciting hatred based on race, religion, gender, nationality or sexuality or other personal characteristics.
- Swearing, using hate-speech or making obscene or vulgar comments.
- Libel, condoning illegal activity, contempt of court and breach of copyright.
- Spamming, i.e. adding the same comment repeatedly.
- Impersonating or falsely claiming to represent a person or organization.
- Posting in a language other than the language of the website.
- Invading people's privacy or Posting off-topic comments.

4.3.4. Related links

For every content topic in different modules of the website, a section should be provided for 'Related Links' to the concerned information.

4.3.4.1. Each content topic covered in the website may have some Related Links to other Government websites which provide further details on the topic.

4.3.4.2. For every Related Link, the complete URL of the Homepage / Concerned webpage should be provided correctly along

with the complete title of the Website which shall appear on the screen.

- 4.3.4.3.** The validity and accuracy of the URL should be checked on a regular basis to make sure that the information is relevant and the linked address is correct.

Only Government websites/webpages should be provided as 'Related Links' for further information since there is no control over the veracity and availability of information on private websites.

4.3.5. Spotlight

The website may have a section called 'Spotlight' which focuses on a certain issue of importance and highlights it. The guidelines with regard to this section are:

- 4.3.5.1.** Every Spotlight topic should be chosen keeping in mind the relevance and significance of the topic in today's context. It should be ensured that the chosen topic is of significance and should interest a diverse group of audience.

- 4.3.5.2.** The content for the Spotlight Section should have the following essential elements:

- Brief introductory text to appear on the Homepage of the website.
- Detailed text on the topic in the Main Page of the Spotlight section. This content should comprise key highlights of the topic and the facts ought to be sourced from authentic and official sources related to the topic.
- Address of the Webpage/Websites which have detailed information on the topic addressed in the Spotlight.
- Graphical Banner highlighting the Spotlight topic and linked to the webpage providing further details.

- 4.3.5.3.** Once the new Spotlight is launched, the older one should be shifted/moved to the Archives section along with the date for future reference.

4.4. Tertiary Content

Information about the 'primary' and 'secondary' content forms a part of the tertiary content.

The guidelines for this type of content are given as follows:

- 4.4.1. About the site - this section should contain information about the Department responsible for the contents as well as the maintenance of the site, purpose behind the development of the site, when it was launched, where it is hosted etc.
- 4.4.2. Navigation Aids Sections such as Help, Site Map, and Search (described in detail in the latter sections).
- 4.4.3. Terms and Conditions with respect to the usage of content on the site. This includes policies on Copyright, Privacy, Legal Implications etc. as well as Content Disclaimers. This has been explained in detail in the previous chapter.

4.4.4. 'Frequently Asked Questions' or FAQs

Although the content developers of websites make (and should make) all possible efforts to ensure that the content answers all possible and anticipated information needs of the citizens, it is sometimes not possible to address these completely. Visitors still have questions because either they couldn't find what they were looking for or because it is presented in such a manner that it is difficult for them to comprehend or understand. In such a case, a detailed list of answers to common questions can prove highly useful to the website audience. Also, it has been proven by usability studies that information presented in a 'question-answer' form is much easier for people to understand than lengthy write-ups. Hence, Government websites, particularly the ones having frequent interaction with citizens for various services/schemes should have a 'Frequently Asked Questions' section linked from the Homepage and all other relevant places in the site.

The web information managers can compile the list of commonly asked queries and their answers through the following sources:

- Emails, phone calls and letters from the public.
- Survey conducted amongst the public.
- Input from people who answer phones and mail in the organization.
- Review of website usage statistics and top search terms/items.

4.4.5. User Feedback

A commonly used method of receiving the feedback from the visitors of the site is through

feedback forms or guest books. Feedback forms, with pre-decided fields, to be filled in by the visitors, enable a much more structured way of receiving feedback and hence make it easy to categories or analyses the same. Forms are also quite useful for receiving grievances/complaints from the users in a structured and formatted manner. The information collected through feedback forms can also be used as a means of knowing the usage pattern of the website and can be used in the enhancement of future versions of the website.

4.4.5.1. All feedback **MUST** be collected through online forms for reasons explained above.

4.4.5.2. All feedback forms should be prominently displayed on the website.

4.4.5.3. Departments **MUST** respond to the feedback explaining how it shall be processed.

4.4.5.4. Departments should also make it clear on the response screen whether citizens should expect a reply on their feedback If 'yes' then in how many days.

4.4.6. Help

A special section labeled 'Help' on the website **MUST** be created, which allows and guides for a pleasant experience while browsing the website. This category includes the kind of content which allows for an easy and convenient navigation for the visitor to the website (e.g. online help, how to open files of certain formats, how to access audio/video on the portal, kinds of plug-ins required etc.). Further, the content which clarifies the purpose of the website as well as its policies for the visitors should also be included in this category. Help should be linked from all pages of the website and should be displayed in a consistent location across the website.

4.4.7. Downloads and Plug-ins

4.4.7.1. Information about downloadable material

Downloading material from the Internet can be an expensive and time- consuming exercise. Therefore, Government websites **MUST** provide Information that will help visitors determine whether they want to access downloadable material. This information would concern the following:

4.4.7.1.1. Self-explanatory title of the document/file.

4.4.7.1.2. Download and use instructions (install, open, view).

4.4.7.1.3. File format and file size.

4.4.7.2. Size of downloads to be minimized.

The total size of the file should be kept to a minimum to ensure acceptable download times for all users, especially those that do not have high-speed, reliable Internet connections.

4.4.7.3. Virus Free Downloads

Prior to making downloadable material available for visitors, Government websites should check for viruses and clear them.

4.5. Minimum Content

The homepage of a website is the primary entry page to the entire content of the website. It is important that the visitors to the site get to access the most important content elements from the Homepage itself.

- 4.5.1. Government websites **MUST** ensure the availability of the following minimum content elements on the Homepage. This is applicable not just to the websites of Departments but also to any Indian Government website, be it on a specific Project, Task Force, Committee or Service etc.

Minimum Content on the homepage of a Department

- Department Name (alternatively, the name of the Project, Service etc. as applicable).
- State emblem of India/Logo (as applicable).
- About the Department (including its main activities and functions).
- Link to all the major modules/sections of the site.
- Link to all the citizen services offered by the Department.
- Link to the 'Contact Us' page of the website.
- Link to the "Feedback" page.
- Link to National Portal.
- Search/Site Map.
- Terms and Conditions of Use.

4.5.2. Minimum Content on Subsequent Pages

Apart from the Homepage, the subsequent pages of the website **MUST** have the following

minimum information, in addition to the main content.

- Self-explanatory title of the page.
- Link to the Homepage.
- Link to the parent section/top module of the individual page.
- Ownership (name of the Department owning the website).
- Link to the “Contact Us” page.

4.6. Information meant for Internal use.

Government websites contain information and services for the public. Therefore, it must be strictly noted that Indian Government websites should not be used to convey information specific to the Department’s employees. Information meant for the internal consumption of the employees should be disseminated through Intranets. This is required, as the information intended for employees can confuse the common public visiting the website.

- All information meant for internal consumption and not in public domain, presently existing on any Indian Government website should be moved to an Intranet secured through proper authentication. In case for some reason, it is not possible for the Department to develop an Intranet, the information meant for internal use may be isolated and explicitly labelled (e.g. 'for employees' or 'for internal use'), to make it clear to the public that it is not intended for them.

4.7. Information to Avoid

- 4.7.1. Commercial banner advertisements should be avoided on Government websites. Banner advertisements that promote and link to other Government agencies as well as social messages are permissible.
- 4.7.2. Any information in text, visual or any other media which may offend/harm the National sentiments, religious communities as well as security and integrity of the Country **MUST** be avoided on the websites and content **MUST** be authenticated as per the content moderation and approval policy.
- 4.7.3. Government Information which is confidential or only for restricted use should be avoided on a website meant for the common public.

5.0. Design

5.1. Visual Identity

Design in the broad sense is a process that achieves the 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. The branding of a website can be established by incorporating common design elements such as colors, 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.

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

5.2. 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:

- 5.2.1. A consistent page layout with reference to navigation elements **MUST** be maintained throughout the site. (Placement of navigation elements should be uniform across the website).
- 5.2.2. 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.
- 5.2.3. 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

6.0. Graphic Buttons & Icons

Buttons and icons are symbolic representations 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 user's attention, add interest to a website and quickly convey information. They are also free from the barriers of language.

6.1. While using national identity symbols like Flag, National Emblem etc., it **MUST** be ensured that the images are in a proper ratio and color.

6.2. The graphic elements like buttons and icons should be simple and their meaning and symbolism should be self-explanatory and relevant. 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.

6.1. Typography

- 6.1.1.** The content of the site should be readable with default standard fonts.
- 6.1.2.** 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. (Ref. Section: 6.6.3)
- 6.1.3.** When using Hindi/Regional language fonts the page **MUST** be tested on major browsers for any inconsistency (loss of layout). Unicode characters **MUST** be used.
- 6.1.4.** Italic fonts are not legible in small font sizes. Paragraphs in all capital characters and italics should be used sparingly as they hinder legibility in big blocks of text.
- 6.1.5.** It is author's responsibility to create Web content that does not prevent the user agent (e.g. browser) from scaling the content effectively, therefore Except for captions and images of text, text **MUST** be resizable without the use of assistive technology by upto 200% without loss of content or functionality.

6.1.6. Font properties should be such that the text **MUST** be readable both in electronic and print format and the content **MUST** print correctly on an A4 size paper.

6.3. Color

- 6.3.1.** Proper contrast between text and background is essential for users who have low vision. Therefore, the visual presentation of text and images of text **MUST** have a contrast ratio of at least 4.5:1 except:
- 6.3.1.1.** If the text is purely for decorative purpose.
 - 6.3.1.2.** Is not visible or Is a part of an inactive user interface.
 - 6.3.1.3.** Is a part of a logo where it has no minimum contrast requirement.
 - 6.3.1.4.** That are part of a picture that contains significant other visual content.
 - 6.3.1.5.** If the text is substantially large in size (18 pt or 14 pt bold) it **MUST** have a contrast ratio of 3:1.
- 6.3.2.** Use of color should depend on the target audience. For example, a site for children may use bigger fonts and bright colors to grab the attention of kids while a site designed for researchers and academicians should focus on content with subtle use of colors.
- 6.3.3.** Websites should ensure the colors used for text and graphics look good on a variety of platforms, monitors and devices.
- 6.3.4.** Color is an important asset in presentation of Web content however, some users have difficulty perceiving color e.g. People with partial sight or older users who do not see color well. In addition there are people using text-only, limited- color or monochrome displays and browsers. If a page has information that is conveyed by color differences like: “required fields are red”, “error is shown in red”, and “January sales are in red, July are in blue” or indications of an action like using color to indicate that a link will open in a new window then these users may not be able to access such information. Therefore it **MUST** be ensured that Color is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.

6.4. Images

- 6.4.1. Use of images for representing text 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 as those using text only browsers shall not be able to access the information thus rendering the site inaccessible to many. Therefore, text **MUST** be used to convey information rather than images of text except when the image of text can be customized to the users requirement or when a particular representation of text is essential for the information being conveyed (such as a text in a logotype): The use of text, rather than images of text, should be considered for page headings and website navigation items (Menus).

6.4.2. Size of image files should be minimized.

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

6.4.2.1. Scaling of images should be avoided as they tend to distort when scaled.

Instead, a correct size should be prepared in image processing software.

6.4.2.2. A thumbnail (a smaller version) for a large image and link to the full-size copy should be provided where appropriate.

6.4.3. Images and other non-text content **MUST be made Accessible**

6.4.3.1. A meaningful explanatory text equivalent **MUST** be specified for images and other non-text content e.g. by using the ALT attribute. The ALT text for an image is displayed before the image is fully downloaded. 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 summaries the content or purpose of the image. For example, to use the description 'Picture' to explain a graphic does not serve any purpose. The following situations are exceptions:

- (i) If the non-text content is a control or accepts input e.g., a submit button then it **MUST** have a name describing the purpose of the control.
- (ii) If the non-text content is time-based media (audio/video) then the text equivalent provides a descriptive identification of the same.
- (iii) If non-text content is a test or exercise that would be invalid if presented in text, then text alternatives at least provide descriptive identification of the non- text content.
- (iv) If non-text content is primarily intended to create a specific sensory experience, then text alternatives at least provide descriptive identification of the non-text content.
- (v) CAPTCHA: If the purpose of non-text content is to confirm that content is being accessed by a person rather than a computer, then text alternatives that identify and

describe the purpose of the non-text content are provided, and alternative forms of CAPTCHA using output modes for different types of sensory perception are provided to accommodate different disabilities.

- (vi) If non-text content is pure decoration, is used only for visual formatting, or is not presented to users, then it is implemented in a way that it can be ignored by assistive technology (by using blank alt attribute). (Refer WCAG 2.0 - 1.1.1)

6.4.3.2. 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. These speeds up the time to download the web page and display the content.

6.5. 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.

6.5.1. Download Details for Video and Audio Clips

6.5.1.1. 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.

6.5.1.2. If a specific software programme is required to access the multimedia file, a link to enable the user to download it **MUST** be provided.

6.5.2. 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, hearing impaired or those accessing the information on slow connections:

6.5.2.1. Government websites **MUST** provide equivalent information of audio only/video only clips (e.g. a text description of the audio/video). In case of video-only clips audio description of the video may also be provided in

place of text.

6.5.2.2. When audio (live or prerecorded) is synchronized with other media for presenting information the audio information **MUST** be presented as captions for the benefit of hearing impaired or those who do not have access to audio. Captions must not only include dialogue, but to identify who is speaking and include non-speech information conveyed through sound, including meaningful sound effects. In the case of video presented in synchronized media audio descriptions **MUST** be provided (if all of the information in the video track is already provided in the audio track, no audio description is necessary).

6.5.3. 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.

6.5.3.1. Certain special effects such as blinking, or flashing have been reported to cause epileptic seizures. It is also seen that people are more sensitive to red flashing than other colors' pages **MUST** not contain anything that flashes more than three times in any one second period.

6.5.3.2. For any moving, blinking, or scrolling information that starts automatically and lasts for more than 5 seconds 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). Many web pages also contain auto updating content that disappears or is updated in a preset interval of time e.g:-. stock prices, news etc. In such a case also the user **MUST** have a mechanism to pause, stop or hide the content or to control its frequency unless this auto update is a part of an activity where it is essential.

6.5.3.3. If any audio on a Web page plays automatically for more than 3 seconds, there **MUST** be a mechanism to pause or stop the audio. 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 readers speech output is controlled via the same volume control as the system sound control the webpage **MUST** provide a means to control the volume of audio playing in the page independently from the overall system volume

level.

6.6. 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 organization and navigation scheme of the content in the website should be either categorized by subject (topic, tasks, services, life events), by audience group, by geographic location, or by any combination of these factors. Web information managers should analyse 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 Navigational mechanisms that are repeated on multiple Web pages within a set of Web pages **MUST** occur in the same relative order each time they are repeated, unless a change is initiated by the user.
- 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 standalone 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 (as breadcrumbs).
- 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 on 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 as the content is read sequentially. Therefore, Web pages **MUST** provide a mechanism to bypass blocks of content that are repeated on multiple Web pages. This may be done by providing a link at the top of each page that goes to the main content area.

6.7. 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 surfer’s 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). (Refer WCAG 2.0 - 2.4.5)
- 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 highlight the term(s) in each search result. Search results should be marked with an HTML heading so that the screen reader users can quickly locate search results.
- 6.9.3** Departments should carefully determine the scope of their 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 customization.
- 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 Because 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.

6.8.Sitemap

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 guideline pertains to site maps:

6.8.1. Every Indian Government website **MUST** have a 'Sitemap' linked through to Homepage as well as all important entry pages of the site.

6.9. 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. Framesets are not supported in HTML5. Use of frames must be minimized as many search engines do not index framed web pages properly, however if frames are used, it should be ensured that:

- Each frame is titled to facilitate frame identification and navigation.
- HTML file name of each frame is meaningful.
- A text title is included on each frame (this can be hidden in visual browsers).

7.0. Development

Use of Open Standard based tools and technologies for the development of websites, software as well as content are very important to interoperability and accessibility of websites. World Wide web consortium (W3C) is an international body working towards defining standards in web technologies and formats for publishing content on the web.

With respect to markup languages Indian Government websites should comply with W3C standards. Most of the browsers, software, companies/communities, also try to comply with W3C standards. Some of the commonly required standards are listed below:

7.1. Markup Languages

HTML (Hypertext Markup Language) is at the core of the foundation of the World Wide Web. Language has undergone a few revisions to enable it to be more powerful. HTML 4.01 version established it as a structural document markup language and is oriented towards the use of Cascading Style Sheets (CSS). The latest standard in HTML is version 5.0. XML (Extensible Markup Language) is the means to extend HTML further and make it more generic. XSL (extensible Stylesheet Language) is the preferred style sheet language of XML. XHTML 1.0 is an XML based markup language and gives a new dimension to markup languages.

Indian Government websites/web documents/pages/forms should validate to following published grammars:

- HTML 5.0
- XHTML 1.0
- XML 1.0

Web pages should be tested for compliance with validation tools such as W3C markup validator. For further details on the above markup languages, visit the website of W3C at <http://www.w3c.org>.

7.2. Cascading Style Sheets (CSS)

Cascading Style Sheets (CSS) is a style sheet language used to describe the presentation of a document written in a markup language. Its most common application is to style web pages written in HTML and XHTML. The CSS specifications are maintained by the World Wide Web Consortium (W3C). Its current specification is CSS3.

CSS is used by both the authors and readers of web pages to define colors, fonts, layout, and other aspects of document presentation. It is designed primarily to enable the separation of document content from document presentation. This separation can improve content accessibility, provide more flexibility and control in the specification of presentational characteristics, and reduce complexity and repetition in the structural content. CSS can also allow the same markup page to be presented in different styles for different rendering methods, such as on-screen, in print, by voice (when read out by a speech-based browser or screen reader) and on Braille-based, tactile devices.

To know more about CSS, visit <http://www.w3.org/Style/CSS/>.

Advantages of using CSS include:

- Presentation of information for an entire website or collection of pages can be held in one CSS file, allowing global changes to be propagated quite conveniently.
- Web browser software can store a copy of the CSS file in the computer's cache, so that it doesn't have to be downloaded each time the user views a web page that references it, hence improving the access time.
- Different users and screen readers can have different style sheets: for example, a large text alternative for visually impaired users or a layout optimized for small displays for mobile phones.
- The document code is reduced in size and complexity since it does not need to contain any presentational markup.

7.2.1. Therefore, Indian Government websites should use Cascading Style Sheets to control layouts/styles and **MUST** make the interface responsive to cater to a wide range of screen sizes.

7.2.2. Websites that use style sheets should 'degrade' gracefully so that the site remains fully functional even if the stylesheet settings are ignored. Therefore, the Web pages in Indian Government websites **MUST** have the same logical order without

the style sheets as they have with the style sheets.

7.3. Scripting Languages

Scripting languages are an easy and fast means to enable or include more controls in Web pages. They can be implemented either as Server side scripting languages using PHP, JSP, PERL and ASP or as Client side scripting language using JavaScript.

- 7.3.1.** Server side scripting languages should be preferred over Client side since client side scripting may face issues of browser incompatibility, scripts being turned off by browsers, security etc.
- 7.3.2.** It should be ensured that pages are usable 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.
- 7.3.3.** File Formats :- Documents form a very important and significant component of Government websites. Indian Government Websites should therefore provide access to documents in appropriate File Formats that are based on open standards and do not impose an unnecessary burden of downloading or acquiring specific software on the intended audience. When choosing file format(s), Departments should consider: Intended use of the material Frequency of use, Accessibility of the format and Level of effort and time required to convert the material to the specific format.

File formats for different forms of content are discussed below:

7.3.4. Graphics & Multimedia files

- 7.3.4.1.** Sites should have image and graphic components in JPEG, PNG and GIF formats and the same should be compressed without losing on visual quality as far as possible, to allow faster downloads.
- 7.3.4.2.** Multiple graphic images at the server may be used (such as providing a thumbnail image with a link to a higher resolution graphic) to make the site more usable even for low bandwidth connections.
- 7.3.4.3.** Departments may use Web and multimedia technologies to enhance sites, on the condition that all elements are accessible.

7.3.5. Documents

7.3.5.1. Government websites shall have a lot of information in the form of documents such as Acts, Rules, Schemes, Gazettes, Forms, Circulars and Notifications. Accessibility and usability of these documents by all citizens is as important as that of the entire website. Departments **MUST** either use HTML format or any other format that makes the document accessible. In case documents are published in a format other than HTML format, departments **MUST** provide a link to the website from where the document reader can be downloaded free of cost.

7.3.5.2. When the document has been provided in a format other than HTML, websites should include a text description of the document, including the title, file type, file size, and effective date. This will ensure that visitors have a reasonable understanding of what to expect when they view the document.

7.3.5.3. When the document has been provided in a format other than HTML, websites should include a text description of the document, including the title, file type, file size, and effective date. This will ensure that visitors have a reasonable understanding of what to expect when they view the document. The document should be properly tagged and should not contain scanned images of text (Ref. 6.6.1). This will ensure that the document is accessible to screen reader users (refer guidelines website web.guidelines.gov.in for details)

7.4. Ready Reference for Developers

- a. It **MUST** be ensured that in content implemented using markup languages, elements have complete start and end tags, elements are nested according to their specifications, elements do not contain duplicate attributes, and IDs , if any, are unique, except where the specifications allow these features. This helps to ensure that user agents, including assistive technologies, can accurately interpret and parse content. If the content cannot be parsed, then different user agents may present it

differently. Some user agents use “repair techniques” to render poorly coded content. Since repair techniques vary among user agents, authors cannot assume that content will be rendered correctly by specialized user agents.

- b.** Labels or instructions **MUST** be provided when content requires user input (for example in forms). Text instructions that describe the input **MUST** be provided at the beginning of a form or set of fields. Elements associated with input **MUST** be labeled to ensure that information about the input field is spoken by screen readers when the field receives focus.
- c.** In situations where web functions are time-dependent, (for example, filling out an online form) it will be difficult for people with disabilities such as blindness, low vision, dexterity impairments, and cognitive limitations to perform the required functions before a time limit occurs. This may render the service inaccessible to them. It must therefore be ensured that such users are given adequate time to interact with Web content whenever possible. For each time limit that is set by the content, the user **MUST** be allowed to turn off the time limit, adjust the default setting before encountering it or is warned before time expires and given the option to extend the time limit with a simple action (for example, “press the spacebar”). Activities that essentially require a time limit (for example an online auction) or the time limit is too long (say 20 hours) are exceptions.
- d.** Many users including the visually challenged cannot perceive shape, size or use information about location or orientation. For such users the content that relies on knowledge of the shape or position of objects becomes inaccessible (for example, “round button” or “button to the right”). Hence It **MUST** be ensured that instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, size, visual location, orientation, or sound. Additional information needs to be provided to clarify anything that is dependent on this kind of information.
- e.** If an input error is automatically detected, the error **MUST** be described to the user in text. The error message should be as specific as possible. This will ensure that users are aware that an error has occurred and can determine what is wrong. Describing the error in text in addition to highlighting the errors will help screen reader users, who cannot distinguish colour and users with cognitive disorders who have difficulty in perceiving the meaning of other visual cues.
- f.** All functionality of the content **MUST** be operable through a keyboard interface without requiring specific timings for individual keystrokes, except where input

depends on the path of the user's movement (for example, drawing freehand curves or using handwriting to write).

- g.** Whenever a web page is rendered using plug-ins or embedded applications, it is possible that functionality of the Web page restricts the keyboard focus to a subsection of the content, unless the user knows how to leave that state and “untrap” the focus. This situation may affect navigation for people who rely on a keyboard or keyboard interface to use the Web, including visually challenged and people with physical disabilities. Therefore, it **MUST** be ensured that if focus can be moved to a component of the page using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it is not possible the user is advised of the method for moving focus away.
- h.** It **MUST** be ensured that the purpose of each link can be determined from the link text alone or from the link text along with its programmatically determined link context e.g., by using title attribute as a tooltip to clarify the purpose of link.
- i.** When any component receives focus, it **MUST** not initiate a change of context. Developers **MUST** use “activate” rather than “focus” as a trigger for change of context. This ensures that functionality is predictable as visitors navigate their way through a webpage. (Examples of changing context when a component receives focus include forms being submitted automatically when a component receives focus or new windows launched when a component receives focus).
- j.** Entering data or selecting a form control must have predictable effects. Changing the setting of any user interface component **MUST** not automatically cause a change of context unless the user has been advised of the behavior before using the component. Unexpected changes of context can be disorienting for users with visual disabilities or cognitive limitations
- k.** Metadata adds semantic information to pages and sites and provides contextual information for people navigating the site, especially those with screen readers who rely on things such as page titles, structured page headings and lists. Metadata may also be used by some search engines. Indian Government websites **MUST** provide metadata like, keywords, and description at least on Homepage and all-important entry pages.
- l.** Tables help in organizing and presenting data on a webpage. However, many designers in the past have been using tables to make the layout of Web pages. This has resulted in the Web pages not being accessible to people using assistive technologies such as screen readers. For this reason, Use of Tables for page layout

should be avoided. For data tables, proper tags and markup **MUST** be provided to identify row and column headers and associate data cells and header cells.

- m.** When users navigate sequentially through content, they should encounter information in an order that is consistent with the meaning of the content and can be operated from the keyboard. Hence if a Web page can be navigated sequentially and the navigation sequences affect meaning or operation, focusable components **MUST** receive focus in an order that preserves meaning and operability.
- n.** For all user interface components, it is a **MUST** that the name and role can be programmatically determined; states, properties, and values can be programmatically set; and notification of changes to these items is available to assistive technologies.
- o.** Any keyboard operable user interface **MUST** have a mode of operation where the keyboard focus indicator is visible. This helps the user know which element among the multiple elements present in the page has focus. For e.g., in case of a button a visual change in the button (e.g. color, size) can indicate that the focus is on the button.
- p.** If an input error is automatically detected and suggestions for correction are known, then the suggestions **MUST** be provided to the user, unless it would jeopardize the security or purpose of the content. Input error occurs if the user omits a certain information that is required by the webpage, or the information provided by the user is not in the correct format or falls outside the permissible value. This is to ensure that the users receive appropriate suggestions for correction of input errors if possible.
- q.** For Web pages that cause legal commitments or financial transactions for the user to occur, that modify or delete user-controllable data in data storage systems, or submit user test responses, at least one of the following **MUST** be true:
 - **Reversible:** Submissions are reversible.
 - **Checked:** Data entered by the user is checked for input errors and the user is provided with an opportunity to correct them.
 - **Confirmed:** A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission.

7.5. Validation & Testing

Websites should be validated and tested with automatic tools and human review. Automated methods are generally rapid and convenient but cannot identify all issues. Human review can help in issues like ensuring clarity of language and ease of navigation.

Following are some important validation methods that may be followed.

- a. Departments may use automated accessibility tool and browser validation tool.
 - Validate syntax (e.g., HTML, XML, etc.).
 - Validate stylesheets (e.g, CSS).
- b. It is a **MUST** that Indian Government websites are tested for multiple browsers and versions of browsers, operating systems, connection speeds, and screen resolutions to ensure access by all.
- c. Use of a self-voicing browser, a screen reader, magnification software, small display, etc.
- d. Use spell and grammar checkers. Eliminating grammar problems increases comprehension.
- e. Review the document for clarity and simplicity. Readability statistics, such as those generated by some word processors may be useful indicators of clarity and simplicity. Better still, ask experienced (human) editors to review written content for clarity.

7.6. Web Application Security

Web Application security is of paramount concern to owners as well as consumers of the website. A lot of security threats are handled at data centres and server administrator level where the application is hosted. Application developers should however be sensitive about security aspects, as a large number of security threats arise due to vulnerability of application software code.

This application driven attacks sometimes turn out to be quite fatal. Best Practices to follow while developing web applications using various technologies are available on CERT-IN website (<http://www.cert-in.org.in>) as well as in internet space. Developers should read, understand and follow these Best Practices during development. NIC as well as CERT.IN have empaneled a number of agencies to conduct the security audit of applications.

- 7.6.1.** Each website/application **MUST** undergo a security audit from empaneled agencies and clear the same, prior to hosting and after addition of new modules.
- 7.6.2.** Department **MUST** formulate a security policy to address various security issues related to the website.

8.0. Website Hosting

8.1. Website Hosting

The fundamental purpose of a government website is to deliver the information and services to the citizens and other stakeholders using the medium of Internet. Generally, websites/portals/web applications are hosted on special purpose servers in a Data Centre.

Data Centre is a facility equipped with controlled power, cooling systems, physical security, and access control. Generally, many servers are hosted in a Data Centre, powered by high-speed networking infrastructure, storage system along with a storage network. Provision for back-ups of data/information residing in Data Centers is also an important service of Data Centre. Multi-tier security infrastructure is also a crucial component of Data Centers.

While it is extremely important to develop websites using state-of-the-art technologies, hosting infrastructure plays a crucial role in the performance, availability, and accessibility of these websites to end users with varying set-ups.

Hence, configuration of hosting server infrastructure as well as facilities at Data Centers are important aspects to review, prior to hosting. Following section details the kinds of facilities and services that the Department should expect from their hosting service providers.

8.2. Hosting Service Provider

Indian Government websites must be accessible to the public in a fast and secure manner on a 24x7 basis. It is important that the Web Hosting Service Provider (HSP) for a government department be chosen with extreme caution and care, keeping the following in mind:

- a. The HSP **MUST** possess state-of-the-art multi tier security infrastructure at both, physical and network level as well as security policies to ensure the best possible security to Government websites.
- b. The Web Hosting Service Provider **MUST** also use devices such as firewall and intrusion prevention systems to make the website more secure.
- c. The Web Hosting Service Provider **MUST** have a redundant server

infrastructure to ensure fastest restoration of the website in the event of any unforeseen hardware/software failure.

- d. The HSP **MUST** have a Disaster Recovery (DR) Centre in a geographically distant location and a well drafted DR plan for fast restoration of the services during any disaster.
- e. Provision should be given to the concerned Department to remotely update their website in a secured manner.
- f. The HSP should also provide the facility of staging infrastructure in order to facilitate the testing of the new websites as well as their enhanced or revised versions' content prior to publishing on the internet.
- g. HSP should provide web server statistics required for performance evaluation on a regular basis. If possible, online access to the traffic analysis should be provided so that the Department can access the traffic analysis at any point of time for the purpose of evaluation.
- h. Web Hosting Service Provider **MUST** provide helpdesk and technical support to the department on 24 x 7 x 365 basis.
- i.

8.3. Contingency Management

The website of a Government Department is its presence on the Internet and it is very important that the site is fully functional at all times. It is expected of the Government websites to deliver information and services on a 24x7 basis. Hence, all efforts should be made to minimize the downtime of the website as far as possible.

It is therefore necessary that a proper Contingency Plan **MUST** be prepared in advance to handle any eventualities and restore the site in the shortest possible time. The possible contingencies include:

- 8.3.1. Defacement of the website:** All possible security measures must be taken for a Government website to prevent any possible defacement/hacking by unscrupulous elements (Ref. 7.7.1). However, if despite the security measures in place, such an eventuality occurs, there must be a proper contingency plan, which should immediately be executed. If it has been established beyond doubt that the website has been defaced, the site must be immediately blocked. The contingency plan must clearly indicate as to who is the person authorized to decide on the further course of action in such eventualities. The complete contact details of this

authorized person must be available at all times with the web management team. Efforts should be made to restore the original site in the shortest possible time. At the same time, regular security reviews and checks should be conducted in order to plug any gaps in the security.

8.3.2. Data Corruption: A proper mechanism has to be worked out by the concerned Government Departments, in consultation with their web hosting service provider, to ensure appropriate and regular back-ups of the website data are being taken. These enable a fast recovery and uninterrupted availability of the information to the citizens in view of any data corruption.

8.3.3. Hardware/Software Crash: Though such an occurrence is a rarity, still in case the server on which the website is being hosted crashes due to some unforeseen reason, the web hosting service provider must have enough redundant infrastructure available to restore the website at the earliest.

8.3.4. Natural Disasters: There could be circumstances wherein due to some natural calamity, the entire data center where the website is being hosted gets destroyed or ceases to exist. A well-planned contingency mechanism has to be in place for such eventualities wherein it should be ensured that the Hosting Service Provider has a 'Disaster Recovery Centre (DRC)' set up at a geographically remote location and the website is switched over to the DRC with minimum delay and restored on the Web.

Apart from the above, in the event of any National Crisis or unforeseen calamity, Government websites are looked upon as a reliable and fast source of information to the public. A well defined plan for all such eventualities should be in place within all Departments/Organizations so that the emergency information/contact help-lines could be displayed on the website without delay. For this, the concerned person in the Department responsible for publishing such emergency information should be identified and his/her complete contact details should be available at all times.

9.0. Website Promotion

Web is a medium of mass information dissemination. With the exponential growth in the number of websites, which has even crossed the one billion mark, the question of visibility on the Internet/Web has assumed critical significance.

The aim of any Government website should be to provide information and services to as many citizens as possible. The existence of any Government site lying inaccessible on the web is meaningless. For this purpose, a conscious and concentrated effort has to be made to increase the reach of the website.

Therefore, the importance of website promotion, especially in the context of Government websites which aim to reach the largest possible number of citizens and stakeholders cannot be overemphasized.

9.1. Search Engine Optimization

People usually search for a website through search engines. Therefore, searching for a site in a search engine by using the Department name or the services offered by it as keywords should preferably bring the website in the first five results on major search engines.

To achieve this, the following guidelines may be followed:

- 9.1.1. The Page Title should include useful and distinctive indication of the contents and should be self-explanatory. The HTML title should be chosen carefully considering its role in search engine indexing, query responses, window title bar and in bookmark labels.
- 9.1.2. Department name, services offered, schemes, location etc. should form a part of the Meta information (meta tags) of the HTML page. The important meta tags that **MUST** be included are keywords and description tags. These tags are present in the <head> portion of the html page and while they are not displayed as part of the page content in web, search engines can read them.
- 9.1.3. Search engines often display the first few lines of a Web page to help searchers to identify the sites they want to visit. The description meta tag should be used to provide guidance to search engines on what to present to the users in the search response.
- 9.1.4. Search engines only consider a limited number of keywords when indexing pages.

Government websites should present keywords in the order of priority and without duplication.

- 9.1.5. The content of the web page should be in textual form as far as possible, including hyperlinks. Important points/programmes/schemes etc. should be highlighted as headings marked by HTML heading tag.
- 9.1.6. HTML links should be specific. Instead of just 'Our Programmes', a link saying 'The Programmes of Department name' will be more favourable for a search engine.
- 9.1.7. Link exchange with related Government sites increases the weightage of the site for search engines, thus improving its ranking in search results. It will also bring more visitors, who are looking for similar schemes, services or information, to the site.

9.2. Website Promotion Techniques

Apart from search engines the website may be promoted through other media like print, television etc. This will prompt casual visitors to browse the website and if they find the information useful, they may visit the site more often.

- 9.2.1. All the advertisements/public messages including Press Releases, Tender Notifications etc. issued in the Newspapers/Audio-visual media by the concerned Department **MUST** prominently mention the URL of the web site clearly in order to give it due publicity. It should be directed that no press release or advertisement of any Government Department shall be issued to the press without checking the presence of the URL of the website and necessary steps should also be taken to ensure the presence of relevant corresponding information on the website..
- 9.2.2. All the stationery items of the Department such as Letterheads, Visiting Cards, Publicity material such as Brochures, Pamphlets and documents such as the Annual Report etc. **MUST** display the URL of the web site
- 9.2.3. The website URL may become a part of the mail signature for all the outgoing mails from the Departments and its employees.
- 9.2.4. The website should also be promoted by link exchange with other Government websites as well as international websites.
- 9.2.5. Providing regular and updated news on various issues related to the Government, citizens etc. are very important tools of promotion. Regular revised updates on all important issues related to Government and in interest of the citizens should be

highlighted/placed on the website. Frequent updates and change in contents will bring the visitors back to the portal and will keep the readers interested in the website.

- 9.2.6.** Sending regular updates on the websites to registered and interested users through an electronic newsletter should form an important means of promotion.

10.0. Website Management

10.1. Website Management Team

The success of any endeavor depends upon the backing of a strong and enthusiastic team. In case of a Government website, the role of a Website management team assumes paramount importance in ensuring its credibility amongst its patrons.

10.1.1. Departments **MUST** appoint a Web Information Manager (WIM) whose role shall be to ensure that there is a proper flow of content to the site and that content quality and user satisfaction issues are taken care of. To achieve this WIM has to coordinate with the various groups within the Department and undertake the following activities with regard to the Indian Government website being maintained by her/him.

- Formulation of policies concerning management of content on the web through its entire life cycle viz. Creation, Moderation, Approval, Publishing and Archival. Ensuring that all content on the website is always authentic, up-to-date and obsolete information or services are removed.
- Set a mechanism for periodically validating links to related information. An automated report can provide a list of broken links on the site, which can be immediately corrected.
- Getting the website certified for Guideline Compliance and ensuring that it remains compliant throughout its lifecycle.
- Web Information Manager is overall responsible for quality and quantity of information and services on the website. The complete contact details of the Web Information Manager should be displayed on the website, so that the visitor could contact him/her in case of some queries or requirements.
- Since the websites receive a significant amount of feedback/query mails from the visitors, it is the responsibility of the Web Information Manager to either reply to all of them himself/herself or designate someone to regularly check and respond to the feedback/query mails.

10.1.2. Besides the Web Information Manager, a Technical Manager should also be appointed for every Indian Government website whose responsibilities would be:

- Regular monitoring of websites for Performance, Security and Availability.
- Ensuring compliance with policies (organisational, regulatory, legislative, etc.) that may require changes in website content, architecture, and security.
- Periodic security audit of the website in line with major revisions.
- Analysis of traffic on the website and feedback to the development/management team.

10.1.3. In case of a large website/multiple websites, a team should be set up with a Web Information Manager having professionals skilled in HTML Authoring, Programming, Design, Content etc.

10.2. Website Maintenance Tools

Web is a dynamic medium, and a website grows with time with addition of new content and features. The website therefore requires regular maintenance to ensure that the quality is maintained, and it meets the expectations of the visitor. With the increase in content size and complexity, it becomes difficult to manually maintain the site and therefore automated tools should be used for updating, analyzing and checking the site. It is intended that the practice of using these tools may be adopted from the beginning as it avoids difficulties later. Some such tool categories are suggested below:

10.2.1. Website Authoring Tools

Website Authoring Tool is a software for generating well-engineered web pages. Lots of web page authoring tools are available in the market, as well as in the free domain. One can choose any tool based on the requirements; however, the following should be ensured while selecting the tool:

- It generates pages that conform to all of the requirements, recommendations and options of this guideline.
- It conforms to the Web Consortium's Authoring Tool Accessibility Guidelines.

10.2.2. Web Content Management System

A web Content Management System (CMS) is the software used for creating and managing web content. It is used to manage and control a large, dynamic collection of content on a website/portal (HTML documents and their associated documents and files). CMS facilitates content creation, content control, editing, and many essential content maintenance functions. Usually the software provides an interface where users with little or no knowledge of programming languages and markup languages can create and manage content with relative ease of use. A wide variety of CMS solutions are available right from customized CMS to enterprise class CMS software available commercially as well as in free domain. Ease of use, support for a variety of content, automated templates, content workflow management are some of the features to be looked into in CMS software. For small scale websites, developers could also develop website specific CMS solutions, as it may turn out to be cost effective in many instances.

10.2.3. Web Analytic tools

Many organizations rely on statistics regarding site usage to measure the impact of the site and also for reorganizing or enhancing their website further. Some use simple counters while others use more sophisticated Web analyzer tools to obtain data. Counters add little value to a site and often appear to be self-congratulatory. Web analyzer tools provide more information and are virtually transparent to the end user, therefore Web analyzer tools should be the standard means of collecting site usage data. Counters should not be used to perform this function.

10.2.4. Validation and Testing

The code of the webpages, scripts and applications may be tested manually or with automated tools to ensure that the quality of web content is maintained, and all compliance related guidelines are adhered to.

10.3. Website Monitoring

Web being a dynamic medium, changes in terms of technologies, access devices and even the users requirements happen frequently. Keeping this in mind, Indian Government websites **MUST** have a website monitoring policy in place. Websites must be monitored periodically in accordance with the plan to address and fix the quality and compatibility issues around the following parameters:

- a. **Performance:** Site download time should be optimised for a variety of

network connections as well as devices. All important pages of the website should be tested for this.

- b. **Functionality:** All modules of the website should be tested for their functionality. Moreover, interactive components of the site such as discussion boards, opinion polls, feedback forms etc. should be working smoothly.
- c. **Broken Links:** The website should be thoroughly reviewed to rule out the presence of any broken links or errors. A number of tools and techniques are now available to easily detect the broken links in a website.
- d. **Traffic Analysis:** The site traffic should be regularly monitored to analyse the usage patterns as well as visitors' profile and preferences. Traffic Analysis tools also give reports on broken links.
- e. **Feedback:** Feedback from the visitors is the best way to judge a website's performance and make necessary improvements. A proper mechanism for feedback analysis should be in place to carry out the changes and enhancements as suggested by the visitors.

10.4. Archiving of Documents

Government websites generally are storehouses of a large number of documents and reports, which are of relevance and importance to specific audiences as well as citizens at large. Many times, these documents also have historical importance and are also referred to extensively for academic and research purposes. These documents can be accessed online only for a specific period of time and need to be moved to offline archives on the expiry of the pre-decided duration. This is important since these old documents sometimes need to be referred to for regulatory or legal purposes.

The Departments **MUST** have a well-defined Archival Policy regarding such old documents stating the duration for which they would be kept online, when would they be moved to offline archives and if/when would they be permanently deleted or purged.

10.5. Compliance with Guidelines and Standards

Since these guidelines aim at fulfilling the common objective of making the Indian Government websites citizen friendly and conform to high standards of quality, the website development and management teams in all Departments should endeavor to comply with these guidelines in earnest spirit. Further, the website management teams should ensure that all Government websites undergo

and clear a security audit carried out by an authorized empaneled agency before being hosted, as well as after major revisions.

10.6. Website Review and Enhancement

Departments and Organizations that own Government websites, and the citizens they serve, want these websites to be as useful as possible. Government Departments at all levels should evaluate visitor satisfaction and usability of their websites and use the outcome of assessments to improve the websites.

- 10.6.1.** Besides regular feedback through feedback form, Departments may obtain visitor feedback through online questionnaires or surveys where the visitors can be asked to rank the website on various parameters and give detailed inputs on what more they would like to be added on the website.
- 10.6.2.** Detailed review of web analysis reports over a long span may also reveal a lot of information on usage or expectations from the website.
- 10.6.3.** In order to keep abreast with the latest technologies as well as to cater to the visitor's demands for major changes and enhancements in the website, Indian Government sites should opt to undergo a formal review by an internal group or an external agency to further orient them towards citizens and other stakeholders.

10.7. Website Policies

Websites represent the face of the department in the cyber world. Like the Department itself, the website also has to continually grow and evolve. As the website grows and reach, the expectations of the citizen also grow. It is therefore important that we set down rules and regulations to operate and manage the websites effectively. Although different policies and their need and purpose is explained in various sections of this document for the sake of convenience, a complete list of policies along with the section are referenced below:

Sr.No.	Policy	Ref.No.
1.	Copyright Policy	3.1
2.	Hyperlinking Policy	3.2

3.	Terms & Conditions	3.3
4.	Privacy policy	3.4
5.	Content Contribution, Moderation and Approval Policy (CMAP)	5.2.1
6.	Web Content Review Policy (CRP)	5.2.3
7.	Content Archival Policy (CAP)	5.2.6
8.	Website Security Policy	7.7.2
9.	Contingency Management	8.3
10.	Website Monitoring Policy	10.3

All the above policies **MUST** be duly approved by the Web Information Manager.

11.0. Guidelines for Kerala Government Websites

Order G.O (Rt) No: 17/2011/ITD Dated 24.01.2011

Information Technology (B) Department

11.1. Kerala Government Websites

This part of the document provides the recommended guidelines for the development and management of Government of Kerala (GoK) websites. The primary objective of this document is to ensure that the GoK websites, belonging to any constituent of the Government of Kerala, at any level, are following the common guidelines. It is advised that these guidelines be followed by the various departments of GoK while developing or managing any departmental websites, portal or web-based applications. Compliance to these guidelines will ensure a high degree of consistency and uniformity in the content coverage and presentation and further promote excellence in Government of Kerala web space.

11.2. Website Design and Development

11.2.1. The Government of Kerala has empaneled three (3) Total Solution Providers (TSP s), viz, National Informatics Centre (NIC), C-DIT and KELTRON. Any constituent, which wishes to develop a website, shall raise the request for the same to any of the TSPs oi their choice.

11.2.2. The Constituent to ensure, through appropriate Service Level Agreements, that the website developed by the Solution Provider is as per the 'Guidelines for Indian Government Websites', prepared by the National Informatics Centre (NIC) and adopted by the Department of Administrative Reforms and Public Grievances (DARPG). The details of the guidelines can be downloaded from <http://web.guidelines.Nov.in>.

11.3. Link to State Portal

All websites of Government of Kerala shall be linked to the official state portal

www.kerala.gov.in

11.4. Domain Registration

11.4.1. Every Government of Kerala website should use the sub domain kerala.gov.in. The use of kerala.gov.in is restricted to the constituents of Government of Kerala. The Information and Public Relations Department (PRD), Government Kerala, is the exclusive registrar for the kerala.gov.in sub domain name. It is the responsibility of the Constituent to obtain the kerala.gov.in sub domain.

11.4.2. The step-by-step procedure on how to register to a kerala.gov.in is given! below: -

Step1. Any Constituent of Government of Kerala, which wishes to register to the kerala.gov.in, has to raise a request in the prescribed format. as mentioned in Annexe re 1, to the PRD.

Step 2. The PFID shall process the request, so received from the Constituent, and inform the sub domain registration details to the concerned Constituent

11.5. Website Testing

AIR the Constituent websites of Government of Kerala shall ensure proper 'user acceptance testing' of the software developed to ensure the quality and may choose to obtain a website quality certification from organizations such as the Standardization, Testing and Quality Certification (STQC).

11.6. Website Hosting

The Constituent websites of Government of Kerala must be hosted in the Centralized State Data Centre (SDC) facilities in Thiruvananthapuram with the State-of-the Art facilities, established by the Government of Kerala.

11.6.1. The Data Centre shall have the following facilities: -

11.6.2. Secure hosting

11.6.3. Standard technologies

11.6.4. Guaranteed service levels.

11.6.5. High quality support, operation, and monitoring of Constituents' applications

11.6.6. Data and Application availability seven days a week twenty-four hours a day

11.6.7. Centralized network management and operations capability

11.6.8. The procedure for hosting the website in the SDC is given below: -

- Any Constituent of Government of Kerala, which wishes to host the website in the SDC, must raise a request to the Kerala State IT Mission (KSITM), in the prescribed format, as given in Annexure 3 for allocating the space for hosting the application at the SDC.

11.6.9. The request for website hosting should go from the authorized authority of the concerned Constituent, identified as the Head of the

Department (HoD).

11.6.10. KSITM shall communicate the availability details to the concerned authority.

11.7. Backup

11.7.1. The back-up of the websites shall be taken care at the State Data Centre as per the back-up policy as per the G.O. (MS) No:10/2010/ITD, dtd 05.03.2010, as given in Annexure 3.

11.8. Website Management

11.8.1. The concerned Solution Provider (SP) shall be the Super Administrator for the management of the Constituent website.

11.8.2. However, any Constituent wishes the System Administration to be done from the Constituent side, the Head of the Department of the Constituent shall raise a formal request to the TSP seeking the administrator privileges.

11.8.3. Upon receipt of the request in the prescribed format from the Constituent, the TSP

11.8.4. Website Content Management: The responsibility of management of the content of the website lies with the concerned Constituent. All departments shall appoint a senior level officer in each of the department as 'Web Information Leader' to ensure up-to-date and high quality content on the website as well as timely response/action on the feedback/queries received through the websites, The following Content Management Framework shall be followed by the Constituent to effectively manage the content of the Constituent website.

11.9. Content Management Framework

11.9.1. Content Management System

11.9.1. While the Development of the websites, in order to present the content as per the requirement of the viewer, organize the content in a categorized manner and to retrieve the relevant content efficiently, every Constituent shall ensure a proper Content Management Framework (CMF), which would be web-based, having user-friendly interface. As a part of this, the Constituent shall use a free open source Content Management System (CMS) for management of the content of the website. CMS should support creating and configuring workflows based on categories of content.

11.9.2. The Constituent shall be responsible for "the creation, review, updating, approval and publishing of the content in the website. The user id and password for the content management shall be provided by the SP.

11.9.3. The Constituent shall constitute a Content Management Team to manage the contents of the website for the Constituent.

11.10. Content Management Team (CMT)

11.10.1. Every Constituent shall constitute a Content Management Team for the creation, updation and publishing of the content. Content could be contributed at different levels of the CMT but the same to be approved in only one level and finally published on the portal after finalization.

The CMT shall consist of the following members: -

- a. Content Creator - multiple (at least 2 nos.)
- b. Content Reviewer - multiple (at least 2 nos.)
- c. Content Approver - One No

11.10.2. Roles and Responsibilities: The roles and responsibilities of the various members of the Content Management Team is given below:-

Content Creator

Content can be contributed by any authorized contributor of the Constituent. The roles and responsibilities of the Content creator is given below: -

- a. Responsible for creation of the content for the Constituent website
- b. Editing of the content before resubmission of the same for review and approval

Content Reviewer

Once the content is contributed, it needs to be reviewed prior to its approval. The important roles and responsibilities of the content reviewer(s) are given below:-

- a. Any content that has been created by the Content creator(s) shall be reviewed by the content reviewer.
- b. The reviewer shall modify/edit the content prepared by the creator.
- c. Once the content has been reviewed, the content reviewer shall release the content for the approval.

Content Approver

Once the Content is reviewed, it needs to be approved prior to its release. The important roles and responsibilities of the content approver is given below:-

- a. Shall approve the content after the review of the content reviewer.
- b. Shall be responsible for the release of the content for publishing in the website.

11.10.3. Monthly meetings and review

The Content Management Team shall meet once in every month for the review of the activities undertaken during the current month and shall address the challenges at are being faced by the Constituent.