

**Speech by Professor Rob Mudde, Vice Rector Magnificus/Vice President Education at TU Delft, on the Opening Academic Year 2024/2025 on 2 September 2024**

*Check against delivery*

Good afternoon, everyone, and welcome to the official opening of the new academic year.

Creating, inventing, designing, building. Shining light unto the unknown, and together shaping the future. A better future, a sustainable future. That is what we're all about here at TU Delft. But in a complex world, we need to work together more than ever. So that is what we do: we work as a community. To you, our first-year students, I say: join our community, and know that you are very welcome. Together we will build your future, our future, *the* future.

It is our theme for today: Engineering the Future. And isn't that just what we have been doing at TU Delft for over 180 years? Shaping the future through our research, our design and engineering, and the projects and enterprises evolving from it. And, of course, through ever new generations of Delft engineers, graduating and going out into the world and working in their chosen fields.

But the future is not linear. In the course of our long history, our views on the future changed, and so did the way we shaped our contributions to an ever-changing present.

Back in the 19<sup>th</sup> century our first graduates worked on infrastructure like roads, bridges, flood defences, sanitation. The things society badly needed back then, and we cannot imagine being without today. They brought us safety, prosperity, a greater life expectancy.

These subjects never go out of fashion, so to speak. Since then, though, we've broadened and deepened the scope of our work. Fluid dynamics, robotics, artificial intelligence, design thinking, and the ethics and philosophy of technology: the list goes on. And our research now ranges from the smallest building blocks of cells – and even smaller; take qubits for example – to the solar system and the planets beyond. In this, we are not only driven by curiosity, and the wish to contribute to the sum total of human knowledge, though these are important drivers. We see it as our mission to create impact for a better world, for a sustainable future.

But the sewers that once brought an end to cholera outbreaks, are now under threat from both the fatbergs of our prosperity and the flash floods caused by climate change. Today, the world is facing complex challenges, that can't be met with a single product, or design, or algorithm. How can we make our cities more resilient in the face of climate change? How do we speed up the energy transition, and make it fair at the same time? How can we contribute to a responsible digital transformation in a world of global cyber threats? And how do we provide high-quality healthcare that is affordable and accessible to all?

In this changing world, we have moved with the times. While our foundations are firmly rooted in the engineering traditions of our predecessors, we have developed different ways of working.

We've formed networks and collaborations beyond our own institution, so we can pool resources and access all areas of knowledge.

We've branched out beyond our campus, meaning that we work, for example, on vertical farming in circular cities at the AMS institute in Amsterdam. In The Hague, we share our knowledge with ministries and officials to try and improve policymaking and enrich the public debate. And soon, we'll have our own base in Rotterdam, where we can work on subjects like the sustainability of port cities, and much more.

The demands on modern engineers are changing, so we have had to evolve the way we educate and train our students.

Once you graduate, you will probably end up working in a multidisciplinary environment, where you will have to collaborate with other professions, as well as interact with all kinds of people, from officials to the general public. That means that you will not only need to be an expert in your chosen fields, but have a general understanding of other fields, and a whole range of skills beside that. That is why we try to offer you an educational experience that is not only sound in its scientific grounding, but close to professional practice as well. You will be joining multidisciplinary projects and learn from professionals in the field. And you can also take part in a whole host of extracurricular activities, aimed at broadening your horizon.

Collaboration is an important part of our educational activities in every sense of the word. In recent years we have set up a Teaching Academy, where lecturers are working together on improving our engineering education by sharing experiences and innovations. In this respect, education itself has become a subject of research. Something we are also very proud of.

With that in mind, it saddens me when I hear about the budget cuts and other measures being considered by the government, that will affect higher education. Is it wise, I wonder, to cut back on activities that are the backbone of innovation and its resulting socio-economic impact? Is it sensible to impose a so-called long study fine, when it will scare off students to embark on a career in technology. Similarly, is it wise to restrict the flow of international students when we so clearly need more people to work on the challenges I have just mentioned? These things are controversial, to say the least.

Now back to you, our first-year students. Today is the official start of your time at TU Delft. Here, you will be laying the foundation for your future as an engineer. We offer you the materials to make the most of that. As with any project, there are some building regulations too. We expect you to live up to your end of the bargain and be a diligent student. As important as your social life is, do take the groundwork for your career seriously.

Likewise, there are regulations for us too. The way we are going with the times, in our research and education, is also visible on our campus. We are more diverse than ever, with greater gender and nationality diversity in both student and staff populations. Therefore, more than ever we have to make sure to offer all of you a safe and inclusive environment. To underline this, next month will be a special Diversity and Inclusion Month, with workshops, training sessions, and events.

But first today. And today we are going to see and hear great things from our community, the community that you belong to from today. Being part of that community brings a lot of opportunities. Not just a new home, a new environment, and new people, but many ways to build yourself up. In your education, of course, but also outside of it, socially, athletically, and in sheer fun. So take advantage of these opportunities while you can, and enjoy them!