By Karl Albrecht

Deconstructing the Future:

Seeing Beyond "Magic Wand" Predictions

Whether it's "rocket mail" or self-driving cars, predictions about the future need to be built on a deep understanding of context and consequences in order to inspire confidence. A business futurist offers insights on how to put wishful thinking, whims, and fads aside in favor of a process of structured inquiry.

On June 8, 1959, the U.S. Navy submarine *Barbero* surfaced just off the Atlantic coast and fired a Regulus cruise missile, aimed at the Naval Air Station in Mayport, Florida. Twenty-two minutes later, the missile struck its target but did not explode.

Shortly thereafter, a crew of sailors cut open the smoldering carcass of the missile and extracted two standard U.S. Post Office mail containers tucked into the compartment where the nuclear warhead would normally have been. The mail was then trucked to the post office in Jackson-ville, where it was sorted and sent on its way for delivery. One of the addressees was President Dwight Eisenhower, at the White House.

After witnessing the event, Postmaster General Arthur Summerfield proclaimed it to be "of historic significance to the peoples of the entire world." He predicted, "Before man reaches the moon, mail will be delivered within hours from New York to California, to Britain, to India or Australia by guided missiles. We stand on the threshold of rocket mail."

Some experts believed at the time that missile mail delivery might be feasible; most did not. It's likely that the Navy Department saw the episode as merely an opportunity to showcase its new missile capabilities, and possibly offer a sobering reminder to the Russian military brass, near the peak of the Cold War.

Summerfield, for his part, was wildly enthusiastic. But the concept never flew.

What Were They Thinking?

The "rocket mail" prediction serves as a useful lesson about the

One of some 3,000 letters launched by missile in a Cold War demonstration of military technology for peaceful purposes.
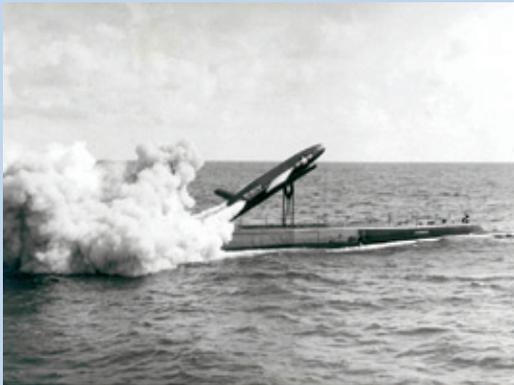
The "Missile Mail" Story

Postmaster General Arthur E. Summerfield's audacious proposal to deliver mail with reusable Regulus missiles—as a very public demonstration of the technology's potential peaceful uses—came at the height of the Cold War, in 1959, when most military technologies under development in the United States were kept secret.

The missile—containing 3,000 letters addressed to various VIPs, including all members of Congress, the Supreme Court, and President Eisenhower—was successfully launched on June 8, 1959, from the USS *Barbero* and guided by chase planes to its landing at the Mayport, Florida, Naval Auxiliary Air Station.

Despite Summerfield's enthusiasm for his vision of a space-age postal service, missile mail never took off. However, the Regulus experiment did demonstrate the U.S. military's ability to guide a missile to a chosen target.

For more information, see "Regulus Missile Mail," Postal Museum, Smithsonian Institution, www.postalmuseum .si.edu/museum/1d_RegulusMail.html.

Regulus I missile fired from USS *Barbero*.

PHOTOS COURTESY OF THE U.S. POSTAL MUSEUM, SMITHSONIAN INSTITUTION

Postmaster General Summerfield receives successful delivery of the missile mail, which then was sent on to recipients by normal post.

President Dwight Eisenhower (left) receives his copy of the letter from Summerfield (center), delivered by letter carrier Noble Upperman.

One of two rugged containers in which the letters were packed and launched via the Regulus 1 missile.

ways in which emotion can trump common sense. Was this a case of rational futuring or just wishful thinking? We can sometimes get so excited and seduced by a "gee-whiz" idea that we neglect our responsibility to subject it to a disciplined inquiry.

Let's briefly deconstruct the rocket mail prediction and see what we might learn from it, starting with a few contextual observations.

First, the missile shot proved nothing that wasn't already known. If submarine-launched missiles could deliver nuclear warheads, it would hardly be a stretch of the imagination to conclude that they could deliver mail.

Second, the presenting feasibility questions would surely have to be cost and scalability; the technical questions were mostly settled. Airplane mail, just rising from its infancy at that time, would almost certainly be cheaper and more easily scalable. Airports were sprouting up all over the world, but dedicated launch sites—and target zones—for rocket mail would have to be built, or military sites would have to be co-opted.

Postmaster Summerfield and his advisers probably had good reasons to think it could be done. More likely, however, this missed call was the result of either wishful thinking or a lively imagination untethered from reality testing. We can do better.

Imagination is an invaluable resource for thinking about the future or attacking any future-focused problem, but it also needs the support of a diligent, organized thinking process that lends depth to the inquiry. The Structured Inquiry Method (SIM), described briefly here, is a three-step process for deconstructing a presenting problem, issue, or opportunity, using three simple whole-brained thinking tools, and then reassembling it into a coherent picture of what might be realistically possible.

Before we review the SIM process and toolbox, we need to explore the interplay between three complementary human mental processes: *imagination, emotion,* and *logic.* I believe we also need a more reliable connotation of the word *prediction.* And, I believe, we can adopt a more disciplined habit of building and deploying our predictions.

Decrees Are Not Predictions

It seems to be fashionable these days for commentators in the popular press to outdo one another with ever more grand, bold and confident predictions. "Printed books will be gone in twenty years." "There will be almost no poor countries by 2035." "The Internet of Things: Everything will be connected to everything else."

I suspect that many of these declarations are simply "magic wand" predictions, wishful decrees that arise from the simple confusion of the possible with the probable. The fuzzy reasoning seems to be, "If I can imagine this thing happening, it *should* happen, and therefore it *will* happen." This kind of pop futurism can be a pleasant pastime over coffee or drinks, but it's a dangerous luxury in business.

It also seems that optimistic magic wand predictions outnumber negative or pessimistic ones by a wide margin, at least in the popular press. Understandably, people who are trying to attract attention to themselves and their ideas tend to favor the good news over the gloom and doom.

My biases are those of a business futurist—someone who assists the leaders of organizations of various kinds in thinking about their enterprises. Whether it's a corporation, a government agency, a hospital, a university, an association, a religious institution, or any other entity that must survive in a resource-scarce environment, betting its future on a grand prediction of some sort carries an inescapable risk. In a number of competitive environments, if you get it wrong, you can stay wrong for a long time.

Context Counts

What makes the magic wand prediction fun and easy also tends to make it weak and risky: the *absence of context.* When one merely decrees that "We'll all have microchips installed in our brains by the year *(fill in the blank)*," without considering the many related trends, events, and conditions that must dovetail for this conceivable state of affairs to manifest, the putative prediction degenerates to an unsupported conjecture.

Conjecture has its uses, but it can only take us so far. The trouble begins when people mistake the "gee-whiz" for the gospel—they begin to act out the assumption that it will materialize. In other words, we believe it because it's too good *not* to be true.

In business futuring, we speak of the *strategic gestalt,* which is a constellation of interwoven causal factors that, considered together, determine whether a particular state of affairs might be possible or probable. The richer the constellation of co-factors, and the more consistent and compelling the logic of the gestalt, the more confident we might be of the outcome we're considering. In other words, there's much more to the microchip-in-the-brain scenario than just the technology of microchips.

One skill that tends to set the top chess masters apart from all others is what cognitive psychologists call *depth of search.* This is the ability to imagine a long series of possible moves and countermoves—a futuring skill if there ever was one—and identify the moves that are most promising. As futurists, we don't need to have been born with the mind of a chess master to look ahead; simple diagramming tools can help enormously.

Returning to the rocket mail prediction, consider how a few extra "what if" questions might have brought its proponents back to earth. For example, airplanes don't usually land by crashing, but missiles do. Suppose one of these mail missiles veers off course and takes out the Arc de Triomphe, the Taj Mahal, or Buckingham Palace? What do we do about the lost mail if one of them goes down in the ocean? How will air defense systems discriminate between mail missiles and nuclear missiles?

The case gets weaker with every question.

To separate trends from fads, futurists need to study what I call "whimology." An unvoiced assump-

tion that seems to be embedded in many of the grand technological predictions these days is, "If you build it, they will buy it." But marketers don't seem to be much better than futurists at predicting the choices that fickle consumers—especially adolescents and teenagers—will make. Whimology is an underappreciated and much needed discipline.

For example, at the time of this writing, one of the more highly caffeinated predictions in circulation is "self-driving cars." Most of the reports I've read seem to focus on the technical feasibility—GPS positioning, automatic steering, car-to-car signaling, traffic control systems—none of which is really in doubt. The more operative question might be, What are the various ways people may react to the prospect of automated vehicles?

Additional questions present: How "complete" will the self-driving experience be, and by when? Will I be able to take a two-hour nap while my car drives itself from San Diego to Los Angeles? Or must I remain on standby in case something goes wrong? Automobile manufacturers are already making human-driven cars ever smarter with digital electronics, so the story seems to be that the kids in Silicon Valley have somehow reinvented the car.

Consider the whimology here: I'm not saying that self-driving cars are just a fad, but to make accurate forecasts we need to estimate the number of people who will be attracted to this technology and the number who will pass it up. And that requires understanding how they decide.

How About a Rating System For Predictions?

If we commit to a policy of insisting that predictions come with pedigrees—a plausible context and a believable strategic gestalt—we might also raise the bar on the format of the prediction; i.e., the language in which it is cast.

In addition to contextualizing our predictions, another way to lend discipline to the futures thinking process is to frame our conjectures as *confidence-weighted predictions*.

For example, a statement like "Every child in the world will have access to a computer by 2050" carries a grand air of certitude, which can be very misleading to the casual listener. It conveys no sense of uncertainty or probability; it's framed as if it were a simple fact.

A confidence-weighted prediction might say, for example, "Retinal transplants will be standard medical procedure by 2040, *give or take about seven years*." Or, "Sixty percent of new homes built will be 'digitally smart' by 2030, at a 90% confidence level."

Adding the confidence interval might not make it any more "scientific," but at least we warn the listener that it's a guess. And we need to remind ourselves that predictions composed of several interdependent outcomes will involve a higher total uncertainty than any individual one.

Perhaps we futurists can adopt a shorthand convention for rating our predictions, something like motion picture ratings, or in this case a "confidence index" (CI). We might say, for example, "Cremations will outnumber burials by 2030 (CI = +/- 6 years)," or "Sales of e-books and print books will be approximately equal by 2020 (CI = 85%)." If this kind of convention became standard, then "naked" predictions—i.e., unqualified by confidence ratings—might be perceived as simply fantasies, speculations, or wishful decrees, which is what many of them are.

Deconstructing, Contextualizing, And Road Mapping

Now, let's zoom in on the process for building more robust, reliable, and trustworthy predictions, using a procedure I call the Structured Inquiry Method.

Step 1: Mapping the Strategic Context

We begin by posing a "big question" of some sort, such as, Will independent book publishers and bookstores survive, thrive, or dive?

That question immediately unleashes a swarm of other questions: Which way are they headed at the moment? How might digital technology change things for them? Will changing reading habits and preferences present threats, opportunities, or both? And how might the behavior of big-name publishers help them or hurt them?

A simple and useful tool for this step is the "mind map," aka an idea map or cluster diagram. This tried-and-true method is cherished by consultants and facilitators who preach and teach creative thinking.

Let's visualize a team of investigators in a futures session, gathered

Author Karl Albrecht leads a group through a Strategic Inquiry Method workshop.

around a huge sheet of paper attached to a wall, or a giant whiteboard. Each one gets a felt marker, and they're all free to add their ideas to the diagram that will emerge.

The group leader writes the top-level question, or a phrase that summarizes it, in the center of the working surface. As the participants come up with related questions and sub-questions, they draw lines radiating out from the main question, and write (or summarize) the many sub-questions. Sub-questions branch out to smaller questions, and also to various topical sub-themes to be considered. The diagram quickly starts to look like a big spider web.

Mind mapping is a generative process, with few rules or restrictions. It continues until it runs its course. Now the investigators have a collective memory device. Everybody sees the same shared picture. They can always extend or amend the mind map as the next steps of the process unfold.

The mind-mapping tool gives us the first important piece of the futures inquiry: *the context*, or the strategic gestalt as previously mentioned. It offers a valuable perspective on the implications of the big question we're exploring.

Step 2: Discovering the Drivers

Next, the investigators gather at another wall and build an "affinity diagram." This collection of movable sticky-notes, index cards, or similar media allows participants to itemize the key trends, events, developments, and possible actions that might "cause" the particular outcome that's central to their inquiry.

Many of the topics on the slips will come from the mind map that was built in the first step. Other topics arise during discussion. This is also a generative process, albeit a more focused one, in that it seeks to identify and itemize causal factors.

Once the wall is plastered with sticky-notes, the group leader facilitates a process of grouping them into logical categories based on common themes. As the notes keep shifting around, they ultimately form a set of "affinity groups," or clusters that

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Small group discussions during Strategic Inquiry Method workshop enable participants to build on each other's ideas.

suggest a categorical structure for the causal factors on the evolutionary path to the prospective end state (possible answers to the question that the group is asking).

Typically, each affinity group of themes represents a key driver, or possible causal factor. Sub-topics within the group may be sub-factors that are more-specific drivers. Each affinity group gets a descriptive heading that summarizes its influence. Some groups might be broken down into sub-topics at different levels of detail.

Step 3: Building the Road Map

Once we have a clear portrait of the strategic gestalt—the mind map—and we've discovered the key drivers that may propel the evolution—the affinity diagram—the third step is to trace out the likely timeline of the change.

For this process, we use the simple method of "card planning," which is another visual tool that keeps everyone in the group focused.

Moving to a third wall, the investigators use sticky-notes, index cards, or similar media to lay out the sequence of the key drivers that will likely lead to the prospective outcome. The result is a series of note cards arranged on a timeline, usually with several—and sometimes many—branches and sub-branches.

Each branch corresponds to one of the major driver categories on the affinity diagram.

When all of the drivers and their dependencies and sequences are agreed to, the result is a best guess about "Nature's plan" for the evolution. The card plan on the wall looks much like a project plan or schedule, except that it's a guess about what will happen rather than a plan to make something happen.

Next, by assigning best-guess time intervals to the various drivers in the card plan, we can estimate the shortest and longest probable time spans for the estimated outcome. We can also assign best-guess probabilities to each of the drivers and calculate an overall confidence factor for the outcome. Some of the drivers might be more speculative than others. Some might be extremely likely, based on available data.

Taken together, the three tools of structured inquiry—the mind map, the affinity diagram, and the card plan—can give us a much clearer and more trustworthy basis for understanding the outcome we're investigating than we would otherwise have by relying on hearsay, advocacy, and magic-wand predictions. ❏

About the Author
Karl Albrecht is an executive management consultant, coach, futurist, lecturer, and author of more than 20 books on professional achievement, organizational performance, and business strategy. His last article for THE FUTURIST was "The Information Revolution's Broken Promises" (March-April 2014). His Web site is www.KarlAlbrecht.com.

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