Some Assembly Required

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Many of us probably had fresh experiences with these three dreaded words this past Christmas. Many toys and boxed tools or furniture display this label. And if you did confront these words, you probably experienced the usual frustrations of searching for missing or mislabeled parts and of deciding if bracket C attaches to board K.

Perhaps many EISs (Environmental Impact Statements) or EAs (Environmental Assessments) should also have "Some Assembly Required" printed on their covers. After all, readers frequently have to hunt for missing information and then assemble their own chain of evidence for impact conclusions.

Common NEPA documents often fail to provide even simple tools for helping readers track information or interpret confusing information.

The phrase "Some Assembly Required" was the subject of a December 24 article (p. C1) in the *Salt Lake Tribune*. The article described a firm called Infographics that has specialized in revising and rewriting confusing assembly instructions.

The Infographics process, it seems to me, is very similar to one I would use to fix a muddled and confusing NEPA document. The steps I would recommend are as follows:

1. **Convene a team and conduct usability tests.**

2. **Rework the overall document design (as necessary) so that readers can easily track and interpret information.**

3. **Repeat the usability test on this new design.**

4. **Then fill in the details, both necessary text and projected graphics.**

5. **Finally, polish the final text by proofreading carefully and correcting the inevitable inconsistencies.**

Below I discuss steps 1 and 2 because, from my experience, they are not routinely part of an EIS or EA project plan. Step 3 merely repeats step 1, and steps 4 and 5 are obvious to NEPA team leaders and resource specialists.

1. Convene a team and conduct a usability test.

Usability tests apply to documents just as well as to toys or equipment. Yes, with toys it is easier to see if the parts all work together and don't jam. But in an EIS or EA, a reader quickly knows if necessary information is present and easy to understand.

A high usability rating means that a document is carefully designed to assist readers in navigating rapidly from point to point. An assumption is that most actual readers of an EIS or EA don't want to read the whole document but to find key information easily.

Infographics initially conducts a usability test of existing assembly directions. They ask a team or several individuals to assemble the toy or the equipment using the directions. How long did it take them? What were the miscues and inconsistencies in the directions? How helpful were graphics?

Such a usability strategy would surely work with a NEPA document. Here are some suggestions for tests that would check a draft's usability:

- Provide several readers (those unfamiliar with the draft) with a list of key content questions drawn from the EIS. Ask them to find answers, noting page or section where the information appears. How long does it take them to find each answer? What features of the EIS helped/hindered their search for answers? Did all of the readers find identical answers? If not, why not? (A 100 percent clear EIS should give all readers the same answers!)

- Ask a lay person (or several) to summarize the impact conclusions for a single resource topic as presented in the draft. Their summaries should both list the conclusions and the main reasons supporting the conclusions. Then ask the specialist author if the summarized conclusions and reasons match what the author intended to say. Repeat as necessary for each impact topic the EIS or EA covers.

- Convene the team of contributing specialists and ask each to choose a resource outside his or her specialty. Then each person checks <u>all</u> references to the chosen resource in the document. Is the information 100 percent consistent? Clear? Easy to track?

In many NEPA training sessions, I have asked if teams checked a document's usability. Participants always respond that they try to ask several people to look over their draft (usually a late-stage task). Note that a quick "look over" is often all the time and effort these reviewers give the draft. Even more troubling is that this look-over phase is often too late to be efficient or very helpful.

A detailed late-stage review is not always efficient because major revisions and changes may be necessary. Such late-stage changes are very time consuming and often a painful task for the original writers, who have invested their time and energy in the original draft text. So NEPA writers should provide for early and ongoing review of the overall design and of projected text. Then late-stage reviews should focus on minor editing and proofreading.

Given the importance of early and careful review, I would urge NEPA project managers and writers to build several usability tests into their project schedule. Otherwise, teams will overlook usability questions in the rush to get the EIS or EA published and on the street. And, if possible, teams should be discussing potential usability even as they plan and design the EIS or EA (as described in the following text).

2. Rework the overall document design (as necessary) so that readers can easily track and interpret information.

Reworking the draft text is necessary if initial usability tests discover that the draft is not user friendly.

The Infographics folks approached reworking of assembly directions by convening a small team of writers to prepare of series of storyboards. They completed this step before they worked on the text and on the proposed graphics.

Much the same process would work well for NEPA documents. A NEPA team would spend time designing (or reworking the existing design) by sketching out page by page the form and structure of the major NEPA chapters. This preliminary storyboarding (also called prototyping or mocking-up) is important because it shows the team members exactly where and how their text should fit into the overall document.

This storyboarding step is not the same as traditional outlines. An outline provides the sequence of content, but it usually does not provide page count estimates, nor does it provide sketches of potential graphics. A good storyboard provides all three: (1) the sequence of headings and subheadings, (2) page estimates for each submission, and (3) sketches of planned graphics.

Few agency participants in Shipley NEPA training sessions have done storyboarding prior to writing an EIS or EA. They often even resist completing a storyboarding exercise because they continue to view actual text as the primary task in document preparation. They revert to the traditional writing approach, which asks writers for text and then allots time for trimming and rewriting rough, rambling text to fit into the evolving document. Storyboarding is a new skill because it usually was not taught in school as part of the traditional writing or English classes.

In a recent Shipley training session, a NEPA practitioner who had led a major EIS project commented that an hour spent developing a detailed storyboard saved 10 hours of late-stage revision and rewriting. Such savings in time (and money) are why Shipley consultants routinely recommend storyboarding as an early design step before writers begin to write text.

Most agency NEPA statements of work fail to list a storyboarding step. In such instances, I usually ask the agency if such a deliverable is possible. An approved storyboard for a major document is a major tracking tool and one that helps guarantee that the contractor delivers what the agency wants.

A Parting Word

Usability is a new topic for many writers, but it is important, especially for NEPA writers. After all, a highly usable document is one that the judge can easily navigate through. The average lay reader will also appreciate a document that is clear in content and in design. In today's busy technical world, an effective, highly usable design is the key to overall document quality.