The Web Site Development Process at the Children’s Museum of Los Angeles

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ABSTRACT

The Children’s Museum of Los Angeles (CMLA) is positioning itself as the premiere children’s museum in the country, with two new physical facilities at Hansen Dam in the San Fernando Valley, and Art Park in Downtown Los Angeles, as well as a third, virtual facility at http://www.childrensmuseumla.org. Because the physical facilities are not yet open (the first, Hansen Dam, will be opening in 2004), the goals and target audiences of the Web site are evolving from a fundraising and purely informational site, to one that incorporates interactive educational projects and online exhibits.

i-Wonder Studios (iWS) and CMLA have implemented a phased approach, allowing the Museum to bring features online as they are needed, and as CMLA can support them.

The purpose of this case study is to present a systematic, comprehensive and cohesive process for managing the design and development process within the context of a non-profit organization with multi-faceted and shifting priorities.
Topics covered include the Discovery process, prioritizing multiple objectives, mapping objectives to technical requirements, the Statement of Work, and initial and ongoing content development.

HISTORY

i-Wonder Studios began working with the Children's Museum of Los Angeles in March of 2001. The Museum had recently closed its previous facilities, and was in the midst of a $100 million fundraising campaign to support the design and construction of two new world-class museums with a mission to "educate, entertain and empower children and their caregivers."

Two architects (Sara Graham and Thom Mayne) had been selected along with the master exhibit designer, Edwin Schlossberg.

An internal Web development team was assigned and consisted of the CEO, Executive Director, Business Affairs Director, Marketing Director, PR Consultant, IT Consultant, Content Consultant and Children's Literary Consultant.

The team from iWS consisted of Account Manager, Project Manager, Creative Director, Editorial Director and Technical Director.

In this context, iWS and CMLA embarked upon a Discovery phase to extract a concrete set of objectives for the Web site.
It should be noted that the philosophical, educational and social goals stated in Exhibit Design Research and analysis documents were very useful as a foundation from which to begin this process.

**DISCOVERY QUESTIONNAIRE**

We began the Discovery process with a questionnaire which iWS distributed to all CMLA stakeholders (as defined by the development team).

Topics covered included the exploration of objectives related to Education (for Adults and Children), Marketing and Fundraising. Questions were framed in terms of a timeframe. For example:

1. Do you have any _immediate_ development objectives for the current site? (Examples: animated splash page, info page template)
2. In terms of site objectives for the next 90 days, please rank in order of importance (rankings may be shared).
   - Information (Caregivers)
   - Education, Inspiration and Empowerment (Children and Caregivers)
   - Marketing/Communication
   - Fundraising
   - Other (please specify)____________________________________
     ______________________________________________________________
3. In terms of site objectives for the next 6-12 months, please rank in order of anticipated importance (rankings may be shared).

- Information (Caregivers)
- Education, Inspiration and Empowerment (Children and Caregivers)
- Marketing/Communication
- Fundraising
- Other (please specify)

In addition, specific questions were generated with the goal of stimulating the development teams thinking in the areas of content creation and maintenance. Some examples:

**Information/Editorial**

1. Do you want visitors to the site to participate in bringing information to the online community?
2. How do you envision the process of researching information links?
3. Who will evaluate the links regarding relevance and priority?
4. Who will check the status of the links (whether or not they are still active)?
5. Who will issue final approval to publish?

**Education, Inspiration and Empowerment**

1. Do you want visitors to the site to submit ideas to the Web development team?
2. What kinds of features do you envision to keep the Museum “open” as a digital presence while the new Museums are being built?

3. Do you envision the Museum²Go program extending its presence onto the site?

4. If yes:
   A. Are there artifacts resulting from any of the Museum²Go activities?
   B. Are there experiences that can be shared after the activity is over?
   C. Are there ways to prepare for any of the Museum²Go activities?

**Marketing/Communication**

1. What differentiates this site from other Children’s Museum sites?

2. What is the primary message to a first-time visitor (child or caregiver) to the site?

3. What is the value proposition or promise in continuing into the site?

4. What kinds of messages do visitors take with them when they leave the site?

5. How do you envision the site helping to communicate the progress being made in the exhibit design, architecture and construction of the new Museum(s)?

**Fundraising**

1. How do you envision using the site as a fundraising tool?

2. Are there specific site features or sections that might appeal to private and/or public donors?

3. Will corporate sponsorship of site areas or features be pursued?

From the questionnaire, we generated a matrix reflecting the priorities of the organization as they applied to Web Development over the course of three years, where lower values indicated a higher priority value:
<table>
<thead>
<tr>
<th></th>
<th>90 Days</th>
<th>6-12 Months</th>
<th>3 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information</td>
<td>x</td>
<td>y</td>
<td></td>
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<tr>
<td>Education</td>
<td>y</td>
<td>x</td>
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<tr>
<td>Marketing</td>
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<tr>
<td>Fundraising</td>
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The questionnaire findings also served to refine the agendas for the 3 face-to-face Discovery meetings.

**DISCOVERY MEETINGS**

The primary goals of the Discovery meetings were to introduce members of the team, define roles and responsibilities, specify communication and approval processes, and gather technical and content requirements. As important, however, was the collaborative nature of these meetings, forging a dynamic working relationship between iWS and CMLA.

From the questionnaire and 3 meetings we discovered a consensus in priority and vision, which could best be expressed in a phased development process mirroring the development of the physical campuses. This information was presented by iWS in a formal Statement of Work.

**STATEMENT OF WORK**

The purpose of the SOW was for iWS to state the scope of work for the Web site development.
iWS presented the detailed content and technical requirements gathered from the Discovery process. In this SOW, iWS also delivered a recommendation of a phased development process. 3 phases were delineated in the document. As much as possible, it was task, deliverable and timeline specific. The challenge increased as it became necessary to forecast further into a future containing unknown variables relating to exhibit design, building progress and program development.

Phase 3, in particular, called for a continued examination throughout the development of phases 1 and 2 in order to achieve the level of specificity desired.

Finally, the SOW presented development guidelines, hosting requirements, interface objectives, development process guidelines and a process for managing functional changes.

Creative design and the development of rich interactive features could proceed within a context of an understanding and acceptance of these requirements.

**DESIGN AND CONTENT DEVELOPMENT**

The content development team consisted of Marketing, Education and Executive representatives from CMLA; Gerald McDermott (Caldecott medal winning author and illustrator); and Creative, Project Management, Technical and Editorial resources from iWS.
While developing the initial content, a temporary Flash animation, based on the Museum logo, was immediately created and published to incite excitement for the impending launch of the first phase.

The content development guidelines from the SOW served as a starting point for the content development team. The concept outline was as follows:

**Phase 1: The Environment**

*Visitors and staff are introduced to the site.*

*Where am I? How does it look? How do I feel when I arrive for the first time?*

*What’s here? What might be here in the future? How do I find what I’m looking for? How do I explore?*

The content focus will be on Museum Information.

**Phase 2: People and Tools**

*Visitors and staff begin to interact with the site.*

*Who Am I? What can I do here? What can I change? Who else is here? How do I let people know what I’d like to do here? How can I invite other people here?*

The additional content focus will be on pre- and post-outreach program experiences and work collected from those programs.
Phase 3: Connections

Visitors, staff and experts interact with each other.

Where do I fit in? What do other people think? How can we work together?

How can I ask an expert a question? What questions do other people have? How can I help? How is this world connected to other worlds? Where can I go from here? Where do I want to go?

The additional content focus will be on education.

In building the Environment, populating it with People, providing Tools and establishing Connections, the foundation for an on-line community is established.

Gerald McDermott was assigned the task of creating visual assets or illustrations for the Environment. He began by creating a dragon-like character, the colors of which served to anchor the palette of the Environment (later, through an online voting tool, users voted to name the Dragon "Chimula").

Next, we tackled user interface issues. The Museum audience is primarily children (of different ages) and their caregivers. Instead of breaking the site out into distinct user sections, we opted for a more inclusive model. Just as in a physical Museum where there are shared and age-appropriate areas, we aimed to make the adult/informational areas more appealing to that group (mostly text) and the children's/educational areas more exciting, interactive and image-dependent. Likewise, it was decided that we would encourage, not require, the Flash player for satisfactory use of the site.
We also explored concept mapping models and developed a hybrid concept mapping architecture which would allow users to intuitively access most areas of interest directly from the "home" page.

The use of a labyrinth, borrowed from the design/architecture of the physical museum, served as an unusual and interesting image to act as a "home" and map of the 4 main sections of the site (Information, Campuses, People, Programs). Again, for ease of use, Gerald created 4 colored shapes to associate with those sections for buttons and consistent visual cues which are not text dependent. Most of Gerald's work was executed with watercolor on paper, and the "paper" look and feel was translated to the lower level templates in the site, maintaining the use of shape and color throughout.

Finally, a narrative for the opening Flash was developed, incorporating the Dragon and the labyrinth.

IMPLEMENTATION OF PHASE 1

Connecting the design to the technical specifications, functional requirements and additional content assets (text, photo) was a challenge, always weighing the consideration of image quality against file size and bandwidth limitations.

Fortunately the target specifications from the SOW served as an excellent guide in making these choices.
IMPLEMENTATION OF PHASE 2

Given the good response from Phase 1, we continued with the strategy from the SOW. Phase 2 focused on pre- and post-visit experiences to supplement the outreach program.

Using design and style specifications developed in phase 1, we built out sections for several programs, and a back office administration application was created to facilitate the updating of information by Museum staff.

To complement the Environmental Arts program, we designed an interactive recycle activity in Flash which would allow users to drag recyclables to bins in an effort to beautify our park. As a result, the sky gets bluer, the grass greener and the park is improved with items like swing sets and fountains made from recycled materials. All the time, users are learning in picture and text how recycling improves the environment. At the end of the activity users can print the park in color, or in black and white so that they can color it themselves. They are also linked to a “recycle recipes” page with instructions for items they can make from recycled materials.

Finally, now further along in the development of the physical Museums, we were able to complete the SOW for phase 3.

PHASE 3 AND ONGOING CONTENT DEVELOPMENT

Phase 3 is currently being implemented and includes a bulletin board/forum, an architectural educational activity, supplements to a Verizon "Reading Edge" outreach program and, of course, Discovery for phases 4 and 5.
As we have largely followed the plan in the initial SOW, we have met our multi-faceted Marketing, Educational and Fundraising objectives as agreed upon over 1 year ago.

Further, we have a process in place for continued Discovery to modify existing content and develop new content consistent with the goals of the organization.

**A NOTE ON DOCUMENTATION**

In addition to the SOW, deliverable documents have included Design/Style guides, user interface diagrams, programming specifications, test scripts for Quality Assurance and training manuals.

This documentation serves to bring new team members and staff up to speed, and as an anchor to maintain the design and structural integrity of the site.

**A CAUTION ON TIMING**

CMLA’s ability to execute an efficient review and approval process was critical to the success of the Web development. Any delays in this approval process may have resulted in content being dated or no longer relevant before it was published.

Moving forward, therefore, we find it important to be realistic about goals and maintain good communication through bi-monthly Web team meetings to review, assess and continue developing the site in the context of all that occurs in a complex organization undergoing a period of dramatic growth and change.
CONCLUSION

As a model, the phased Web development process employed by i-Wonder Studios and The Children's Museum of Los Angeles illustrates the usefulness and importance of several tools, techniques and practices.

The first of these is a thorough Discovery practice using a combination of questionnaires and meetings to explore the multi-faceted objectives of an organization over time.

Also significant is the manner in which the Discovery is documented in a clear, concise and thorough Statement of Work which function as a tool for building consensus and a framework within which content development can occur in sync with the vision and goals of an organization.