Know-Center Pharma Day Event 2019

Highlights

Pharma Day took place on the 13th and 14th of February in Graz, 30 key industry experts, including 6 speakers, came together to discuss, debate and share insights on the opportunities and challenges of data analytics in the pharmaceutical industry.

Pharma Day attendees

The agenda included key speaker slots, demonstrations of prototypes and networking events to encourage the debate and establish connections between representatives across the entire pharma community. We brought together people from Pharma companies of different sizes and outside of the conventional pharma areas, including tech leaders like Siemens. This approach allowed the audience to discover other perspectives and experiences.

CEO of Know-Center, Stefanie Lindstaedt with Pharma_Day Speakers: Ciro Cottini, Caterina Minelli, Pankaj Doshi and Ivo Backx.

On the 13th the event started with a chocolate tasting welcome and introduction to the event by Univ.-Prof. Dr. Stefanie Lindstaedt, CEO of Know-Center and Head of the Institute of Interactive Systems and Data Science at TU Graz. Next, Univ.-Prof. Dr. Johannes Khinast, CEO of RCPE and Head of the Institute of Process and Particle Engineering at TU Graz, explained the trends and challenges in the digital design in pharma manufacturing processes highlighting the technological advances that allow the development of simulations, which can generate a significant added value to existing processes. The key role of advanced analytics in developing the simulation of complex processes when mechanistic models cannot be clearly described was highlighted.

To finalise the first day, Prof.Dr. Lindstaedt discussed the main competences of Know-Center, emphasising the expertise of our data engineers and scientists and extensive experience in developing solutions for the entire spectrum of data value chain, from data management and data visualisation to data analysis and data security. After that, the participants had an opportunity to interact with real data-driven prototypes developed at Know-Center.

Interactive demonstration session of data-driven prototypes

At the evening, a delightful dinner featuring Styrian food was served, offering another chance for exciting discussions.

Social networking event

The next day started with an inspiring presentation by Pankaj Doshi, PhD, Head of Process Modeling, Drug Product Design, Pharmaceutical Science - Small Molecule, Worldwide Research and Development at Pfizer Inc. He provided an overview of the application of computational modelling and data analytics to

the pharmaceutical virtual or *in-silico* process and product development, including interesting use cases like the use of machine learning to predict crystallisation propensity of active pharmaceutical ingredients. He concluded with a clear message about the existing situation: "The pharmaceutical industry is moving towards a digital definition of drug product design, which will revolutionise product realisation in terms of speed and quality."

The next presentation provided a different perspective of digitalisation: the key role of metrology for a reliable digitalisation. Caterina Minelli, PhD, Medicine Manufacturing Technical Lead at the National Physical Laboratory (NPL UK), emphasised the critical role the accurate measurement and standardisation play in the implementation and digitalisation of advanced manufacturing processes. She concluded by highlighting the need of bringing together metrologists, pharmaceutical companies, system engineers and regulators to develop and maintain the metrology infrastructure and harmonise and extend standardisation.

After the coffee and demo session, Ciro Cottini, Head of department in CMC R&D at Chiesi, presented a first-hand real case scenario: the main opportunities and challenges for Chiesi in their digital journey. He emphasised the importance of properly integrating innovative/transformational and operational work, as well as pharma experts and device providers. Innovation, new technologies and new algorithms seem not to be the greatest challenge for an effective transformation.

The final presentation underlined how the market changes in therapeutics and diagnostics are driving the manufacturing transformation in the Pharmaceutical industry. Ivo Backx, Manager Account Development Life Science industries, Digitalization & Innovation at Siemens, highlighted the need of leveraging technology to drive Innovation through three key components: collaboration via data integration, as well as the use of Big Data Analytics and simulations. He presented compelling use cases related to the deployment of Digital Twins for continuous optimisation and applying AI & Analytics for increasing productivity.