



**SOCIETY OF
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In the Quest for Innovation, All Roads Lead to Rome

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This article is the first in a series on the process of innovation. As actuaries, we first learned math and later how to perform various actuarial calculations or functions. Most of the time, there was a formula or algorithm to follow to complete the task and get to the desired result.

This is what attracted me to major in math in college. When it comes to innovation, however, there is no single formula or algorithm to follow. A quick Internet search shows there are three steps, four steps, and even five steps in the innovation process. Others say it's a cycle.

Obviously, there are many approaches to innovation. The choice is really up to you and perhaps what you're trying to accomplish. And while some methods and tools work better in certain situations, what's most important is to try to innovate when the opportunity arises. This article describes at a high level the steps that are likely common to most innovation "algorithms."

Future articles will cover specific aspects of innovation in more detail.

WHAT IS INNOVATION?

The term "innovation" has become a buzzword in recent years. Simply put, innovation is about creating value by combining existing ingredients in new ways. That's it. It can be something small, such as improving something directly related to what you do but that provides a better result or saves time. Or it can be something big. The invention of the iPhone is an example of combining existing ingredients in new ways that has created tremendous value.

WHERE CAN YOU INNOVATE?

You can innovate around any process, problem or opportunity where you believe you can achieve better results through innovations. Here are some examples.

- Work on a solution to a process that is not working well.
- Design new products or modify existing products. Look for markets where needs are under-served or not served at all.
- Consider how new technologies or services available in the market present opportunities for innovation.
- Leverage existing products, services or capabilities to expand offerings.
- Apply innovation techniques to something that's actually working well, in order to make it even better. For instance, look for those "facts" about how something works in the industry that are only facts because people have come to take them as facts. Here's an example outside the industry: Tables have four legs; the one I built and am working on at this moment has just two.
- Apply actuarial skills to a non-actuarial problem facing your company. For instance, I helped innovate earlier in my career by bringing an actuarial perspective to a non-actuarial problem. We were modeling the default risk of commercial mortgage loans and I applied double decrement theory to account for loans being modified (morbidity) and/or outright defaulting (mortality).

Once you have a problem or opportunity that you believe could benefit from innovation, there are many techniques for generating ideas and potential solutions. There is no shortage of

resources for idea generation. One I like that offers many exercises for a variety of occasions is <https://gamestorming.com/>.

YOU HAVE AN IDEA, NOW WHAT?

There is a big difference between an idea and having implemented that idea. The first step is to vet the idea and gather more information to better understand the opportunity and potential solutions. Use existing literature, web searches and related presentations. Talk to people knowledgeable on the topic.

Then seek ways to validate the idea. Are there related examples in the industry? Can you build a prototype of your idea? Can you test it internally? Can you run a pilot externally? If it's a new product concept, many U.S. state insurance departments are becoming more open to companies testing new concepts. At least two, Vermont¹ and Kentucky², have created regulatory sandboxes for this purpose. The goal is to work out the kinks to determine if it makes sense to fully implement the idea.

That's essentially the process. Find a problem or opportunity for innovation. Come up with an idea. Validate and test it. And then implement it. Most importantly, don't go it alone. Ideas only get bigger and better when exposed to many people with diverse perspectives. For example, when looking into new product capabilities to serve niche markets, obviously working with marketing professionals in your organization will be needed. This collaboration not only benefits from the different knowledge each party brings to bear, but also the different perspectives. Exposure to various perspectives can also help reveal ideas that may ultimately not be feasible, though we have to be wary of just how easy it is to kill ideas that people say

can't be done. This is why doing background research is so important. If an idea is not feasible, there needs to be something demonstrating why, not just one person saying so.

The best thing about innovation is that you and your team get to design and build the road.

After you do, enjoy your time in Rome!

We will explore the Innovative Process in greater detail in our future articles. We hope to also share how actuaries and those they work with are innovating. If you or your company has done something interesting that could become an article or part of one, please contact Maria

Thomson at mthomson@charter.net. Also contact Maria if you have comments relating to this article, or innovation in general, which you are willing to have published—or start a conversation on our LinkedIn page <https://www.linkedin.com/groups/2932342/>.

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¹Insurance Innovation Waiver Bill Signed by Governor, Vermont Official State Website, June 11, 2019.

²Kentucky Creates Insurance Innovation “Sandbox,” Kentucky Government Website, May 20, 2019.