

Promootio, Aalto yliopisto 17.6.2022
Tuomo Suntola

Arvoisa rehtori, provosti ja dekaani, hyvät professorit, kunniatohtorit, riemutohtorikollegat ja vasta promovoidut tohtorit, hyvät naiset ja herrat – ladies and gentlemen ...

I feel privileged and honored to come back to the home of my academic studies to Aalto University and this Dipoli building – which, originally, was built to serve as the student house.

In 1963, as a first-year student, I had the obligation and honor to participate the building work – the modest task I remember was to help in removing building wastes from a space which now is the income lobby under this hall.

In the 70s, for 50 years ago, there was a kind of second industrialization boom in Finland. Previous decades had produced heavy industry like pulp and paper, metal, and shipbuilding – now there was an active demand for high technology which meant a major challenge to technologists.

I was captured to the high-tech boom in an early stage of my doctor's career. I had just completed a successful development project in VTT Semiconductor Laboratory here in Otaniemi, when I was invited to start a new research activity in a medical instrumentation company to create something unique to the products.

My proposal was to develop a thin film flat panel display based on electroluminescence, with the warning that nobody, by far, has been able to make such devices. The board of directors answered to my proposal with silence – until the chairman stated: “I am still confused, but at a higher level – let's go ahead”. The flat panel display came true in ten years but the novel thin film technology behind the success turned out to be far more valuable. It took another ten years to develop the technology to semiconductor manufacturing, and the next ten years to get it accepted by the industry – then the technology carried itself to an exponential growth which still continues.

We may be used to think that technical development is driven in weeks or months – at least when seeing that new models of mobile phones appear every week and a new electric car every month. The roots of fast development extend deep and wide – the more fundamental issues we are working with, the wider is the scope of new opportunities, but the more diverged and complex are the problems to be solved. For a scientist and technologist, a real skill and challenge is to see the essential and simplicity behind the complexity. I have always admired artists drawing cartoons or caricatures – with a few lines they are able express and bring up the essential.

World has really changed during the last fifty years – not least thanks to the huge development of electronics and telecommunication. If somebody had been able to tell me – at the time of my doctoral thesis – where we are today, I had regarded that as science fiction and something absolutely impossible.

I sincerely hope that every one of you, now celebrating your doctor's degree, can – after 50 years – enjoy and feel having been part of development that we consider science fiction and impossible today. For that, I wish you inspiration, bright thinking, and – of course – a drop of good luck!