Building a Culture of Collaboration and Innovation

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John Wheatley, Division Scientist at the 3M company, joins Dr. Jack Zenger in this edition of the Zenger Folkman podcast series to discuss how 3M fosters collaboration and innovation across the entire company.

John’s responsibilities include new product development, intellectual property, and strategic planning. 3M’s highly collaborative approach to innovation connects a number of diverse technologies, skillsets, and businesses to build new product platforms. John was recently recognized as one of the few individuals in the history of 3M to reach 100 U.S. patents.

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What happens inside 3M that encourages collaboration between departments?

One of the first things that comes to mind is what we call the Annual Event, an internal showcase of technologies. We set apart several days to showcase the newest technologies, products, and solutions from across the entire company. This is an opportunity for employees to show what they are working on and to see what others are working on. As an employee, you might see a problem that you didn't know about that you can help solve, learn about a technology that you could use in your area to help solve a problem, or learn about an application space that you didn't know existed.

We also have the Tech Forum, an internal professional society with more than 40 chapters with a wide range of topics, from adhesives to nanotech to optics. These chapters foster collaboration and technical interaction at the grassroots level. I've recently been involved in the Vision and Perception Science chapter where we use the understanding of the human sensory system in the design of products—vision, acoustics, touch, and so forth. We saw a need for this type of research, so we created a new chapter.
Do these activities and ideas come from your most-senior management or did they bubble up from underneath?

I think they happen both ways, but oftentimes it is organic and comes from the bottom up. Things like the Annual Event and the Tech Forum provide the landscape and encouragement for the bottom-up, grass-roots collaborative creation of ideas.

I’ve been with 3M for more than 22 years and the Annual Event was going on when I arrived. It’s really part of the DNA of the company.

Are there any other things happening inside 3M, a very broad and diverse company, that ensure communication and collaboration?

Part of our corporate culture is a program we call the 15 Percent Rule. Employees can use a portion of their time to pursue new ideas that are outside of any formal program or responsibilities. This could be a new idea that you’d like to champion or something that you want to work on that might be outside your department or division.

Another program that I’ve participated in several times is called Genesis, a mechanism by which employees can present an idea to a committee to seek funding. The Genesis program provides several benefits:

- It lays the foundation for being inter-disciplinary. Employees can form teams with the right people from across the company to demonstrate a technical improvement, key technology, or product.
- It is a platform for exposure of ideas to your peers and to upper-level executives. One of the biggest challenges of new ideas is getting exposure.
It is one thing for an R&D function within an organization to have these types of programs, but a lot of our listeners are not from R&D. Do you see collaboration spilling over to other parts of organizations, such as sales, finance, or marketing?

These programs are structurally set up for collaboration. All of the Genesis initiatives that I’ve been involved with have connections to one or more other businesses. At the end of the day, we want to make sure that the ideas we want to pursue solve real problems, are practical, could be adopted, and will help the bottom line.

There really are no barriers to having cross-functional teams be interdisciplinary in every sense of the word—technically and also functionally. I want to have all the people at the table who can help an idea succeed.

How does this spirit of collaboration impact leadership practices and behavior inside 3M?

The fact that there are no barriers lays the foundation for a person to demonstrate leadership skills and to grow as a leader. The 15 Percent Rule, for example, encourages you to look beyond the day-to-day and to try something new or to follow an idea. This is generally not something you can do all by yourself: you need to pull in collaborators, which demonstrates the leadership skills of building a team. Building that team together is absolutely a core part of leadership.

Also, as you mentioned, I’ve done a lot with patents and intellectual property. Patents are a wonderful vehicle for collaboration. In order to write a patent and to go through the steps to actually get a patent, you have to learn the history of a field; identify the high-value problem you
are solving and its constraints; know how you are different and better than what’s been done before; and then identify the products, articles, systems, or processes that you are going to enable. You will do a much better job, and do it faster, if you have an inter-disciplinary team to help you with accelerated learning and to look at it from all perspectives. This is all part of leadership.

Is the leadership style in 3M, an organization that strongly advocates collaboration, different than that of other organizations you’ve been exposed to?

I don’t know of a more collaborative company than 3M. I am in the Display division, but over the last few months I have interfaced with collaborators in the transportation, aerospace, and healthcare divisions. This kind of collaboration is very effective and can generate real results.

What impact does this collaborative environment have on the spectrum of products that come out of 3M?

Our collaborative environment helps us generate products and technologies that are useful across multiple fields and businesses. To take the other extreme, if we weren’t a collaborative company and I’m working on an idea or technology and I’m only applying it to the specific problem at hand, the potential uses for that idea or technology are limited. In a collaborative company, I can look across and ask how this constraint I’ve changed can solve a problem in other areas.

The other thing our collaborative environment does is help identify problems in a different area that you weren’t even aware of.

People mention that 3M has many different technologies, which is true. But what is unique is the combinations of those technologies. Having broad collaboration and visibility into other technology areas allow us to see those connections. You might take a problem that is very difficult to solve, but by combining multiple technologies, you can really address the issue.
In many organizations, influence and impact is a function of title or position. I’m hearing you say that people have a certain amount of influence because of their expertise and their ability to involve others, rather than the number of their subordinates. Is this a correct assumption?

I think you used the operative word, which is influence. Influence is a big part of innovating and championing ideas. You have to first convince yourself that a particular idea is good, is worth the time, and is valuable. If you can do that, you can then begin to show what’s possible. If that first prototype, which might be a piece of material the size of a postage stamp, shows promise—and maybe something surprising—you can then begin to share the concept, excitement, and the vision with your peers and management. They might get excited and want to add to the idea. Collaborating and sharing can help an idea get stronger, broader, more practical, and reach a tipping point where things are being pulled along because others are so excited.
In conclusion, do you have any observations or advice to pass along to listeners that they can apply in their organizations?

There is a line of inquiry that I’ll often go down when I’m trying to find an area to improve or where to invent or innovate. I try to find the exciting improvement in something. And then I go to the next step and ask, “Why hasn’t that been done, what is the constraint, and what prevents improvement or innovation in that area?” Drilling down sometimes two or three levels of asking these questions, oftentimes, you’ll find the key constraint, that if changed, allows you to make some non-incremental, exciting improvements. This applies to product development, but I think it applies to a lot of other things as well.

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