



ENVISION THE BIKE EXPERIENCE OF TOMORROW

4. Science Hack - TUM: Junge Akademie - Nov. 26-28, 2021 – Munich, Germany

Challenge Definition



Vision:

Bikes are either purely mechanical or hybrid models utilizing motor support. But the overall biking experience is not that different from what it was in 'the old days'. Let us change this! Let us utilize technologies that already exist or are on our horizon and envision what a bike ride might look like that puts the focus on the human and emphasis on the biker's health and wellbeing. Body sensors could drive the motor support, performance data could be displayed in real time in the cloud – there are endless possibilities.

Task:

Describe the experience from the biker's perspective. Work out the benefit and perceived value. Don't forget risks and physical limits and always consider safety measures. Complement your vision with a development plan that indicates major milestones and uses design approaches like digital twin, system simulation or machine learning.

Support:

Altair will provide sample data and first class development tools for data management, IoT, dashboarding, control design, engineering and much more. We will support you with our deep understanding of lightweight design, electric driveline optimization and data science.

Skills:

- Mechanical Engineering, Computational Science or Informatics
- Business Management, Marketing
- Team player, well organized - customer centric thinking