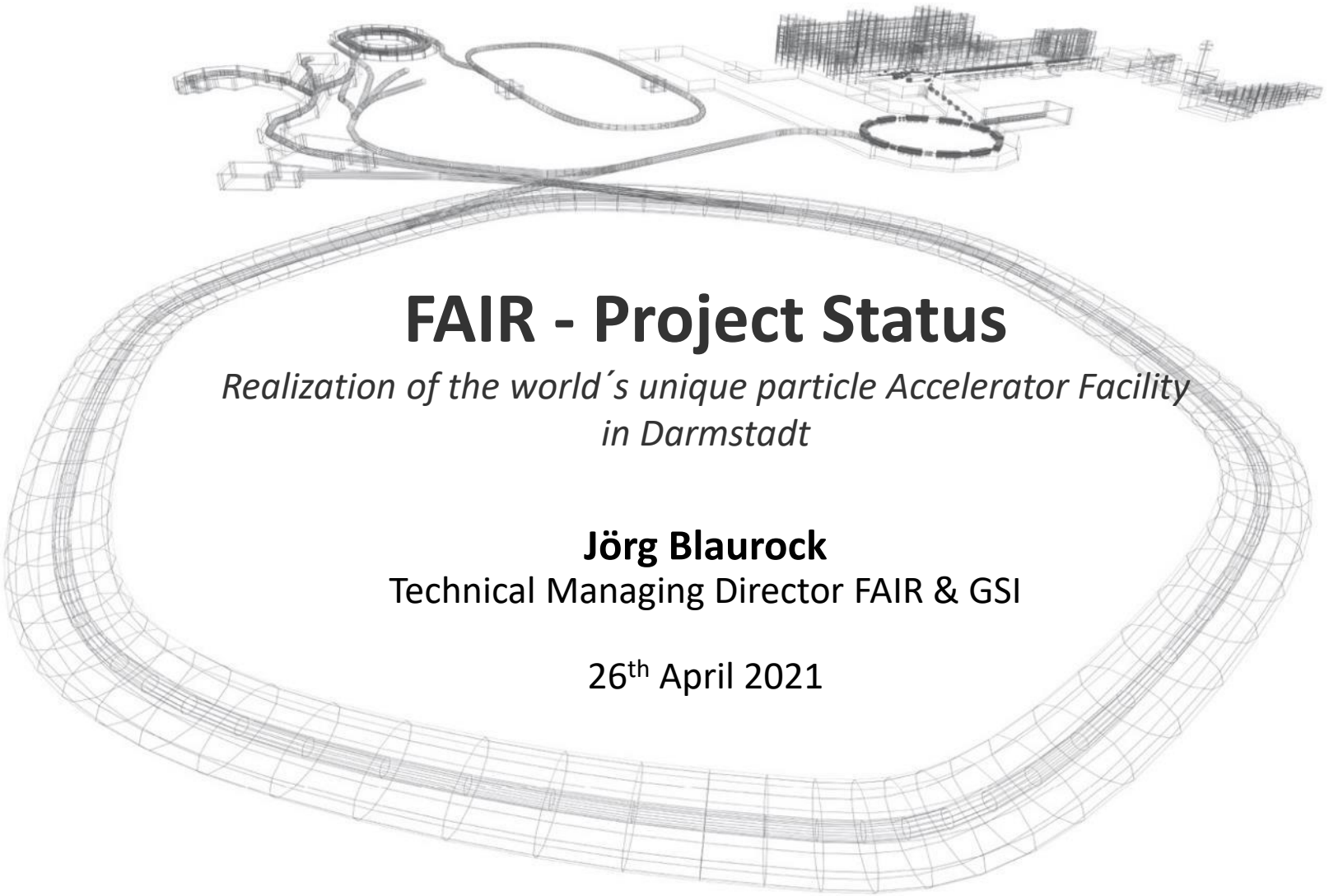


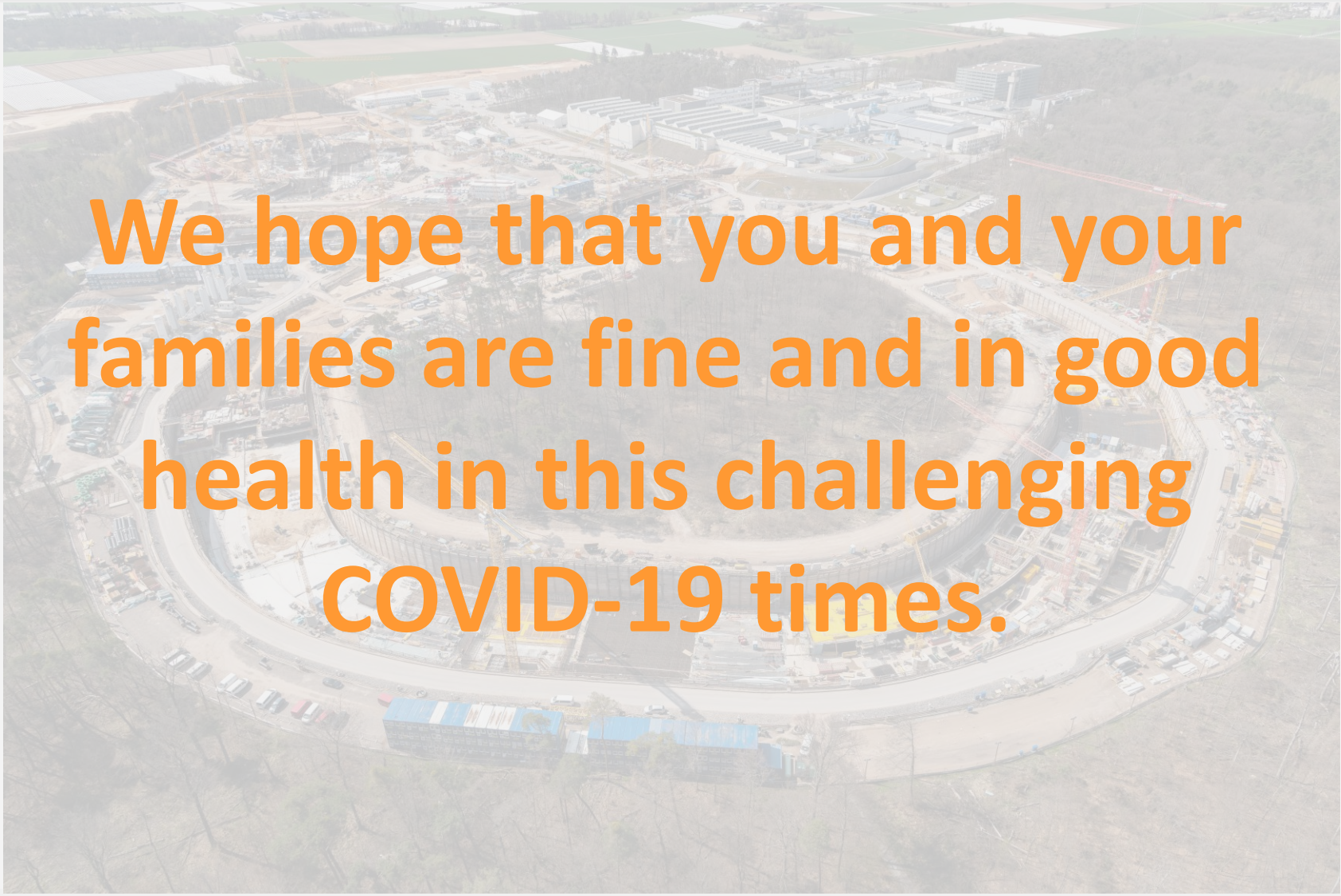
FAIR - Project Status

Realization of the world´s unique particle Accelerator Facility in Darmstadt

Jörg Blaurock
Technical Managing Director FAIR & GSI

26th April 2021

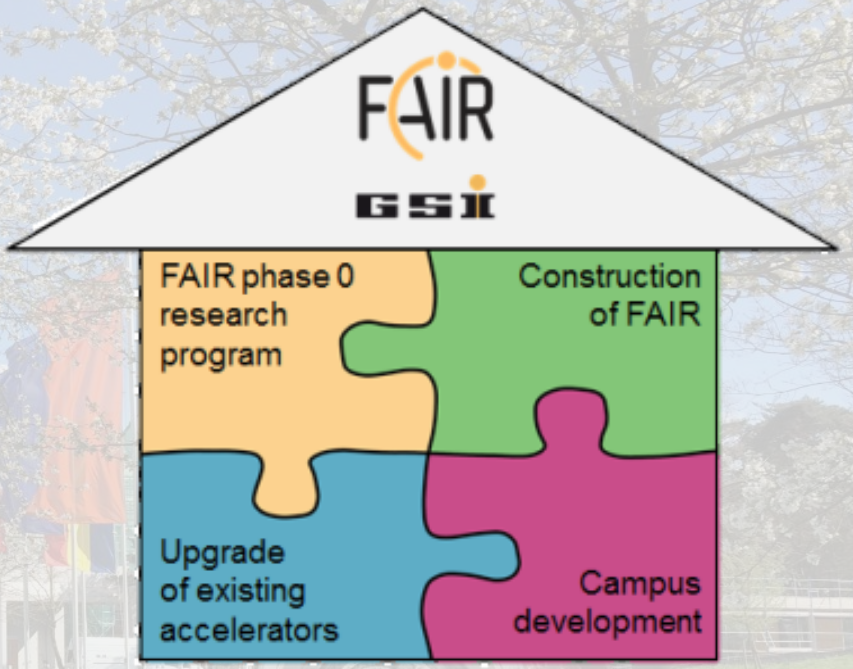
COVID-19 situation



We hope that you and your families are fine and in good health in this challenging COVID-19 times.

STRATEGIC OBJECTIVES OF GSI/FAIR

- Construction of FAIR
- Upgrade of existing accelerators
- FAIR phase 0 research program
- Development on Campus



Development on **Campus**

- Developing the buildings and facilities in view of the future operation of FAIR is one of the strategic goals of both FAIR and GSI.
- Two measures taken to develop the Campus as a host lab and to provide a state of the art workplace and accompanying infrastructure are:

FAIR Control Centre

- State of the Art Main Control Room and some 200 work places
- Operation start planned for 2024

Parking Garage

- Providing parking space for approx. 800 cars
- Start of operation in May 2021

Sketch of FCC building: view of the visitors gallery and main control room in the front

FCC building:
Preparatory steps of the FCC site started in March 2021

New Parking Garage for GSI/FAIR

Accelerator and Experimental Facilities
Physics Run 2021

General Plan of Accelerator Operations 2021

Legend

- Bake Out
- Dry-Run
- Commisioning without Beam
- Beam Commisioning
- Physics Run
- Engineering Run / Beam Studies
- Operator Training
- RF-Conditioning
- Physics Run-Cryring standalone

User Beamtime

	Days:	Shifts:
Unilac	134	402
SIS18	133	399
ESR	88	264
Cryring@ESR	80	240
Cryring (standalone)	60	180
HKR besetzt	199	597

FAIR Recent Highlights - Accelerator (Part 1)

December 2020

The FoS CR dipole magnet assembled at BINP workshop

March 2021

Completion of assembly shop and storage facility for CR dipole magnets at GSI campus

FAIR Recent Highlights - Accelerator (Part 2)

January 2021

The FoS Long Multiplett, produced at ASG in Italy,
a major component for the Super FRS,
is now installed at the CERN test facility.
The FoS test for the Short Multiplett was completed in 2020.



FAIR Recent Highlights - Accelerator (Part 3)

March 2021

Integration of the thin wall, ripped dipole vacuum chambers (front) into the s.c. SIS100 dipole magnets (back)

March 2021

pLinac test cavity after copper plating

FAIR Recent Highlights - Accelerator (Part 4)

February 2021

SIS100 cryogenic transfer line:

12 m long spools waiting for

shipment to GSI / FAIR

Status December 2020

FAIR Storage area for

SIS 100, HEBT, HESR

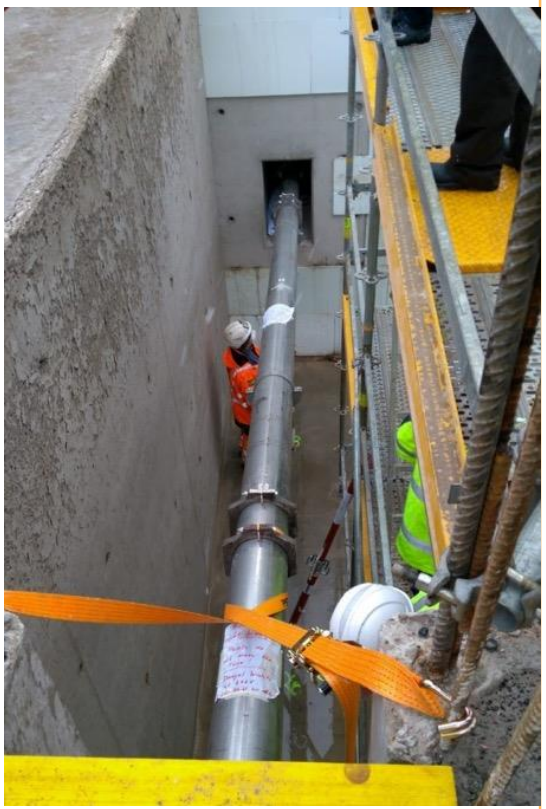
FAIR Recent Highlights - Accelerator & Experiments (Part 5)

January 2020

assembly of the PANDA Solenoid Yoke at SET at BINP workshop

February 2021

First section of laser beamline for laser cooling @ SIS100 & APPA SPARC installed on FAIR site



FAIR Recent Highlights - Civil Construction (Part 1)

Overview Civil Construction
April 2021

FAIR Recent Highlights - Civil Construction (Part 2)

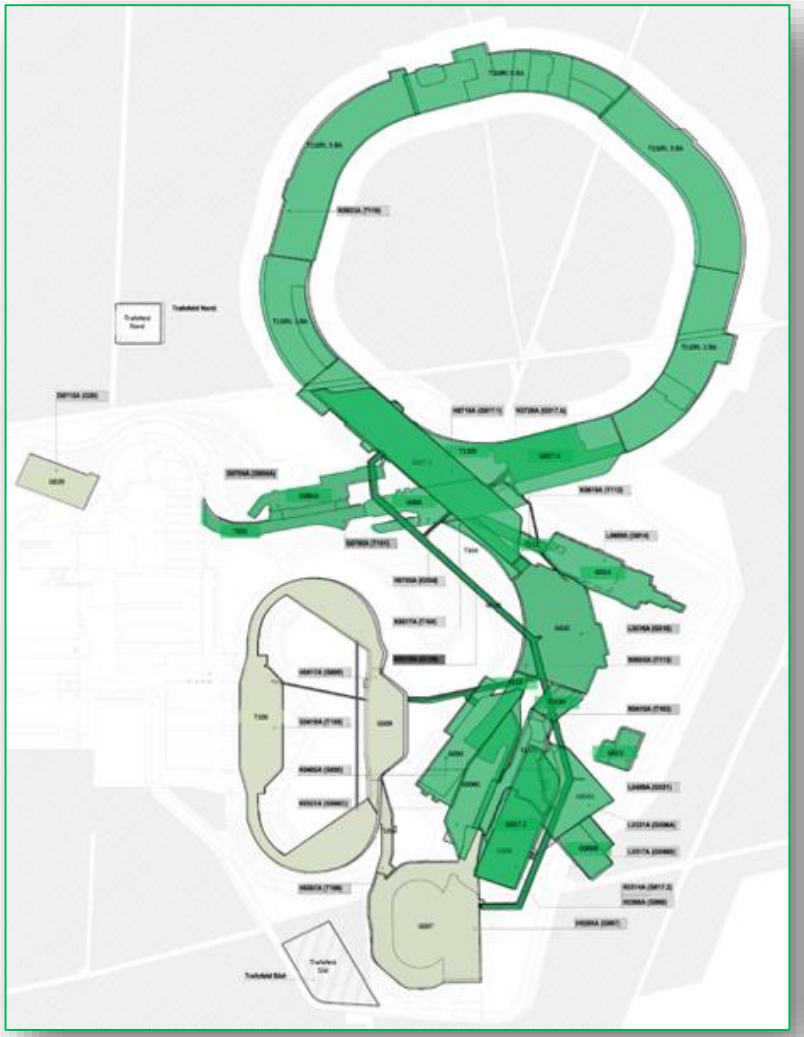
Connection line GSI-FAIR and transfer building
April 2021

FAIR Recent Highlights - Civil Construction (Part 3)

Civil Construction south
April 2021

FAIR Intermediate Objective & Rebaselining 2021

- Objective:
  - Target of FAIR remains the completion of the Intermediate Objective (IO) until 2027
  - Start of early science with either 1st part of SFRS/NUSTAR or APPA cave within 2025
- Key elements:
  - Procurement and delivery of the entire accelerator and all experiments for the full MSV
  - Realization of buildings for pLinac, CR, HESR for the full MSV will start after the related international approval of financing - Council aims at making the budget available in 2022
- Focus:
  - **All ACC In-Kind providers need to stick to the committed or needed delivery dates of the ACC components.**



FAIR - Summary and next steps

FAIR Project is progressing well towards the key objectives.

Next steps of FAIR project are:

- Continue to successfully manage the impact of COVID-19
- Continue construction works in the construction area North aiming at substantial completion end 2021
- Ramp-up of construction works in the construction area South, focus on experiment buildings
- Start technical coordination with technical building installation companies
- **Secure a timely delivery of ACC components.**
- Develop a robust installation plan to achieve the FAIR „Intermediate Objective“

Thank you for your attention!