

## **39th Conference of Rectors and Presidents of European Universities of Technology**

Online conference hosted by University of Technology of Compiègne, France  
September 17<sup>th</sup>-18<sup>th</sup>, 2021

### **“Universities of Technology addressing the challenges that planet earth is facing”**

#### **UTC addressing grand challenges**

**Christophe Guy**

**President of UTC and Conference Host**

First of all, a few words about UTC that was created in 1972 by the French Government as its first ‘experimental University of Technology’ in France.

UTC is an “engineering only” university that trains 4400 engineering cycle, Master and PhD students in 5 fields of engineering that are mechanical, process, computer, urban and bioengineering. 9 research laboratories with over 400 faculty and researchers ensure that this education is research based.

Furthermore, numerous links with industry through joint labs, industry chairs, industry PhDs and participation of industrial partners in the governance of UTC and its foundation ensure that our technological research also meets the industrial challenges that our companies face. Based on a highly selective entrance selection, the UTC engineering education model combines engineering sciences, social sciences and humanities, economics and political science. Two 6-month industry internships as well as a mandatory international experience are part of the 5-year engineering curriculum.

Why did France need a university of “technology”?

By the end of the 1960s, a group of people identified that France was in a relatively backward position as far as technological matters were concerned. They found that this resulted from a kind of “technology-phobia”, seen as a sub-culture that would not enable those who studied technological subjects to attain leading industry positions.

UTC proved them wrong.

Believing the opposite, UTC founding father and first president Guy Deniélou stated: “Technology is the name for science when it explores applications developed by men, for Mankind.”

This was an ambitious and humanist vision that strongly resonates with us particularly today. The human element is key for a technology that should bring innovative solutions to challenges that society faces.

What are these challenges that UTC is facing and how do we tackle them?

As mentioned earlier, global challenges related to climate change, health, demographic shifts, peace, digital revolutions, inclusiveness and access to water and food - to mention but a few - are all challenges that we face collectively.

At UTC, we are strategically engaged in different ways to contribute our part.

Also, since I have arrived at UTC, there are 3 major initiatives that I have launched:

1. The first concerns the digital strategy.
2. The second a strategy is on sustainable development.
3. The third is on interdisciplinary collaboration.

Concerning the digital strategy, we all have “suffered” distance teaching when Covid restrictions banned our staff and students from campus. Our colleagues have shown immense talent and dedication to deliver knowledge and passion for engineering to our students. It was a laboratory for new ideas and approaches that we now want to develop, alongside with traditional teaching modalities. Since last year, we added online teaching and learning modules in cooperation with international partners and in particular TU Braunschweig, teaching French, German and intercultural courses to German and French students. In a recently started Erasmus project, we also develop an “online bioengineering practice lab”. Apart from teaching, the digital strategy also aims at a different approach to university administration with for example paperless circuits and software solutions.

On the research side, artificial intelligence finds its way into many of our research fields and a dedicated industry research program will shortly be launched.

The second theme is about sustainable development. This vast field concerns many aspects of course, but this new academic year sees the launch of the label “sustainable engineer” that is an academic program open to all of our students. Furthermore, an important governmental grant is currently deployed to reduce the carbon footprint of our campus installations. On the research side, we are engaged in several programs, such as the institute of environmental transition of the Sorbonne university alliance or the Sorbonne research initiative “Mastering complex, safe and sustainable complex systems” that is coordinated by UTC.

We know that a lot more has to be done and programs like Green Erasmus will help to further evolve in this field.

A part from climate related issues, “sustainability” for us also means social inclusiveness and I am proud to say that UTC has an almost balanced number of female and male students in its new cohorts.

Finally, UTC wants to foster interdisciplinary collaboration.

Since 2012, UTC is a strategic partner in the Sorbonne University Alliance. Together with Sorbonne University, the Museum of natural history, INSEAD, a fine arts school and several national research organisms, UTC is engaged in a common strategy. The Sorbonne University Alliance covers all disciplines of the humanities, medicine, science and engineering, technology and management and this diversity encourages a global approach to teaching and research, in order to jointly promote access to knowledge for everyone. UTC is the only engineering university and contributes to the alliance with its vision on technology.

This shared vision of an alliance covering a broad range of knowledge has been supported by the French government and excellence initiative grant obtained in 2012 and definitively confirmed in 2018. Through this grant, the Sorbonne University Alliance supports strategic

initiatives, from research to education, including international policy, innovation and campus life.

Among the examples I would like to cite the Institutes in fields such diverse such as music, health, environmental transition, data, artificial intelligence, heritage, and others, complemented by strategic initiatives that explore opportunities for cross-discipline collaboration in other fields. In practice, a lot of this happens through interdisciplinary doctoral programmes.

Sorbonne University also allows us to structuring our education by pedagogical innovations and the creation of experimental courses. Open to the society, the Sorbonne University Alliance promotes open science and free access to publications and data.

I will conclude my presentation, by saying that all this is fuelled by intercultural openness and international collaboration.

We have to learn from each other and learn with each other.

It is for this reason that I am happy to be with you today.