

**BREAKFAST KEYNOTE ADDRESS**

**Speaker: *Mehmood Khan***

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*Introduction:*

**Mehmood Khan**

Vice Chairman and Chief Scientific Officer, PepsiCo

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Ambassador Quinn, laureates, it truly is an honor, a pleasure to be here and most of all a humbling experience just to be surrounded by amazingly successful, capable, caring people who have had such a profound impact.

And while it's fun to reminisce about one's own career, I'm actually, as has been said by many people standing here representing thousands of people in my organization and the organizations I've had the opportunity to lead, having practiced medicine for many years, years at Minnesota, Mayo Clinic, been president of R&D of one of the biggest pharmaceutical companies in the world, Takeda Pharmaceuticals, and now as Vice Chairman of PepsiCo, it's been an interesting journey – practicing doctor, pharmaceutical executive, and the chips and soda guy.

And as I think about it, I'm going to share with you this morning – since the theme is STEM and women and empowerment – not all the wonderful things we do at PepsiCo but some of the challenges and questions that I can now reflect back on in almost a decade at PepsiCo. I joined the company at the end of 2007, and Indra Nooyi had just become CEO and chairman that year. And we had a task, and that was – What was the future of our company? And by asking that question – what was the future in many ways of our industry when you're one of the biggest corporations in the industry, where you go, you actually bring industries along with you if you're successful. We had a 100-year legacy in the history of success. But it was clear both to Indra and myself and many of my colleagues that the future was not simply an extrapolation of the past. The world is changing, and fast.

The part I want to focus on is the people part, not the products, not the business, but the people. And the world is changing in a number of ways that impacts our industry. You guys know about this better than I do – water scarcity, arable land becoming more and more of a challenge, food supply issues, the whole supply chain becoming challenged, energy, etc. – an aging population, and add onto the fact the seven billion or seven and a half billion are going to become nine and a half billion within the lifetime of most people in this room. And if I get to live to be the same age as Dr. Swaminathan, if I'm fortunate enough, even within my lifetime, I might be able to get to see that world. However, we have a choice. Today we have a billion hungry people – we could have three billion hungry people at that point. Or we might have solved this challenge, and we won't have not only three billion hungry people but conflict, challenges; and much of what we're talking about might happen. If that happens, it won't be

just hunger. But if you look around and read the news today, much is about access to equality, access to a fair share of this world's resources, food and water being fundamental to that.

So within that context is a large food and beverage company, and of course 97% of the world's population buys its food from the private sector, not from governments. And when I talk about food, I'm not talking about commodities, I'm talking about the food we eat, commodities being converted to food we eat – we don't eat oats raw, we don't eat wheat, we don't eat soy; we eat products that use those ingredients, so it's a very important transition.

It was an interesting opportunity, as I looked at my own organization when I joined PepsiCo. So I reflect back a hundred percent. Every single member of my executive team was male, caucasian, and had gone and completed their education in the United States – interesting observation, a hundred percent. And the challenge it raised for me was – we're a global company, 50% of our business is outside the U.S., fastest-growing markets are outside the U.S., of diverse cultures. And being a nutrition scientist, while nutrition is global, food is not global, it's local, it's culturally relevant. And so there's this distinction between the scientist, nutrition and the culture, which is food. And somehow we have to understand and make that bridge. And we're in the business of making food products.

So we started this journey, and I won't fill you in the details; we'll talk a little bit about the outcome in a minute. Today on my executive team, we have four of my direct reports are women, three of them have never gone to school in the United States, all the way through their doctorate; more importantly, my core science team, now half of that executive staff is women, and of my staff positions – finance, HR, etc. – the majority are women; and today PepsiCo's Global Innovation Team is run a majority by women, not the minority. And that has transitioned over an eight-year period. But it didn't happen because we did some quota, it didn't happen because we went out and identified by gender.

We had a very simple philosophy – we're going to look broadly, we're going to identify the best talent, the best background, the best experience, and let's see who comes up. However, let's keep our minds open, because if we keep hiring from the same pool of talent, we will continue to bring the same ideas to the table, which means we will have a future which is simply an extrapolation of the past, and then we will not succeed, because the world around us will have changed.

So today I might be the only physician scientist that runs innovation, and now the vice chairman of a food and beverage company, which itself is interesting – the fact that people with medical backgrounds and knowledge and expertise in how our bodies work have tended not to participate in the academic pursuit of understanding fundamental things like how the food and beverage and the agricultural sector works. Yet, we're in the business of feeding humans.

The second part of this is that we have members of the team who are molecular biologists, computational biologists, computational modelers, chemists, agronomists. I can go on and on. All of a sudden the skillset broadened from food technology and engineering, which is still important, to all these disciplines.

And as all these disciplines came to bear, we started looking at the other piece, which, since I took over as vice chairman early this year, I also am now responsible and chair of PepsiCo's

Global Sustainability Agenda and Council, which is the global impact we have from procurement to agriculture agronomy, water, energy, transportation, all of those things.

I asked myself an interesting question – We need to appoint somebody who's going to be the program manager of our Global Sustainability Agenda. And given the theme of this discussion, you may not be surprised to hear that I had the fortune of finding and hiring Heidi DuBois, who is now a woman in charge of PepsiCo's Global Sustainability Agenda.

And so we've transformed at the top. And we talk a little bit, because that changes the conversation through the organization. And by the way, when you become the minority gender for the guys in this room, you learn very quickly – first it was your mother who told you what to do. Then there was typically your teachers, in my case my admin, my wife of 33 years, and now most of my executive team. And you learn to behave, you learn to say yes, you learn that there's a lot of very smart people around you that are actually shaping the conversation for you as a leader – because any true leader has developed one skill, and that is the ability to learn, absorb, assimilate, not react but not be put off by being challenged either. We can be put off by being challenged and go back and regress, or we can listen to that challenge and say, okay, so what am I missing?

So let's talk a little bit about STEM on this, because if we're going to solve hunger, supply chain issues, business issues related to that, we can't do it without STEM. So let me tell you a few things we've been doing the last recent years in STEM to cover this.

We formed a PepsiCo STEM council. It wasn't because it was nice to do. It wasn't because we wanted sound bites. But over 50% of all scientists working in industry today, all industries, are over the age of 50. Over 50% are over the age of 50, which means, within a decade, half of the entire industry R&D workforce is going to retire – half. We have missed a huge opportunity the last two or three decades while all our brightest minds went into investment banking, went on to *Wall Street*, did all sorts of things, even our science graduates.

What happened, what was happening and what we failed as leaders to do was to bring our brightest minds to the problems we need to solve. And as a result, we have now a gap. That gap, in my mind, will not completely be filled; but if we don't do something now... It doesn't need a study. One of my challenges is – this is not a project that needs another academic study. Guys, we have ten years to replace half the entire industry's workforce. It's not going to happen because we wait for the next person who's going to publish something. It's going to happen because we take young people, pull them up, train them as fast as we can, and put them in positions where they get the experience, because they've got to take over.

And by the way, I have a very selfish reason for doing that – because I want to damn well retire one day and enjoy my grandchildren. But it ain't gonna happen until we do something consciously. So we formed these things.

We then developed a Global Rotation Program. We started taking young R&D scientists and started moving them around the world to make them global citizens, global thinkers, to start respecting other cultures. I am... My father was from India, and my mother was born in what is now Pakistan. I've never lived in either country. I grew up in Manchester, England, went to grad school up in Minnesota – Did I get that right? – and then ended up on the East Coast, and

by the way, Chicago along the way. And during all that career, we also spent a year in the Middle East working on an international project. It's going to take that sort of mindset to create the leaders of tomorrow. And we, as senior leaders, have got to move these young people and give them the opportunities to achieve that.

We then developed a global PepsiCo fellows program. Because in corporations, you get the marketers who get there, the Super Bowl, and they have all of this attention; and the guys in the labs who are actually creating the innovation are often an afterthought. We changed that. We made Global PepsiCo Fellow Program, which gave them tenure within the company, gave them research grants to do their own research within the company, collaborate with any university of their choice with their own funding, and gave them what we call the Chairman's Award, which is the highest award that PepsiCo can award. We identified the first six fellows, and Danielle Greenberg was the first female fellow to become a member of that initial class, and she's been a phenomenal addition. Now she herself is mentoring others. But we didn't stop there.

Global Industry STEM Task Force was created of 30 members of government, industry, NGO partners—30 organizations came together. I have the honor of having appointed Heidi Kleinbach-Sauter as the first chair of that global initiative. Heidi now chairs it on my behalf and is doing a wonderful job of that. And as that task Force is growing, it is impacting across multiple industries. We became part of the STEMconnector, but we didn't stop there.

The New York Academy of Sciences, of which I have the honor of serving as a member of the Board of Governors, kicked off an initiative to look at what they called a Junior STEM Academy across the world and globally connect young scientists through the New York Academy of Sciences, and all of the Eastern Seaboard Universities from Massachusetts all the way down to New Jersey, so from MIT all the way down to Princeton, as the base, and look across the world. I'm proud to let you know that we pledged \$1 million as the seed money to be there as one of the founding partners to get that off the ground. So we wanted to get going.

But as I talk a little bit and finish off—all this wasn't nice to do. It wasn't done again to get sound bites and media quotes or make sure that we're in the right circles. It was the right thing to do because it was also the right thing for business. Let me just talk a few minutes about business.

In 2007 when I had the opportunity to look at our organization, and Indra and I became partners, innovation at PepsiCo represented about 4% of our net revenue each year. It wasn't sufficient to grow our business. We increased the R&D budget by over 40%. We hired hundreds of new scientists, put in hundreds of millions of dollars of investment. At a time, 2008, when the industry was looking and thinking and the economic crisis was howling, our board of directors and executive team had the confidence to continue to drive and invest in the future. That future, as we look at it today, is a very different picture.

I'm going to talk about two years very quickly, 2013 and 2014. In 2013, 8½% of \$65 billion in revenue was now coming from innovation. If you do your math, we had now gone to about \$7 billion of revenue coming from innovation each year. We'd upped it by \$3 billion a year. We then looked at this and said—okay, what about how are we competing in the marketplace? In 2013, we look at the top 50 launches of the entire food and beverage industry in the United States, the biggest market in the world—9 of those top 50 came out of my organization. And we

looked at this. Everybody said, well, 2013 is a one off year – what about 2014? We have those data. Of the top 50 launches by the entire food and beverage industry, 10 came out of my organization. That's 20 percent of the top innovation of the entire industry coming out of one company's R&D.

More than that, as we looked at it, we had reframed the discussion. We had started to tell the other industry players – it's a different future. Others would follow, which is the important part. What's fascinating for me is, if you look at U.S. supermarket sales at a time when U.S. supermarkets are challenged for growth, the number one contributor to growth of the entire supermarket industry in the United States in the food and beverage sector is now PepsiCo. In fact, the next ten companies' combined innovation in 2014 equaled the incremental growth of just PepsiCo. And that was a combination of investment focus, all the rest of it; but it was because we had diverse talent, diverse skills, different ideas, different thought process.

Let me finish on the sustainability side. We didn't just create more of the same – that wasn't going to grow the business. We looked at our human sustainability goals, and I at another time can go into these numbers. But in 2014, we compare to the year 2006, which is when we started this journey. We have removed 434,000 tons of added sugar from the U.S. diet, half a billion tons almost. We have removed 1,800 metric tons of salt from the diet. We don't talk about it, because what we learned is when you can sell consumers on the packet, that what we've done is change the formula, they walk away from the brand. It is more important to do the right thing; you don't necessarily have to do it by brand, by package.

But we didn't stop there. We removed 1600 metric tons of saturated fat in 2014. On the environment side, we looked at water, and we have reduced water use per unit of production already by 20%. That not only reduced water use, it saved us \$17 million a year, which dropped right to the bottom line. Look at our packaging work, and in 2014 alone we used 130 million tons of recycled PET; and as we continue to do this, we are eliminating packaging out of our waste supply, and in one year alone we took out 90 million pounds of packaging out of the system. I can tell you about the greenhouse gas emissions. We now operate one of the largest, all-electric fleets in the country. And as that technology goes around the world, we'll start to look at this.

And the last is the initiative we've just launched, which is what we call our Sustainable Farming Index Initiative. We have just signed up the first 600 farmers in 11 countries that are now tracking end to end carbon, nitrogen, energy, water use in their farming practices that are our suppliers. And as we start to do this across the commodities we do, we start to look at finally end-to-end carbon footprint and water use from seed to shelf. It cannot be done by just looking at any one of those components until you start to look at this in an integrated way. And then you start to ask yourself the question – Where are the biggest levers, and what's the biggest impact?

So let me finish by saying it's been an amazing journey. We have much to do and much to learn from each other. We can do this in one of two ways. We can be sitting in our own silos in our own camps, criticizing each other across the table. That is easy, often done, often written about, and it makes great sound bites – but nothing actually gets done. We can sit and do academic research. And I spent 20 years – and I say this with all due respect and humility – but we are the point in our human mankind's history that doing more research studies alone is not

sufficient. Writing opinion papers and policy papers is not sufficient. Until we start taking action, doing things, not talking about things, not writing about things but actually doing things, things won't change.

We're at a point, in my opinion, that if we do not do something, there will be not just three billion people hungry, there will not just be conflict in Syria or a few countries here and there. As humanity starts to face that a third of it is hungry, they will fight for their rights, there will be conflict, there will be turmoil, there will be pain, and our children will inherit a planet that we as parents and grandparents will be ashamed of, handing over to them.

So let me finish by saying—it's not a choice. Diversity brings success because it brings new ideas. And by the way, my definition of diversity is not what you look like, it's now how tall you are, it's not what suntan you have—I didn't get mine in Manchester, England, by the way. If you want to try there, you're really going to be cold and wet. Diversity is about diversity of thought. It's not about counting numbers, it's by including people in the debate.

Thank you very much.