MetalJet - Making the Impossible Possible Dr. Julius Hållstedt¹ *¹Excillum Kista julius.hallstedt@excillum.com*

From the first idea of making an X-ray source using a fast flowing liquid metal-jet as electron target more than 20 years ago, the invention has gone from deemed as impossible to hundreds of MetalJet Xray sources installed in research, development and production all over the world. Applications and methods that used to be impossible outside of the synchrotron have now been realized also in the home lab.

The ecosystem of innovation relies on a multitude of ideas, visioners, investors, early adopters and funding. This communication will go through the journey from idea to industrial product and exemplify the importance of courage across the community in order to enable game changing development. Here one of the first application areas of MetalJet where the potential was identified was for single crystal diffraction. In the research community (such as crystallography) for new inventions to turn out successful, they rely on both courageous scientists and funding organizations to see the potential and dare to take the chance of investing in unproven technology. By sharing this historic perspective on the success of the MetalJet the hope is to encourage new ideas to be brought to life and that the community on all levels continues to be brave in order to maximize the chance for new developments for the future.