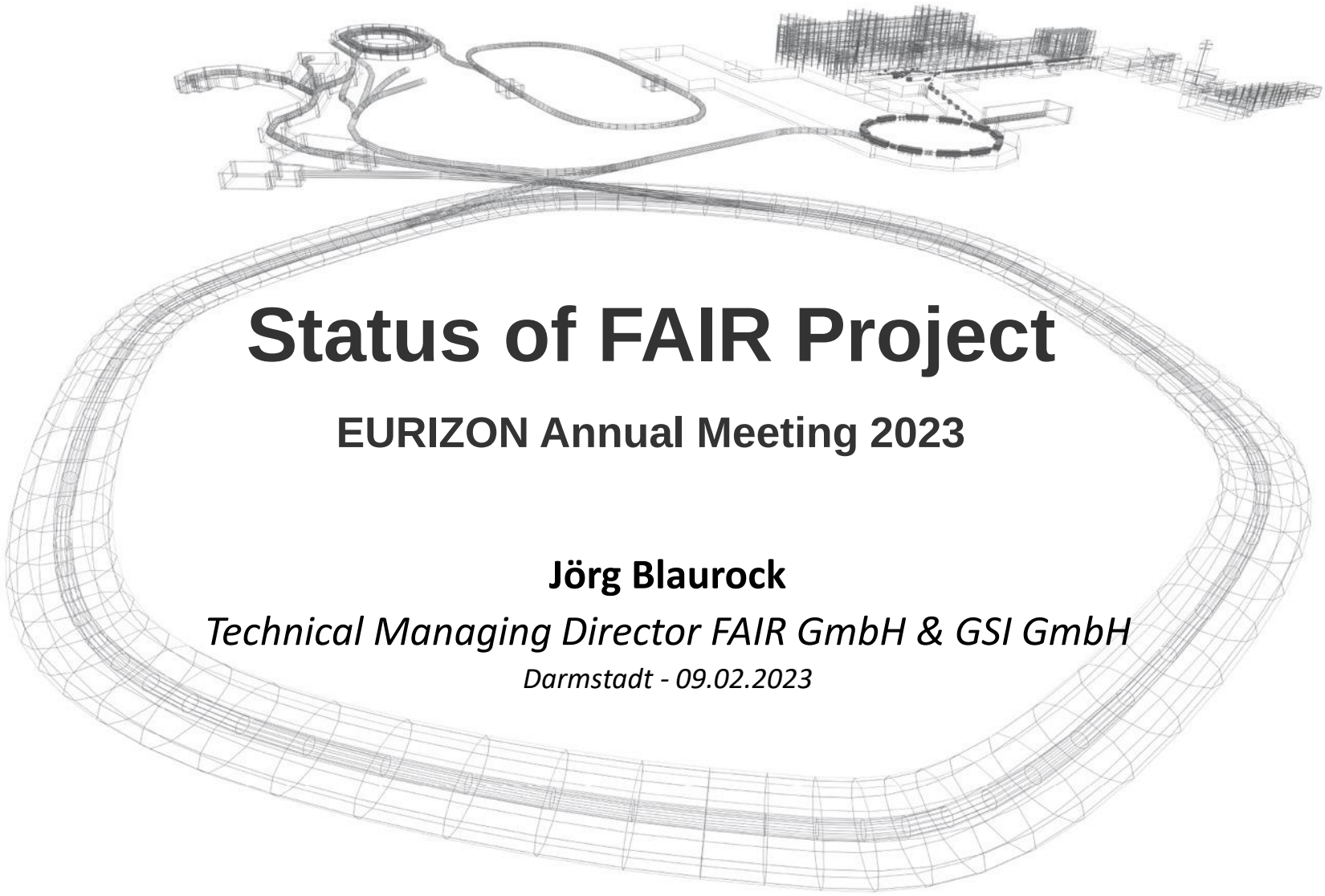


Status of FAIR Project

EURIZON Annual Meeting 2023

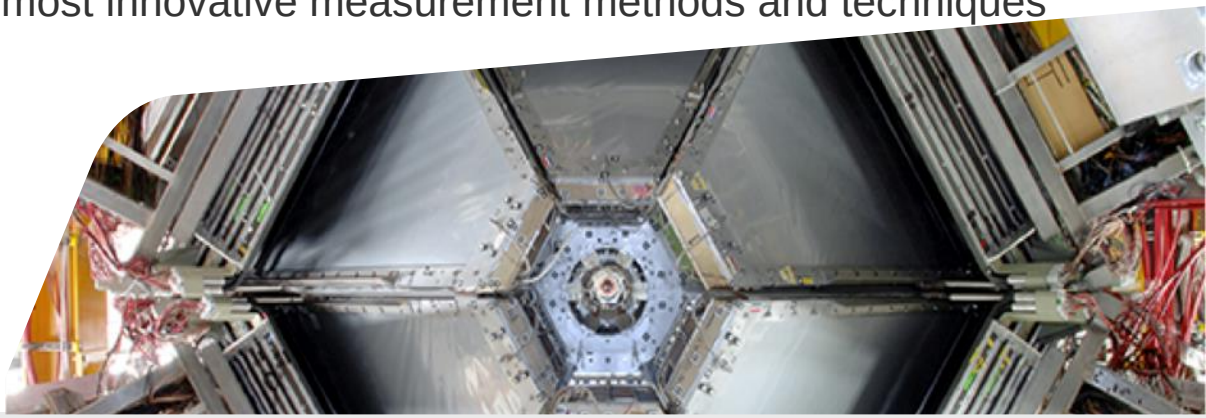
Jörg Blaurock

Technical Managing Director FAIR GmbH & GSI GmbH

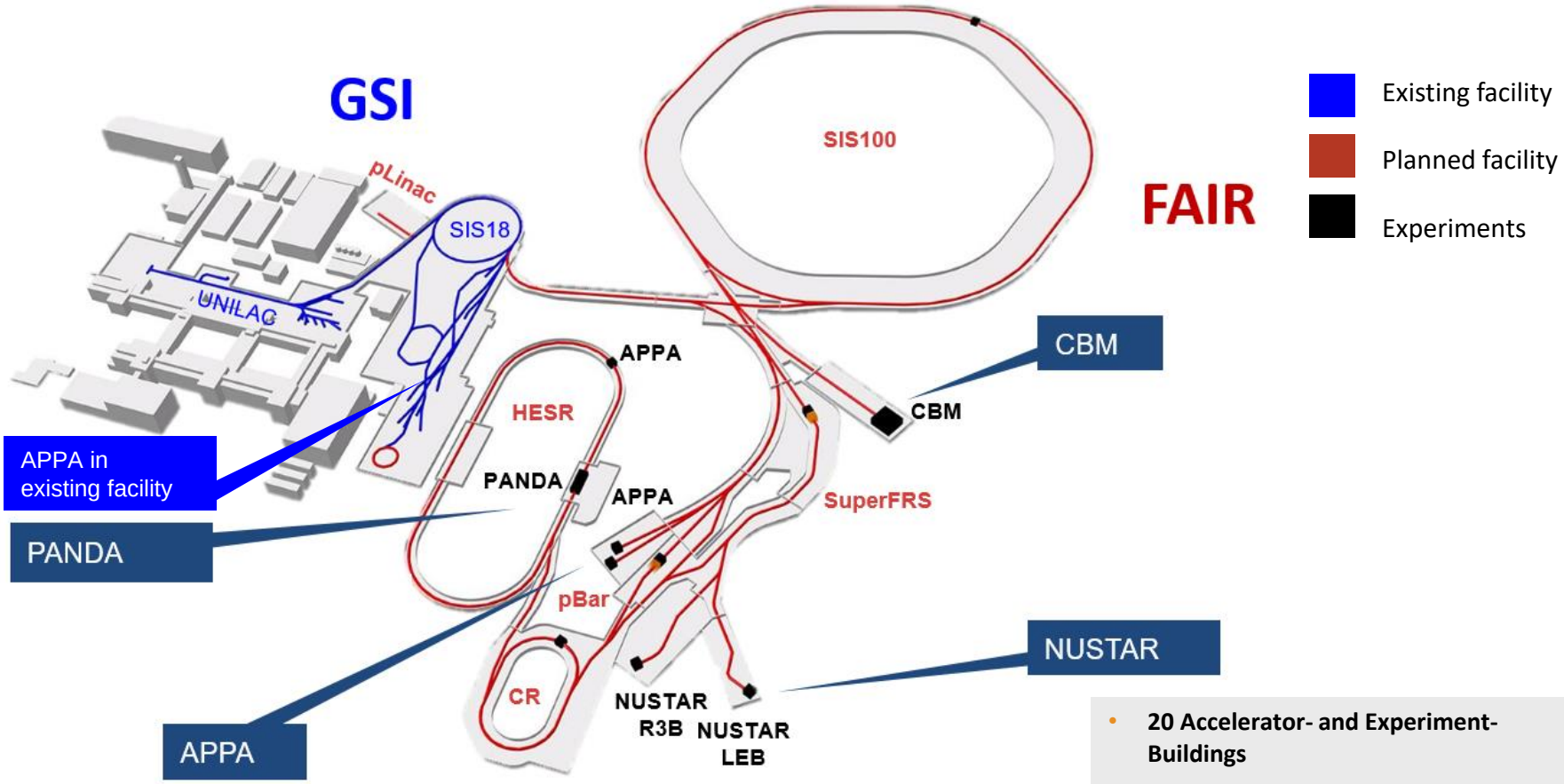
Darmstadt - 09.02.2023

FAIR – Facility for Antiproton and Ion Research

- Unique particle accelerator facility for research with antiprotons and ions worldwide
- Matter as it occurs in the universe is first produced and researched in the laboratory
- Fundamental research and development of applications in materials research, radiation biology, aerospace, etc.
- Collaboration between several teams of top international researchers - more than 3,000 scientists
- Different research programs in parallel with different ion varieties possible
- FAIR develops and uses the most innovative measurement methods and techniques



FAIR – The Facility



- **20 Accelerator- and Experiment-Buildings**
- **Underground accelerator ring** with a circumference of 1,100 m
- **Around 150,000 m ²** total space

FAIR Darmstadt

Overview FAIR Construction site

December 2022

Overview FAIR Construction site

December 2022

FAIR Construction
- Main Supply Building -

December 2022

FAIR Construction
- Experiment Cave CBM -

December 2022

Technical Building Installation
- SIS100 tunnel -

December 2022

Technical Building Installation
- SIS 100 tunnel -

December 2022

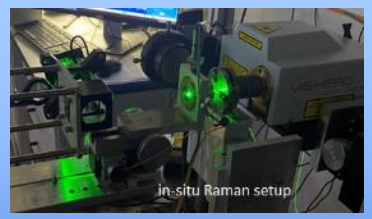
FAIR Project Progress – Experiments

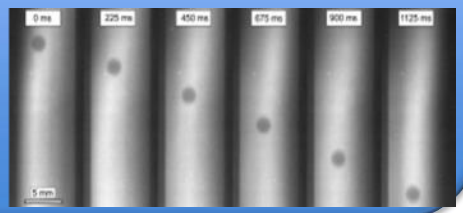
Progress

Recent Highlights

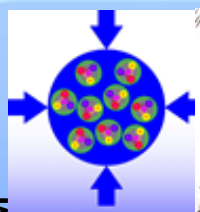
- Experiment components are already used in FAIR Phase-0

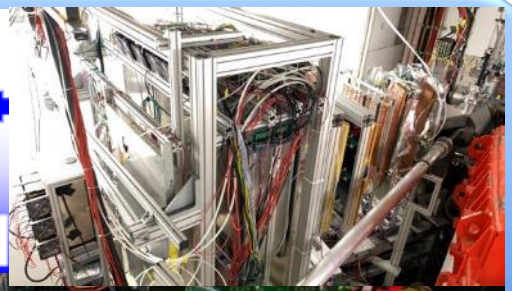
APPA

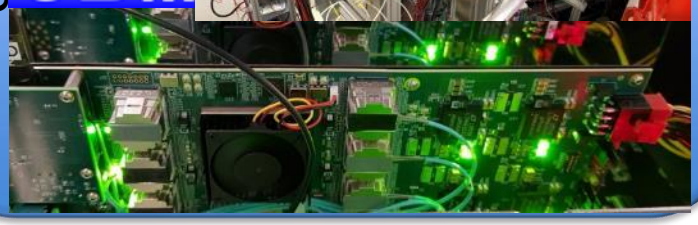




CBM







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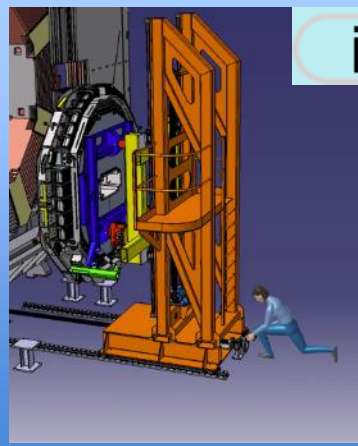
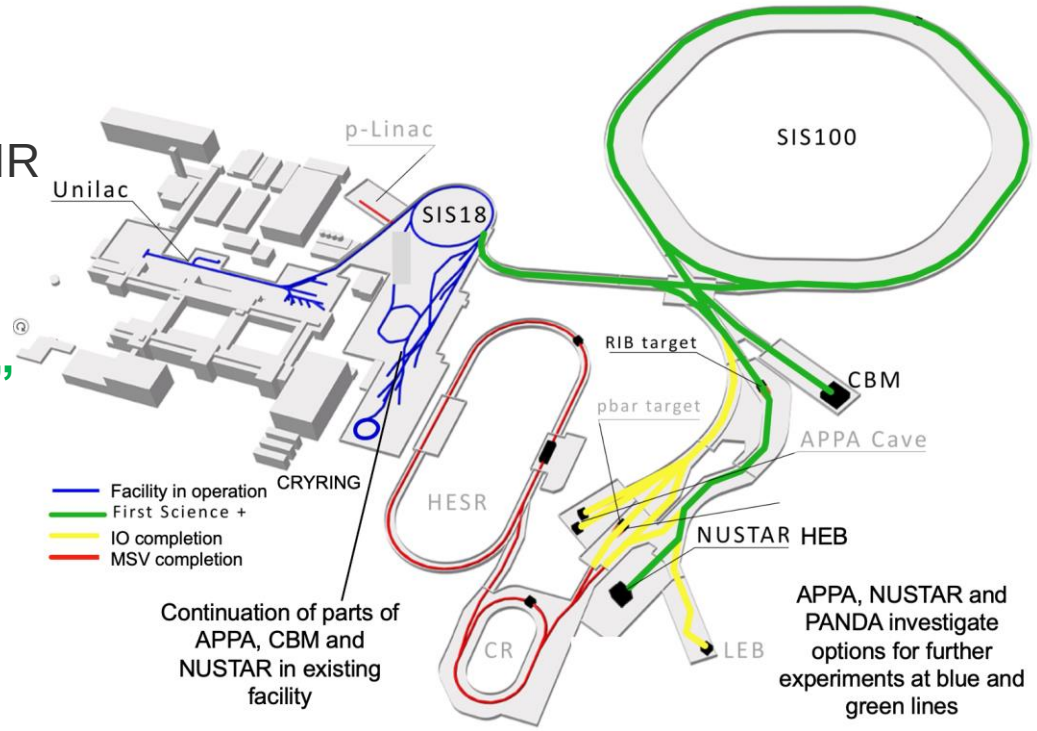
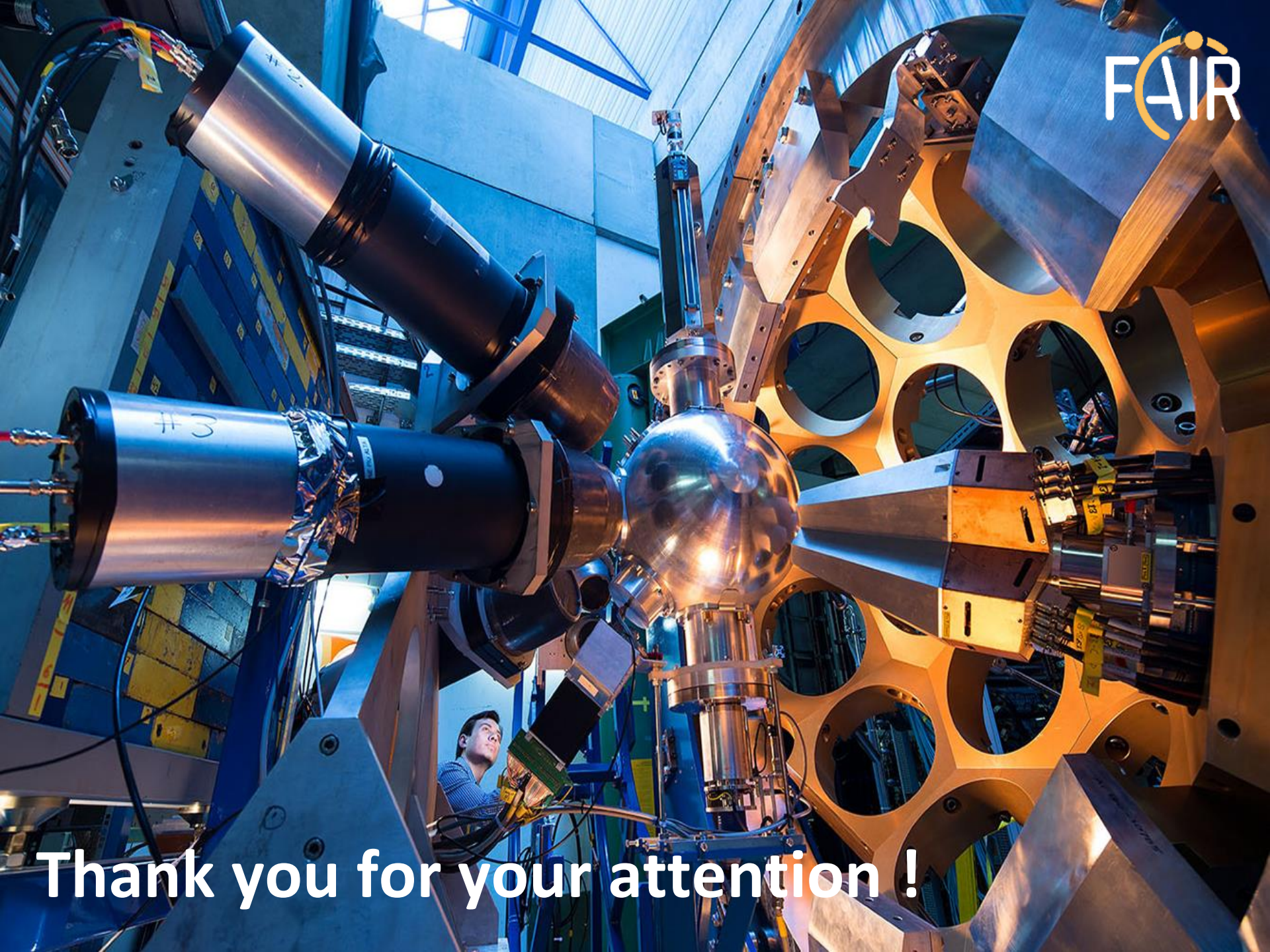
PANDA



FAIR First Science and Staging Review

- The international review panel has issued its report, which is publicly available in full on the FAIR website
- The scientific program of all four FAIR pillars is indicated as outstanding and in many cases world leading
- Given the financial constraints, a start configuration **“First science +” (FS+)** including SIS 100, SFRS with the High Energy cave and CBM is recommended
- In October 2022 FAIR Council decided to follow the recommendation of the review and pursue a stepwise realization starting with “First science +” (FS+) , followed by the APPA cave, then the LEB and finally the rest of the CR, the HESR and the pLinac




FAIR
Thank you for your attention !