Shane Greenstein:

This is professor Shane Greenstein with the HBS Digital Initiative from the 2019 Future Assembly at Harvard Business School. We are pleased to present, Flash Talks, exploring technology in a multidisciplinary world.

Frank Nagle:

How's it going everyone? My name is Frank Nagle, I'm a professor here in the strategy department at HBS. Thanks so much for having me. My research thinks about how technology is weakening the boundaries between organizations of various types. So I'll be talking a little bit about some of the challenges and opportunities related to crowdsourcing, especially for companies that weren't born into the crowd.

Frank Nagle:

So I think it's important for everybody to have the same definition, or at least we can have a working definition here today of what crowdsourcing is. I'll throw it up there, I won't read it for you, but in particular I like this definition because it comes from Wikipedia. So this is what the crowd thinks, that crowdsourcing is, so we'll take their opinion on it, but I also like it because it's fairly broad. So we can think about things like gig workers, platform participants, user communities that would all fall under this kind of general heading of crowdsourcing.

Frank Nagle:

So just a few things by the numbers. More and more companies are using this. There's more and more venture capital being invested in these kinds of crowdsourcing applications. We also have an increase in percentage of companies using platforms and trillions of dollars worth of value being created by platform companies.

Frank Nagle:

And then lastly, one of the things I study in particular is thinking about open source software, which is a version of crowdsourcing where we create software in a non-traditional kind of means. And more and more companies are both using this and contributing to it. And oddly open source software is generally thought of as free, but there's more and more money pouring into this as well. So when we think about examples and think about crowdsourcing, often we think about these companies that were again born into the crowd.

Frank Nagle:

So Uber or Linux or Wikipedia or Upwork companies and organizations, their business model, their organizational model has always been involved with kind of these external partners coming in and helping create value. Where there's more interesting, I think work and a lot more challenges are thinking about companies and organizations that didn't always... that weren't born into the crowd.

Frank Nagle:

These kinds of incumbents that have existed for a long time had a business model that was very inwardly focused and now we're starting to engage with external crowdsourcing partners. So take GE, for example, a long history of great innovation and great development, mostly focused internally. A few years ago they actually started crowdsourcing jet engine development.

Frank Nagle:

So not exactly a simple thing, but, and it since that went well, they've started using it more and more. The Frito-Lay as a kind of a classic example because they use crowdsourcing to help build a Super Bowl commercial. They've got a lot of good press and it went well and now they're using crowdsourcing to actually develop new flavors.

Frank Nagle:

And then lastly, my favorite is Lego, which Lego had for a long time developed all their toys or their products, all their designs internally and over the past few years they started opening this up to users where they allow users to suggest designs and then the users actually vote on them.

Frank Nagle:

So we were having a discussion last night in the kind of pre-events that one of the problems that can happen with the crowd is you get so many suggestions, it's very hard to sort through, but the answer to that is you use the crowd to help you actually sort through things as well. And so we can think about even more complex things. NASA is using crowdsourcing study, which is the search for extraterrestrial intelligence, used to be very kind of centralized in large labs.

Frank Nagle:

Now they're using crowdsourcing to help with that as well. Microsoft recently famously has purchased GitHub, which is the biggest open source repository in the world. And they're getting more and more involved in that. Apple, I think is a very interesting case as well because you think about the iPhone, which first of all has open source software in it, but more importantly a lot of the value that's generated by it is by third party apps that Apple does not make.

Frank Nagle:

And so that app store is kind of their way of tapping into the power of the crowd to actually generate innovation and value for their customers. So I've talked about a few of the benefits from crowdsourcing, I'll overview these quickly and then think more about the challenges. So when we think about one of the main benefits is this kind of increased access to long tail ideas and specialized skills.

Frank Nagle:

Bill Joy, the co-founder of some Microsystems kind of sum this up quite nicely. "No matter who you are, no matter what company you are, most of the smartest people work for someone else." And so how do we tap into those smart people that are elsewhere? We can use crowdsourcing to find these experts in very unique things that are very specific and we don't necessarily need them full-time as an employee.

Frank Nagle:

And we can still harness their inputs via crowdsourcing. While lots of research and including some from here from HBS, it showed that crowdsourcing can save time and money. And when I talked about the Frito-Lay example, that also increased brand awareness. So when Frito-Lay for Doritos did the Super Bowl halftime commercial where they crowdsourced it from users, not only did they kind of save money and save time, but they also got this great press of they're letting users help create the brand and sell the brand and things like that.

Frank Nagle:

And so this was very good for the brand as a whole. Some of my research is looked into how crowdsourcing can actually increase the efficiency and productivity of the operations you do. So on top of saving time and money, we can also think about getting more out of the assets that we already have and crowdsourcing can help us with that as well.

Frank Nagle:

And then lastly, one of the things we're seeing a lot more now is internal crowdsourcing. So here if a company or an organization is worried about showing the world their the problems that they're having difficulties facing, they can do this in a more internal manner and share it across the company so that other people from the company can actually weigh in and give ideas without having to expose kind of the crown jewels to the external world.

Frank Nagle:

Now some of the challenges with crowdsourcing I think are there broadly... when we think about crowdsourcing, this applies to most companies that are trying to deal with it. But in particular it deals with, it affects companies that are making this transition, that had older business models or more traditional business models and are now starting to engage with crowdsourcing.

Frank Nagle:

So some of the early work that we've been doing is thinking about how you actually measure value both at the macro level. So kind of the GDP level, Wikipedia, we don't pay anything to use it. Most people aren't paid to create it. And so how does that show up when we think about GDP and national statistics like that, but also how do we think about firms investments in these type of activities when there's the money invested doesn't necessarily represent the actual activity going on.

Frank Nagle:

And relatedly, if we can't measure these things, what should the government's role be in crowdsource good? Should they be sponsoring these types of things and helping them grow like Wikipedia or open source software or, and or should they be regulating them such that there's a, we're avoiding any kind of abuse of the people that are participating in these crowds.

Frank Nagle:

When we think about companies, especially companies that are transitioning, but all companies, we have to worry about employee identity. I showed NASA up there before, which had started using crowdsourcing to help build some pieces of satellites and spaceships and things like that. But the scientists at NASA got very upset by this, some of them, not all of them.

Frank Nagle:

But some had this kind of identity crisis because they were the NASA scientists. They were supposed to be solving the hard problems and they ended up with this kind of not invented here syndrome where the innovations that were going out into space were not actually invented by NASA, they were invented by somebody that was retired, a radio engineer is kind of the classic example. So thinking about employee identity is pretty important when we think about crowdsourcing, one of the important things to be able to do this successfully is to attract a crowd, which is not always easy.

Frank Nagle:

For Lego, they had a great user community and a great user base, and so they were able to tap into that very well. But that's not always the case for all companies. And so that's why we've seen the rise of these kind of crowdsourcing startups or these crowdsourcing specific companies that will allow you to tap into their crowd so that you don't necessarily have to develop the crowd on your own.

Frank Nagle:

Let the experts at crowdsourcing help you out and they can bring the crowd to you. And then lastly, some of the things that I've looked at as well are thinking about the complimentary ecosystem. So I'm not necessarily here to tell you that crowdsourcing is right for everybody. It may be right for many people, but if you don't have your organization and your technology inside the firm tied in a way or developed in a way such that you can actually integrate these external ideas, then it may be difficult for you to actually integrate crowdsourcing.

Frank Nagle:

And so I've talked about these incumbent transitions a lot in some of our recent research has thought about how crowdsourcing really changes the way that a company operates. And so companies that start to crowdsource have to develop these three capabilities that they don't necessarily already have.

Frank Nagle:

So one is thinking about sharing intellectual property, which is not something that most companies are comfortable doing or have done in the past. And so thinking about that and how that changes when you engage the crowd. Thinking about how to shepherd crowds. So managing crowds is very different than managing employees or external contractors. So in Lego's case they designed a few rules around the crowdsourcing effort such that you weren't allowed to submit anything that was violent or represented a hate crime or these types of things so that they kind of pushed the crowd in the right direction, but they don't tell them exactly what to do.

Frank Nagle:

So they set some guidelines and they let the crowd do what they want to do. And then lastly, when we think about crowds, I mentioned kind of this notion of them potentially being exploited. I think the easiest way to do this is with a quick example that it's not necessarily exploitation, but it certainly raises a question.

Frank Nagle:

So Facebook, when they wanted to translate into many local languages, they instead of hiring lots of translators, which would have been the more traditional way to do this, they threw it out to the crowd and said, "Hey Facebook users, help us translate." This was great because they translate it into Spanish in two weeks and French in 24 hours. But at the same time, Facebook gets this massive amount of value and none of the users get paid. They get some benefit in that Facebook is now available in their local language so they can communicate with grandma easily and things like that.

Frank Nagle:

But at the same time there's this kind of question as to whether or not this was exploitation. Again, I'm not saying it is, but certainly these types of situations raised these type of questions. So Deloitte, last

year I liked this kind of flow chart, the world of crowdsourcing. There's a lot of options and they have this nice chart that lays everything out. This is publicly available and in the interest of time I'll kind of move forward. So just thinking about open questions for breakout discussions. There's a lot here that we can discuss and I look forward to talking about it during the breakout session. So thanks so much. And look forward to talking later.