



Sky High

Ten years after founding IDT, Dr Sunjoo Advani believes that the company will continue to improve transportation safety through technology, and policy.

Images by Bram Belloni

International Development of Technology (IDT) was founded by Dr Sunjoo Advani in 2005 when he identified a gap in the engineering and aerospace industry. The company develops flight and vehicle simulators, as well as advocating for ways to improve aviation safety worldwide. *The CEO Magazine* spoke to Sunjoo about why he decided to found IDT, the highlights for the company over the last decade, and what his vision is for the future.

***The CEO Magazine:* What is your professional background prior to becoming president of IDT?**

Sunjoo: I started off with a bachelors degree in mechanical engineering and a masters degree in aerospace engineering, both in Canada. In 1990, I moved to the Netherlands to do my PhD in aerospace engineering at the Delft University of Technology. I finally completed my doctorate in 1998, because I was simultaneously creating a new flight-simulation research institute at that university, and was nominated to become its first director. When I discover

something with high potential, I give it everything I have and strive to achieve the maximum for my team. For me, one plus one equals three, when the right elements prevail.

What have been the key learnings from your past experiences that you have been able to bring and apply to your role?

I started off as a scientist with a tenacious thirst for knowledge. However, I learned you also can't just keep that expertise to yourself. The world needs people who can translate knowledge into the language of the user, and show them real solutions. We can achieve much more by understanding the many aspects of complex problems by also venturing outside our own areas of specialisation.

There is a growing need to recruit young minds into engineering, and it starts from developing that interest at an early age by exposing youngsters to the fascination of science and technology. That is why I also enjoy giving lectures and hands-on workshops in schools.

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Since my childhood, I have always been passionate about aviation. I initially wanted to become a professional pilot. I was also a fanatic model airplane builder as a youngster, and became a private pilot. To help pay my way through university, I started a small business, building unmanned aircraft for unique applications. Ironically, my hobby made me realise that engineering would be a much better choice for me than becoming an airline pilot, since you actually solve important fundamental problems and can directly influence change. Leveraging change is really what it is all about for me—to make flying safer. When you have that drive, you start to also think beyond existing conventional limits. And yes, it is possible to make a career out of your passion!

What were some of the highlights in your career after realising this?

My commitment to aviation and particularly its safety was further emboldened when learning about airplane accidents. In my formative years, these were more common >



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than today, and were often attributed to human factors or pilot error. This led me to focus on pilot training and flight simulation.

Today, aviation has become very safe due to automation, procedures and technological innovation. Pilots are well trained to operate their extraordinarily reliable airplanes, and to resolve challenging situations.

However, a balance is required between managing these complex systems, and maintaining basic hands-on skills throughout a pilot's career. When something unexpected does occur, it might be a situation that the pilot was never exposed to in the past or even during their training. Accident data shows that, in some rare cases, pilots became startled and subsequently failed to act correctly, or even applied the wrong control inputs. This has led to what is known as 'loss of control'—today's number-one cause of commercial aviation accidents. During a Royal Aeronautical Society conference that I chaired in 2009 in London, we reviewed several recent aviation accidents and determined that loss-of-control indeed required further attention. We somehow needed to re-think pilot training to give pilots the knowledge and tools to do the right thing, even when they might be startled. Clearly, it was a complex, challenging issue that would require a dedicated team and international cooperation.

I quickly learned that the best way to realise change in aviation is to influence the governing regulations. I had the opportunity of advocating aviation safety regulations through "ICATEE", the international loss-of-control working group that I was requested to chair since the aforementioned 2009 conference. By involving industry, government and academia, our team has been able to make our work recognised through solid evidence, research and diplomacy. The key change is to bring pilots back to their basic flying skills, and better train them on how to manually handle their aircraft whenever the need arises. In some cases, it may require doing



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nothing by allowing the automation to keep flying the plane safely. In any case, the objective is to prevent and, if needed, recover from "airplane upsets". These principles have recently been incorporated into global aviation rules, including a new US law signed by President Obama, as well as recent European aviation regulations. As an industry, we now understand what is needed in order to teach the airlines how to deliver airplane Upset Prevention and Recovery Training, or "UPRT". Now, airlines and governmental bodies around the world are asking for help in implementing those changes, and IDT is part of that exciting process as well.

What have been the greatest challenges you have had to overcome?

We don't think in terms of challenges, we think in terms of solutions. And we gain credibility with our customers by speaking their language and understanding their issues. For us, a problem is simply something for which you don't yet have a solution. It's all about your mindset.

What are the key values of the company?

We are a small company with big projects, and even bigger ambitions. We transform ideas through the established partnerships we have created. We

recruit the best people from around the world and serve the most demanding customers in the field. In our projects, we involve leading scientists and engineers, and the most qualified partner companies in order to create an integrated project team. Teamwork is one of the key success factors in IDT. We also publish articles every year in both industry magazines and scientific journals to maintain our leading edge role. We are driven by a vision of making the world a safer and nicer place. It sounds ideal, however every business and individual can influence their environment with the choices they make. We are proud to be one of those.

How do you work with the external partners to achieve success?

We choose partners based on their competencies, track records, and most importantly, their values. We have been approached by parties who simply think they can take our knowledge, our model, and convert it into something immediately profitable. In reality, profit only comes after a long commitment to what you are doing and believe in, and when you have the right tools, knowledge, and reputation to solve the problems.

What is your vision for the future of the company?

We will continue to work on safety of transportation and mobility. Flying, driving, walking—anything that has to do with moving—that is where we will focus our special skills. By offering complete solutions for each customer's needs, we will continue to develop our unique market position. In that sense, we offer a special combination of know-how that makes us approachable, visible through our network, and able to maintain that market position. Developing trust in our customers is an essential element, which comes through speaking their language, understanding their needs, and offering reliable solutions. We are driven by determination and committed to improvement. ●