Are You Serious About Innovating?

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I've been pondering this question lately - and thought that sharing this small sample of my own introspective questions might benefit others who struggle with nurturing the seed of innovation within organizations.

This is written from the specific perspective of a software engineering discipline – but is applicable to so many different types of organizations and teams.

Further, these thoughts are based on a slightly constrained premise that you have an existing product or service - and that stagnation has set in - and your innovation muscles have atrophied…

Questions that you might want to consider, in assessing whether your organization is serious about innovation…

1. Does your culture allow for errors and mistakes? If your organization operates under a threat of punishment and fear – how will your engineers ever have the courage to try something new and potentially innovative? I recently heard a CTO proudly state: “We have a perfect track record of tech choices and implementation so far, and we don't want to risk that”. A search of review comments on his company’s Glassdoor page – appears to reflect what I expected - a culture of fear and punishment. Which begs the question – are his engineers too afraid to try something new? Are yours?

2. Do you plan – and give your engineers time to “throw the first one away”, especially for critical new components? If you are racing to the finish on every release – how much of your solution is designed (for maintenance, for scalability, for extensibility) – and how much is simply hacked together? How much innovation can be introduced – if there is no luxury of time for trial-and-error?

3. As an engineering organization, do you periodically do collective code reviews and discussions of innovative Open Source software projects to glean great ideas? More specifically, for the individual, I think there are five essential practices to becoming a world-class innovative engineer:

- Read great code written by others;
- Write a lot of code – with intent - focused on solving meaningful problems;
- Be willing to experiment;
- Constantly be re-learning your craft (patterns, algorithms, new developments, etc.);
- Share what you learn

4. If you did a poll of your engineering group – and ask them what books they are reading, how many would have a ready answer? What percentage are focused on your current technology stack – and what percentage are looking further afield? Innovation benefits from cross-pollination of ideas.

5. What are you doing to support access to innovative ideas and continued professional development within your engineering group? Do you have a corporate Safari account program in place? Why not? When was the last time you invited an innovative leader to give a talk to your engineering group?

6. How many of your engineering group are members of the IEEE and ACM? Those two organizations provide access to their Digital Libraries – and are a wealth of ideas for innovation. Here’s a tip: Provide your engineering group with reimbursement for their membership dues. But that doesn’t go far enough. You need to close the circle. Institute a monthly discussion forum in which a rotating set of people present innovative ideas that they have gleaned from the latest papers, journal articles, etc.

7. Do you have a wiki for collecting links to innovative articles and Open Source projects? Sometimes the flood of new things is overwhelming – but you can at least have a process for organizing information and curating it for later re-discovery.

8. When is the last time you sent any of your engineering group to a conference? It isn’t about picking-up new skills – it is about the exposure to ideas – and the invigorating surge of energy that is shared by being exposed to a large collection of people that are doing innovative leading-edge things. Sure, they could watch conference talks on Youtube – but that isn’t nearly as effective in achieving the transmission of enthusiasm...nor does it help you in spotting potential new candidates to recruit for your engineering group – or communicate with enthusiasm some of the interesting new problems your group is tackling.

9. Is there some bit of code, tooling, etc. that you could Open Source – that might be beneficial to the Open Source community at large? Trust me, being supportive of your engineers’ effort to Open Source something (that is truly meaningfully useful) will repay itself in all kinds of ways that you cannot imagine. Second best – lend some portion of your engineering team’s efforts to support an existing Open Source project. Again, the payback in innovation, enthusiasm, pride, etc. is beyond what you can imagine.

10. How much of your engineering development effort is allocated to re-factoring? Unless your code base is of a trivial size – planning for re-factoring efforts needs to be part of your technology road-map. That’s also where innovation can seep back into your solution.

11. Do you have a formal Innovation Reward Program? Why not? If your business is driven by software, or derives value from the software that runs it – you are insane to not have a formal Innovation Reward Program. Establishing a culture of financially rewarding people for game-changing innovative ideas is moral, equitable, and in your best interest. Your business is people. Your best, most vital asset, is people. Take care of your people, and they will take care of you. Invest in them. Reward

your people in proportion to the value they create. If someone in your engineering group creates a solution that will reduce costs by 10% - why not give them 1% of that reduction as an Innovation Reward? Reward the behavior that is beneficial – and eventually, it will stifle the behavior that isn't.

12. Are your key business processes documented? Without first assessing what you do - and how you do it, and understanding the underlying cost/value of that activity - how will you prioritize and drive change with a focus on First Things First?

13. Have you done time-motion studies of your key critical process flows? Why not? How could they be reworked to dramatically improve efficiency and eliminate waste - to provide an innovative competitive advantage?

14. Do you actively listen to your end users and HEAR what they need and want? I was once brought in to consult to a major software engineering group on the East Coast - to help alleviate some amorphous and undefined problem that Executive Management didn't want to specify. The Director of Engineering was quite proud of the fact that they had Nobel Prize winners in their organization - and that his group did 26 releases a year. But when I interviewed their end users (in another State) - their biggest complaint was that they were underwhelmed by the slow/buggy behavior of the application - and were not pleased with 26 changes foisted upon them per year. Sometimes the Art of Listening with Intent - is the missing ingredient to achieving breakthrough innovation.

A critical component of sustained innovation is establishing a virtuous feedback loop of positive reinforcing behavior. Change doesn't happen overnight, but with the right incremental steps, support, and nurturing - any organization, in any field of endeavor, can be changed into an innovation dynamo.

My name is Kelvin Meeks, and I help software engineering organizations achieve breakthroughs in changing their culture, envisioning new products and capabilities, introducing innovative new architectures, and achieving breakthroughs in performance & scalability.