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# POLDI Instrument Upgrade - Lessons learned

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After more than two decades of operation, the POLDI instrument (Pulse Overlap Time-of-Flight Diffractometer) at PSI is undergoing a comprehensive upgrade. This transformation encompasses the entire system — from the instrument and neutron guide to the surrounding infrastructure, motion systems, and detector control — effectively amounting to a complete rebuild.

While the project has made significant progress, it has also encountered numerous challenges, including issues related to project planning and budgeting, technical implementation complexities, and personnel transitions, among others. Some of these challenges have been successfully addressed, while others remain unresolved or are still under investigation.

In light of this, we chose to initiate an ongoing evaluation process rather than waiting until the project's conclusion. This proactive approach aims to inform and support upcoming large-scale projects at PSI by sharing our experiences, including both successes and setbacks.

In my presentation, I will outline the key challenges we have faced, discuss the solutions implemented where applicable, and highlight the measures we have introduced to mitigate potential risks in the future.

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