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Success Magazine: Dr. Kaloyeros, where did you grow up? How did your upbringing help to shape your character and ultimately lead you to where you are today?

Dr. Alain E. Kaloyeros: I grew up in Beirut. In high school there, the emphasis is very different than in the US. We focused on math and the sciences as opposed to sports and basic education. It was cool to be the smartest in your class, especially in the science arena. So I studied hard to be the best in my class. Being a nerd was cool.

SM: Why did you leave Beirut to study in the US?

AEK: The war caused many families to leave Beirut to seek safety and a better life. War and all of the atrocities associated with it gives you a special appreciation for the freedoms that we have here in the US. I had received my master's in Beirut and I wanted to obtain my PhD. Most of my friends were going to study in France, because the educational system in Beirut was under French control. But having grown up learning about American innovation, I was fascinated by the American system. I initially spent one and a half years at the University of Miami as a doctoral student and then I studied and received my PhD in Experimental Condensed Matter Physics from the University of Illinois, Urbana-Champaign in 1987.

SM: What has been the motivating factor

in your drive for excellence in your work?

AEK: We are driven to be the best at what we do. In order to be successful, you must treat your organization like big business. You have to build your empire in order to have the freedom to do the research that you enjoy.

SM: And, you have done that?

AEK: Well, we are in the process as we speak.

SM: Coming from Beirut, could you ever have imagined that you would be sitting here now, with the president of the United States visiting you? You have created this vast organization and you have students coming to intern here from all over the world. You have major corporations giving you billions of dollars for your research facility. I know that you have surrounded yourself with excellent people, but how has this transpired from your humble beginnings?

AEK: It is a mixture of things: persistence, stubbornness, making good business deals, creating an environment that people want to be a part of, and making offers that cannot be refused. The timing of the offer was also crucial to the success. If I had requested fourteen billion dollars when we began this project and told our investors that we were going to build the largest and most productive nanoscience university hub, they would have laughed

us out of New York. Most importantly, it is about leadership. We are most fortunate to have New York State government, led by Governor Andrew Cuomo, as our anchor partner. His vision and leadership, for which he is recognized as the nation's "entrepreneurial governor," are making New York Exhibit A of the 21st century innovation-driven economy. Also, there is a point where luck comes into play because of other people's inaction. Other universities were attempting to accomplish what we have achieved. Our model was different. We imbued the business of academics; we created accountability within the academic system. Individuals made decisions and were held accountable for them, which is unheard of in the academic environment.

SM: During the development phase of this innovation concept, companies were not falling over each other to come here to Albany. You had to negotiate, you had to administer it, you had to develop it, build it, construct it ...

AEK: And manage it. It is a relationship that you have to continue managing and nurturing because the new companies coming in felt threatened. Each of the major companies wanted a glass wall to separate them from the possible intrusion of the other companies due to the nature of their research.

SM: But you have overcome that?

AEK: Exactly. By showing them that with

this open innovation model you can still have the glass wall and the Switzerland model where everyone is treated equally and their research is protected.

SM: You are diverse in your approach to business. You have a scientific mind, an analytical mind, a business mind, and you have charisma. You can go into a meeting and people will listen to you because you have the vision and the ability to back it up.

AEK: It comes with a price though; one thing I used to enjoy, which I can't anymore, is being underestimated going into a meeting. No one would know who we were so they would take us for granted, and by the time we were finished with our presentation, we would have achieved what we had set out to accomplish. That evolved into people believing that everything we do is done with a purpose. For example, during a particular luncheon meeting I was very hungry. I did not want to disturb the speaker, so I grabbed the fruit bowl, placed it in front of me, and began to eat. The head of negotiations for the company stopped the speaker and then addressed me saying, "OK, we know what you are doing; we know that you are the one running the meeting." I looked around and I said, "I am not sure what you mean." He stated, "We know that you are in charge and that is what you are showing us by controlling the food." I had no idea what he meant, but apparently he believed that I was specifically trying to show him who was in control. It was a very expensive luncheon for him. He contributed about twenty-five million dollars to the university program.

SM: You consistently remain ahead of your competition. How do you accomplish this?

AEK: It is a constant battle. One can never rest on their laurels. We have two entities who are trying to duplicate this model now: China and the European Union. The European Union effort has been watching us surpass them for the last twenty years. In fact, they complained that NY State was contributing to our efforts from the academic institutions, yet they receive over three hundred million euros contributed to them each year.

SM: I do not see them as a threat, but China will never give up until they surpass us.

AEK: The Chinese see it as a national issue. It is a sense of pride and military competitiveness. They do not play by our rules. But they do not have the society, the freedom, the innovation, the ethics that we have here because they are afraid of their intellectual properties being stolen.

SM: The impact that you have had on the area is phenomenal, and because of your efforts the region has grown dramatically, including GlobalFoundries in Malta. How do you plan to continue this growth, so companies coming into our area can be the new centers of innovation?

AEK: We need to expand the geographic footprint of the innovation, education, and economic impact. I am a believer in Governor Andrew Cuomo's innovation-driven economic development strategy, which is expanding our "innovation" module across the state to other areas using nanotechnology, which feeds all of the industries from medicine to all phases of business. Through this groundbreaking blueprint, we are attempting to seed and feed other nanotechnology modules in Utica, Syracuse, Rochester, and Buffalo. We operate a facility in Rochester—a CNSE center focused on defense and green technology—and it is very successful. We also own a solar technology plant in Halfmoon, and our plan is to continue that growth and manage facilities throughout the state, deploying our unique academic and business infrastructure.

SM: Who is funding this?

AEK: The state match of funds has diminished because the private sector is investing more funds. The corporations are funding the lion's share of the cost of the research, and innovation is staggering. The old Kremlin model, whereby the government would do the funding internally and grandfather it through the system, is long gone. We must work together with the corporations to effectively be able to afford this research and innovation.

SM: All the eyes of the world are on you and your organization, looking to mimic your success. On June 19th, you are the keynote speaker at the NYC event "Building New York's Innovation Pipeline." What will you be discussing there?

AEK: We will be discussing how our model works, what we are doing, and how we can export our methods to other parts of NY. One key piece that I want to emphasize is the cultural piece which does not get a lot of coverage. We changed the grading system of our faculty here. We expanded it so that they are treated like entrepreneurs. For example, we do not grade them on how many courses in the college they teach, but how many courses in the community they teach. Once they are rewarded for teaching in the high schools, junior colleges and symposiums, then they become invested in the community. Our affiliation with Girls Inc. is an example of our academia's success in broadening to the community.

SM: We need to change the approach to science in our society. We are a nation of attorneys, not engineers, doctors, or physicists. How do you see us changing our approach so that we do a better job involving our youth in the future of science? How do we change the concept to that of Lebanon, where geeks are cool?

AEK: There are a lot of things to help the focus of science. Being a scientist is cool now thanks to Steve Jobs and Bill Gates. We have to challenge our youth to mimic the entrepreneurs and innovators of our world. We must provide them with the opportunities to make something of themselves using their God-given abilities and teach them to be proud of their intelligence, by capturing their imaginations as early as elementary school. Our biggest and most crucial challenge is to get them to change their mindset at an early age. Seeing my son come into his own and become excited about creating videos and games on the computer is thrilling. It is exciting to see him grow.

SM: Where do you see yourself in ten years?

AEK: If I am not in an environment like this with the freedom to innovate I don't know what I would do. In ten years time we will be able to walk inside our facility all the way down to Starbucks at Stuyvesant Plaza. The world has changed and it is important that the nanoscience world monitor its values and build to a greater future with responsibility, because of the emergence of our science as the controlling aspect of medicine, science, and finance.

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