Chapter-II

Developmental Process of Information Service
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2. Developmental Process of Information Service

Technological revolution in the field of information dissemination throughout the world makes today's people well informed and more concerned with every happening at their surrounding. Information Technology today enables every organisation whether big or small, international or national or local to reach its target people, promote and convince them about their services or products efficiently. Now it is found that every viewer of television whether a small kid or aged person, is aware of every new product, brand and service of different corporate sector organisations like FMCG\textsuperscript{14}, banking, insurance, hospitality industry, telecommunication etc. Now, 'Information Service' has become the utmost necessity of every public related organisation.

Information Service in museums of India is getting priority since this century and its essentiality is well admitted by all museum authorities. They want to implement the service to assist visitors in better understanding exhibits, enjoying activities, make museum popular among common people, students, tourism sectors and also establish museum as a public service institution. To achieve this success, proper strategic planning is most essential prior to final launching of the service. Thorough research has been done on the developmental process of information service in the perspective of Indian museums and its outcomes are given in this chapter precisely.

2.1. Planning and Conception of an Information Service Development

Proper planning is the basic necessity of any successful project or prior to launch any product or service. Competent planning accomplished with the effective selection of mission and objectives to specify what it want to do and achieve assuming its capability, market conditions, and visitors' requirement.

\textsuperscript{14} Fast-Moving Consumer Goods like soap, refrigerator, television-set, food items, cosmetics etc.
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2.1.1. Determination of the Mission Statement

Museum should determine its 'Mission' of work in form of written statements or a plan or guidelines that will state the museum's philosophy, objective and act of service. It should be prepared on the basis of the nature of collection, strength of the museum, its target people and nature of the location it exists. Museum should work on the basis of its mission statement.

Many Indian museums have its written mission statement and are trying to work on the basis of it but majority of museums does not have any mission plan. As a result these museums are not being able to serve people properly and all of its investment in terms of money and manpower is not giving positive feedback.

Museum needs to establish its Mission regarding Information Service for visitors, general people, other museums, user-institutions and also for museum itself. It may be for long term basis, like 2-3 years or short term basis like 1-3 months or more duration depending on the matter that need to inform, nature and demand of target people, strength of collection, information resource and finance. Efficient mission planning can help the museum to select effective modes of information dissemination, run all its activities in scheduled time and getting positive feedback in terms of revenue and good image that will help museum to survive successfully today along with its competitors. Analyses on following sectors are most essential before selecting museum's 'Mission Statement' for serving Information:

<table>
<thead>
<tr>
<th>External Sectors</th>
<th>Internal Sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of collection and nature of location</td>
<td>Inform visitors about exhibits and activities</td>
</tr>
<tr>
<td>Selection of target visitors and institutions</td>
<td>Develop programmes and facilities for visitors</td>
</tr>
<tr>
<td>Information demand and museum's resource</td>
<td>Emphasis on education, culture and heritage</td>
</tr>
<tr>
<td>Uniqueness in museum than others</td>
<td>Publication of information materials</td>
</tr>
<tr>
<td>Public relations and museum awareness</td>
<td>Motivate visitors for repeated visit</td>
</tr>
</tbody>
</table>

Table: 2.1. Sectors need to analyse prior to development of Information Service.
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Box: 2.2. Proposed Mission Statement

Nagaland State Museum, Kohima, Nagaland

The museum is responsible for preserving and disseminating heritage of the ethnic culture of the sixteen major tribes of Nagaland to aware people of the nation and abroad. Museum will exhibit the uniqueness of their lifestyles, arts and crafts, folk dance, folk songs, musical instruments, textiles, ornaments, pottery, basketry, bamboo and cane works etc. all that reflects the socio-culture of all the major Nagas.

Information about all these valuable items will be disseminated through sixteen magnificent dioramas or miniature sets that will exhibit typical village, house pattern and life style along with the life size mannequins of tribes and all the associated objects of their life and occupation. Other galleries will enlighten on different arts, ornaments, basketry, pottery, textiles, rituals and arms. Visitors can get information through labels. The gallery audio show will take visitors in the Naga Village. Folk dance and songs will be performed everyday with full traditional attire by the respective Nagas. Documentary film on each Naga tribe will be shown to visitors in the auditorium in specific hours. Researchers and interested visitors can refer books and valuable historical documents in the museum library. Museum's Information Kiosk will look after all those persons who want to know more about exhibits and Naga culture. Museum's guide will take the responsibility of school students.

The museum will send traveling exhibition to other museums within India and abroad to disseminate information about Naga heritage. Correspondence will be made with the tourism departments and registered traveling agencies. Advertisement in hoarding will be given in the strategic places like way to the city and museum and also in nearby cities. Classified advertisements will be given in local leading newspapers. All this will remind people about different scheduled and special activities of the museum in a regular interval. Museum will publish picture post cards and albums on the tribes both in print and CDs that will be available to visitors. Visitors can take photographs wearing tribal dresses in the tribal village set of the museum and can taste delicious Naga dishes in the museum's restaurant. Crafts and shawls will be available on sale from the museum's sales counter.
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2.1.2. Assessment of the Organizational Capability

Museums need to analyze its every prime sector concern with the Information Service through Strength, Weakness, Opportunity and Threat analyses to fulfil its mission plan prior to take any final decision regarding implementation of the service. In addition, museums also need to assess the present and future requirement or trend of information demand of people through market research. These analyses are the basic requirement for conceptualizing the idea of a successful information service that will assist a museum in public’s dealings, earning revenue and good image and ultimately help in surviving successfully today along with its competitors who have already proceed and achieve success in the field of information dissemination.

A. Operational Capability

a) Whether all exhibits in the museum are labeled with essential information that can attract and give knowledge to visitors?

b) Whether the museum can arrange infrastructure required for dissemination of information?

c) Whether the museum has experts and efficient staff who can look after every requirement of information service? If not, then can museum arrange such human resource? For example, staff for writing and printing of information materials; looking after the maintenance of different electronic implements; coordinating all the services running in a day like different training, workshop, seminar, lecture etc.; interact with target institutions, visitors and people outside the museum etc.

d) Whether the museum can complete documentation of its entire collection both manually and in computer in given period of time?

e) It should well administer that whether the present staff has training and experience in looking after various activities of the museum or not?
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B. Financial Capability

a) It is required to know whether the museum has adequate fund to run itself and its entire activities that are informed to target visitors and have capacity to get it back with profit.

b) It is very much essential to know that how much fund is available for running entire information service, maintaining public relations, undertaking research and development, maintaining human resource and arranging technological supports. It is also required to know how much they can earn from visitors and need to estimate the deficit amount that they need to collect from other sources like sponsors, government grants, donations etc.

c) It is also need to know that in case of any financial crunch is the museum capable of maintaining all its services, for running various programmes, and renovate exhibitions by alternating sources like hiring technology, inviting sponsors, unpaid publicity, contractual or honorary appointment of experts etc.

C. Marketing Capability for publicity of the service

a) Museums need to know how far its information can reach to target visitors and institutions and convince them?

b) It should also need to know how much the museum is familiar with public and what image is imprinted in their mind about museum?

c) Is the product and services provided by the museum will prove useful to target visitors?

d) Is museum is capable of giving advertisement of its exhibits and services?

e) Museum need to assess probable demand of visitors, general people and different target institutions from the museum and whether the museum is in a position to serve all those information to them or not?
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D. Collection Strength

a) It is require to know that whether museum's collection is properly arranged, well documented, preserved and having full supporting information that can satisfy any visitor?

b) It is also need to know that how far museum can use its important object in attracting and alluring visitors in museum?

c) Whether museum's theme of exhibition is attractive and significant to common visitors or not and how far the museum needs to renovate or change its exhibition pattern to attract more visitors.

E. Analysis of the market condition through Market Research

a) Why people will visit the museum?

b) Who are the target visitors and institutions, and what are their expectations from the museum?

c) Who are the competitors, what they are serving and their area of strength and weakness?

d) Is there any uniqueness in museum's exhibits, display and services than others?

e) What are the strength, weakness, opportunity and threat of the museum?

f) What are the overlapping areas between the museum and competitors?

g) How far they can convince people?

h) Popularity or reach of museum among people in a given geographical area?

i) Can museum stand in the competition with other museums and entertainment institutes?
Museum should analyse strategically its position by the 5Ws and 1H model of Lasswell given in the following table:

<table>
<thead>
<tr>
<th>Why does the Museum exist?</th>
<th>Museum needs to think on following items:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>■ target people and institutions</td>
</tr>
<tr>
<td></td>
<td>■ the product and service offered</td>
</tr>
<tr>
<td></td>
<td>■ nature of the locality and area of interest</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What must the museum do to fulfil its mission?</th>
<th>The museum must define its objectives, which must be either short term (3 to 6 months periods) or in special case long term (not more than three year). It must include:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>■ update the information resource of the museum regularly</td>
</tr>
<tr>
<td></td>
<td>■ proper preservation of resource</td>
</tr>
<tr>
<td></td>
<td>■ improve efficiency and efficacy</td>
</tr>
</tbody>
</table>

| How can the museum achieve its long and short-term objectives? | Through the application of a strategy, formulated to achieve the objectives of the museum. Examples of possible strategies are following: |
|                                                              | ■ create conscientiousness regarding the information resource of the museum      |
|                                                              | ■ ensure that entire activity concern with target people are performed smoothly  |

| When should the objectives of the museum be achieved? | From the objectives and strategies, goals must be established. The goals define what to do and when to do it. |

| Who will execute the service and achieve the goals and where? | The final step is to implementation of the goal as project and successfully performed within the time limit. |

Table: 2.2. Strategic Planning
2.1.3. Forces acting upon the Information Service Architecture

After getting the entire scenario related to the development of information service, the museum should think upon the following factors that can interfere with the information service architecture:

- **Users' Demand**

Users' carry a stronger voice in defining the information architecture by pressurizing regularly for modifications in the architecture. This is generally happens due to launching of more user-friendly technology in market or demand for changing the theme of exhibition, new services etc. To satisfy users and to keep them always in confidence, the information architecture must be flexible as possible to permit the integration of innovations into the current architecture. This is not always easy to integrate into the existing information, processing resources quickly. To overcome such situation museums need to watch constantly on market situation and need to prepare itself in advance to serve before the demand breath on shoulders.

- **Cost Management**

The implementation of new projects requires a rigorous economical analysis prior to the implementation and operation of a pilot project. It needs budget constriction in other fields. Therefore, it is very much essential to select such project that can earn adequate revenue after implementation and museum can balance its all fields. Museums also need to control over investment just after the implementation of the service and go for cost effective information dissemination.

- **Quality Improvement**

It is very much essential to hold users and increase visitors because today's facility and service will not attract the same visitors twice or thrice. It needs to introduce updated information using advanced electronic information processing, which must become adherent to the productive processes.
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Data Administration
Correct data administration is very important for achieving consistent and integrated information architecture. Data administration, if well conducted, will simplify considerably the integration and consolidation of data in the museum, reducing reworking and eliminating unnecessary interfaces.

Legated System
Often the need to maintain old systems in operation creates obstacle in modernizing the information architecture or implementing entirely new service. This process delays the application and also increase expenditure. In such consequence, it is better to go for modernizing the existing system with new technology for getting success.

New Hardware / Software Technologies
New hardware / software technologies are very much essential to introduce continuously in the existing system, screening the advantages of previous technologies. It is essential for serving visitors, target people and institutions as per demand of the new technology literate generation.

System Connectivity and Interoperability
In-depth study regarding development of the Information Service in Indian museums is very much essential to justify the use of new technology, its interoperability and connectivity with existing and other systems as well as the new alternatives offered by the market. It is essential for avoiding unplanned wastage of money, misuse of technology and manpower as well as to run all the new and old system smoothly.

Observing Standards
Implementation of information architecture without strict adherence to standard and procedure for the purchase, implementation and development of information resources will be the first step towards total disaster. Therefore, strict observation is very much essential for designing the architecture.
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Information Resource Management
The capacity to manage the information resources of the museum will be a determining force in the implementation of any new information architecture.

Availability of Information Resources
The limitation of the information resources including infrastructure, networking and hardware/software can affect the implementation of the information architecture. For instance, if a given information service cannot be accessed remotely in the desired time, it may be necessary to implement new system.

External Competitors
The pressure from external competitors is regulated by a simple equation, either the internal information service is competitive or it must be outsourced. Therefore, the market must be constantly monitored. This question directly affects the information architecture, as the outsourcing will introduced values and influence from external museums and users.

Chart 2.1. Factors affecting the Information Architecture
2.1.4. Steps in the Development of Information Service

Conceptual Design

It must include the following factors:

- What will be the final product or service offered to the target visitors and what will be the expected results?
- What will be the range of application covered?
- Who will be the target people, institutions, visitors and users of the service?
- Is the service totally new or will it substitute an existing service?
- What is the total cost of the project?

Logical Modeling of Data

It must be performed with the involvement of staff, users of the system, other small museums, experts involved and the project coordinator. It must consider the following essential guidelines:

- Do not work with groups formed by more than ten people.
- Do not model the actual situation. Model should be done on an optimized situation with the future vision.
- Analysis of the relevance of data should be done to the limit. Irrelevant data should be eliminated.
- Need to look for simple solution. Large complex models are difficult to use, requiring great effort to implement without producing adequate benefit.
- Model should be finished with the validation involving all the members of the design group.

Physical Design

The physical design of the database is composed of the following tasks:

- Definition and validation of the service distribution.
- Evaluation of the service characteristics of performance.
- Definition of the data safety and recovery procedures.
- Definition and validation of the operational procedures.
The resources to be allocated to the service must take into account the following costs:

- Cost in terms of necessary manpower for the development and maintenance of the service.
- Cost in terms of manpower contracted from outside the museum for the development and maintenance of the system.
- Cost of hardware and software resources, considering the facilities needed during development and utilization by the users, once the information system becomes operational.
- Indirect costs relative to physical space, travel, etc., needed for the execution of the service.

The revenue and benefits to be produced by the operation of the information system must be evaluated in the following manners:

- If revenue is not produced, it is necessary to estimate the cost reduction by the system operation as follows:
  - Estimated manpower reduction after installation of the service.
  - Cost reduction due to the elimination of function after installation of the new system

- Additional benefits can be quantified in the following forms:
  - Reduction in the time to satisfy the users' needs.
  - Better quality of the services supplied to the users.
  - Reduction in the final operational costs.

Other benefits are:
Increase in the competitiveness in the market due to introduction of new service than offered by competitors.

Tests and Validation
The final tests are made with the objective of checking the performance of the system under real operational conditions.
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© Functional Model
The modeling of the function, which is to be done with the support of the users, should correspond to the definition of the data elaboration. The step consist of:
- Defining the layout of the main menus of the service.
- Defining on-line, electronic and printed information that the system will produce.

© Prototyping
It enables to select the prototype for facilitating the functions for data access by users.

© System Construction
- Final data model and final functional model
- Tested data safety and contingency procedures
- Tested data backup and recovery procedures

© System Implementation
It should be at last assured that the service should be available to all users.

© Maintenance
Once the service enters into operation, continuous maintenance must be provided to ensure the system stability, particularly with regard to alterations.

<table>
<thead>
<tr>
<th>Development Steps</th>
<th>Schematic Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Conceptual Design</td>
<td>......</td>
</tr>
<tr>
<td>2. Logical Modeling of Data</td>
<td>......</td>
</tr>
<tr>
<td>3. Physical Design</td>
<td>......</td>
</tr>
<tr>
<td>4. Technical-economical Feasibility Study</td>
<td>......</td>
</tr>
<tr>
<td>5. Tests and Validation</td>
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</tr>
<tr>
<td>6. Functional Model</td>
<td>......</td>
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<tr>
<td>7. Prototyping</td>
<td>......</td>
</tr>
<tr>
<td>8. System Construction</td>
<td>......</td>
</tr>
<tr>
<td>9. System Implementation</td>
<td>......</td>
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<tr>
<td>10. Maintenance</td>
<td>......</td>
</tr>
</tbody>
</table>

Table: 2.3. Steps in the development of Information Service
2.2. Development of an Information Service

Effective planning helps in the development of a successful Information Service. It is the stage that needs to work with a determined mission by collecting all the raw materials as prescribed in the planning. This process can be done through following stages:

2.2.1. Selection of Modes of Information Dissemination

The first and important job is to select the modes of dissemination to reach common people, target visitors and institutions and also to assist visitors in the museum. Selection should be made on the basis of following considerations:

A. Nature of the Locality

Mode of information dissemination directly depends upon the nature of the locality where the museum is situated. Here major segments are:

1. Rural Area
2. Semi-urban Area
3. Urban Area
4. Metro City or Capital city

All the above areas differ greatly from others in respect of the socio-economic background, education, and technological literacy of target people, infrastructure, operational capability and financial strength of a museum etc. All these factors are essential to consider before the final selection of the modes of information dissemination within and outside the museum.

B. Nature of Collection

A mode of information dissemination is also specific to the nature of collection. As because every theme of presentation needs new approach to touch the sentiment of viewers. Exhibits like archaeological, art and paintings etc. need more emphasis than objects of natural history and physical science that are related to our day-to-day life. Interactive and participatory exhibits are good for science objects but not for any art, painting, archaeology etc. objects.
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C. Nature of Visitors, Target People, Target Institutions and Users
All the museum activities are for visitors or users. Thus, museums need to consider whether the provided services and information regarding exhibits can satisfy people or not and prove useful in their practical life. All these selection must commensurate with the educational background of the target visitors, nature of their acceptance, general demand in their life, socio-economic background etc. For example, if a museum targets students then the museum has to maintain a strong information resource of their exhibits, easy access to users, good library, publication etc. all that support their educational needs. But if a museum targets tourists then emphasis should be given more on entertainment.

D. Financial and Operational Strength
No museum can implement what it wants to serve without strong financial backing. It is also found that many financially strong museums could not able to serve according to its capacity because of its poor operational capability. Thus, both of these is very essential to run a successful museum and all its services. Museum having good operational capability can earn finance by its own effort. Thus operational capability is much more necessary than the finance.

E. Uniqueness in the Museum
To survive in the competition every museum needs to find out its uniqueness over other museums and entertainment institutions. Today's visitors never want to invest money, time and energy to see same thing everywhere and same thing every time in a same museum / place of amusement. Thus, museums need to go for market research for finding what the competitors are serving and what they can serve unlike them that can attract people.

F. Governing Authority
The nature of the governing authority plays an important role in the selection of services. A dynamic authority having optimistic approach and future vision is most essential in Indian museums to serve as per the demand of this century.
### Table 2.4: Modes of Information Dissemination as per location of museum, nature of visitors, target people and institutions, financial and operational strength.

<table>
<thead>
<tr>
<th>Nature of the Locality</th>
<th>Nature of visitors, target people, target institutions and users</th>
<th>Financial and Operational Strength</th>
<th>Modes of Information Dissemination</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tourists</td>
<td>Students</td>
<td>Local People</td>
</tr>
<tr>
<td>Rural</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Semi-Urban</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Urban</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Metro/Capital City</td>
<td>✓</td>
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</tbody>
</table>

*Table: 2.4. Modes of Information Dissemination as per location of museum, nature of visitors, target people and institutions, financial and operational strength.*
2.2.2. Information Updating

After the selection of different modes of information dissemination as per target people concerned, the major job comes to update the information resource of the museum's collection. It can be done in two ways—Manually and through computer. These two are briefly discussed below:

- **Manual Information Updating**
  All museums whether small and big, rural or of metro city's, financially very weak and very strong, the primary job is to update all information related to its collection manually at first. It can be done as follows:

- **Resource Collection**
  The initial stage is to collect all the related information regarding objects present in the museum's collection that serve for both curatorial purpose and for serving visitors as per their expected demand. This can be done as follows:

  - **From Field Record Book**
    Information that is collected at the field, like habitat, climatic condition, locality, use, material composition, local name, associate people etc.

  - **Experts**
    Additional information regarding the object can be collected from the experts of the museum or from the members of the expert committee of the museum.

  - **Bibliographic Reference**
    In addition to above sources, information about objects in the museum's collection can also be received from various books and journals.

- **Undertaking research**
  In case of entirely new objects, museum authority needs to collect information by thorough research on the respective object (s). This can be done through appointing researchers or by experience and qualified museum staff.
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Documentation

Information collected from the above mentioned sources are to be documented in the basic record books of the museum, like Accession Register / Card, Catalogue Books / Cards, Index Cards etc. This information can be referred for the official purpose, preparation of labels, writing popular literature, monograph, undertaking research, and to serve information to the enquirer.

Documentation is the textual version of image and registering its physical traits. It exactly means making of records and documents. Documentation in museum management is a written accurate recording of information about objects, which are acquired or acknowledge as a property of a museum in a methodological and scientific way. Documentation of information related to museum's collection is the important professional responsibility to ensure all items that are accepted temporarily or permanently by the museum are properly and fully documented to facilitate provenance, identification, conservation, preservation and display.

The International Committee for Documentation of the International Council of Museums (CIDOC) has provided an explication of documentation as — “the records, which document the creation, history, acquisition by the museum and subsequent history of all objects in a museum collection. Such records include provenance and provenience documents, acquisition documents, conservation reports, cataloguing records, images and research papers, both created by the holding institution and by previous owners or independent researchers, etc. Also used for the process of gathering this information”.

The definition guides the categories of data required to serve information for different purposes. At first data should be recorded either in bound ledger book, single card or multiple cards, as individual document sheets or in computer. Here process of documentation of important data regarding an object that need to undertake within a museum is given in brief:
Steps of Documentation of museum objects

Entry in the Entry Register

It must include the following items:

- Provincial sequential number
- Date of arrival, name and address of the owner
- Identification
- Purpose for entry
- Temporary storage location
- Name of museum employee receiving and/or bringing the object

Three options are possible concerning the entry of the object

- It will not be acquired for the collection
- It will be accepted as loan
- It will become the museum’s property.

If the object will not be accepted by the museum—in the same register the following has to be recorded:

- Date of return
- Reason for return
- Name and address the object is sent
- Name of the recorder

After finishing registration procedure classification is done on the basis of objects as loan for temporary exhibition and objects of permanent collection. The object that becomes the museum’s property, is allowed a unique inventory number, which is also recorded in the register. Number affix to the objects but not always permanently. This rule can be modified as per working flexibility of individual museum. In general, an accession numbers is given to objects that are accepted in permanent collection. For a loan object, a temporary number in a tag is given. Every object should have number in same position.
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Accessioning

In India different museums are using different documentation procedure, some are maintaining Accession Register, preserving record in Accession Cards for easy handling, for example the Indian Museum, Kolkata whereas some are maintaining Catalogue Card for example, the Manipur State Museum, Imphal. Whatever procedure museums are maintaining they should keep in mind that all information regarding an object should entered and preserve in the record book or card.

The International Committee for Documentation of the International Council of Museums (CIDOC) has provided guidelines for storing information about museum's objects. It almost covers all the information categories and thus museums of India can follow these guidelines to document information about its objects. Museum may also include different information sectors from these guidelines in their existing system according to their needs. The guidelines incorporate the following elements (source: www.cidoc.icom.org):

Format of the Information Group and Information Categories:

1. Acquisition Information

- Acquisition Method
- Acquisition Date
- Acquisition Source

2. Condition Information

- Condition / Examination History / Physical Condition
- Condition Summary / Condition Note / Condition Narrative
- Condition Date
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3. Deaccession and Disposal Information

- Deaccession Date
- Disposal Date
- Disposal Method / Disposal Type
- Disposal Recipient

4. Description Information

- Physical Description
- Specimen Status

5. Image Information

- Image Type
- Image Reference Number

6. Institutional Information

- Institutional Name / Organisation Name / Body Name / Custodian Name
- Institution Sub-body Name / Organisation Sub body Name / Department Name / Sub Body Name / Custodian Sub Body Name
- Institution Address / Organisation Address
- Institution Country

7. Location Information

- Current Location
- Current Location Type / Location Status / Location Description
- Current Location Date
- Normal Location / Original Location
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8. Mark and Inscription Information

- Mark / Inscription Text
- Mark / Inscription Type
- Mark / Inscription Description
- Mark / Inscription Technique / Mark / Inscription Method
- Mark / Inscription Position
- Mark / Inscription Language
- Mark / Inscription Translation

9. Materials and Technique Information

- Material
- Technique / Manufacturing Methods / Creation Process / Decorative Techniques
- Part or Component Description

10. Measurement Information:

- Dimension
- Measurement / Numeric Value / Dimension Value
- Measurement unit
- Measured Part / Dimension Qualification / Measurement Remarks

11. Object Association Information

- Association Place
- Association Date
- Association Group / Person Name / Folk Name / Organisation Name / Nation
- Association Type
- Original Function / Use
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12. Object Collection Information
- Collection Place / Excavation Place
- Collection Date
- Collector / Excavator
- Collection Method

13. Object Entry Information
- Current Owner
- Depositor
- Entry Date
- Entry Number
- Entry Reason / Entry method

14. Object Name Information
- Object Name / Specimen Name / Common Name / Local Name / Classification / Object Category / Object Group
- Object Name Type
- Object Name Authority / Object Name Information Source

15. Object Number Information
- Object Number / Accession Number / Inventory Number / Catalogue Number / Registration Number
- Object Number Type / Identity Number Type
- Object Number Date / Accession Number Date / Identity Number Date / Inventory Number Date / Catalogue Number / Date of Registration

16. Object Production Information
- Production Place
- Production Date / Period
- Production Group / Person Name
- Production Role
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17. Object Title Information
   - Title
   - Title Type
   - Title Translation

18. Part and Component Information
   - Number of Parts or Component / Amount / Number of Items / Quantity
   - Description of Parts and Component

19. Recorder Information
   - Recorder
   - Record Date
   - Authority

20. Reference Information
   - Reference
   - Reference Type

21. Reproduction Rights Information
   - Reproduction Rights Note
   - Reproduction Right Owner

22. Subject Depicted Information
   - Subject Depicted / Subject Content
   - Subject Depicted Description

23. Additional Information
   - Access to Visitors in Cyber Museum's Kiosk
   - Gallery Wise Presentation
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♦ Computerized Information Updating

Computer is the ultimate necessity of all museums because it deals with enormous information resources as well as public services. Though 90% Indian museums today, do not have any computer but it is expected that this percentage will reduce rapidly. Computer can reduce work pressure at great extend and also can provide highest standard of flexibility in information retrieval.

♦ Infrastructure required

Serving information through a computerized system need hardware, software and network system. List of these technologies are given below:

♦ Basic Hardware

Requirement of the hardware can be divided into two categories. First, general hardware and second, hardware essential to run network systems.

♦ General Hardware

It includes following items:

1. **Personal Computers (PC)**—Monitor, Central Processing Unit, Keyboard, Mouse and Modem with Pentium 4 processor or 233MHz or more CPU, 64 MB-128MB RAM.

2. **Scanner**—Good and high resolution scanner is required for scanning images of exhibits, rare documents, manuscripts, books, miniature paintings, fragile and dilapidated objects etc. for preserving information in CDs, making microfilm, documentation, loading images in the website and making publications.

3. **Printer**—For getting print or providing printout to visitors or users.

4. **Floppy, CD (Compact Disk), CD Writer and Drive**— these are required for storing document files, watching Compact Disk, copying files, create multimedia presentation, making documentary etc.
5. DVD (Digital Video Disk) and Player — It is now in the market, much more advanced than the CD player / writer. It gives hundreds time better quality, high resolution, more space and more longevity than CDs. More audio and visuals can be store in a DVD than any CD. Thus it is very much useful for audiovisual operation and storage of large volume of information about objects and other required information.

- **Hardware essential to run network systems**

- **Sender and Receiver Hardware**

  **1. Workstation:** Data communication is done by various communication devices and software inter connected for information exchange. The device used to communicate a data communication network is called workstations. These workstations may be computer, terminal, printer, telephones etc. each of them are connected in a data communication network mode.

  **2. Multiplexer:** It enables data transfer through communication channels. For example, telephone lines.

- **Local Data Communication Networking or Local Area Network (LAN)**

  LAN is the communication network, it enables museum to share information among its number of system present in different departments located in the same building or cluster of buildings. It is composed of following hardware:

  **A. Transmission Channels:**

  1. **Physical Media:** It includes Coaxial Cable, Ethernet type cables, twisted-pair wires and optical cables, having optical fibres.

  2. **Repeaters:** It is signal amplifier equipment extend the physical dimension of the network.

  3. **Router:** It links two or more network and convert one communication protocol to other. It joins together logically different segments, redirect messages to other networks.
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4. **Bridge**: It permits the interconnection between local or remote networks.

5. **Gateway**: It permits interconnection between networks, which have different topologies, or use different operational systems. It also performs protocol conversion.

6. **Hubs**: It links two local sub-networks and isolates data traffic between them using different communication protocols and facilitates data transfer.

7. **Ethernet Card**: It provides PEER to PEER connection in between two to three computers and facilitates multi-user and multi-tasking operations.

8. **Radio Waves**: Normally used for voice communication

**B. Network Interface Units**

It connects each device in the LAN network to share transmission.

**C. Server**

It is a dedicated computer that controls one or more resources. This contains both hardware and software interface for LAN. Three major categories of servers used in LANs, these are:

1. **File Server**: It is used to share storage space for files, give periodical backup and provide gateway to other servers within and between LANs.

2. **Printer Server**: It is used to handle printing works of all workstations connected in the network.

3. **Modem Server**: It is required to connect other networks or simply to use a telephone. It is used to share resources among all connected workstations in a network.
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Internet Connection

Internet connection within the museum requires following technology:

1. **Modem for Dial-up Connection**: It connects host machine with the Internet. Modem converts digital signals into analog for transmission facilities. At the receiving end, a modem performs the reverse function and converts analog signal into digital forms in minimum 9600 to 28800 bits/second. Now it is available in-built with the PCs.

2. **Telephone Line**: The telecommunication software allows host machine to communicate with the Internet host through telephone line. The line connects with the Internet modem and pass signal to the computer modem.

3. **Internet Service Provider**: To connect with Internet via telephone line the host computer needs to enroll in the Internet Service provider like VSNL (Videsh Sanchar Nigam Limited) in India.

Figure 2.1. Multi-accessible Centralized database in a network

Chart 2.2 Data Communication Using Modem
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♦ Basic Software

Software is the set of instructions requires for the construction and running the entire information system. It is of two types—Programming Software and Operational System:

A. Programming Software

Many programming languages are now available in the market that can be used for different purposes. A list of these languages are given in the following table with its nature of work that can be used for developing program for storing and retrieving information:

<table>
<thead>
<tr>
<th>Language</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C Language</td>
<td>It is a general programming language, used for designing a set of programme</td>
</tr>
<tr>
<td>Visual BASIC</td>
<td>Object-oriented programming language for Windows applications</td>
</tr>
<tr>
<td>PL/I</td>
<td>Scientific-commercial programming language introduced by IBM to provide a unique alteration for both FORTRAN and COBOL that are for Scientific and Commercial programmes respectively.</td>
</tr>
<tr>
<td>Oracle</td>
<td>It is widely used for programming server to connect series of computers in a network.</td>
</tr>
<tr>
<td>HTML (Hyper Text Market Language)</td>
<td>It is a programming language useful for designing web pages and website.</td>
</tr>
<tr>
<td>PHIGS</td>
<td>It is 3D graphical programming language</td>
</tr>
<tr>
<td>GKS</td>
<td>It is a 2D graphical programming language</td>
</tr>
<tr>
<td>Commander and Lightship</td>
<td>Integrator software for the development of executive Information Systems</td>
</tr>
<tr>
<td>Corel, Photoshop, DTP</td>
<td>Programming language for graphical designing, DTP (Desk Top Publishing) works that requires very much in museums.</td>
</tr>
</tbody>
</table>

Table: 2.5. List of Languages or Software
B. Operational System

The common Operational Systems available in the market, compatible to PCs that can be used for computerized information management, documentation of objects of museum’s collection and its access, are given in the following table:

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Operational Systems</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro-Computers</td>
<td>MS-DOS / Windows 95, 97, 2000, XP</td>
<td>Mono-user system based on objects, very much user friendly and corresponding to 70-80% of all Operating Systems in use in PC. Windows operates on top of MS-DOS, an operating System produced by Microsoft.</td>
</tr>
<tr>
<td></td>
<td>UNIX</td>
<td>Multi-user and multi-tasking operational system, permit multi-chaining of processes.</td>
</tr>
<tr>
<td></td>
<td>Windows/NT</td>
<td>Multi-user, multi-tasking, process multi-chaining, 32 bits operational system. It can be used in server architecture.</td>
</tr>
<tr>
<td></td>
<td>Linnux</td>
<td>It is most suitable for information handling and maintaining security system</td>
</tr>
<tr>
<td></td>
<td>OS/2</td>
<td>Multi-user and multi-tasking introduced by IBM in 1987. It is extremely user friendly with multi-chaining of processes and multi-tasking.</td>
</tr>
<tr>
<td>IBM Mainframe</td>
<td>MVS</td>
<td>Multi-user and multi-tasking operational system, permitting multi-chaining of processes</td>
</tr>
<tr>
<td></td>
<td>MVS/ESA-AIX</td>
<td>Multi-user and multi-tasking operational system, permitting multi-chaining of processes</td>
</tr>
</tbody>
</table>

Table: 2.6. Operational System for Microcomputer and IBM Mainframe.
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Methods of Data Entry

A. Keyboard Input
Here typing the Keyboard of a Computer makes data entry. It is a very slow process. In double keyboard-input method, data is keyboarded by a staff into a text file (word processor software). Here a unique identifier number is affixed to the object, and then the data is keyboarded again into the database by another staff. This system is used in the Canadian National Collection of Insect, here 109 specimen recorded per day. Another system of Keyboard entry is direct entry from record into the current objects and then modification as per requirement. It is faster than earlier process.

B. Speech Recognition Software (SRS) Input
It is very effective digitally data entry process useful for large-scale data entry through speech recognition software. Now in India any financially sound museums can go for implementing this software for entering huge information about their enormous collection as it is cost around Rs. 10,000 (approx.). It only requires a microphone as an additional hardware.

In the SRS input method, data is entered into a spreadsheet using the spoken tab key command or using the keyboard tab key to move through the fields. For empty fields the tab key need to press twice. The data is read into SRS in a precise field and can be corrected as required. Unique identifier number is then printed on labels and affixed to the object.

C. Automatic Replication
It is useful for new acquisitions in lots containing identical collection and locality data. In this process a customized replicating subroutine is incorporated into the database, consisting of a separate database. The subroutine then generated duplicate records of the data and automatically assigned each record a unique identifying number.
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**Computerized Documentation**

Using relevant software and hardware mentioned above museum can furnish documentation of its entire collection in computer. For Photographic documentation, all objects are need to scan with higher resolution and set in the proper place of the documentation format. It is required to store in such format so that information can be retrieve very easily and quickly. Secured storage of all the documented information is very much essential in form of both hard and soft copy.

**Multimedia Presentation**

All aspects of a museum, its galleries and important objects can be recorded in the audio-visual format maintaining a strong, useful and attractive theme and story line. It can be done in three formats:

A. **General Presentation**: Lucid presentation on the history of museum, its different galleries, important exhibits and popular activities etc. It is for general visitors and can be shown prior to the entry in different galleries.

B. **Specialized Presentation**: Presentation on particular gallery or theme of that gallery, like, scripts and its translation written in important manuscripts, on various sculptures, pillars, coins etc. present in the museum's collection. It is difficult to tell every visitor in the museum orally. In addition, presentation can be made on objects of museum's collection that is not possible to show visitors, like gold objects, gems and jewelry, rare, fragile and dilapidated objects etc. This type of presentation can be prepared for specialized visitors and can be shown as special show taking entry fee.

C. **Presentation on Associated Information**: These are the films on historical periods, site, excavation, expedition, in situ condition of objects, monuments, wild life etc. This type of presentation can be shown to general visitors in special hours.
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2.2.3. Electronic Systems Development

Dissemination of information through various electronic implements is done in three major modes—Audio, Audio-visual and mechanical demonstration. Appliances required for these modes are very costly and out of reach of many museums in India. It is found that many electronic implements that are fruitfully using in many museums abroad are beyond imagination of maximum number of Indian museums. For example, Radio Broadcast Loops. As a result emphasis has been given during the research on finding those electronic implements that can be used in average Indian museums. Following developmental procedures are required for these three modes:

Audio Systems

Recording of voice and playbacks on specified theme are required in case of Audio System, other than technical implementation of appliances required for different audio-systems. These appliances need to purchase either directly from the market or need to develop in the museum's workshop with number of machinery or can give order / contract to reliable company / big museums. Recorded voice is played in these audio-systems for informing and entertaining visitors. For example in Guide-o-phone, that visitors can hear by pressing a button and Gallery Audio Shows, in which a group of visitors in a gallery can hear a guiding lecture on that gallery in specific interval of time. There are following steps that required undertaking before final recording:

1. Write-up of the Theme
2. Translation in required languages (Indian and Foreign)
3. Approving the Copy from the competent authority
4. Voice Selection (Male / Female Voice)
5. Recording with appropriate supporting music and Editing
6. Store in Compact Disks in more than two sets

15 Text or manuscripts of the theme
Audio-visual Systems

Audio-visuals are most effective and attractive modes of dissemination of information. This may include Film Projection System within the museums' auditorium or within specific gallery (ies) on various themes like, on the mythology of sculptures, habit and habitat of animals' etc. To arrange such programme a museum needs to collect videocassettes or CDs on the desired field. This can be prepared by museums itself or they can purchase readymade cassettes or CDs. Museum can take following steps in this regard:

A. Film Making in Videocassettes / CDs / DVDs

- Selection of theme
- Research and Collection of Data
- Copy Writing
- Approval of the Proof / Manuscript
- Selection of the site, dates and time
- Selection of Private Agencies or hire a trained Audio-visual technicians or send museum's technicians
- Shooting
- Editing
- Addition of Audio
- Final Editing
- Approval of the visuals
- Storing in number of copies
- Arrangement of the Audio-visual players within galleries or auditorium

B. Purchase of readymade cassettes on relevant theme

- Natural history
- Wild life
- Historical Sites
- Excavation
- Expedition etc.
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© Mechanical Demonstration

This are mainly used in the Science and Technological museums where mechanical demonstration is essential to interact and communicate with visitors. Here scientific phenomenon can be explained with the help of working models. Participatory and interactive exhibits as well as mock-up models can do mechanical demonstration.

In India these objects are present in many science and technology museums like museums under the National Council of Science Museums. These museums developed such type of exhibits in their workshops. For example, in the Nehru Science Centre in Mumbai, Birla Industrial and Technological Museum, Kolkata, National Science Centre, New Delhi etc. Experienced engineers look after the manufacturing and development of these exhibits. Other than this, interested museums can give contract to any reliable company or above mentioned museums to provide them the mock-up or interactive exhibits based on given theme. These can be developed by taking following steps:

- Theme Selection
- Discussions with engineers of the museum / Company
- Inviting Drawing / Plan / Sketch of the entire set up with raw materials and budget
- Approval of the Drawing / Plan / Sketch with budget plan after proper scrutiny by the museum’s committee
- Preparation of the miniature interactive / participatory exhibits / mock-up model
- Evaluation by group of visitors, experts
- Final approval of the project
- Actual model making
- Practical Demonstration
- Evaluation by the jury visitors and experts
- Approval for positioning in the gallery
- Preparation of instruction label
- Giving training to demonstrators for operating exhibits and guiding visitors.
2.2.4 Development of allied modes for Information Dissemination

In addition to the manual, computerized and electronic ways of information dissemination's, museum can utilize traditional and outreach media to inform people and should follow the steps given below prior to develop the programme:

1. Selection of theme, duration and time
2. Selection of artist/experts/judge/staff/volunteer/target institutions/candidates
3. Communicate with the respective artists/troops directly or through agencies.
4. Completing Agreement procedure for a fixed period of time.
5. Arrangement of the show, accommodation for artists and invite sponsors.
6. Giving advertisement in local newspapers, radio and television in daily event column, giving news release before a week and during the programme, giving posters, banners and hoarding in various strategic locations etc.

Arranging Cultural Programmes on Performing Arts

Cultural programme is the traditional and best media for informing viewers about the rich cultural heritage of the country. Museum can organize cultural programmes on non-material culture or performing arts like classical music and dance, recitation, folk songs, folk-dance, folk-theatre, martial art etc. in its auditorium during or after the museum hour, once or twice in a month. It can be arranged daily for example, in November to February targeting tourists in pick months, April to June targeting students during the vacation period or July to September to attract people in the Lesser Visitors' period. Big museums alone or as a group can organize big show on above items together as a cultural night.

Organising Events

Though it is a corporate functioning and ninety percent of museums in India do not have so much funds to think for it but still few potential museums are in India that can organize events solely or in association with other organisations. Events can enhance image of museums and increase knowledge of people about museums. Example of two events are given overleaf that museum can organize:
School Contest

Today’s education system is very much influenced by the social participation, publicity and wide outlook. Museum can easily take the opportunity to organize competitions on quiz, drawing, classical programmes—dance and music, extempore etc. within the museum or in wider sense they can book a slot in Television Channel.

Event Sponsorship

Museum can sponsor cultural programmes, exhibition and festivals like Sanhati Utsav, where large gathering of people can be expected. Here museum can share views with visiting people.

Celebrating Festivals

Any museum can take unique effort to celebrate Pongal, Holi, Beishakhi, Vishu of South India, Bihu of Assam, Van-Mahatsava, Idd, Buddha Purnima, Diwali and many more regional festivals in respective regions. One of such effort is taken in Kolkata, by the Indian Museum. Here in every year on the eve of ‘Holi’ festival the museum organizes a beautiful cultural programme, known as ‘Basant-Utsava’.

India is rich in its food culture and heritage. Museums at least once a year can organize food festivals on our traditional and regional food items inviting traditional chefs. Other than the conventional food festivals, museum can also organize festival on such foods, which are taken for specific purpose like as medicine and in special festive occasions or food that are taken in specific months. In the Veda we find the name of many foods and drinks that are taken in the specific month to adapt the body with changing seasons and many foods and drinks are taken against specific diseases. Fair can be arranged on these themes and give opportunity to city people to know and taste various food items.
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Organising Exhibitions

Museums can organize a wide range of exhibitions within and outside the museum. Many museums in India organize variety of exhibitions each year on history, culture, paintings, musical instruments, textiles etc. in addition museum can also organize temporary exhibitions on Indian rituals and ceremonies, traditional symbols, Vaastu-Sastra, dresses and costumes, masks and headdresses, ornaments, martial art etc. with wide publicity campaign.

Cultural Exchange

Organizing programmes within the museum is not enough. To reach people around the globe, museum needs to exchange its ideas, history, culture and evidences that it content with the people of own city, different cities of India and abroad. This exchange can be done by sending exhibitions or group of artists associated with the museums or videocassettes to other museums and vis-à-vis or can invite and travelling exhibition and regional performers through other museums. Through this effort information of remote corners can spread throughout India. Exchange of Annual Reports on activity will also generate interest in other museums to organize similar events.

Organising Training and Workshop programmes

Museum can organize wide ranges of training courses on cultural, academic, technical aspects, craftsmanship, painting, performing arts etc. in specific period of a year for target people. Experts can be invited for giving training.

Guide Service

Above all guide service is mandatory in every museum and no other modes can substitute it. But for effective guide service museum needs to select guides who have well knowledge on the subjects of the museum's collection. Proper training should be given to them in dealing with visitors and explaining the exhibits. Moreover, it should be well informed to visitors that where they request for guide and at what time.
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2.2.5. Internet and Dissemination of Information

Museums can launch its Website or can put information in the specific web pages of different portals for virtual visitors. Through the Website museum can reach and entertain those persons, who could not able to come in museums, like old and invalid people, and to those people who resides in other countries, far away from their own root and want to see their country's treasure.

(#) Steps in Development of a Website

While developing own website museum's need following requirements:

◆ Technical Requirements

(#) Permission and Registration

Authorized service provider does the entire registration of the site. In India they are the private body and worked as an agency. Interested museums can contact their nearest agency for construction and registration of their website. It is done as follows:

1. Museum at first needs to select a name of their site that is unique, easy to search and remember.

2. It should be thoroughly searched to assure that no other institution has using the same name.

3. The Service Provider Agency will then register the selected name of the museum in the respective site as .com / .org organisation of India and load the name in different portals.

4. The Agency can develop entire pages of the museum as per demand with or without multimedia or with guided tour and set other requirements as well as different facilities in the site.
Copy Right and Information Security

At present there is no Internet Information Security Law in India to save information piracy, wrong claims and misuse of information. All information provided in the Website is public, and for common use. Museum can take following measures to protect their valuable information as copyright:

1. Access to important information both in text and image should be given through specific password that can be available to users after paying nominal charge through Credit / Debit Card System.
2. Warning should be given regarding legal action taken by the museum in case of wrong claims, information piracy and misuse of information.
3. Images should be given in low resolution so that it can not be used for individual publication.

Required Expenditure

It varies greatly from an agency to agency and as per requirement. The total cost depends upon following criteria:

1. Number of pages
2. Number of images
3. Paid systems
4. Conferencing facility
5. Multimedia used

Technology Required

Netscape, Sun Micro-system and Microsoft provide some common commercial solutions, which may help museums for making their Website. Two kinds of computers are commonly used to make web site: one that run on Microsoft's Windows NT operating system and other that use a variation of the UNIX operating system.

Using these museum staff can construct different pages of their site that can be deliver to the respective Agency for registration only and can save money.
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♦ Arrangement from Museum's side for Website

1. Computerized documentation of museum objects with colour photographs

2. Regular selection of new themes for presenting museum attractively.

3. Website with multimedia can give overall demonstration or guided tour to the virtual visitors before coming in the museum. It is also useful to inform and entertain both visual and hearing-impaired visitors.

4. Selection of target group is required on the basis of the mass interests, to satisfy the virtual visitors by serving accordingly.

5. Need to make provision for user friendly\(^\text{16}\) programme like information helpful for school students, teachers, research scholars, tourists, and entertainment for housewives, disabled people etc. Museum should also give attention to the special visitors like fashion designers, architectures etc. by providing them an ethnic platform.

6. An effort should be made to provide information in such formats that are useful to hearing or visually impaired users because next to television Internet surfing is the increasing entertainment for them.

7. Site should be provided with the 'Communication Box' where user can put their comment and question with their e-mail address so that museum can get the feedback of their site and can also communicate with him/her.

8. Museum should provide all the associated information in the 'Museum New' Section to inform virtual visitors about its current activities.

9. Essential aspects of website are—modify the site at regular interval, look after the message box everyday and give reply of each query.

\(^{16}\) Programme or item according to the liking of expected visitors.
2.3. Line of Information

Line of information is the series of directional landmarks required to indicate the way to approach a museum from anywhere in the city, welcome visitors in a museum and guide them to see exhibits starting from the entry into a museum building to the last exhibit of that museum. This line is very much essential to inform city people and to whom who is passing in front of a museum building about the lively and friendly existence of the museum. Inside the museum this line will help visitors to see different galleries one by one and enjoy every show / programme / activity of their choice.

2.3.1. Within a museum

Maintaining a line of information is essential inside a museum from its entrance to the last exhibit of the last gallery. This will inform visitors one by one about the museum and help them to find positions of different galleries, basic amenities, time and venue of different programmes etc. Here ten different stages of this line are given below:

1. Signboard (s) at the entrance of a museum / museum campus
   It is very important to inform persons who are passing in front of a museum and willing visitors about the name, content of the museum, date of establishment, main attractions etc. to attract them inside.

2. Information Board at the Entrance, Ticket Counter, Reception Desk
   This board should be furnished with all the basic information like timing of the museum, closing day, entry fee, photographic charges, time and venue of guide service, scheduled and special programmes with entry fee, dos and do not etc. in bold and attractive letters to draw attention of every visitor.
Chapter: 2. Developmental Process of Information Service

3. Manual Information from the Information Kiosk, Reception Counter
This should be the first interacting point in between visitors and museum before the entry into different galleries. Here all the basic information should deliver to visitors and give reply of visitors' queries. Appointment can be fixed here with respective authority for specific information. Here all the necessary information materials like gallery plan, folders, guidebook, CDs etc. and other popular publications should be displayed so that visitors can see, read, take the free materials and can purchase according to their choice. The counter may provide guide-o-phone to visitors.

4. Directional Information Board at the strategic locations
Directional Information Board should be furnished with the information about the location of different galleries, its content and important attractions, location of auditorium, show time and other amenities in local language, Hindi and English. It should be placed in the strategic locations within the museum like central gathering point, corridors, junctions and bifurcation.

5. Multimedia presentation / Hourly Introductory lecture
Museum can arrange multimedia presentation within its auditorium if it is located near to the entrance or in a well-accommodated room prior to the entry of visitors in different galleries in a regular interval of time. In this presentation museum can provide an overall idea about the museum. Instead of the multimedia presentation museum can offer guiding lecture at regular interval of time to give a preview of museum to visitors.
Chapter: 2. Developmental Process of Information Service

6. Caption Label with Picture of most attractive objects of the gallery, at its entrance

Caption labels with picture should be placed in front of each gallery to inform visitors about the nature of collection and attract them inside.

7. Introductory, Group and Individual Label

Introductory label should be accomplished with the history and theme of the gallery, highlight important exhibits, its attraction and significance. It should be written in brief, lucid and simple language without unnecessary jargons and technical terms so that all visitors can understand it. It should be placed in such a way at the entrance so that it can draw attraction of every visitor.

Group labels should speak about the importance of the group of exhibits and Individual labels should provide basic information about that particular object. Sometimes individual label can be descriptive in nature.

All the labels should be written in three-language system— Local, Hindi and in English language.

8. Interactive and Participatory exhibits

In science museums theme of the exhibit can be well demonstrated by the interactive and participatory exhibits. Visitors can get the practical knowledge through these types of exhibits.
9. Gallery Information Service

This includes Gallery Publication / Gallery Audio-guide show / Video-show / Slide show / Computer access etc. Provision should be made to provide publications on the gallery in form of folders when visitors enter into that particular gallery or he/she may ask to return the folder after completing the gallery visit. Provision can also be made within the gallery to display publications related to the exhibits in that gallery and allow visitors to read it and purchase it from the sales counter or take photocopy of it from the library.

Museum can arrange a projector in the gallery where slides audio-visual presentation can be shown to group of visitors in specific hours.

Simple PC or Touch screen computer(s) can be placed within the gallery where visitors can access information about exhibits displayed in that gallery.

10. Reference Library

Museum library should collect books and journals where information related to objects can be found and documentation of books and journals should be made in reference to the museum's collection in addition to normal way of cataloguing of books and journals.
2.3.2. Line of Information outside a Museum

Maintaining a line of information is very much essential outside a museum to aware the existence of museum in a city, inform about its activities in the service of common people and to serve as a pathfinder. This line should be drawn from different busy locations of the city to different ways to approach a museum. It helps to reach large number of people and also help them to find the location of the museum. Here eight different stages of this line are given below:

<table>
<thead>
<tr>
<th>1. Hoarding, Signboards and glow signs outside the museum premises, strategic locations and way to the museum</th>
</tr>
</thead>
<tbody>
<tr>
<td>This should highlight the name of the museum, its content, present activity, importance, attractiveness, offers and discounts, date and time of activities / programmes, artists, chief guest, trainers etc. Prior to give information in the hoarding and signboards an advertisement copy needs to prepare and sanction from the concern authority. After that consultation is required with an Advertisement Agency to hire a space for giving advertisement in desired locations for certain period of time. It should be given in advance of the scheduled programme.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Newspaper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newspaper reaches a large number of people everyday. Museum can utilize this media for giving classified advertisements in the Daily City Event column, publishing articles and news release and can enjoy unpaid publicity. Museum can also give detail advertisement as per its capacity to inform about its various exhibitions and other public participatory programmes. This process requires a good Advertisement copy written in brief and impressive language with or without images, mentioning all related information. News release can be given just before, during and just after the event but advertisement should be given in advance.</td>
</tr>
</tbody>
</table>
Chapter 2. Developmental Process of Information Service

3. Posters, Banners, Leaflets

These are the useful media for informing people outside museums. This should be given in well advance to the particular occasion in different strategic locations like in tourists' spots, other museums, amusement parks etc. Posters should be made attractive to draw attention of viewers.

4. Invitation Card, Direct Mail, e-mail

Invitation Cards are required to send to respective persons, delegates, speakers, chief guest, target institutions etc. In addition museum may communicate with its target institutions like different schools and colleges, other museums, respective persons as well as regular users and members through direct mail or e-mail.

5. FM Radio

It is now highly popular in Indian cities, suburbs and rural areas. Good percentage of people everyday listens 24-hour programme of FM channels. Thus, it becomes a good media to inform people about public participatory programmes. Museum can inform about its temporary exhibitions and special public friendly activities to audience through any popular FM Channel. Other than FM, local radio waves can also be used in this purpose.
6. Television

Television advertisement is the very good media for informing people, but it is a costly media and maximum Indian museums are now not in a position to invest huge amount in television advertisement. Museums can go for unpaid publicity in different television channels, like news coverage on exhibition, opening or renovating gallery, new acquisition, excessive visitors day etc.; news release on coming and ongoing happenings; news telecast in daily city event category of programmes for exhibitions, training, and other public participatory programmes etc.

7. Over Telephone and through SMS

Telecommunication is the fastest media to inform people. Efficient telephone operator can provide basic information about the museum to the enquirer on phone. Now SMS has created a revolution in informing people. Museum can take help of cellular companies to provide information about its special exhibition through bulk SMS to all subscribes of those companies.

8. Website / Web page

Through museum's website and web pages information about the museum, its major exhibits, temporary exhibitions, seminars, different courses and other activities etc. can be given to virtual visitors throughout the world. Museum should provide a query sheet in its website so that interested visitors could use this option for asking any query or giving comments.
Case Study: 4.

Natural History Museum of the Bombay Natural History Society
Hornbill House, Dr. Salim Ali Chowk, Mumbai–400023

Date of Study: 22.05.2001*  Website: www.bhhs.org
Source of Information: Dr. (Mrs.) S. Unnithan, Scientist In-charge, Collection.

The museum has rich collection of faunas of all over the world and mainly famous for Salim Ali’s collection of Birds.

Type of Museum: Academic Museum, of the Bombay Natural History Society.

Mission Plan of the museum: Conservation of nature, primarily biological diversity, through action based on research, education and public awareness.

Information Dissemination:
1. Give research assistance and all necessary information on prior appointment.
2. Organizes popular talk shows and wild life film shows within the society.
3. Organizes temporary exhibitions, hobby club activity, nature camps like, bird watching camp etc. and invites students.
4. The museum has a very good Library that is extremely helpful for students and researchers for giving information about objects present in the museum.
6. Computerized access to the documentation of objects is given to scholars who come through proper channel and on prior appointment.
8. Museum also provides information through its Website.

Museum’s Visitors: The museum mainly targets students, researchers, teachers, scientists and learned persons. Members of the society regularly participate in different activities of the museum. The number is increasing day by day. Common people are almost absent in the museum. Other than members’, visitors need permission to see and get any information from the museum.

* Survey proof is given in the 'Research Proof' section of the Appendix II, page number 316

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Chapter: 2. Developmental Process of Information Service

Museum’s Strength: Museum’s all collection is properly documented both manually and in computer, supported by easy retrieval system. As a result access to information as well as original object is very much easy here. The museum maintains good management and marketing practice. Good number of celebrities, corporate houses, international bodies and N.G.O s. is associated with the museum and makes the museum popular. The museum has prepared itself efficient in dealing with all the members, delegates and dignitaries.

Forward Planning:

1. The museum is giving emphasis on strong but low cost advertisement in the city and suburb, mainly in schools and colleges.

2. Museum is trying to organize field trip, safari tour, exploration etc. in vacations, so that student can participate as per their choice.

3. The museum wants to make an appeal to the Maharastra Government to pass an order to the Board of Secondary Education to make museum visit compulsory for every school students, in their each academic session.

Suggestions: The museum is good for researchers and students of higher-classes, mainly of Life- Science. Thus, more emphasis is required in maintaining communications with local schools, colleges and universities. The museum should exhibit some of its objects, making beautiful dioramas with fabricated objects so that common people like to visit the museum.

A line of Information should be drawn outside the museum so that people can know about the existence of the museum, its different activities and also get a direction to approach towards the museum. Pictorial cataloguing of the living forms of faunas present in the museum collection is required so that visitor can co-relate the original beautiful animals with the taxidermy specimens.
Case Study: 5

Museums of the Himalayan Mountaineering Institute, Darjeeling, West Bengal

<table>
<thead>
<tr>
<th>Date of Study: 15.03.2002</th>
<th>Type of Museum: Mountaineering Museums</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source of Information:</td>
<td>Mr. Chandranath Das, Curator.</td>
</tr>
<tr>
<td></td>
<td>Mr. Vijay Singh, Principal</td>
</tr>
</tbody>
</table>

The museum is only of its kind in India and serving well in disseminating information regarding the Himalaya, different expeditions to its various picks and various aspects of mountaineering specially on the Himalaya to common people as well as trainee mountaineers.

Subject Content: There are two museums, one is the Main Museum, which has models, paintings, photographs of the Himalaya; manuscripts on the Himalaya; autographs of different mountaineers; mountaineering equipment, dresses and personal belongings of hill folks' etc. The second museum is the Everest Museum that exhibits chronological history of the attempts on the Everest starting from 1852.

Mission of the Museum: The museum is established to become the centre of educational activities on mountaineering and to preserve the works on the Himalaya. It also helps trainees of the institute and inspires new comers about the adventure in the Himalaya.

Information Dissemination:
1. The museum provides information about the Himalaya, its peaks, mountaineering and various flora and fauna found in different altitudes of the Himalaya through exhibits and photographs.
2. A telescope is present in the museum, through which visitors can watch nearby picks of the Himalaya.
3. Visitors can refer good number of books and documents in the Library.
4. Good number of publications and mementos are available on sell.
Chapter: 2. Developmental Process of Information Service

Museum’s Visitors: Every year half a million tourists, mountaineers, researchers and trainees visit the museum. Students of this Institute regularly use the museum for their purposes. Many foreigners come to India especially for the purpose of mountaineering. They also visit this museum.

Museum’s Strength: The Himalayan Mountaineering Institute is nationally and internationally famous and organizes many international seminars, which bring this museum very much popular in different part of the world as well as among innumerable mountaineers. The museum is well managed by the Ministry of Defence as a result it is well maintained and ready to provide necessary information to enquirer. Beside this the location of this museum favours national and international tourists to come in this museum easily.

Forward Planning:

1. The museum decided to cover a number of subjects, including-the origin of the Himalayas, description of the Himalayan flora and fauna, social and cultural life of people living in different ranges of the Himalayas, description of areas and routes undertaken by explorers of the Everest, etc.

2. There will be special areas to highlight the important Himalayan climbing achievements of different countries, selected mountaineering and other adventurous sports, films and programmes.

3. There will be a computer interactive centre about the equipment used for all adventure activities related to the Himalaya.

Suggestion: The museum needs its own website to communicate faster with people, because most of the visitors are coming from different parts of India and abroad. Beside these the museum can send traveling exhibitions in different Indian museums to encourage people about the adventure in mountaineering.
Case Study: 6

Madhav Chandra Goswami Museum (Former Anthropology Museum), University of Guwahati, Assam

<table>
<thead>
<tr>
<th>Date of Study: 17.12.2003*</th>
<th>Type of Museum: Academic Museum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source of Information: Dr. S. K. Ray, Curator.</td>
<td></td>
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</tbody>
</table>

This university museum is rich in ethnological objects of all the seven sister states of the Northeast India. The museum is serving well in disseminating information about the rich ethno-cultural heritage of the northeast India to students, national and international researchers as well as designers in the field of textile, printing and handicraft.

Subject Content: Ethnological objects of different tribes of the seven states of the northeast India including large number of textile objects, wooden and bamboo crafts, agricultural and fishing implements, ritual objects, masks and headgear etc.

Mission of the Museum: The museum is dedicated to preserve the rich culture of the tribes of the seven northeastern states mainly tribes of Assam from total extinction and for the use of coming generation.

Information Dissemination:
1. Guide Service is available to persons who have prior appointment.
2. All sorts of information regarding objects are available for researchers, designers and artists on having prior appointment.
3. Good number of publications is available.
4. The University Library provides additional information regarding any desired subjects.
5. Graphs of ethnic textile designs are available in the museum, which are very much useful for textile designers.

* Research proof is given in the 'Research Proof' section of the Appendix II, page number 314
Chapter: 2. Developmental Process of Information Service

Museum's Visitors: A good number of researchers and designers come in this museum from different parts of Assam, India and also from abroad in search of information regarding ethnic objects, tribal designs and fabrics.

Museum's Strength: The museum has very good resource persons and an experienced research team, as a result information regarding objects present in the museum's collection are almost updated manually. Graphical recording of the textile designs is also done here that are available to designers and researchers on permission. For these designs a large number of national and international designers and researchers regularly communicate with the museum and the museum itself cooperate with all such interested persons by providing their desired information.

Forward Planning:
1. Computerized documentation of all the objects along with photographs.
2. Paid information service.

Suggestions:
1. Measures should be taken in the security of information to prevent information piracy.
2. Museum should charge for the entry fee, photography, supplying information and graphs of the textile weaving patterns.
3. Website of the museum is urgently required so that more students and researchers can communicate with the museum for information.