PICTURE PERFECT: USING ILLUSTRATIONS IN TECHNICAL COMMUNICATION

Ten years ago, a BBC.com feature[1] made a startling observation. It warned that the addictive nature of Web browsing could leave the average human with an attention span of nine seconds—"roughly that of a goldfish."[2] The Internet has only become a bigger and busier place over the past decade, with many distractions vying for our attention every online minute.

Tied to this explosion of information is the challenge that every technical communicator faces—that of engaging her audience and quickly communicating the essential information. For a generation that has grown up on YouTube, Twitter, Facebook, and devices, anything that resembles a long stream of text is simply not interesting enough[2]. Visual stimulus has become central to the "experience" of learning, even in printed documents and reference material. Also, visual elements are inherently social media-friendly, helping attract precious eyeballs to the stuff that matters.

This paper discusses how visual elements are an integral part of technical communication in this graphics-savvy, device-crazy world. It also proposes some easy-to-implement strategies to effectively use visual elements in user assistance deliverables.

Graphics: Many languages, many possibilities

Localization has always been a key consideration for technical communication. While conventional wisdom suggests that images are expensive to localize; in some scenarios, using graphics optimally may actually save localization costs.

Mobile phones and tablets offer genuine visual delight. However, their form factors make it difficult to read text. Therefore, for apps targeting such devices, including visual user assistance makes perfect sense from the standpoint of learning experience as well as localization. As a simplistic example, look at the following user assistance screens that appear when you press **?** from within Angry Birds, a rabidly popular game for multiple mobile platforms:

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[1] *Turning into a digital goldfish*
[2] *Attention spans and the Internet,* Anna
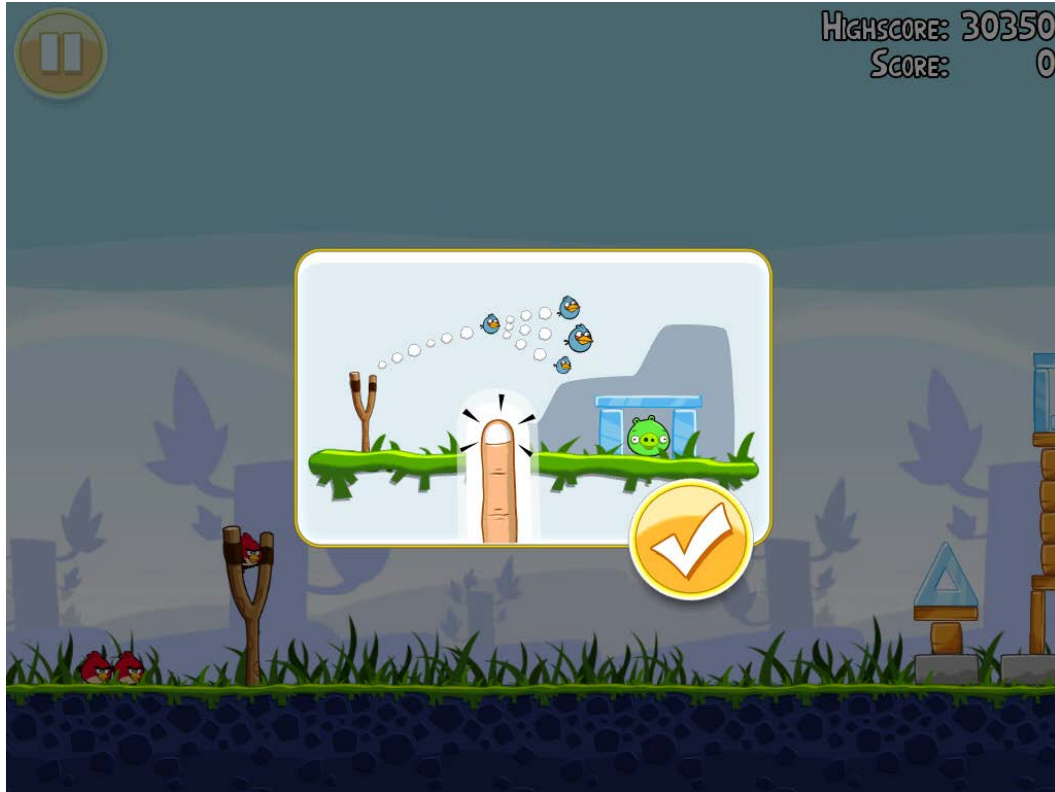
Since user assistance requirements for mobile apps largely center around troubleshooting and productivity tips, visual elements could fit the bill perfectly even for some more complex apps.

Beyond the digital world, let's look at how a leading brand of ear plugs (widely used in noisy industries) teaches users the correct way of using the product[3].

[3] *Localizing Images: Cultural Aspects and Visual Metaphors*, Samartha Vashishtha
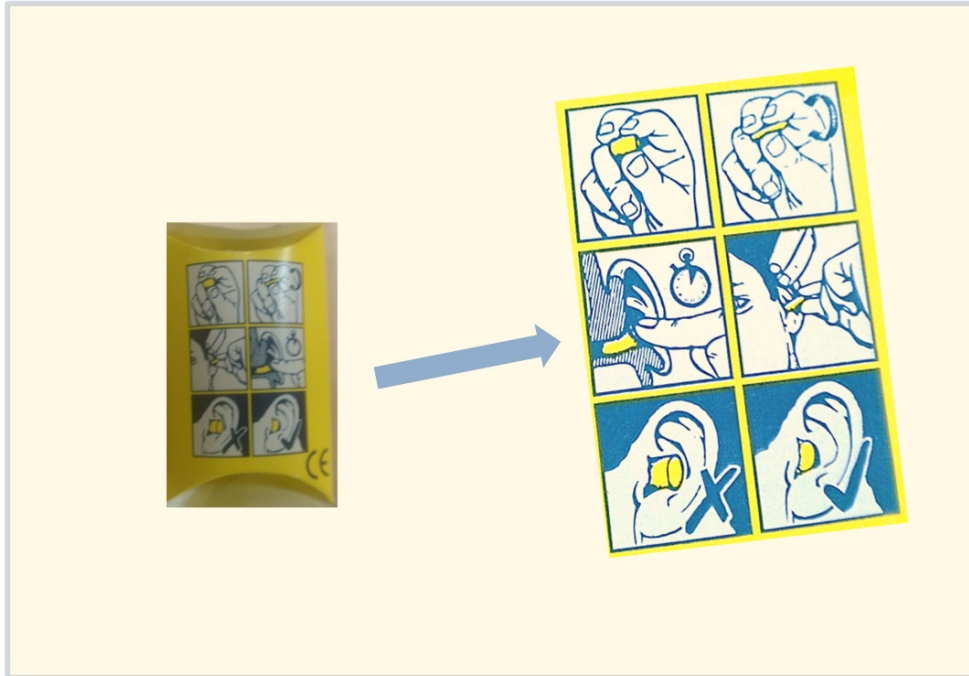
As is evident, communicating the information in this scenario using *just* words would have taken significantly greater localization effort.

Localizing text in images using data-driven graphics

We looked at some examples of visual documentation making little or no use of text. However, screenshots, diagrams, schematics, and illustrations in technical communication often include varying amounts of text. Illustrations such as architectural diagrams and machine drawings could include significant amounts of indispensable text.

Data-driven graphic workflows provide a highly effective alternative to manually recreating such images for different languages. The following illustration captures an example workflow using Adobe Photoshop[4]:

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[4] *Localize graphics using Adobe Photoshop CS5*, Vikrant Rai
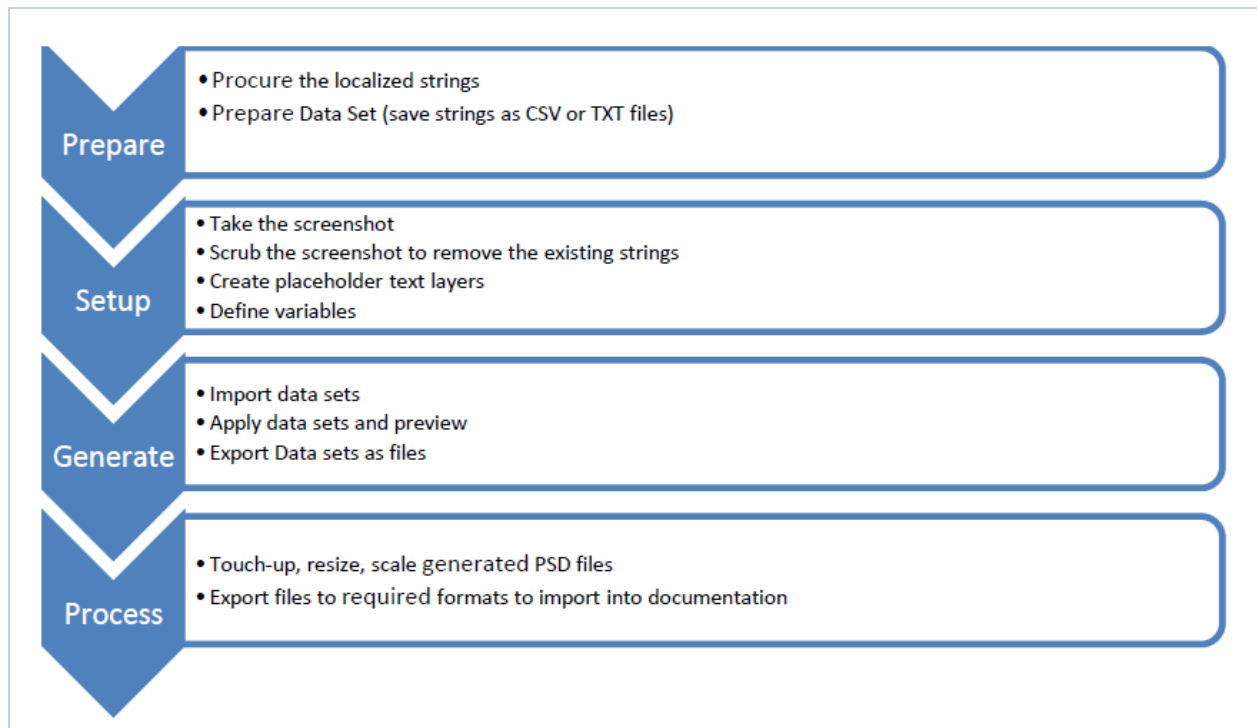
This workflow makes use of layers, variables, and Photoshop data capabilities to let technical communicators and localization professionals quickly create multi-language versions of an image.

Videos: The Holy Grail of Web 2.0 learning

The advent of data-enabled devices and high-speed Internet access has given learners unprecedented access to video learning content. The Khan Academy[5], one of the most acclaimed educational initiatives in recent memory, depends entirely on video as its medium of lesson-delivery.

With users often turning to YouTube as their first stop for educational content, creating demos has become a natural technical communicator responsibility. Fortunately, present-day demo-creation software makes it a breeze to create multi-device video learning content even with little prior experience.

For instance, using Adobe Captivate, you can seamlessly create video demos and embed them in documentation. You can also evaluate how well your users are consuming this video content and use that feedback to drive optimization. The learning curve to get started with these features is negligible.

Reinventing conventional technical communication

The Google Chrome documentation comic strip is one of the most remembered examples of visual documentation in recent times. The strip drew popular attention to Google's new browser[6] and, arguably, also played a role in its adoption.

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[5] http://www.khanacademy.org/
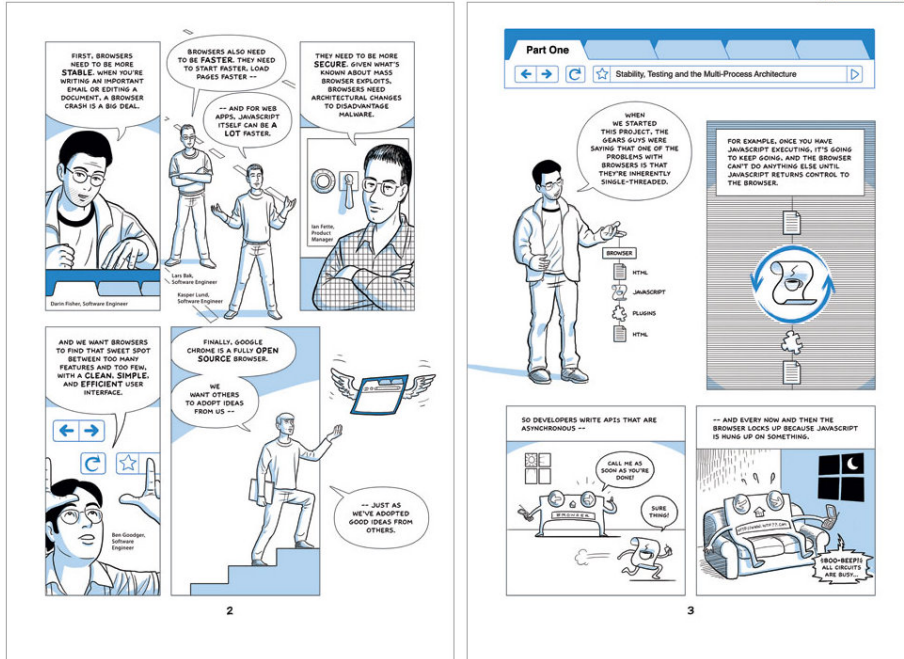
While such a radically-different documentation deliverable takes serious graphical skills and multi-department collaboration, it is possible for technical communicators to include engaging visual elements in their work without negotiating a steep learning curve. Consider the following infographic:

[6] *Technical Writing at Google*, Susan Wu
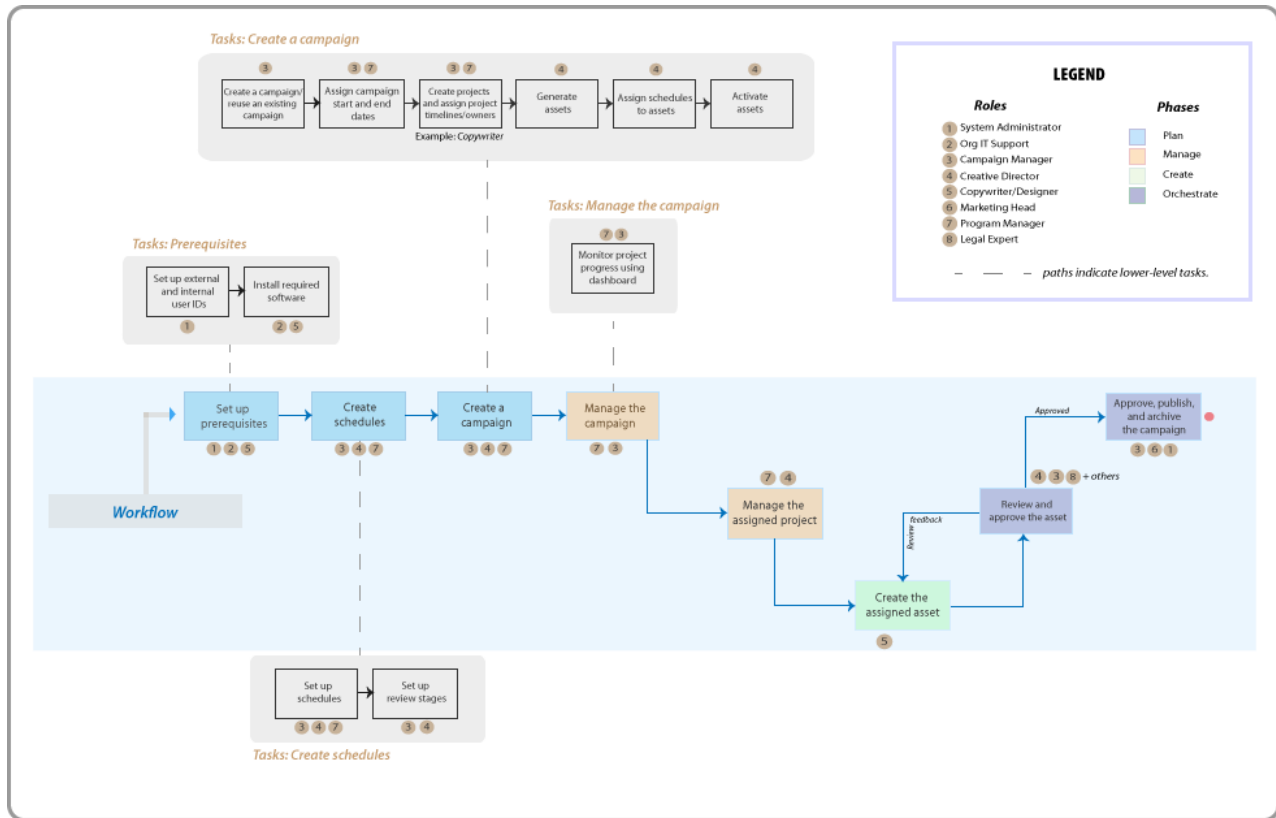
This infographic summarizes a multi-step, multi-participant workflow that an organization could use to manage their advertising campaigns using standard project management software and graphics/copy creation tools. Besides the top-level steps (colored boxes) and workflow phases (color-coding of the boxes), it also summarizes the people involved at the different steps (numbers mapped to roles in the legend). Wherever necessary, the lower-level tasks for each workflow step are captured in the gray 'callout' boxes.

While this infographic captures information that could take many pages of text to document, it is surprisingly easy to create. Basic familiarity with vector image editing software and some imagination is all that you need. In fact, the Adobe Illustrator skills needed to create this graphic were picked up over a single evening of self-learning. Since this graphic is a vector image, it is inherently scalable for multi-channel delivery across online and print formats.
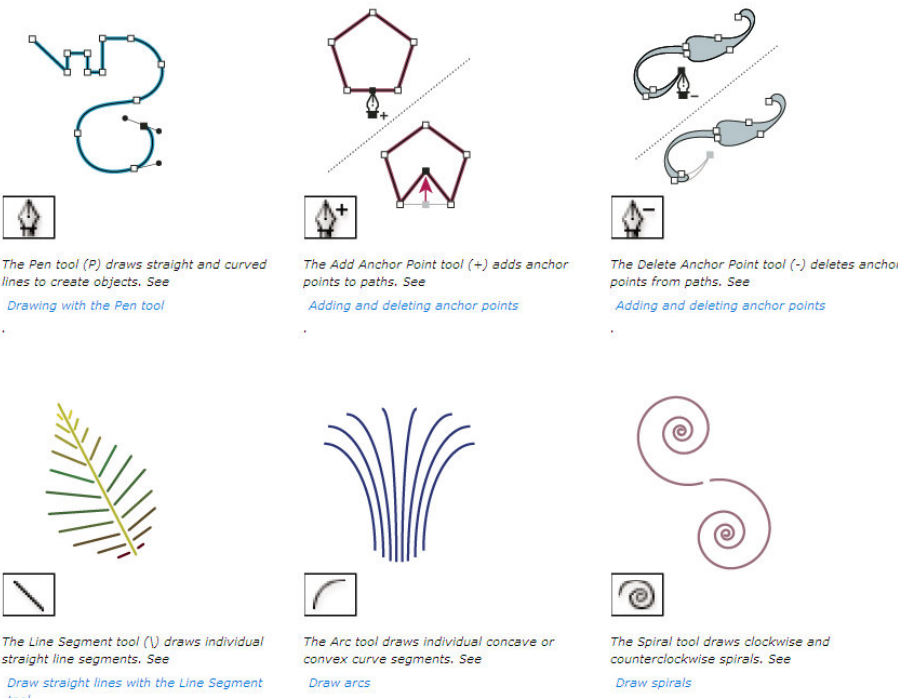
More ideas for visual communication

- You could include visual TOCs that let users quickly navigate to key topics.

This example from Adobe Illustrator documentation[7] lets users quickly navigate to information about their vector drawing tool of choice.

- PDF Portfolios are great for 'visually' packaging and presenting information in an interactive way. You can include files in multiple formats—such as HTML, Microsoft Office, and image

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[7] *Drawing tool gallery*

files—in portfolios. See a snapshot from a sample portfolio below[8]:
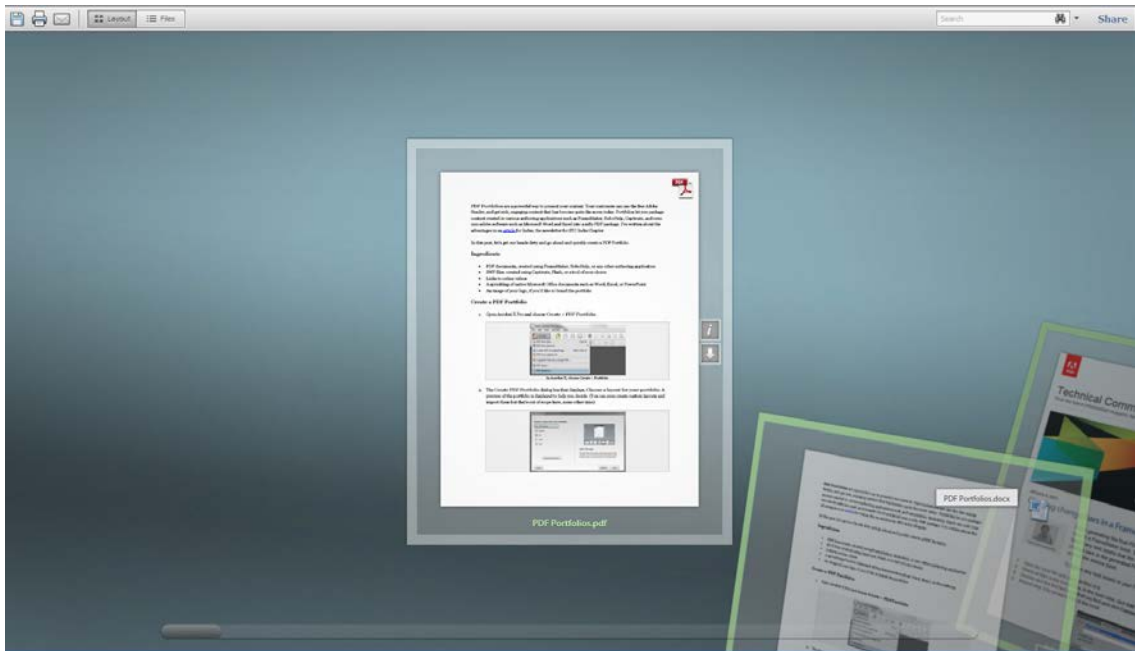
- You could remodel standard operating procedures and process documentation as infographics or swim lane diagrams, such as the following[9]:
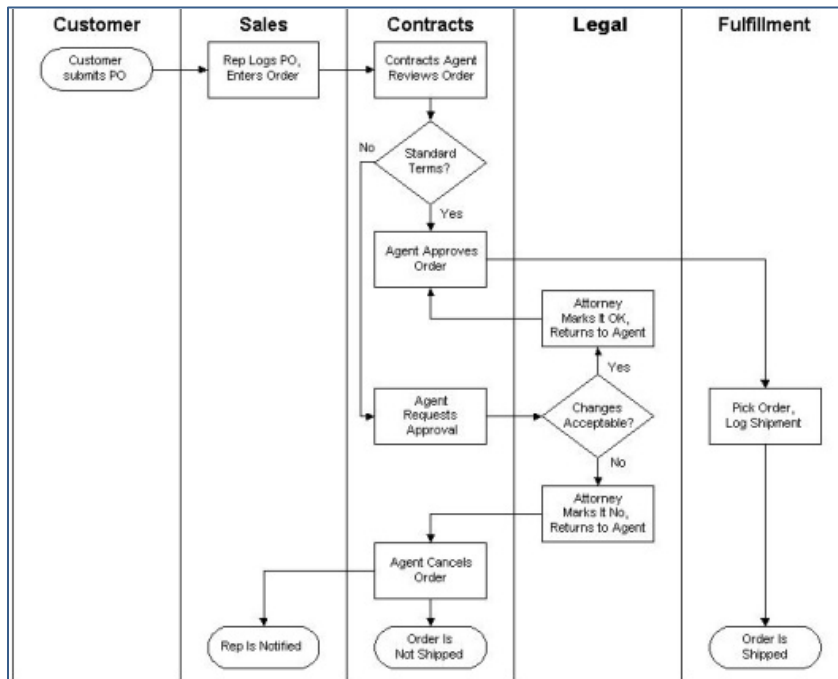
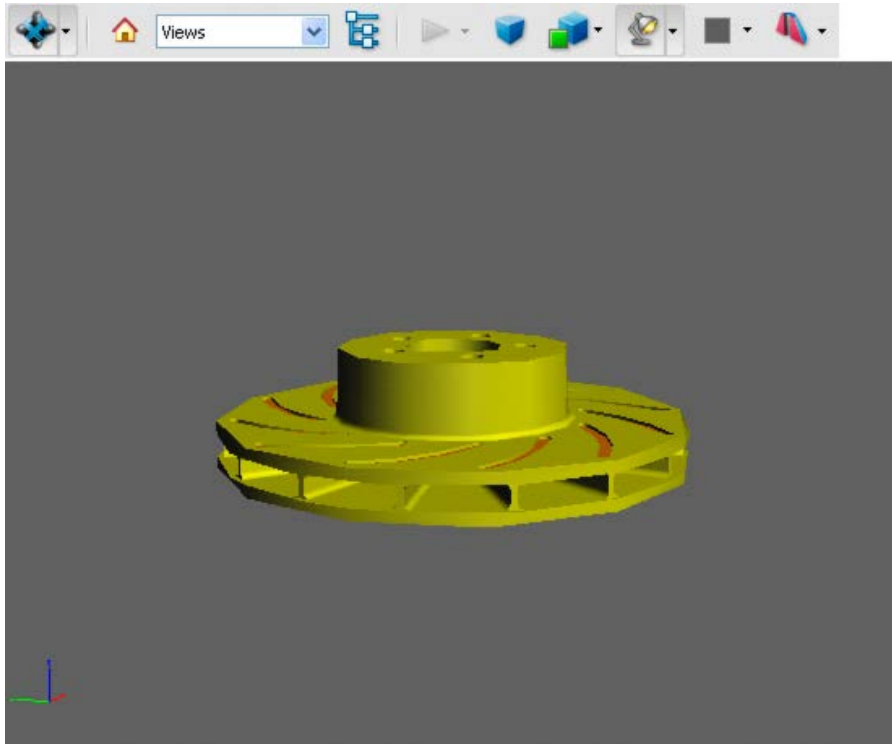Vector image editing software is ideal for creating swim lane diagrams.

- You could make information navigation more intuitive, especially in industries like aerospace that are making the transition from printed manuals to devices.[10]

[8] *Creating PDF Portfolios*, Vikrant Rai
[9] *Courtesy Wikipedia*
[10] *Alaska Airlines ditches paper flight manuals for iPads*, Donald Melanson

- You could complement procedural information with demonstrations of key features and workflows. Such demos could be embedded in-context into HTML or PDF deliverables using inter-product workflows.
- You could embed interactive 3D illustrations (for example, machine drawings) into online Help and PDFs. For example, when you embed a 3D model in a FrameMaker document and convert the document to PDF, readers can *interact* with that 3D model in Acrobat or Reader[11].

- Architectural and engineering information could benefit from perspective illustrations, X-ray drawings, or exploded-view drawings. Vector image editing software provides features to

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[11] *Interacting with 3D models*

create such drawings. For example, look at this perspective drawing created in Illustrator[12]:
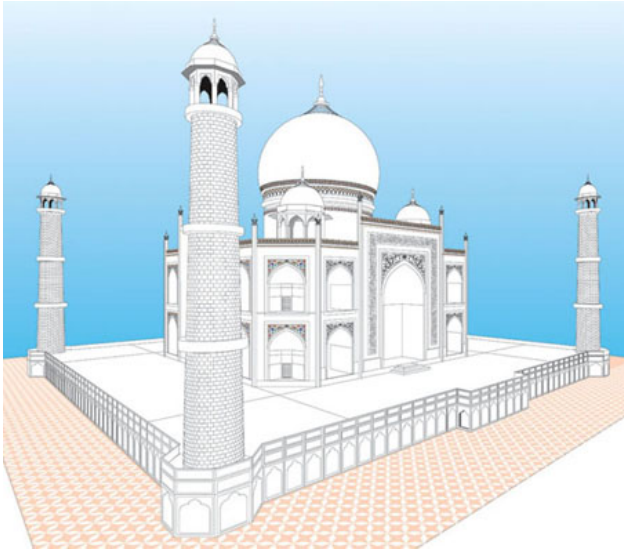
- You could remodel complex printed datasheets as "collapsible" interactive tables.

A word about accessibility

While including visual elements into your work, do not lose sight of your organization's accessibility commitments. A general requirement is that a text equivalent be provided for every non-text element using *alt* or *longdesc* tags, or in the element content. The W3C Web Content Accessibility Guidelines further state[13]:

The power of text equivalents lies in their capacity to be rendered in ways that are accessible to people from various disability groups using a variety of technologies. Text can be readily output to speech synthesizers and braille displays, and can be presented visually (in a variety of sizes) on computer displays and paper. Synthesized speech is critical for individuals who are blind and for many people with the reading difficulties that often accompany cognitive disabilities, learning disabilities, and deafness. Braille is essential for individuals who are both deaf and blind, as well as many individuals whose only sensory disability is blindness. Text displayed visually benefits users who are deaf as well as the majority of Web users.

Providing non-text equivalents (e.g., pictures, videos, and pre-recorded audio) of text is also beneficial to some users, especially nonreaders or people who have difficulty reading. In movies or visual presentations, visual action such as body language or other visual cues may not be accompanied by enough audio information to convey the same information. Unless verbal descriptions of this visual information are provided, people who cannot see (or look at) the visual content will not be able to perceive it.

Looking ahead…

Visual elements in documentation are here to stay, both as high-impact learning touchpoints and as integral parts of the overall product experience. In the years to come, technical writers will have unprecedented opportunities to structure and present information in novel ways. Fortunately, easy-

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[12] *Drawing in perspective*
[13] *Web Content Accessibility Guidelines 1.0*

to-learn features in industry leading tools will make this transition to visual documentation quick, painless, and rewarding.