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BUILDING INNOVATIVE CULTURES

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Gary Pisano is the Harry E. Figgie Jr., Professor of Business Administration at the Harvard Business School where he currently serves as Senior Associate Dean for Faculty Development. Over the course of his career, Pisano has explored fundamental questions about how organizations innovate, learn, compete, and grow. Pisano has written six books, including his latest, Creative Construction: The DNA of Sustained Innovation. He is a two-time winner of the McKinsey Award (2009, 2019) for the best article published in Harvard Business Review, and the inaugural winner of the Clayton M. Christensen Prize (2020) for his work on innovative cultures. In addition to his academic research and teaching, Pisano serves as an advisor to senior leaders at leading companies around the world and has been a director of both public and private company boards. Professor Pisano currently serves on the board of directors of Axcella Health and Generate Biomedicines.

What are the challenges in building an innovation culture?

— It is all about behaviors. There are behaviors around innovation cultures that everyone seems to embrace: tolerance of failure, collaboration, willingness to experiment, feeling safe to speak up, and individual empowerment to take decisions. The other side of the coin is a set of more demanding behaviors: chiefly, intolerance of incompetence and insistence on high performance standards. These create an environment that's intimidating to some people. Everybody talks about how much they love psychological safety; however, if you are free to speak up to others, people should be free to speak up to you. People in innovative organizations need to develop a thick skin. An innovative culture is expected to be fun. I think it can be fun – but it's not purely fun. People want to embrace just a part of it, not the whole thing. I don't think that works.

What should be the role of a chief innovation officer?

— Every Chief Innovation Officer (CINO) I have met is an incredibly competent, experienced person working against tough odds: the organization hasn't set them up to succeed. I think the problem with the role is limited empowerment. CINOs in most companies can't fire people. For instance, if the head of a business unit refuses to change the culture and strategy, I don't think any CINO I have ever encountered could go in and say, "That's not how we are going to work here. You have got to find another place to work." CEOs can do that. Building an innovative work culture requires an incredible transformation. You need a lot of clout to do that, and it can be painful. CINOs need authority to drive that change.

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SCALING INNOVATION

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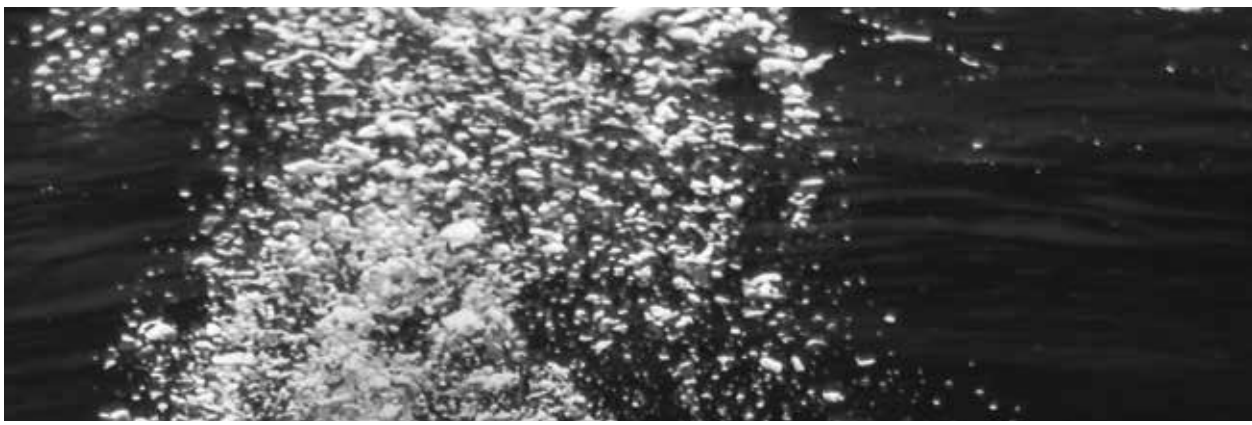
Why do a lot of organizations struggle to scale their innovations?

— Failure to scale is a symptom of the failure of the innovation system. Organizations don't think early enough about the scaling issues, the manufacturing, or the service issues. This often stems from a lack of experience. They are not asking questions early on, such as what kind of equipment or process to use. Innovation requires a high degree of discipline. New organizations are keen not to constrain creativity but, if you don't have the right manufacturing, delivery, and service processes, the new idea won't be scalable. You must think about what these will look like when you are producing a million units, not just the first 100. You must start asking questions about processes and systems very early. Scalability is something larger companies typically do well, even if they have not transformed their cultures.



BUILDING AN INNOVATION TEAM

How do you think an innovation team should be structured?

— I love the idea of cross-functional teams bringing different perspectives, but they should collaborate well and have some authority to drive things. Often, such groups are not teams, they are just committees or representatives of functions and lack the necessary unity and authority. Power resides in the separate functions. To innovate requires unity, purpose, and focus. It doesn't mean your innovation team needs to be insulated from the rest of the business. The team must be very functional culturally; it has to have a tolerance of failure; it has to be comfortable with ambiguity; and people must take accountability for their decisions. All the characteristics of innovative cultures at organizational level also play out at team level.

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What are the characteristics of innovative people?

— First, you must make sure people are technically or functionally competent in their roles. Innovation often presents technical or functional difficulties. Creativity requires a degree of intellectual horsepower. You also need people to exhibit specific behaviors: they should be comfortable with risk, ambiguity, and stress. Are they ambitious? Are they curious? When hiring, you must ask people about their experience and track records. Have they taken on big challenges? How do they deal with failure? A high degree of self-confidence – although not arrogance – goes a long way in building an innovative culture. Confident people can give and receive candid feedback without being problematic about it. Insecure people are the worst people in an innovative organization because they don't like to be challenged.

> Culture can be measured. There are indicators of behavior."

LESSONS FROM THE WORLD OF TECHNOLOGY

What lessons can organizations learn from innovative tech companies?

— Tech companies have been very innovative but so have lots of other companies. Every company uses technology. This distinction between tech and non-tech is a little blurred. Technology firms have always been forced to innovate rapidly or fail. In other sectors, things used to change more slowly. Now, everybody is experiencing dramatic change. The generally applicable lessons are: have the right strategy for innovation; think about what you want to achieve; and build the right systems and culture. Innovation is not just random, it's quite systematic and repeatable.

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"This idea that large companies can't innovate is one of those business myths that has been perpetrated."

Can large organizations innovate like tech companies?

— This idea that large companies can't innovate is one of those business myths that has been perpetrated. IBM was incredibly innovative in the 1960s, for instance. Bell Labs was a massive organization that was innovative. Today, Google, Apple, and Amazon are massive innovators. A lot of what is going on in the automobile industry today is innovative. Everybody talks about Tesla, but other auto companies are moving into autonomous vehicles and electrification alternatives. They have been doing a lot of innovation while running huge businesses in very harsh conditions. The auto industry is a tough one to compete in. Any company with over $1 billion in annual revenue can be considered a large company. There are nearly 5,000 companies in this category, worldwide. So, in fact, most innovation is done by quite large companies.

Can culture be quantified?

— Culture can be measured. There are indicators of behavior. People get in trouble when they try to measure values that are hard to observe but behaviors are not hard to observe. It's not perfect but the suggestion that other measures that companies use are perfect is false. Let's consider depreciation. If we buy a piece of equipment, it depreciates over five years. Does that mean that, every year, 20% of the piece of equipment falls apart? No. We just set up general rules to account for that, to structure our profit and loss statements. The metrics we think are precise are really generalized and complicated. A set of rules that, while not precise, is reasonable is sometimes the best we can do. The same applies to measuring culture.

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MANAGING INNOVATION

At what point in the innovation cycle should a product or idea be scaled back or killed?

— It varies, depending on the nature of the product and how deeply you understand it. In pharmaceuticals, there are certain disease states that are easier to model and predict. So, what you observe, even in animals, is highly predictive of what will happen in people. Similarly, what you observe in a small sample of people can be predictive of what you are going to observe in a large sample. If you are getting bad signals early, you can stop the process. There are some poorly understood diseases, where early observations are very noisy. Animal models are extremely noisy, so good and bad news cannot be taken at face value. It really depends on the level of knowledge around the product. Sometimes, predictive modelling can be trusted and sometimes it can't.

How can you predict the success rate of innovation?

— A good model is an accumulation of deep, empirical knowledge over time. Industrial chemistry has been around more than 150 years, and now has a deep reserve of accumulated knowledge. So, you can design a chemical process on a small scale and predict the complexity of what's going to happen on a large scale. Both the aircraft and auto industries use computational methods to predict air flows and drag coefficients, without ever building a physical prototype. They can test lots of designs virtually; those tests are not perfect but are predictive of what you will see when you build a vehicle or an airplane. In the newer fields, the knowledge base and theory have yet to be built up. The data hasn't accumulated to be able to create the models that allow you to do the prediction, so it's much more empirical.

THE FUTURE OF INNOVATION

Is there a specific innovation that you think will have a lasting impact on wider society?

— People are calling this the century of biology – I agree. We are finally able to engineer medicines, instead of discovering them. This could improve our health, giving us better quality of life. The internet transformed our lives and the way we learn and shop now. I hope, in the next 15-20 years, we will come to look at medicine in the same way.

What are your top tips for organizations to become more innovative?

— First, hire confident, open-minded, curious people. Second, really think through what innovation means and how it is going to help you, specifically, to compete. It's not just innovation for innovation's sake. Three, don't just go with the latest innovative trend; think it through systematically. You are building a bespoke system for your organization; don't just copy the market leaders, because what's best for Apple is not necessarily best for you. Fourth – in order but not in importance – work on the culture.

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