Foundation for Open Innovation, Part 3: Managing uncertainty of technology development

by Michael Glessner

When managing the invention and development of a promising new technology, how do you most effectively deal with the uncertainties that exist? Per our definition in Part 1 of this series, invention is discovering something new to the world. Is what you seek even possible? Will the technology characteristics be capable of dealing with all the application requirements for its targeted use? These are huge questions that if handled correctly can make or break a critical development effort. So how does a thoughtful manager handle uncertainties in innovation?

The key is realizing uncertainties and risks are not synonymous, and that they require very different management approaches.

- Uncertainty – attributed to a new-to-the-world challenge with a truly unknown outcome
- Risk – attributed to something that has been done before, so that possible outcomes are predictable

Viewed this way, a prudent manager should think differently about invention and inherent uncertainties in this approach to creating differentiated products. If there is no history to rely on, how can you predict outcomes? The short answer is – you can’t. So don’t even try.

Consider moving as quickly as possible to address the key assumptions that make the technology great. Learn, adapt, and then learn some more by proving or refuting these assumptions. For example, one assumption might assert the technology is great because it can fulfill a certain key characteristic performance level. It would then be wise to set up a test to definitively prove or refute this claim - the path forward will be much clearer when this work is done. The faster a team can perform this learning cycle, the quicker they find the right development path. Encourage your team to select the biggest uncertainties and address them first in their development plans. Better to know early on if the idea cannot succeed, so you can stop development and reapply resources elsewhere. (Read more about Embracing Quick Wins and Quick Losses)

Also, consider sparking a team with an unusual or unexpected team member (possibly from another business unit or from academia) to generate more creative thinking about the development approach. Such wild cards can promote unusual approaches that may yield significant value.

What’s your view? Have you tried approaches like this? Were you successful? Now that we’ve laid the foundation for Open Innovation, my next piece will dive deeper into Open Innovation for Business to Business (B2B) companies.

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What's your view? Add your question or comment
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