

A large, detailed 3D wireframe model of the FAIR facility is the central background element. It shows a complex, multi-looped particle accelerator structure with various components like bending magnets and straight sections. The model is rendered in a light gray wireframe style, showing the intricate geometry of the facility.

FAIR Project: A brief status overview

KHuK Annual Meeting
4 December 2015

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Challenges in 2014

- FAIR Council was informed of significant delays and cost increases in FAIR civil construction
 - Previous (project) management structures proved to be insufficient
 - Civil construction planning standstill due to additional claims by planning offices
- ⇒ Staatssekretär Georg Schütte initiated a review of the FAIR Project by an International Review Committee (chaired by Rolf-Dieter Heuer)

Review in February 2015

Members:

- Rolf Heuer, CERN, Chair
- Elke Aschenauer, BNL
- Per Dost, WTM Engineers GmbH
- Lyn Evans, CERN
- Thomas Klinger, IPP Greifswald,
- Volker Koch, LBNL,
- Reiner Krücken, TRIUMF,
- Karl Morgen, WTM Engineers GmbH
- Berndt Müller, Duke University,
- Robert Rosner, University of Chicago,
- James Yeck, ESS Lund

Guests:

- Karl-Heinz Kampert, GSI Scientific Advisory Committee
- Oda Keppler, BMBF
- Jacques Martino, FAIR Scientific Council (unable to attend the meeting)
- Rolf Zettl, Helmholtz Gemeinschaft

Review in February 2015

- Based on:
 - written information provided by Management
 - written information provided by the four FAIR Collaborations (*requested by the Joint Scientific Council and the Review Committee*)
 - presentations by and discussions with Management
 - presentations by and discussions with all four FAIR Collaborations
- Major results:
 - Critical assessment of the effectiveness and efficiency of the project organization and management structures
 - Uniqueness and attractiveness of the overall research program of FAIR, still in 2025 (and later) – Resource-loaded prioritisation of the scientific pillars of FAIR
 - Strong recommendation for vigorous intermediate research programme at GSI
- Subsequent meetings of GSI Supervisory Board and FAIR Council in March
- Decisions by FAIR Council and GSI Supervisory Board included a number of tasks for the FAIR and GSI Management
- Several consequences in management and organization followed

Council decisions and consequences after the Review 2015



- The Council asked the FAIR Management to „execute an up-to-date and critical analysis of the cost, the schedule, and the scope and to prepare different scenarios based on (1) a set cost cap or (2) the completion of the full scientific scope of the Modularised Start Version“. ✓
- Establishment of an interim management ✓
- Shift of responsibilities to the Administrative Managing Director (FAIR and GSI), including overall project responsibility ✓
- Council asks the Administrative Managing Director to execute within the given financial boundaries all necessary organizational measures required for a successful and sustainable realization of the FAIR project ✓
- Appointment of an overall project leader: Jürgen Henschel ✓
- Implementation of advisory panels for the management:
 - Strategy Board ✓
 - Administrative and Management Advisory Board ✓
 - Building Advisory Committee (BAC) ✓

Developments in 2015

- Spring/Summer 2015:
 - Cost analysis revealed:
Additional costs of 235 M€ for MSV completion
(in addition: 13 M€ missing contributions from countries originally intended to become shareholders)
 - Management developed a staged approach, aiming at realizing majority of experiments by 2022
 - A proposal for the future organisational setup of FAIR GmbH and GSI GmbH was developed by the management

- July 2015:
 - Discussions in Joint Scientific Council of FAIR and GSI
 - FAIR Council asked the management to start immediately with the planning of construction of the facility in a staged approach
 - FAIR Council committed itself to take a decision on funding baseline and the respective scope in late September 2015.

Council Decisions in September 2015 (Part 1)

- Council confirms its goal to realise the FAIR facility as outlined in the Convention
→ Modularised Start Version (MSV)
- MSV to be completed by 2025 at the latest
- Stepwise realisation approach in order to start experiments as early as possible
- The Council understands the necessity that all parties involved do their utmost to continue to provide all experimental groups of the MSV experiments with adequate funding for R&D and detector construction to avoid negative consequences for the experiments due to the delays and the construction staging

Council Decisions in September 2015 (Part 2)

- Review of project progress and financial status by 2019 (scope not to be subject to this review)
- Cost cap: 1,262 M€ (Price level 2005)
 - Overall cost frame:
1,358 M€ (Price level 2005, incl. 95 M€ site-related costs)
- Shareholders have committed to confirm additional 158 M€ by mid-2016; commitments for another 90 M€ will have to be made by 2019
- Appointment of a Joint Technical Managing Director for FAIR GmbH and GSI GmbH, starting in early 2016
- Implementation of a Joint Scientific Council for FAIR GmbH and GSI GmbH

Achievements & Challenges

- Significant progress has been made in detector and accelerator developments as well as in the upgrades of existing GSI machines
 - *see also talk by Oliver Kester on Saturday morning and others*

- In FAIR Civil Construction:
 - the previously criticised design of the SIS 100 tunnel was confirmed as being adequate by a panel of international experts as reasonable and adequate,
 - and three building permit applications (including the one for the SIS 100 tunnel) have been filed already; more to follow
 - feasible building procedure still being worked on, integrating accelerator and experiments in the best possible way

- Organisational integration of FAIR and GSI ongoing

Intermediate research at GSI for FAIR

Until the FAIR facility is ready for operation, beam time at GSI is important for

- providing experimental opportunities for research groups
 - supporting young talent
 - keeping the FAIR Collaborations together
 - performing machine and detector tests
- *see also talk by Thomas Stöhlker on Saturday morning*

Conclusions

- The FAIR project was in serious trouble in 2014/15
- The binding Council decision on scope and funding of the project in September 2015 enabled the campus to realise the FAIR facility and go ahead with implementation
- The Council requires completion of FAIR by 2025, the Management aims at 2022

Significant progress has been made in 2015
but we still have a long way to go!

Thank You

