

“We Need Timely Solutions”

Networking ZKU More Closely with Process Engineering and Thus Becoming Faster



“After all, we are also measured by the contribution we make to the economy and society,” says Prof. Thomas Hirth, Vice-President for Transfer and International Affairs of KIT. (Photo: KIT)

Climate protection, energy transition, resource and raw material security – we have a lot of big tasks to do. The KIT Climate and Environment Center (ZKU) can contribute even more. A conversation with Prof. Thomas Hirth, Vice-President for Transfer and International Affairs at KIT, about the future orientation of KIT.

Prof. Hirth, where should the journey of the ZKU go?

From my point of view, ZKU has to network even more with other disciplines at KIT, especially with process engineering. After all, we have no time to lose and need technological solutions for

sustainable energy supply, mobility, water management, raw material and material efficiency, and the development of the circular economy. These are the lead and growth markets of environmental technology. The ZKU is very much concerned with environmental impact. But it kind of lacks a direct link to concrete applications. If our climate and environmental researchers cooperate even more closely with other disciplines, technological solutions will emerge that can be used to tackle global environmental problems. This would allow us to leverage even more of ZKU’s potential.

Where do you see unleveraged potential?

We know a lot about ecosystems, geo-resources, material flows, and global systems. We can describe the state of the atmosphere, know much about gases that are harmful to the climate, and can identify and analyze environmental problems. With this knowledge, we should approach other disciplines more and develop solutions, for example, to reduce greenhouse gas emissions or make better use of raw materials. After all, as KIT, we are also measured by the contribution we make to the economy and society.

How can the disciplines come closer together?

There is a lot of knowledge on several sides that is not yet being optimally brought together. That’s why we need formats where the various experts join to discuss topics, write project proposals, and get industry on board. These can be workshops or discussion forums, or brainstorming sessions where ideas are collected. Through stronger networking, we also gain efficiency and speed. I think that’s extremely important, because we need solutions promptly.

What are the topics for which cooperation is particularly in demand?

Everything that has to do with CO₂ – from reducing emissions to using CO₂ as a raw material – requires the expertise of many disciplines. The same applies to the development of a circular economy, which we can only do together with industry. The sustainable use of water as a resource depends heavily on technologies. How can we recycle water even more efficiently and how can nutrients be recovered from wastewater and returned to production? These are all topics where we have a lot of work

to do. The availability of raw materials is another important interface between life sciences and process engineering. Our THINKTANK Industrial Resource Strategies is a good example of successful cooperation between environmental research and process engineering.

What else is important?

The development of systemic solutions. That’s the strength of KIT and that is what can be further expanded. For example, we also have a great deal of expertise in economics, humanities, and social sciences. New solutions must not only make ecological sense, but also offer economic advantages. Not only has KIT the ability to develop technological solutions, but we also have the skills to assess and evaluate them ecologically and economically.

The transformation must be ultimately managed by society, politics, and business. How can knowledge transfer be improved?

After all, what we develop at KIT is to be transferred to the economy and society. Innovation days strengthen the connection between science and industry. At our Innovation Day this year, which was attended by KIT researchers and representatives from industry, sustainability was a major topic. And we have to involve society more and offer more dialog formats like Science Week to make science understandable. With “KIT im Rathaus” (“KIT in the City Hall”), we have already established another format. Here, the individual KIT centers regularly present themselves and discuss with the audience. So we are already well on the way – but there is still room for improvement. ■