IN CONVERSATION WITH
RALPH HÄFELI

Head Technical Research & Development (TRD) IT Novartis

Ralph Häfeli, Head Technical Research & Development (TRD) IT, Novartis

Ralph Häfeli started his career in 1992 as Automation Engineer in the Engineering Department of former Ciba-Geigy in Basel. During that time, he was leading automation teams in investment projects for biotechnological and chemical production facilities. In 2000, he joined the Pharma TechOps IT organization as technical project manager for the global MES evaluation. He then held various positions of increasing responsibility in Manufacturing IT and global IT systems management until being appointed global Head Pharma Technical Operations IT in November 2007. As CIO Region Basel he was the IT business partner for global Novartis Headquarter functions from 2012 until 2015. Since 2015 he is leading the IT-unit for the Technical Research & Development function within Novartis Global Drug Development. Ralph Häfeli has a degree in electronics from the Swiss Federal Institute of Technology (ETH) in Zürich.

Please describe your current role at Novartis

I am leading a global IT-team that is focused on designing and delivering IT-solutions and –services to the Novartis Technical Research and Development unit (a CMC organisation) within Global Drug Development. Based on a deep understanding of the business strategy and needs our mission is to jointly develop and implementation strategy and roadmap and to identify and implement the appropriate technologies and solutions.

We hear that you are actively involved in creating the vision of a digital laboratory. In your opinion, what are the key requirements to achieve this?

Most importantly, we need to ensure that the future laboratory IT environment is providing an inspiring and effective workplace, which enables the lab users (scientist, analytical experts, technicians etc.) to focus on their core, scientific activities. We will do this with activities in 3 main solution domains. The first one is about automation and integration. With the automation of routine activities and the integration of systems, instruments and devices we free up peoples capacity and lay the foundation for 'digital' by capturing data at the place of creation directly in electronic form. The second is about data management to curate data and make the information interoperable. The third domain will provide sophisticated solutions and services to explore the opportunities of data and digital to collaborate effectively, get new insights and to implement new ways of working.

What role do technological advancements play in this?

While many technologies and systems exist since a long time, recent, often called 'digital' technologies, provide us with new capabilities. IoT-platforms, Data Lake and Data Hub concepts or industry standardization concepts like Allotrope allow to effectively capture, manage and explore vast amounts of data. Machine learning, advanced analytics, artificial intelligence or modelling and simulation are technologies that allow us to turn the data into valuable and new insights. Finally, digital assistants using natural language processing or new devices for virtual and augmented reality will improve global collaboration and efficiency of operations.

What are some of the expected key benefits for a digital laboratory that looks into the future?

At the end, we hope to see significant time savings in developing and supplying new, innovative therapies for our patients. The technologies we make available are not intended to replace people but rather to complement and augment their human capabilities. With instant access to large amounts of knowledge, almost unlimited data&information processing power and the ability to seamlessly collaborate within globally distributed teams, our people will be able to take faster, high quality and data driven decisions. We also expect that we can reimagine the way we work in certain areas for example by simulation vs performing every activity by a physical experiment or process step. Finally, we will remain an attractive employer for our future talents by providing a state-of-the art working environment that inspires people and encourages innovative experimentation.

What in your view are the most important factors behind the success of implementing a digital lab?

The most important success factor is the mind-set. If we design the Digital Lab from a technology perspective, we will not get the maximum value. At the centre of our design needs to be the people work in the labs. Taking a holistic approach to address their needs will ensure we deploy the right technologies and provide an integrated working environment with an improved user experience. To do this, we have to ensure from the very beginning, that our 'Digital Lab' initiative is a jointly owned and strategically lead journey with highly committed and engaged team members from business and IT and not be managed as a tactical deployment of new IT technologies. Last but not least, since it's all about data and information, we need to ensure we have a proper data strategy in place that goes beyond the labs to ensure seamless operations along the relevant value chain.

What you would like to achieve at the SmartLabs & Laboratory Informatics Congress in London?

I am looking forward to meet with industry colleagues and solution providers who share the same passion for the topic and who are open to share experiences and discuss different perspectives. I'm excited about the technical advancements we see every day and the opportunity we have to shape this industry. Together, we can create an inspiring future.