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Becoming a More Effective Innovator

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In May, 2016 I was a member of a panel at the SOA Life & Annuity Symposium in Nashville. My contribution to this panel was to discuss aspects of innovation that may help actuaries be more effective participants in product innovation.

INNOVATION VS. INVENTION

It is common to conflate the words innovation and invention. Invention or being inventive means working on something that is really new. One way to distinguish invention from innovation is to think of invention as a legal process that involves patents, proprietary information, etc. On the other hand, innovation is about making an idea work in the market place.

In a recent article in the *NY Times*, Adam Davidson succinctly described the invention/innovation timeline:

“... our lives improve not at the moment of invention but when society creates the conditions to allow new ideas to become integrated into our daily lives.”

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At the end of your careers only a few actuaries will have invented something. On the other hand, the majority of actuaries probably will be directly involved with innovation, either as an individual or part of a team. As a successful innovator, you will have brought a new product, process or something else, to the point where it became an integral part of your company's operations.

The use of Rx data to assess risk in underwriting life insurance illustrates the distinction between invention and innovation. Someone understood the value of Rx data, figured out how to collect them, and how to analyze them. This person was an inventor. The role of actuaries was to improve the risk assessment process by incorporating Rx data into it. First, we realized that Rx data were valuable; then we explained to others why this is so. While the insurance community continually

seeks new underwriting tools, it didn't wake up one morning and suddenly feel comfortable incorporating Rx data in the risk assessment process. Adopting Rx data into life insurance underwriting was an innovation process rather than an invention activity. Talented people from many areas of our companies cooperated to make Rx analysis an integral part of the risk selection processes.

TYPES OF INNOVATION

Early in 2016 I was fortunate to listen to a webinar presented by the MIT Sloan Management Review. The title of the webinar was *Cognitive Technologies: The Next Step Up for Data and Analytics*. As I was listening to the speakers, I realized how their discussion helped me better understand the types of innovation activities that actuaries work on.

The Sloan webinar stated that current business changes almost always fall into one of the following areas:

- Eliminate tedious work,
- Reduce labor costs,
- Utilize the explosion of new available data,
- Make more accurate decisions, and
- Embrace powerful new technologies.

Most actuarially-related innovation projects are also likely to fall into one of the above areas, typically with the intent to make things work better rather than to make dramatic changes. Years ago the chemical company BASF emphasized this point in one of its commercials when it said “we don't make the dress, we make it redder.” Let's remember, for the most part, as actuaries we're in the coloring rather than the dress design business.

INNOVATION BARRIERS FOR THE INDIVIDUAL

In theory, none of us would argue that eliminating tedious or repetitive work, reducing labor costs, using data more effectively, making better decisions and embracing powerful new technologies are bad objectives. But when we bring these innovations in the workplace, we immediately come face-to-face with the natural human reactions that impede innovation. The most important of these is: am I going to lose my job as a result of a new innovation?

Getting back to the Rx example, I'm sure that many underwriters believed that the use of Rx data was just another way of eliminating jobs. I think most of us understood that underwriters were not suddenly going to become unemployed, but it certainly became evident that the underwriter of the future would not perform her job as underwriters of the past had done. Yes, change is frightening but it is a natural consequence of innovation. We can deal with it once we understand more about innovation.



So, if you're assigned to an innovation project, you'll also need to think about what it means to you and to your fellow workers. Humans have a role to play even when the intended result is to improve operations. It is not axiomatic that innovation eliminates the need for human intervention—quite the contrary!

So, what can humans do to eliminate, minimize, or even improve the impact of change on their personal careers? The MIT webinar speakers explained how humans can become more important to the innovation process in five “steps”:

- **Step In**—master the details of the system to know when it needs modification
- **Step Up**—take a big picture view and help make the decisions about automating new areas
- **Step Aside**—focus on areas where humans still do the work better than new technologies
- **Step Narrowly**—work on areas that are too narrow or limited to be worth automating
- **Step Forward**—remember, humans build the new systems!

BECOMING A BETTER INNOVATOR

If you want to become a better innovator, not only should you think about these five “steps,” but also work on broadening your abilities to contribute more to the innovation process and even, perhaps, lead it. Here are some of my personal recommendations:

- **Always think about HOW TO rather than HOW NOT TO.** If you don't offer solutions to problems that arise during the innovation process, you will be an impediment and a barrier.
- **Become time sensitive.** Sure, all of us need time to consider new ideas, but keep in mind that projects need to move forward, otherwise they will stagnate and die. All too often I've seen actuaries fret about making decisions related to innovations. The result is that good ideas are shelved because everyone loses interest in project.
- **Become a risk taker rather than a risk avoider.** Actuaries are skilled at understanding and measuring risk but that information must to be translated into a decision. Again, the decision to kill a new idea is often made because it is a safer path, although such decisions seldom consider the

consequences of not implementing the innovation. Learn to distinguish between risk taking and risk avoidance!

- **Remember BASF's perspective.** Although BASF's strength is its ability to develop new products, the company is aware of its role in the innovation process: BASF doesn't make the dress, it makes it redder.
- **If you're working in the life insurance business, start selling insurance.** Get an agent's license and see what it takes to sell a policy. You'll acquire a new perspective of what needs to be done as well as increased empathy with those tasked with making sales. This may help you develop innovative solutions!
- **Be particular with whom you have lunch.** Rather than going out with other actuaries from your company, start to hang out with the marketing types and any other creative colleagues.
- **Read, read and read.** Become a voracious reader of books on business, economics, science, etc., where new ideas are presented. Think about how they may apply to your business. Science fiction is often a leading predictor of technological changes. You'll find that as your view of the world expands, you'll be able to generate new ideas and solutions. And don't forget to partake in the humanities because, as it is said, they bring breath to your life and make us human.
- **Don't only attend actuarial meetings.** Find non-actuarial insurance industry meetings to attend to widen your perspective about problems that need solutions.

- **Volunteer in your community.** Be exposed to different aspects of life that stimulate your thinking about what's needed and what's next.

I have two final thoughts for actuaries who want to be innovators or inventors: DREAM. Let your imagination go wild. Consider the "if I only could" ways to improve people lives and interactions. Some people have created solutions to problems that we only realized existed when the solution was put in front of us. Where would we be if people like Bill Gates and Steve Jobs had not made personal computers and electronic communication as important to our daily lives as the air we breathe and the water we drink? I recognize I'm describing a "if we build it, they will come" scenario, but it is one under which new ideas and products have been created. It is even possible that you'll defy the odds and be both an innovator and an inventor.

LOOK INSIDE. If you're concerned about how you personally react to innovation, see Walt Kelly's Pogo cartoon from Earth Day (<https://enviroethics.org/2012/07/07/vintage-poster-pogo-earth-day-1970/>) in 1970 is *always* worth another view. ■

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