

FAIR construction status April 2018

Peter Senger, GSI

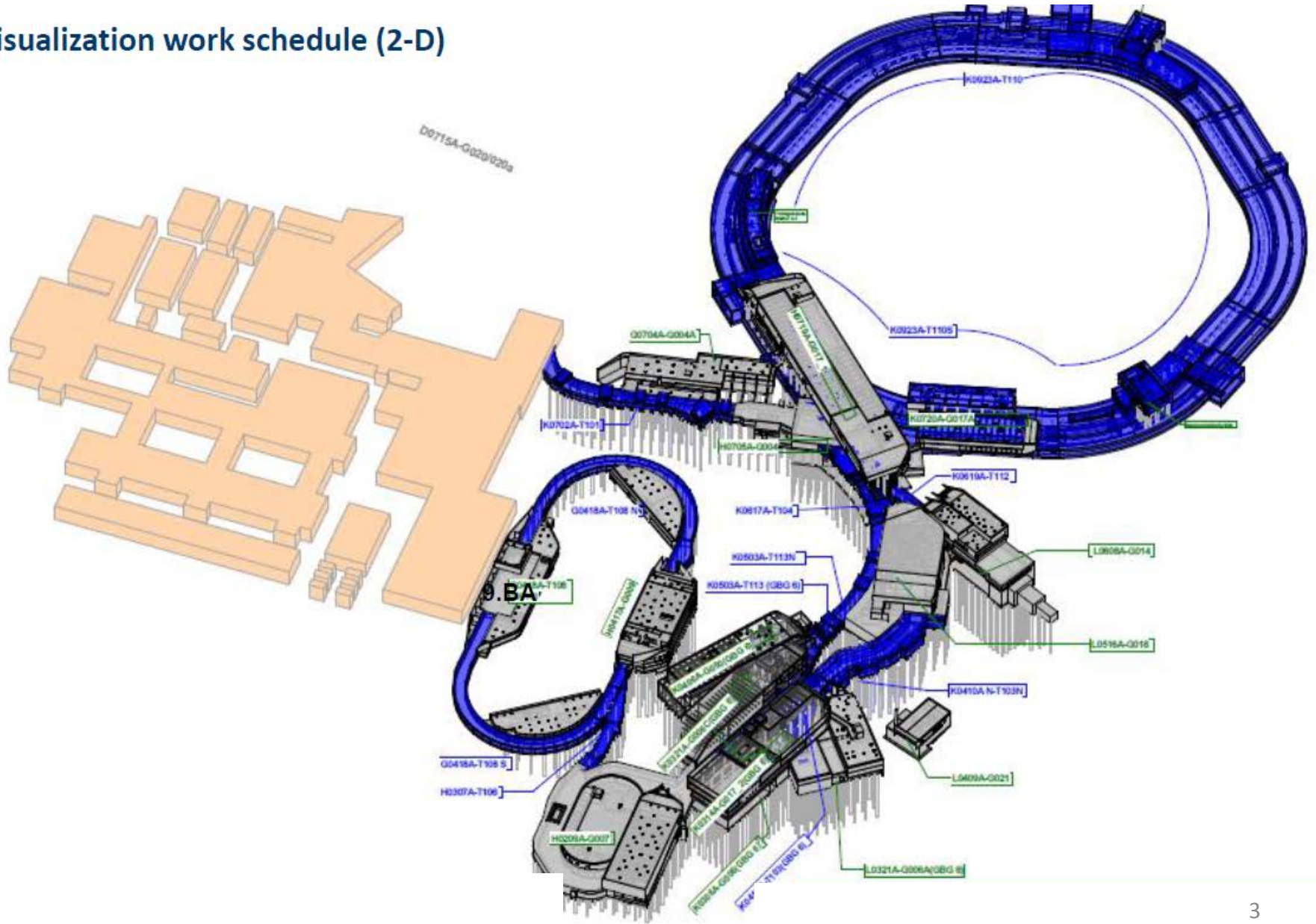


Civil construction (Status 2014)

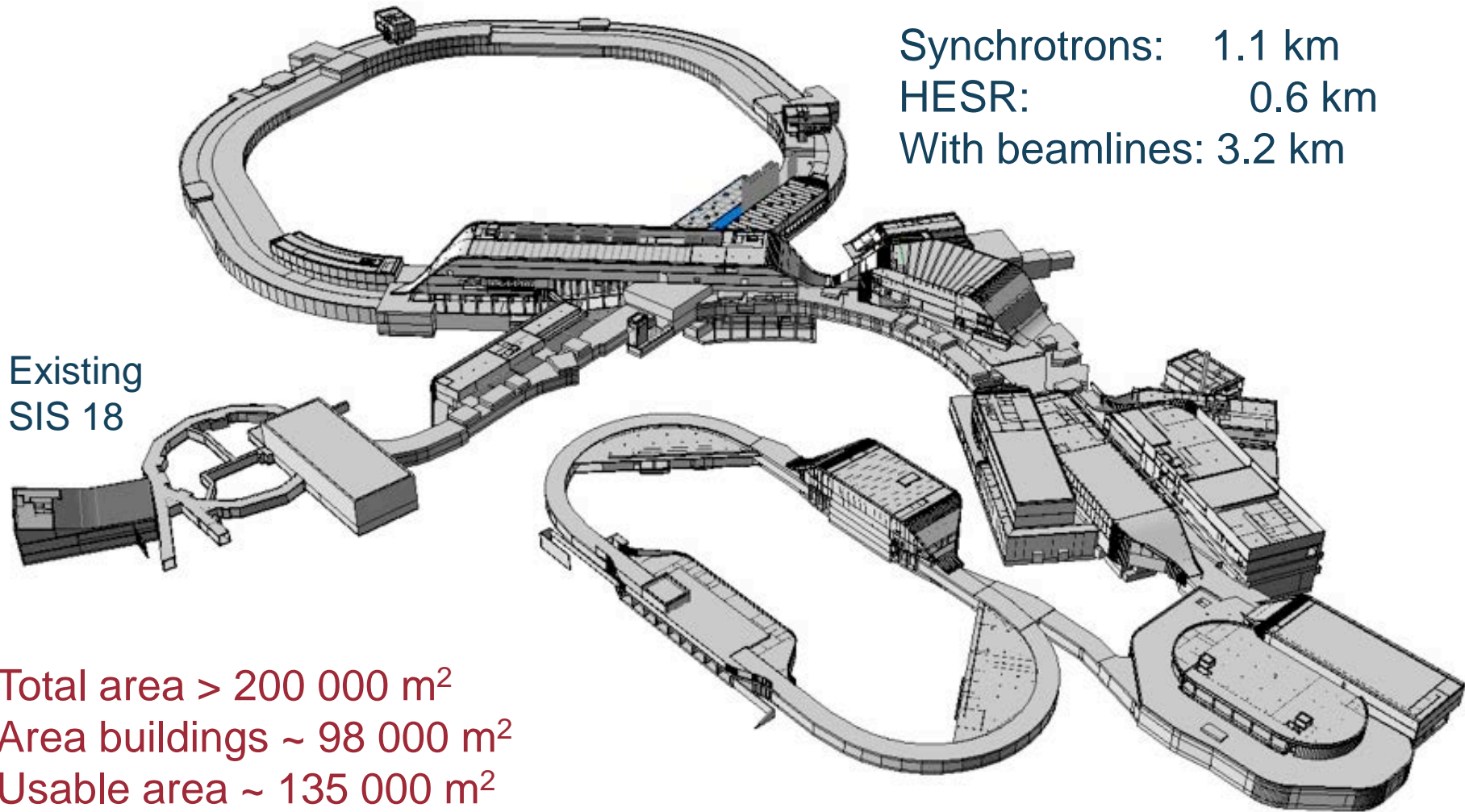
The four most powerful drilling machines worldwide put down 1350 reinforced concrete pillars of 60 m depth and 1.2 m diameter.



Visualization work schedule (2-D)



FAIR Civil Construction

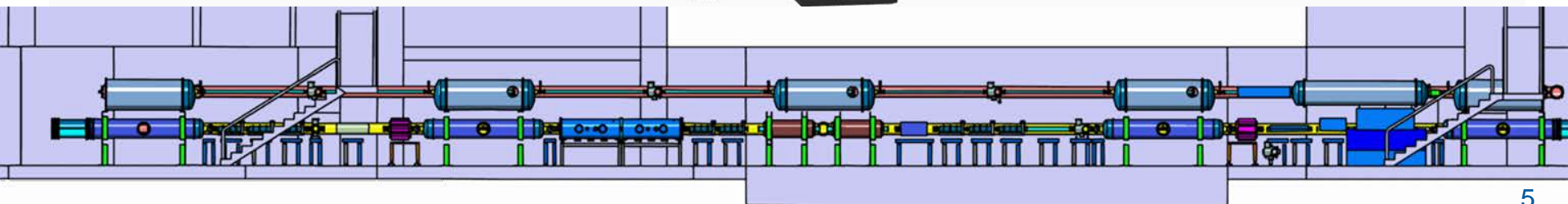
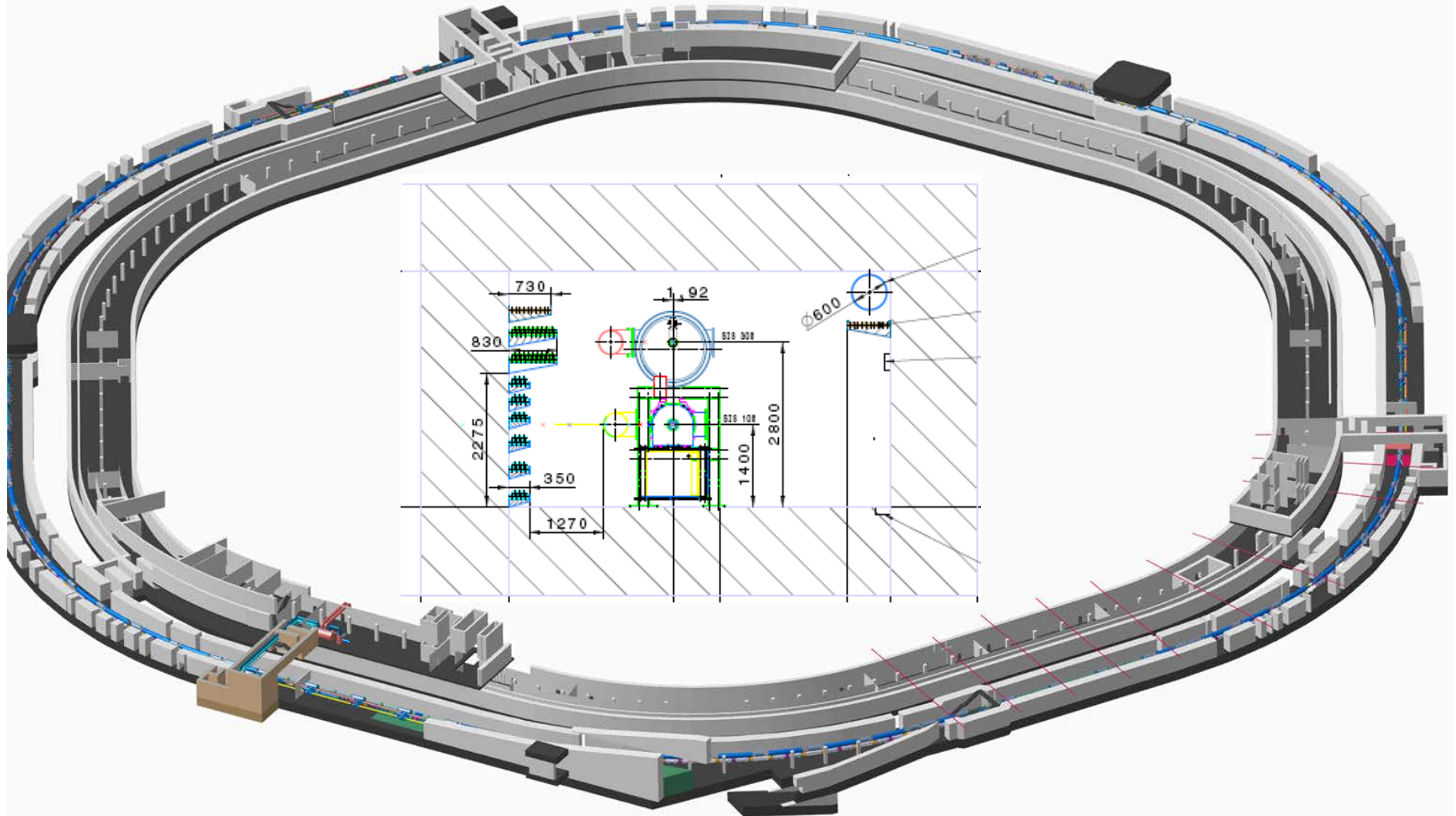


Synchrotrons: 1.1 km
HESR: 0.6 km
With beamlines: 3.2 km

Existing
SIS 18

Total area > 200 000 m²
Area buildings ~ 98 000 m²
Usable area ~ 135 000 m²
Volume of buildings ~ 1 049 000 m³
Substructure: 1350 pillars, 60 m deep

Tunnel for SIS100/300



FAIR Project Status 2018



- Successful restart in 2015 and 2016
- Start of excavation and trench sheeting in July 2017
- Civil construction Area North, i.e. SIS-100 tunnel plus adjacent buildings including the CBM building, has been awarded on January 29th 2018.
- Shell construction will start mid 2018.
- Completion of all buildings by 2022
- Full integrated planning for construction and commissioning of the entire project: Completion of the full FAIR facility by 2025.



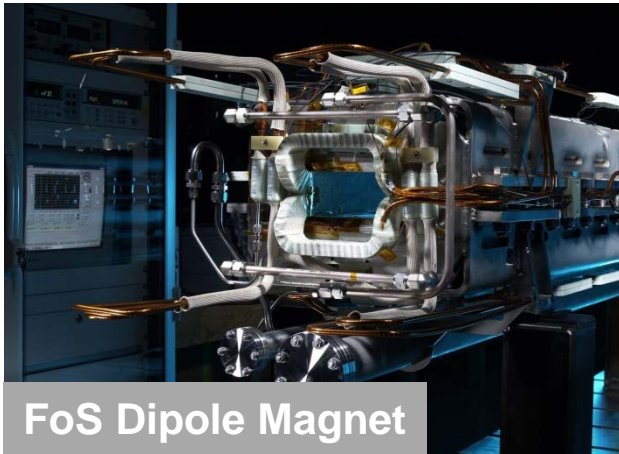
Ground breaking - 4 July 2017



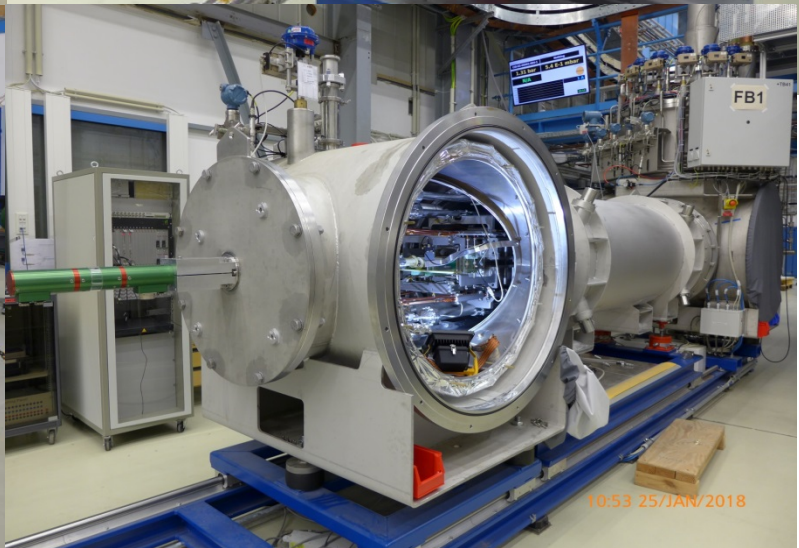
Excavation SIS100 tunnel - Nov 2017

Construction of accelerator components

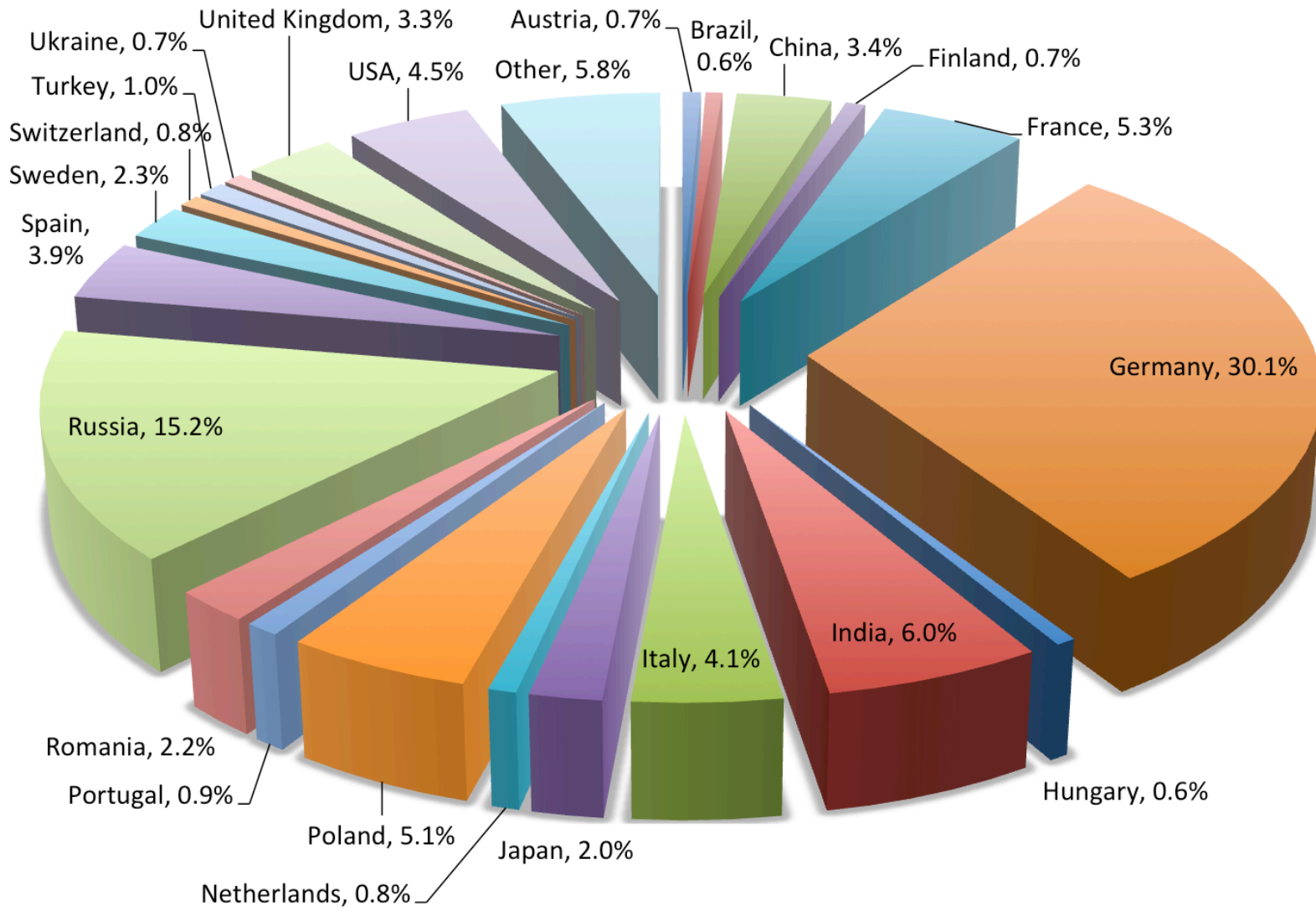
- First of Series (FoS) of major components for SIS 100



19 SIS100 dipole magnets have been delivered and are being cold-tested ...



Collaboration Members by Country



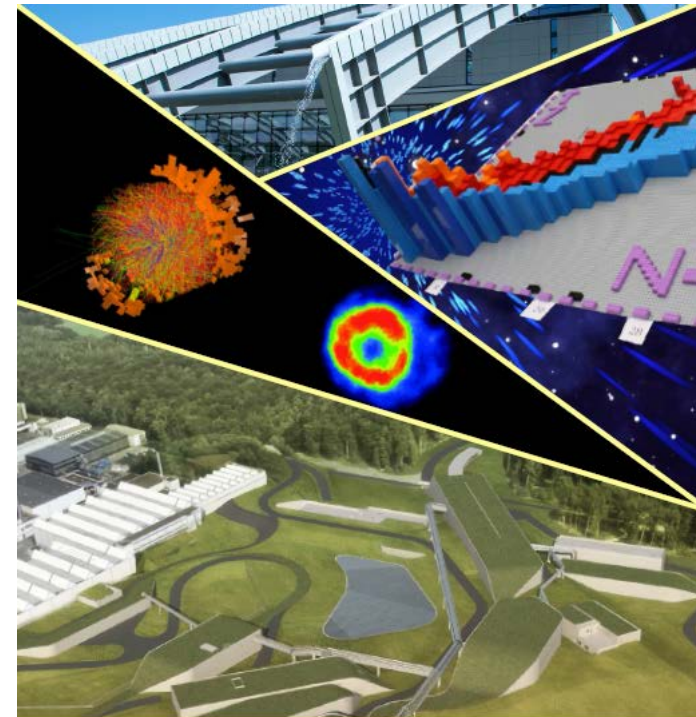
Instead of conclusions ...

Key Summary Recommendation of the NUPECC Long Range Plan 2017 presented in Brussels on Nov 27th :

Complete urgently the construction of the ESFRI* flagship FAIR and develop and bring into operation the experimental program of its four scientific pillars APPA, CBM, NUSTAR and PANDA.

FAIR is a European flagship facility for the coming decades. Worldwide unique it will allow for a large variety of unprecedented fore-front research in physics and applied science. It focuses on the structure and evolution of matter. Its multi-faceted research opens a new era in our understanding of the fundamental building blocks of matter and the forces as well as of the evolution of our Universe: the new possibilities for research in Darmstadt are unique and are expected to produce ground breaking new insights for nuclear research.

*European Strategy Forum on Research Infrastructures



NuPECC



NuPECC
Long Range Plan 2017
Perspectives
in Nuclear Physics