



Enabling Technologists To Solve The Right Problems

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Innovation has been such a huge buzzword over the last decade or so for those involved in technology. Rarely do I go a day without reading about some startup company “disrupting” this field or how their innovative products will cause them to make millions in revenue in a span of a few years. Although some of these companies, such as Snapchat and Uber, do go on to be successful in terms of attracting many users or generating revenue, they are not solving truly global issues that are inclusive of everyone. They are targeting individuals in developed countries living with the means to be able to call a driver through their smartphone app. Too many Silicon Valley companies are solving Silicon Valley problems. A significant amount of talent is wasted towards trivial problems that only benefit a very small percentage of the world. This is the challenge of inclusion for true innovation: bringing together individuals with the skill set and individuals with the knowledge of global issues together to truly solve issues that have plagued the human race for too long.

A significant component of what needs to be done to include all in innovation is bridging the gap between awareness of issues that need to be solved and allocating talent after that information is gathered. A deep awareness of initiatives such as the Millenium Development Goals (MDGs) created by the United Nations even for those not involved with politics or international relations creates the opportunity for thinking outside the box and more broadly about how to make a positive impact. Rather than just thinking about opportunities to generate wealth or fame for oneself, it’s important to instill a sense of responsibility to include all in the innovation process. Currently, that process is very closed off to an “elite” group, especially in Silicon Valley, consisting mainly of engineers and investors trying to become the next Mark Zuckerberg. Initiatives by Facebook to try to impact other parts of the world positively came only after the company was well established and on its way to an IPO. Currently, Facebook has the Internet.org initiative to try to provide Internet for all individuals around the world. This socially-minded project is admirable, but these kinds of projects do not have to wait for a very successful company to begin to be worked upon.

A global mindset can start from a young age in school. The way that individuals are educated has a huge impact in how they view the world later on. For example, in the United States, students are required to learn about American history over and over again starting from primary school, and only in high school is there a chance to learn about world history. Even “world history” in high school mainly focuses on Europe with some brief overviews of Asia, South America, and Africa. In the news, there’s a very heavy inward-focusing emphasis on the United States with some coverage of global news. It is not nearly enough compared to some other countries’ or news outlets’



coverage of world news. Even those who want to learn about the various economic, political, and social situations of regions around the world cannot do so with the current system without going out of their way to read other sources. This is why some well intentioned international projects become complete failures because of the lack of true knowledge about the culture and systems in place. Some individuals have taken it upon themselves to travel frequently or participate in activities in other regions of the world volunteering, teaching, and learning about potential issues to be solved at a systemic level. This is a great way to become a global citizen and think innovatively and creatively. However, this also requires a significant amount of time and money that not everyone has.

A recent phenomenon that has been happening in the tech community that I have frequently participated in has been the organization of highly successful hackathons. A definition of hackathon is the following: "an event in which computer programmers and others involved in software development and hardware development, including graphic designers, interface designers, and project managers, collaborate intensively on software projects." They are highly energetic and productive events where ideas become reality and resources to mentor, teach, and learn are everywhere. Many colleges are organizing their own hackathons, such as the University of Michigan, Stanford University, and the University of Pennsylvania, as well as venture capital firms and independent organizations. Some of these hackathons can bring upwards of 1000 student hackers from across the United States and sometimes globally for a weekend together. The 24-48 hours are very intense with little sleep, yet the hackers learn new skills quickly and are able to build amazing software and hardware and win significant prizes. Hackathons have offered \$10,000 for first place, drones, electric scooters, meetings with investors, etc. In order to raise awareness about its own technology scene, the South Korean government is selecting and flying in 1000 international hackers to Seoul for a 4 day hackathon and tech conference this summer for what will be the hackathon of the year. In 2014, the organization 10x10 organized an international hackathon in Croatia and flew in hackers as well. Generally, hackathons don't have a specific theme, and hackers work on whatever ideas that they might have. However, without a deep awareness of global issues that need to be solved, hackers in developed countries often work on problems that directly affect them, such as delivering late night food quickly or using Internet of Things devices to turn on the lights. These can be technically challenging hacks to work on, but they don't really impact those that technology can really help. This is the gap between the information available about ideas to hack on and the talent that is available.

KPCB, one of the top venture capital firms in Silicon Valley, recent came out with a social good initiative called Build for Good, partnering with Kiva, Pencils of Promise, and Medic Mobile to get engineers to start working on social initiatives. Some of the projects include building an application for Kiva that helps Kiva donors access impact and creating software that helps Pencils of Promise train more high quality teachers in developing countries. JP Morgan also hosted a Code for Good hackathon where around 100 hackers were flown in, formed teams, and partnered with 1 of 5 nonprofits to build solutions for their projects. The hackathon was highly successful and allowed both hackers and the nonprofit organizations to dream up bigger ideas to create positive impact. Examples like these show that with the right information and the allocation of resources, individuals can cross collaborate and begin to work on more problems that have true global impact in a short



span of time. Hackathons are a perfect example of this potential. With a greater social impact mindset in Silicon Valley and elsewhere, we can begin to be truly inclusive in the innovation process.

An actionable item to begin closing the information gap is to set up a platform where individuals can post their stories from around the world and projects that need to be done. This would be a bridge between the people with the right skills who can make it happen and people with the proper cultural, social, economic, and political knowledge. This sets up a strong, interdisciplinary global network where everyone involved can learn from one another and start to work together on problems that take more than one field to solve. Technologists can't solve these problems. Politicians can't solve these problems. Artists can't solve these problems. But together, they can.

The challenge of inclusion means taking steps to make sure that everyone, including engineers, to think globally. It's essential to create more open minds and more empathetic engineers to begin to close the information gap that creates roadblocks to solving today's most pressing innovation issues.



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