

TUM Talk: Facing the future with confidence

Wars, crises and critical debates surrounding Germany as a place to do business dominate public discourse. Yet there are a wealth of technologies and strategies available to help us take decisive steps towards the future in difficult times. At the TUM Talk network format at the Heilbronn Bildungscampus experts from science and business demonstrated how the perspective can be turned into a positive one.

It's easy to remind people, but it's more difficult to make things happen: despite multiple crises, many people in positions of responsibility are looking for ways to approach the future with confidence, even in difficult times. "The world is the domain of those who want to shape it", says Prof. Dr. Thomas F. Hofmann, President of the Technical University of Munich (TUM). Given the scarcity of resources, it is all the more important to maintain a clear focus and make a decisive choice of methods and strategies. "Crises often trigger unexpected forces — this is true for individuals as well as for companies," explains Prof. Dr. Helmut Krcmar, Founding Dean and Delegate Officer of the President for TUM Campus Heilbronn until the end of September.

Experts from science and business searched for and discussed approaches that might pave the way for a sustainable outlook to the future at the fifth TUM Talk, which took place at the end of October at the Heilbronn Bildungscampus. The good news: not only is the number of crisis flashpoints high — the number of available solutions has also grown.

Critical optimists wanted!

This places even more importance on the perspective of the people involved: "You have to be an optimist", explains Christine Steger, CEO of cosmetics manufacturer Mann + Schröder, "if you don't have this attitude within you, you won't become one". It's by no means about ignoring specific problems. It's about having the conviction that you can achieve the very best even in difficult situations. The family-run company from the Heilbronn region for instance, has made sustainability a priority for the new generation of shareholders — and as a result has been able to motivate employees across all hierarchical levels. In spite of challenging transformation processes, this has ensured that the company has a "bond that has brought about an incredible amount," says Steger.

The basis for developing a plan for the future lies in analyzing the current situation honestly and openly. It is helpful to know that everything that is already there can be made even better — "this is what drives

us as scientists and it is exactly the same for companies", says Prof. Dr. Daniel Cremers, holder of the Chair of Computer Vision and Artificial Intelligence at the Technical University of Munich.

This perspective is elementary for corporate management, but also for all other levels within the company: "We have to ensure that ambition becomes a prerequisite when hiring," says Dr. Gerald Karch, CEO of heavy goods logistics specialist TII Group. Small and medium-sized family-run businesses hold advantages when it comes to making rapid and decisive steps towards the future: "If a family of entrepreneurs stands behind an idea, then they will be able to make it happen", says Karch.

Greater willingness to build bridges

Yet at the same time, the future can rarely be shaped alone. A greater openness to new impulses is required, something that isn't always part of everyday life, especially in SMEs. "We realize that building bridges is important", reports Nicole Büttner, investor and co-founder of Merantix Momentum, an IT company specializing in AI. Within her field of work, this primarily involves bringing people with technological expertise and people with in-depth industry knowledge together. New ideas and business models can be developed and implemented in this manner.

The same applies for other forms of cooperation, such as between companies themselves or between science and business. A concrete example of this, in addition to the TUM Campus Heilbronn, is the Innovation Park Artificial Intelligence (IPAI), which has been sprouting to developing in Heilbronn for the past two years. "If we combine our strengths with cooperation and joint innovations, then there's a lot we can do to counteract any issues," says IPAI Managing Director Moritz Gräter. Close networking helps small and medium-sized businesses in particular to combine forces for extensive changes or technological developments.

Can AI help us out of the crisis?

This year's TUM Talk marked the end of the all-day conference "Rethink Mittelstand". The TUM Campus Heilbronn organized the event together with the ZEIT publishing house. More than 300 representatives from SMEs, start-ups, corporations and the Technical University of Munich debated ways and means of ensuring that their own companies are fit for the future. The objective here was also clear: SMEs need to start doing things so that they can set the course for the future: "We don't have an insight problem, we have an implementation problem", said Thomas Saueressig, Executive Board Member for Customer Services & Delivery at software group SAP, "the right time is always now."

There's no getting around artificial intelligence (AI) - along with the question of whether, when and how it can help SMEs. There are already hundreds of AI tools available for a range of purposes - from data analysis to video generation. Prof. Dr. Daniel Cremers illustrates how technology has overtaken humans in terms of speed and error detection within just a few years with the help of deep neural

networks using the example of automated image recognition. He also admits that sufficient stability is still lacking in many applications: "If it's not necessary to complete a task with 100 per cent perfection, then AI works very well."

This is another area where perspective is crucial: AI may not be able to fulfil some expectations and may compromise some business models. Yet with the right choice and a little trial and error, companies may find the technology to be a valuable tool when it comes to the future. This gives SMEs the opportunity to enter the field of AI at any time and at any level of maturity.

From routine tasks to a revolution

In the case of Mann + Schröder, the first task was to cleanly prepare and record data within the company. This was followed by making established processes even more efficient. This included, bringing together all machine manuals with the aim of finding a solution more quickly in the event of a malfunction. Artificial intelligence is now also being used to help the family business collate trends and forecasts. The guiding question in all of this work is: "Where can activities be replaced that do not contribute value?", says Steger.

This way of approaching marginal issues makes sense for many SMEs. However, the situation is often different when it comes to critical business processes. "Everything that is relevant to security, we do without AI," says TII Group CEO Karch. His company achieved several world records in spring 2024 when it helped transport a special ship weighing 23,000 tons on a moving platform with 880 axles. Nevertheless, for sensitive business processes, there is still too much legal uncertainty about the use of AI. "The following applies: too much hesitation can be damaging on the path to the future: "Some of the fog will soon be gone, but there's no time to wait until the fog has completely disappeared" emphasized Büttner.