

The Back of the Napkin: Solving Problems and Selling Ideas with Pictures

Dan Roam

Portfolio

Published by the Penguin Group

2008 Hardcover \$24.95

Reviewed by Glenn Assheton-Smith

Ever since I came across xplane's work (see xplane.com) for Business 2.0 magazine in the glory days of the "dot com" boom, I've been fascinated with the use of **visual thinking** and **pictures** for telling stories. Later, first as a business process analyst, and later as a solution architect, I was drawn to the use of **models**, **frameworks**, and **viewpoints** to describe complex problems and systems – and found pictures and models a natural way to "tell the story" of a particular process, or to tell it from a particular architectural perspective.

Then as I gravitated more towards business architecture and strategy, I found myself "telling stories" aimed at a different audience – business executives – who were interested more in problems and solutions around business strategy and results. I found that previous methods I had applied for "telling stories with pictures" for business processes and system architectures didn't always lend themselves to more strategic business concerns. Here, I discovered that PowerPoint slides, business charts and graphs, and Strategy Maps were essential viewpoints/tools.

I suppose somewhere in the back of my mind, I wondered, "Is there really some sort of meta-framework here" for telling stories with pictures – some hidden taxonomy for describing technical problems, process problems, problems of business strategy, and so forth.

Then I came across author Dan Roam's recent book, *The Back of the Napkin: Solving Problems and Selling Ideas with Pictures*. Roam's book is a remarkable collection of "frameworks," "models," and "techniques" for telling stories, and solving problems, with pictures.

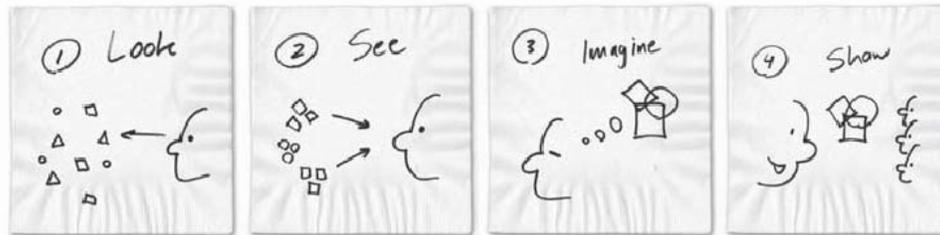
Let me "show" you.

The Four Steps of Visual Thinking

"The Back of the Napkin" provides a handful of really quite remarkable frameworks for applying Visual Thinking to solving all sorts of business problems.

[And that's one point to make, Roam's book focuses on solving "business" problems. That being said, many of his Visual Thinking frameworks, models, and techniques can easily be extended to solving other types of problems – for example, technical.]

The book's first key framework is this one:



This set of pictures illustrates the four key steps of the Visual Thinking process: (i) **Looking**, (ii) **Seeing**, (iii) **Imagining**, and (iv) **Showing**.

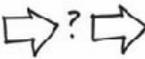
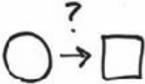
“Looking” is a semi-passive process where we get a “sense” of what’s going on in our environment. “Seeing” is the activity of categorizing and interpreting the input of our Looking process. “Imagining” is the “art of the possible”: It’s imaging future possibilities and envisioning creative outcomes. And finally “Showing” is taking our creative output, and presenting it in a way that is meaningful and digestible to our particular audience.

HOW to Look, See, Imagine, and Show

OK, that’s fine, but in the overall process of Visual Thinking, “how” do we look, see, imagine, and show? There are many different types of business problems, and different viewpoints from which they can be considered. Where do we begin? What “types” of problems is Visual Thinking suited to? Is the task of addressing a “process” problem similar to that of addressing a “people” problem? Is a problem of “gaining market share” similar to a problem of “launching a new product”?

To address the question of “how” to Look, See, Imagine, and Show, the author suggests that there are really six core types of problems – which he terms “**the 6 W’s**”:

THE SIX PROBLEM “CLUMPS” (THE 6 W’S)

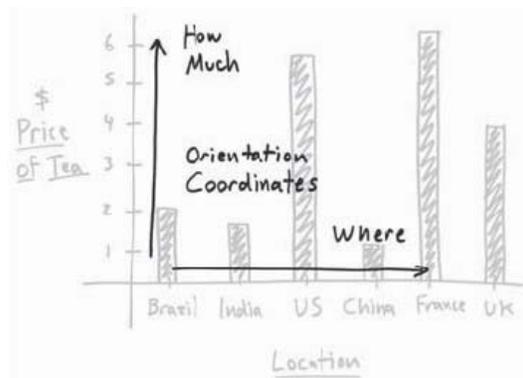
	<p>1. Who and what problems. Challenges that relate to things, people, and roles.</p> <ul style="list-style-type: none"> • What is going on around me, and where do I fit in? • Who is in charge and who else is involved? Where does responsibility lie?
	<p>2. How much problems. Challenges that involve measuring and counting.</p> <ul style="list-style-type: none"> • Do we have enough of X to last as long as we need? • How much of X do we need to keep going? If we increase this over here, can we decrease that over there?
	<p>3. When problems. Challenges that relate to scheduling and timing.</p> <ul style="list-style-type: none"> • What comes first, and what comes next? • We’ve got a lot of things to do: When are we going to do them all?
	<p>4. Where problems. Challenges that relate to direction and how things fit together.</p> <ul style="list-style-type: none"> • Where are we going now? Are we headed in the right direction, or should we be moving elsewhere? • How do all these pieces fit together? What’s most important and what matters less?
	<p>5. How problems. Challenges that relate to how things influence one another.</p> <ul style="list-style-type: none"> • What will happen if we do this? What about that? • Can we alter the outcomes of a situation by altering our actions?
	<p>6. Why problems. Challenges that relate to seeing the big picture.</p> <ul style="list-style-type: none"> • What are we really doing, and why? Is it the right thing, or should we be doing something different? • If we need to change, what are our options? How can we decide which of those options are best?

The fundamental underpinning for these 6 types of problems relate to the way our brain works – the way human beings orient themselves in time and space to make sense of their world. The book’s appendix provides a fascinating discussion of recent insights from neurobiology and vision science that suggest that the human brain actually processes different types of problems through distinct pathways in the human brain.

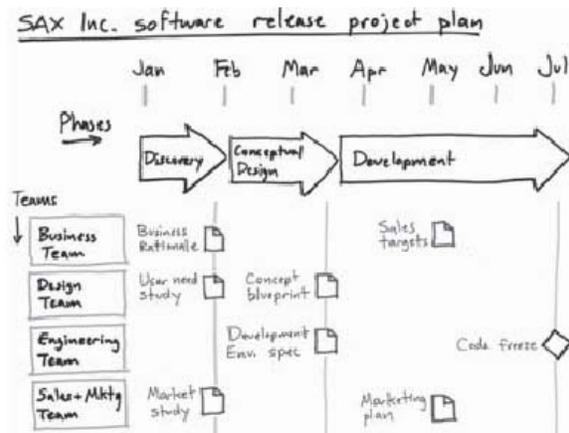
Frameworks – and the critical role of Coordinate Systems

A key insight of the book, to my mind, is the role of establishing a “framework” or “**coordinate system**” prior to solving a particular problem. Irrespective of whether one is solving a “*who/what*,” “*how much*,” “*when*,” “*where*,” “*how*,” or “*why*” problem, clearly defining one’s “dimensions of analysis” is critical.

Coordinate systems that “orient us” in a particular problem domain are critical to establishing a familiar context where we can easily understand where we are, and easily interpret the meaning of what we encounter. Two examples of diagrams (or models) with coordinate systems that are familiar and easily navigated are charts and timelines.



Chart



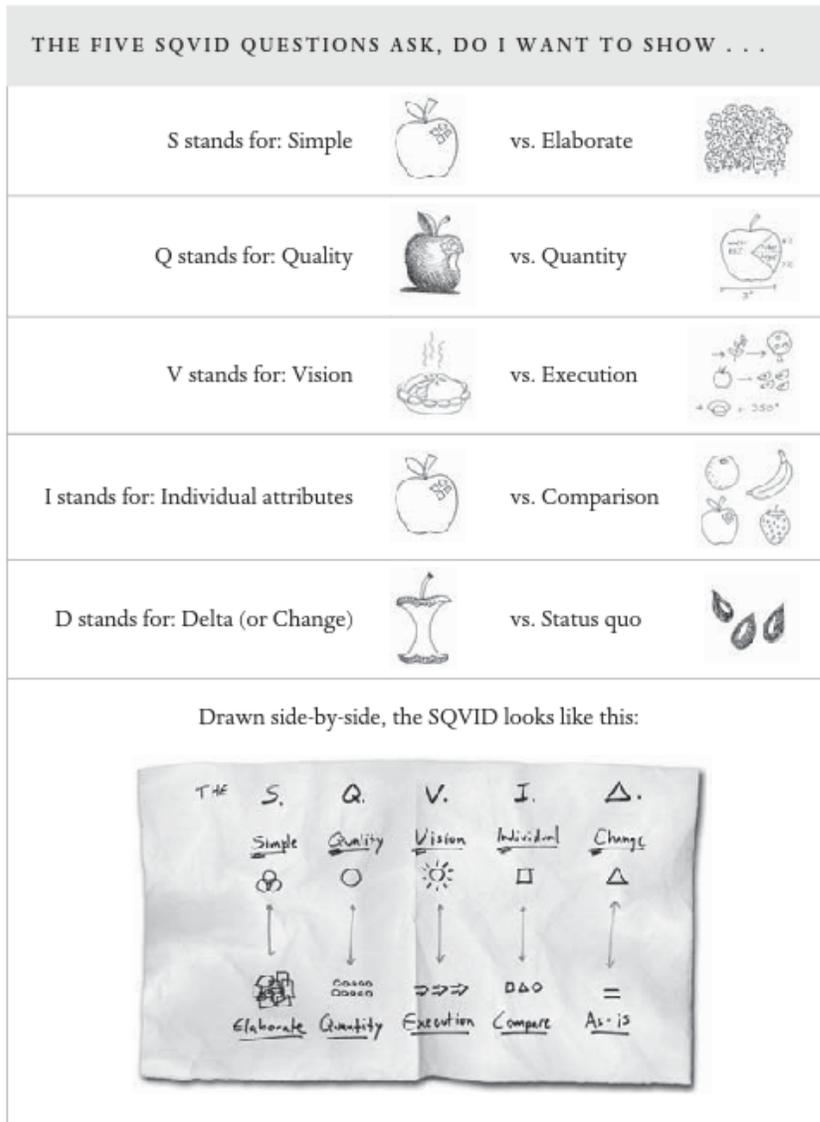
Timeline

The two visuals above answer very different types of questions. The Chart answers a “where” and “how much” question. The particular Timeline above answers a combination of “who,” “what,” and “when” questions. Pretty cool.

A Framework for “Applied Imagination” – the SQVID

So once we’ve “looked” at the problem, and we’ve “seen” the problem in the context of the 6 W’s, we are ready then to start “imagining” different aspects of the problem – to kick the tires around various “quantitative” and “qualitative” aspects of the problem.

For this task of **Applied Imagination**, the author has developed a framework he calls **the SQVID**. And, without further ado, here it is:

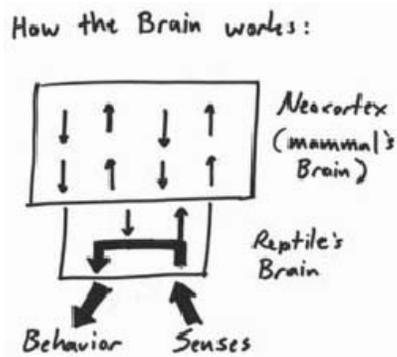


In the words of the author, “The SQUID is ... a series of five questions we walk our initial idea through in order to bring it to visual clarity and to refine its focus – both according to what’s most important to us and what’s most important to our audience.”

The SQUID, says Roam, is “brain food for the whole brain.” The upper part of the diagram (shown at the bottom of the visual above) emphasizes “creative” aspects of a problem: simplicity, quality, vision, individuality, and change – aspects that are descriptive, qualitative, abstract, and appeal to the emotional side. The lower part of the diagram emphasizes more “analytic” aspects of a problem – attributes that are numeric, detailed, factual, and measurable.

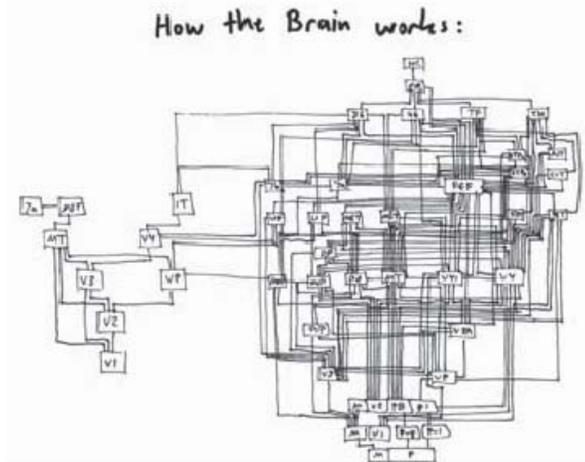
As the SQUID provides a structured approach to analyze a problem from both a “creative” (or right-brain) and “analytic” (left-brain) point-of-view, it encourages dialogue between “right-brainers” and “left-brainers” – at times forcing each type to view the problem from the perspective of the “other” side of the brain.

In illustrating the “S” column of the SQVID – “simple” vs. “elaborate” – I love the example the author provides of two different illustrations engineer Jeff Hawkins shows to two different audiences: the first a “simple” diagram for non-technical audiences of how the brain works, and the second for neuroscientists, PhD’s, and other experts.



This is the picture Jeff Hawkins uses to introduce general audiences to his ideas.

Simple



This is the drawing Hawkins shows to scientists and PhD's.

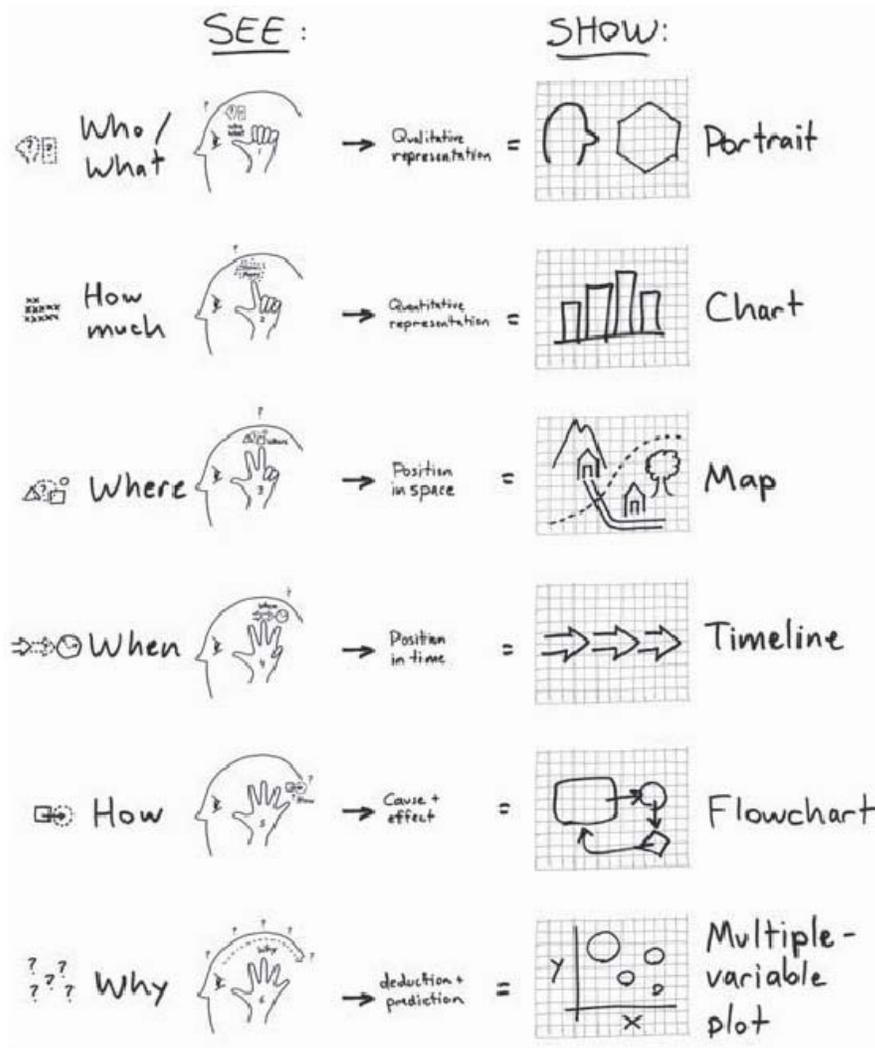
Elaborate

Now THAT illustrates the use of Visual Thinking at its finest!

Back to the Coordinate System Thing – Frameworks for Visual Thinking

A few pages back, I provided illustrations of two key models that the author uses to answer two different types of questions – these models were the **Chart** and the **Timeline**. These are two examples of 6 “frameworks” (or one might say “models”) that Dan Roam provides for “thinking” about the 6 key types of problems – the 6 W's.

Here's how Roam visually depicts these models (where he says “See” and “Show,” think “Problem Type” and “Model”):



The six ways we see and the six ways we show.

I mean, maybe I'm too easily impressed, but that's frickin' brilliant IMO. Roam then proceeds to further explore these 6 types of models (or as he calls them, "showing frameworks"), to show key variations of each of the above types of models.

Roam further elaborates this Visual Thinking Framework in something he calls the **Visual Thinking Codex**. But it wouldn't be fair of me to reveal ALL Roam's secrets in this book review, so I'll leave this for the book to elaborate upon.

Can you walk me through an end-to-end example of applying this Visual Thinking Framework?

Why, I thought you'd never ask? But, unfortunately, no, I've run out of time and space for this particular book review. Thankfully, however, the author provides numerous concrete examples of applying various aspects of his overall methodology, including an entire section of the book (Section III) devoted to a Case Study – which the author calls a Visual Thinking MBA.

Even better, there are a few great webcasts where you can watch the author illustrate his approach. Here's one from the vizthink site (a site well-worth checking out BTW):

<http://www.vizthink.com/blog/2008/03/18/246/>

Here's another from a presentation the author gave at Microsoft Mix 2008:

<http://sessions.visitmix.com/?selectedSearch=UX03>

And finally, a presentation the author gave at Google on May 27th, 2008:

http://video.google.com/videoplay?docid=-7863214807223480691&ei=2YukSLH_JoeW-QHQwYEU&q=dan+roam&vt=lf

In Summary ...

With "*The Back of the Napkin: Solving Problems and Selling Ideas with Pictures*," author Dan Roam has written a remarkable, thought-provoking piece of work that anyone interested in communicating ideas and solving business problems (and really problems of all kinds) through pictures will find a valuable addition to their bookshelf.

Glenn Assheton-Smith is a Solution Architect for a large, integrated media company in Canada, and a self-described Visual Thinking evangelist within his company.