

The Future is FAIR

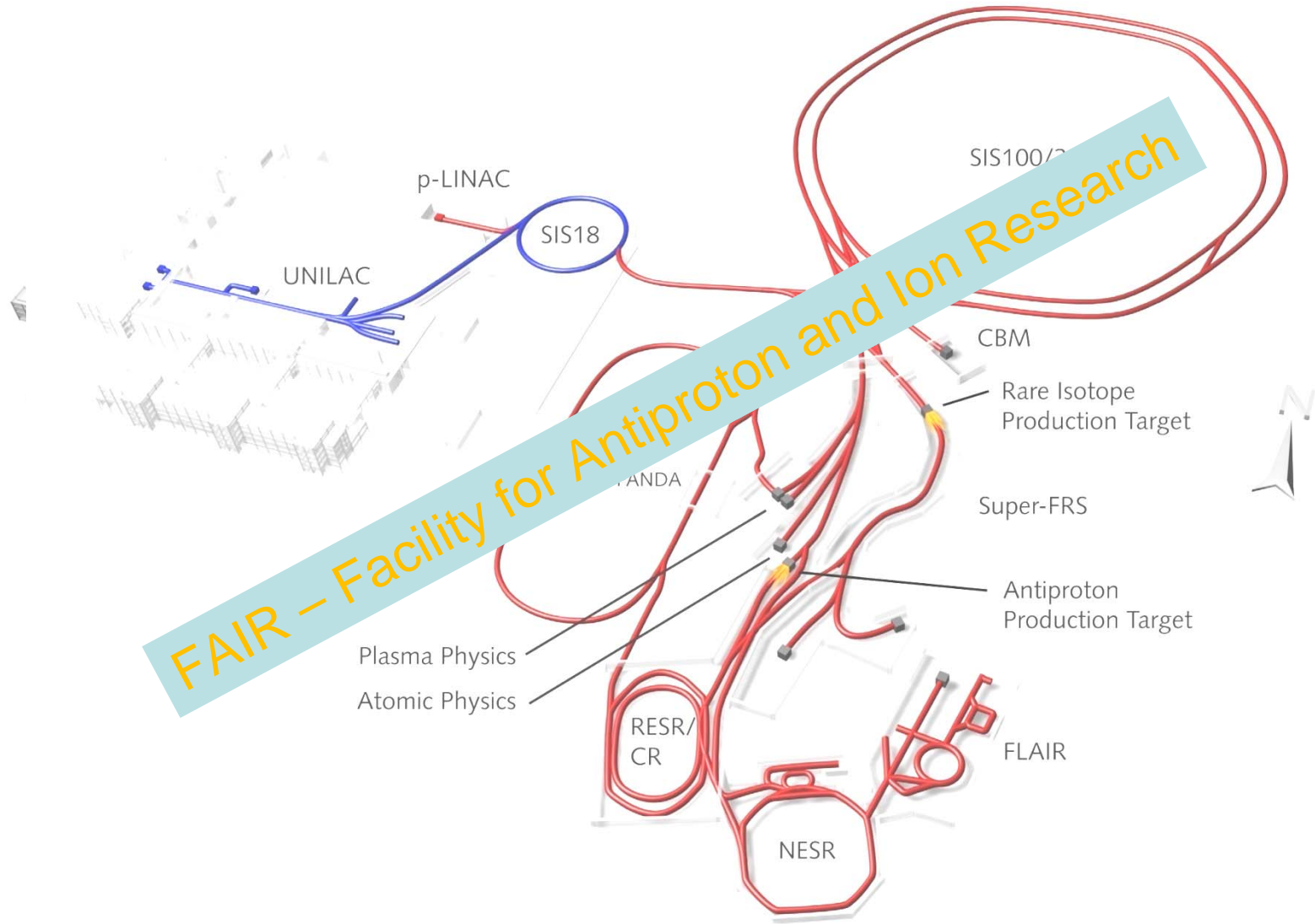
Simone Richter
FAIR Administrative Geschäftsführerin (des.)



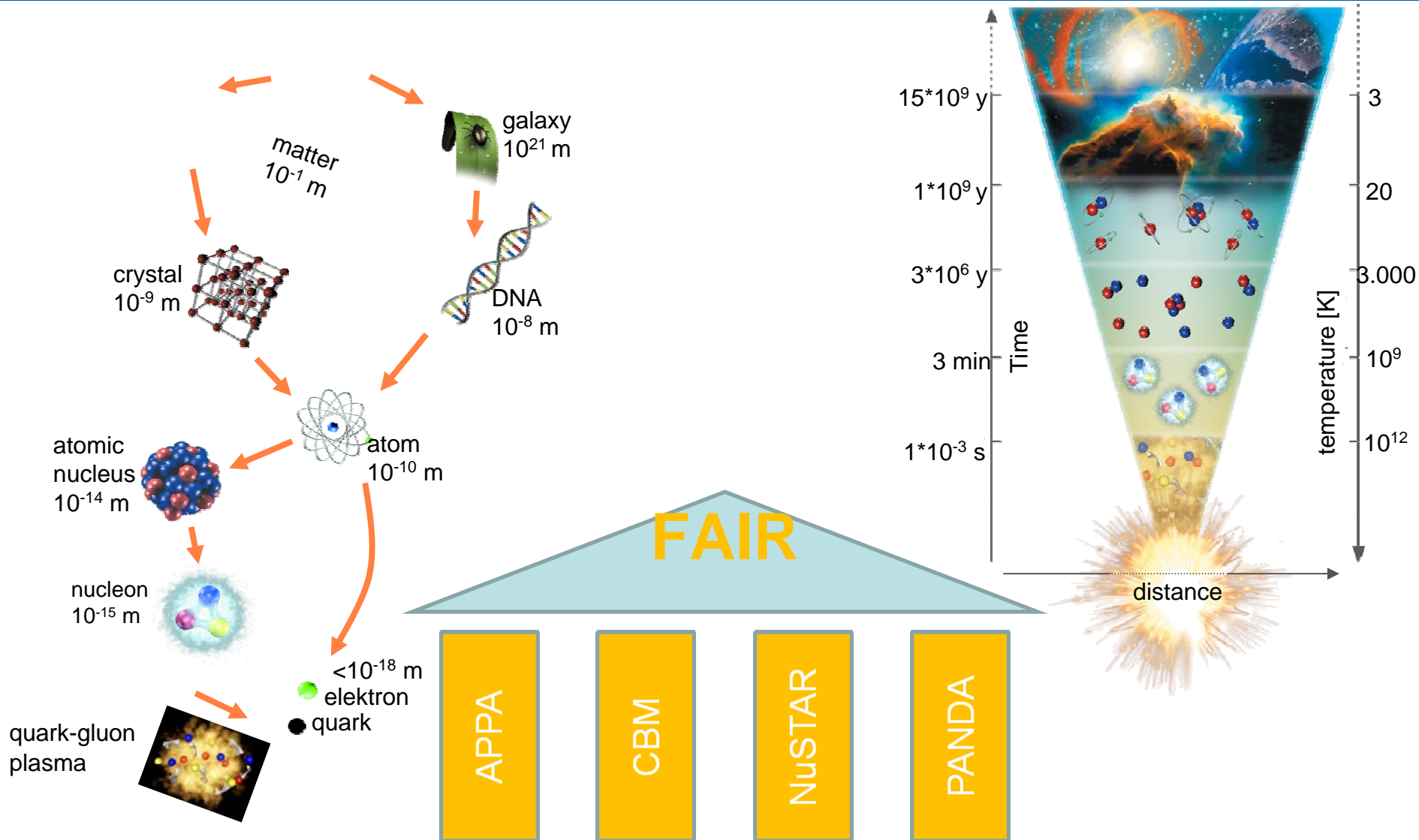
Austria China Finland France Germany Greece India Italy Poland Romania Russia Slovakia Slovenia Spain Sweden U.K



FAIR



What and Who is behind FAIR?



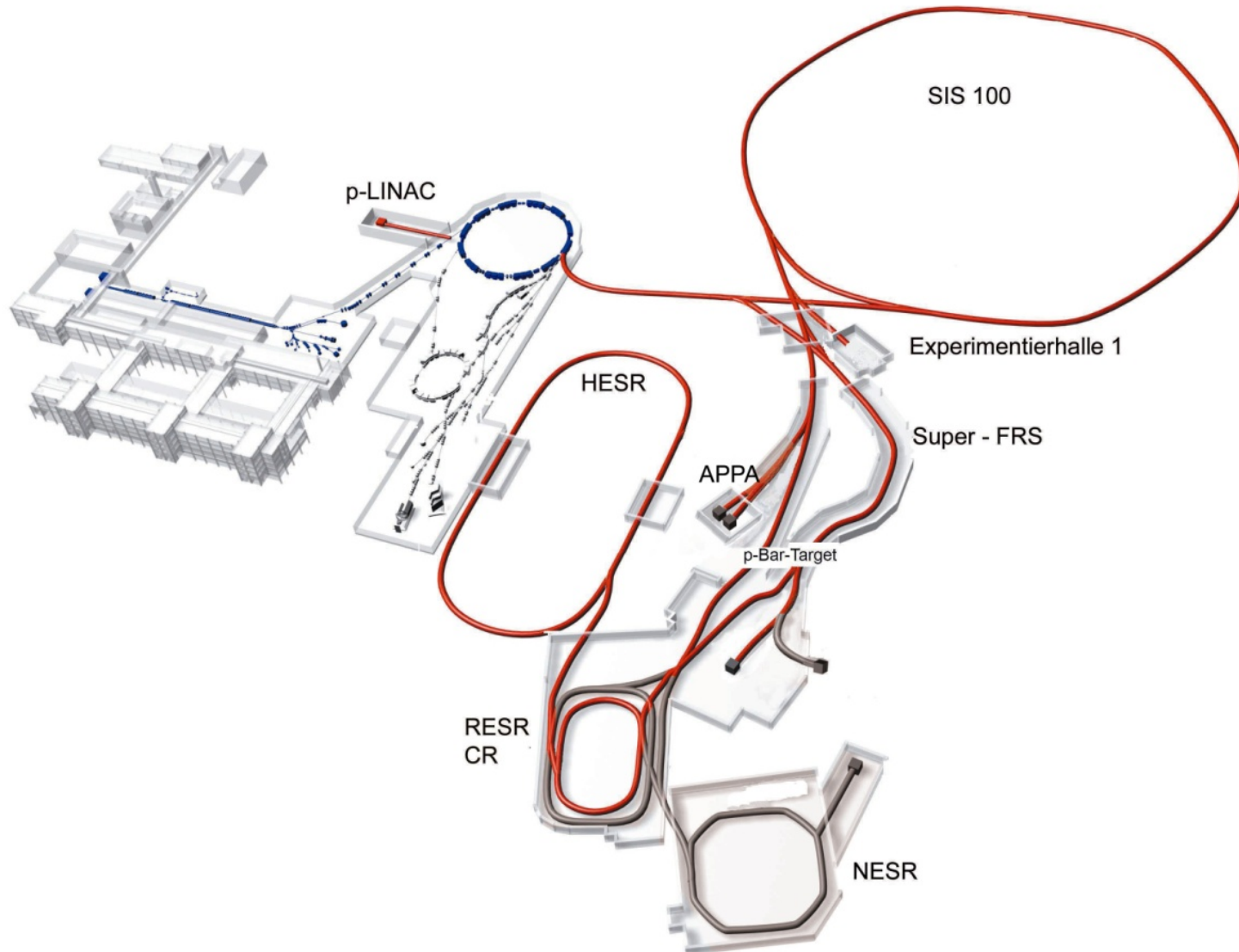
On the way to the FAIR Modularized Start Version

- **2001:** Presentation to the German Wissenschaftsrat:
 - Conceptual Design Report
Projectcost: 675 M€
- **2003:** Decision of the German Federal Government to realize FAIR; contribution of at last 25 % by international partners
- **2006:** FAIR Baseline Technical Report
 - Projectcost : 1.187 M€
- **2007:** FAIR Startversion
 - Projectcost: 940 M€
- **2009:** Listing of full costs for site & buildings; identification of site related costs
- **2009:** FAIR Modularized Start Version
 - Projectcost: 1.027 M€

FAIR Modularized Start Version

Year ↓	2003	FAIR Project Proposed - CDR - Recommendation for Realization in three stages						
	2005	FAIR Baseline Technical Report - Entire Facility						
	2007	Phase A					Phase B SIS300	
	2009	Module 0	Module 1	Module 2	Module 3	Module 4	Module 5	Phase B
		SIS100	Exp areas CBM/hades APPA	S-FRS fixed target area NuSTAR	pbar facility incl. CR for PANDA option for NuSTAR	LEB for NuSTAR NESR for NuSTAR & APPA FLAIR for APPA	RESR intensity for PANDA & parallel operation with NuSTAR & APPA	SIS300 ER HESR e-cooler
		Modularized Start Version						

Green Paper – Physics at the MSV



Cost of the Modularized Start Version (Price basis 2005)

Sum Accelerator and Personnel Modules 0 - 3	502
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Sum Site & Buildings Modules 0 – 3 (w/o site related cost)	400
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Experimentshares	78
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FAIR GmbH Personnel and Running Cost	47
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Grand total Modules 0 - 3	1027
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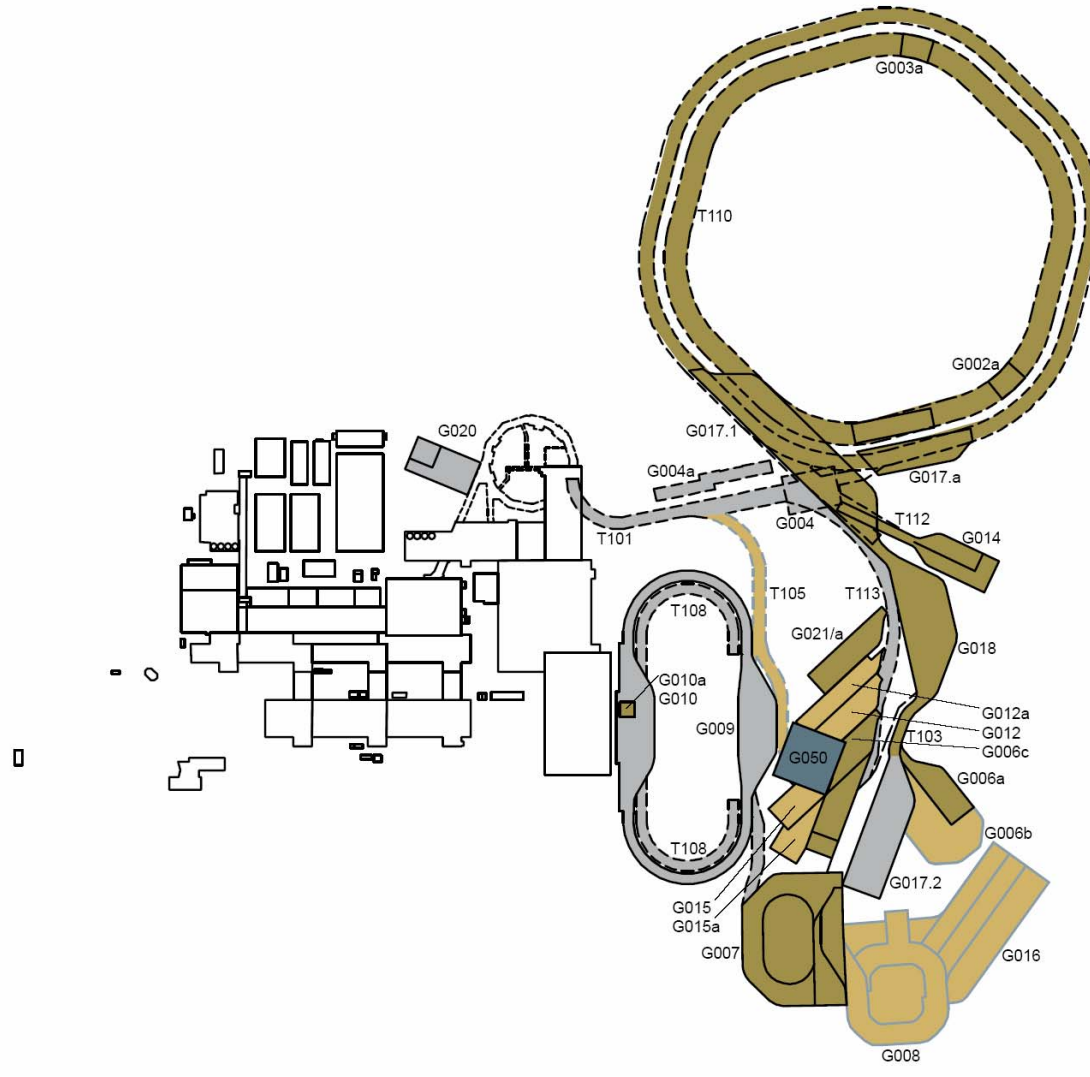
alle Angaben in M€

FAIR Partners and their Commitments

FAIR Countries	Total declared Contribution (k€)
Austria	5.000
China	12.000
Finland	5.000
France	27.000
Germany	705.000
Great Britain	8.000
Greece	4.000
India	36.000
Italy	42.000
Poland	23.740
Romania	11.870
Russia	178.050
Slovenia	12.000
Slovakia	6.000
Spain	19.000
Sweden	10.000
Total	1.104.660
Firm Commitments	1.033.660

not firm for the first batch

Buildings within the Modularized Start Version



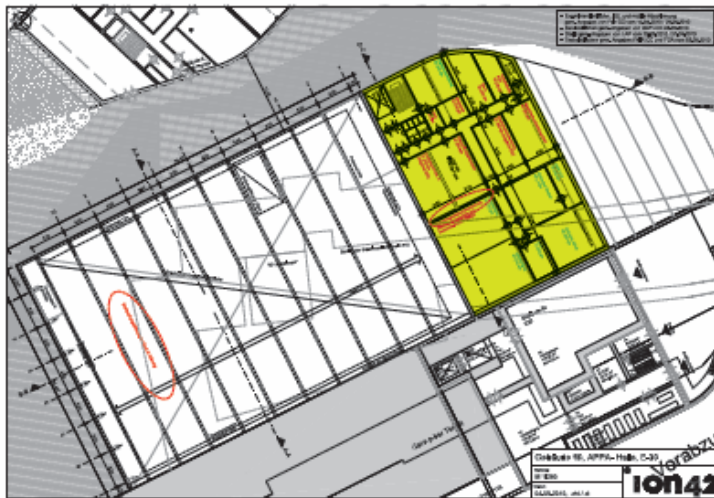
The APPA Building



E10/ E11



E20



E30

- Berechnungsgrundlage Halle
- Berechnungsgrundlage Service- und Technikflächen
- Berechnungsgrundlage Tunnel T113

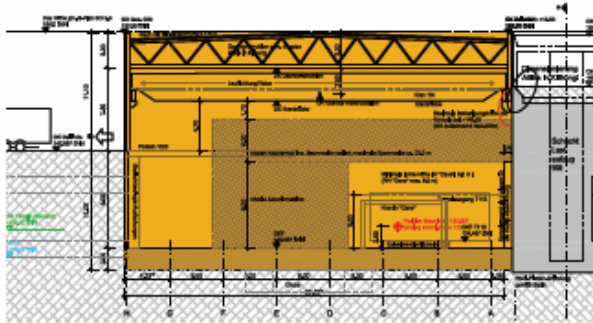
Geb.050 - Flächen zur Kostenschätzung

Mitarbeiter
Ohne Maßstab
Datum
07.06.2010, cht

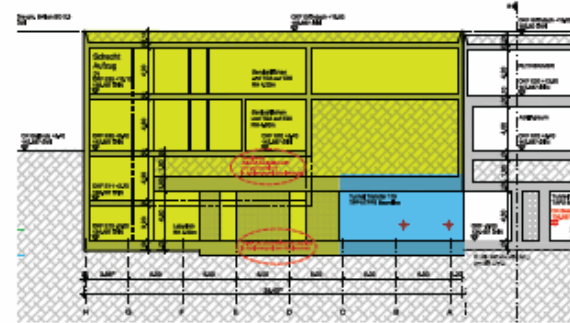
ION42

Vorabzug

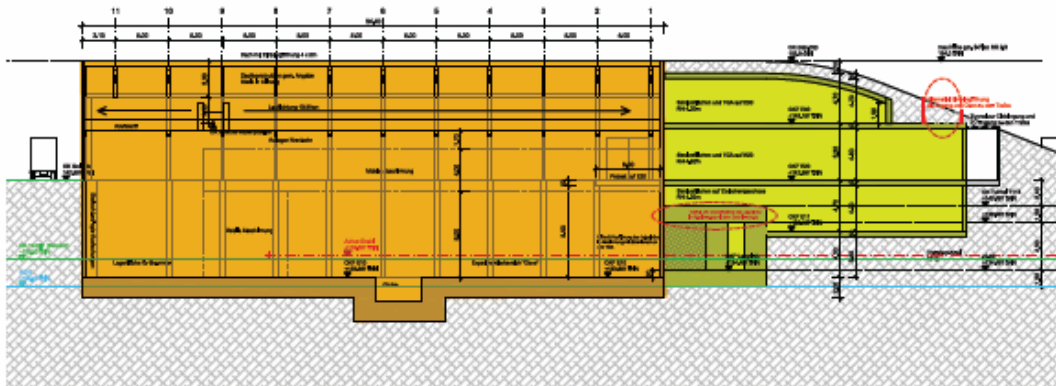
The APPA Building



Schnitt A-A



Schnitt B-B



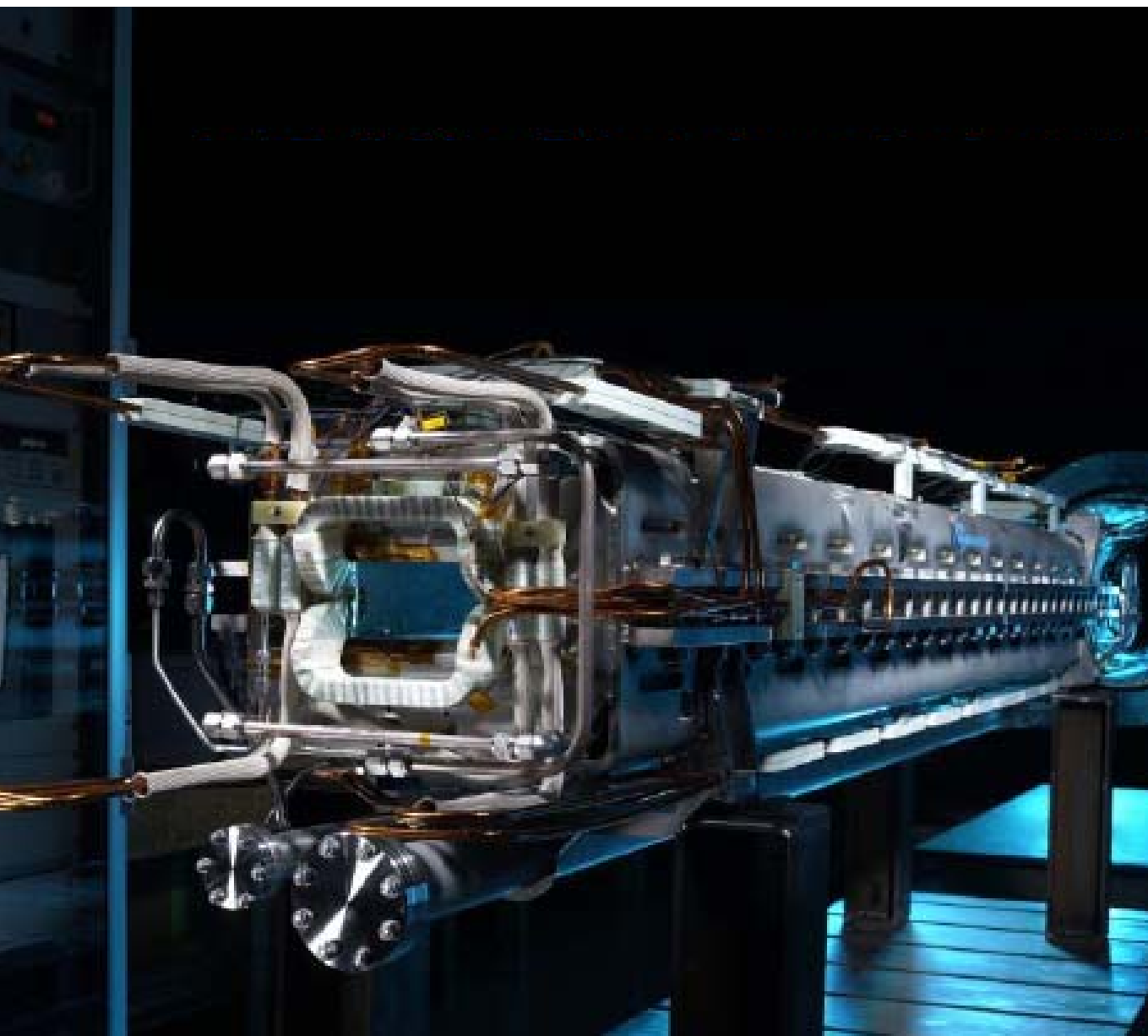
Schnitt C-C

- Berechnungsgrundlage Halle
- Berechnungsgrundlage Service- und Technikflächen
- Berechnungsgrundlage Tunnel T113

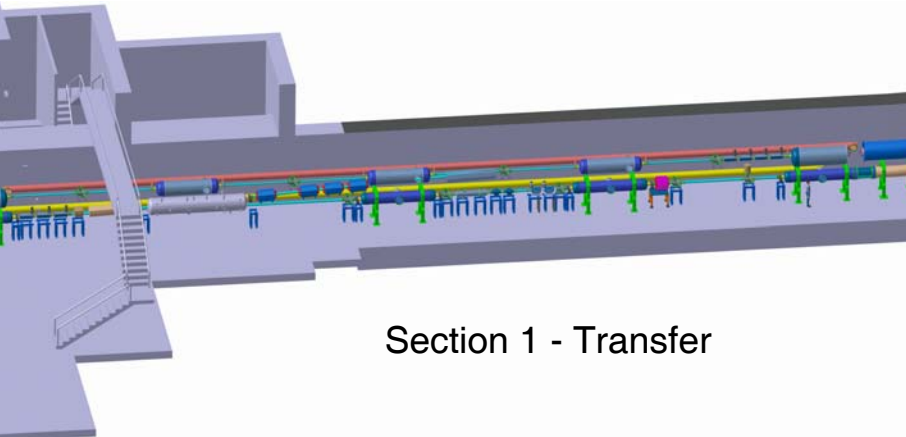
Vorabzug

Geb.050 - Flächen zur Kostenschätzung	
Maßstab	ION42
Ohne Maßstab	
Datum	
07,06,2010, cht	

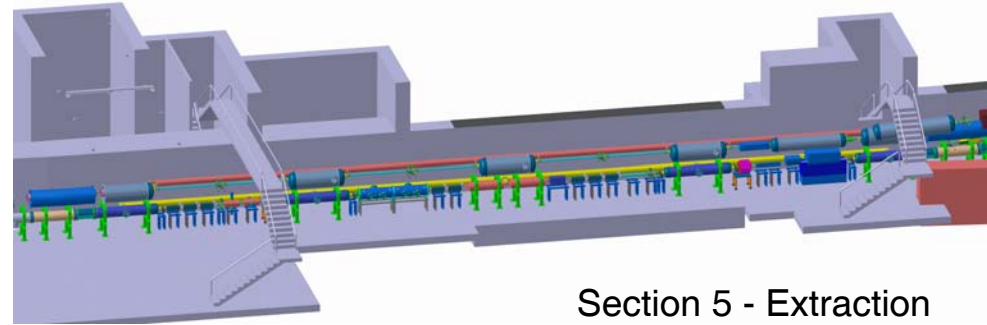
First SIS100 Full Scale Dipole under Test



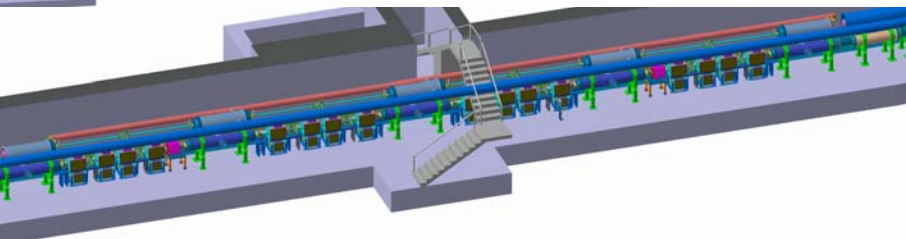
SIS100 - Straight Sections and Arc



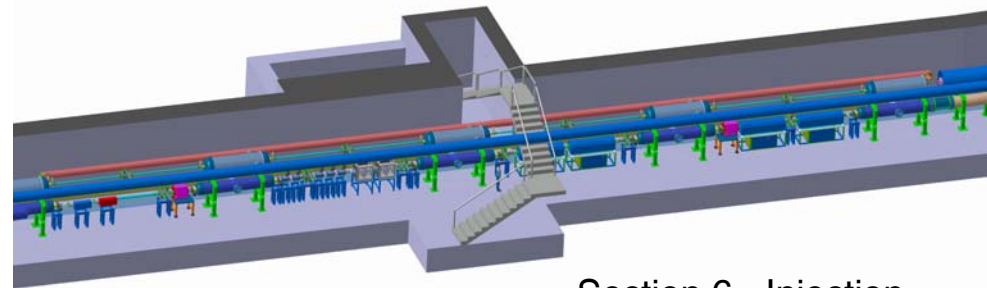
Section 1 - Transfer



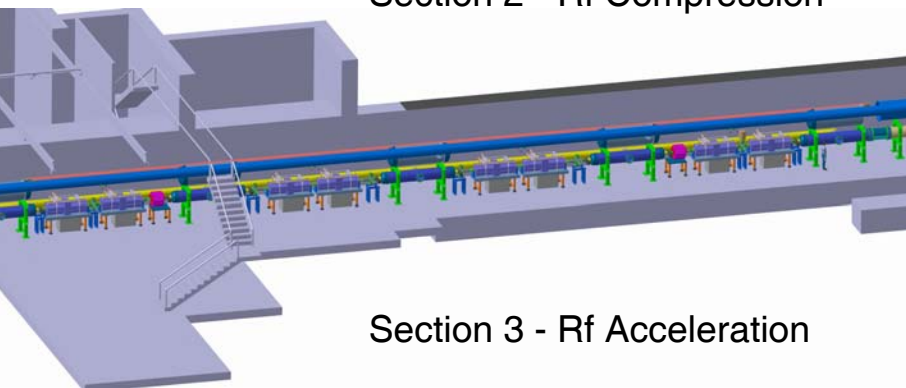
Section 5 - Extraction



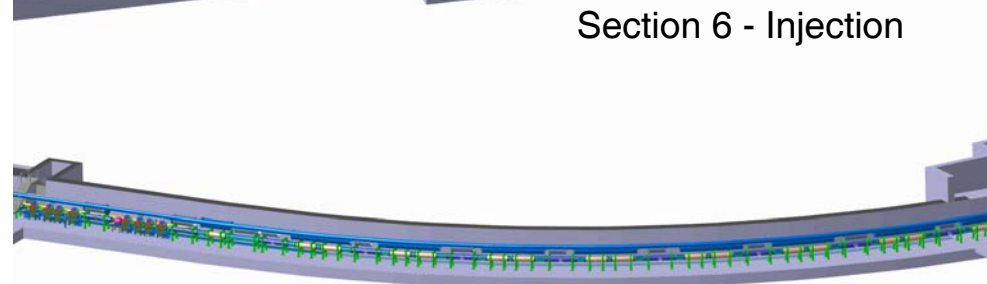
Section 2 - Rf Compression



Section 6 - Injection

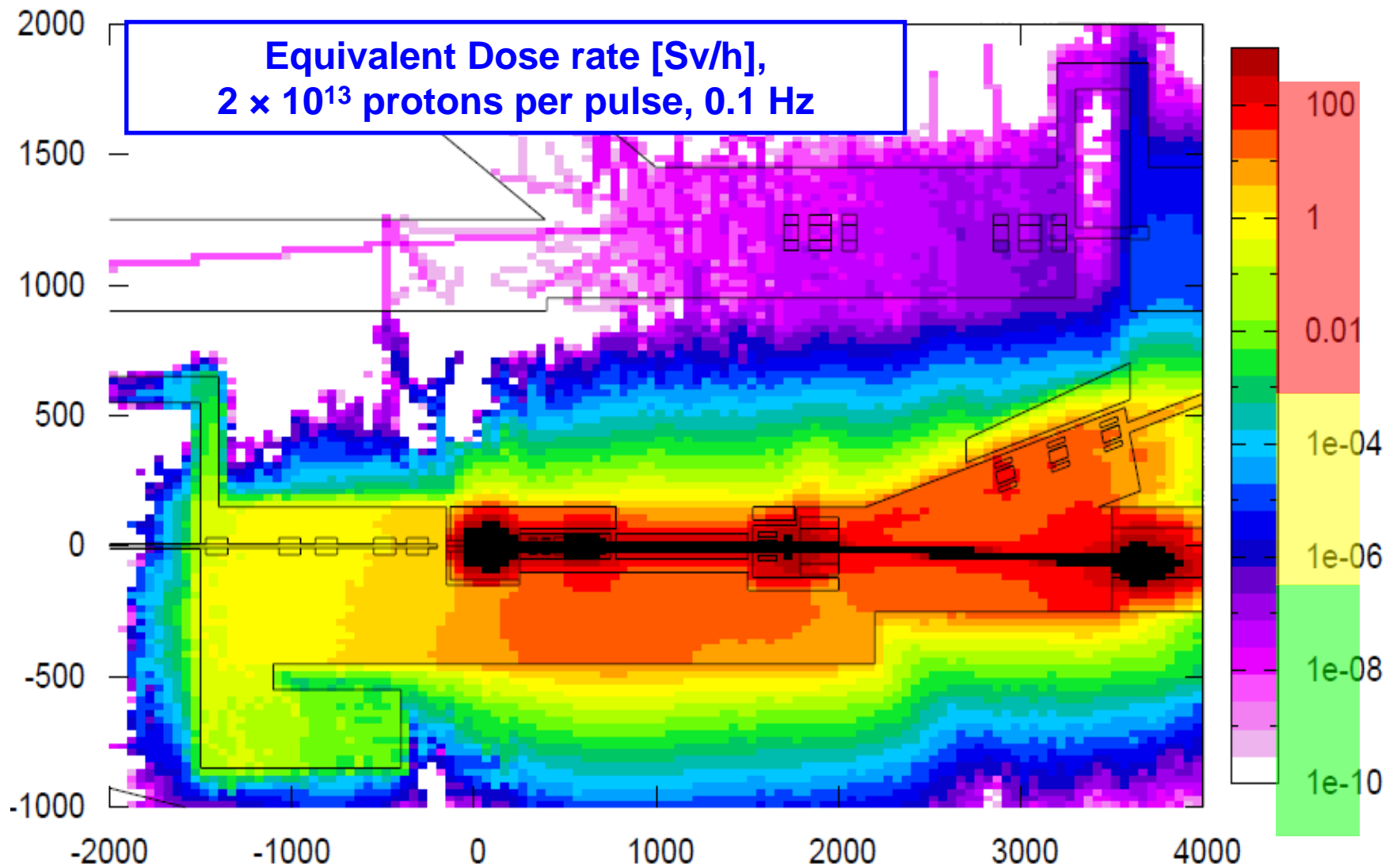


Section 3 - Rf Acceleration

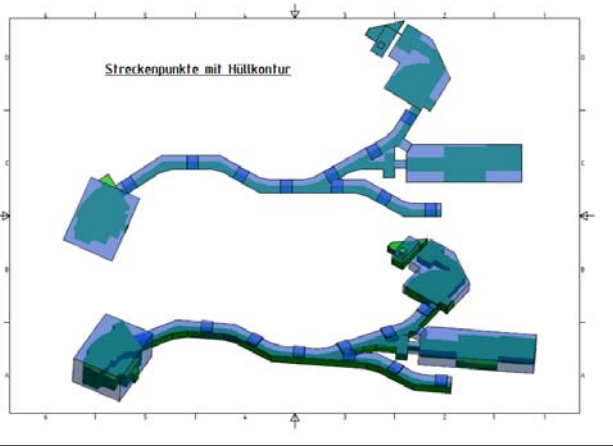


Arc

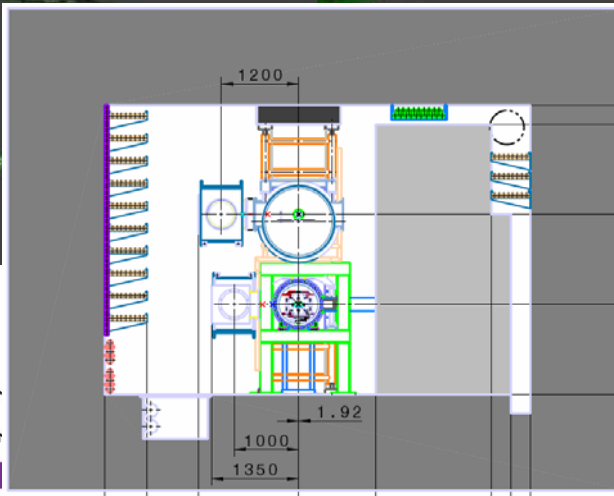
Equivalent dose rates during operation



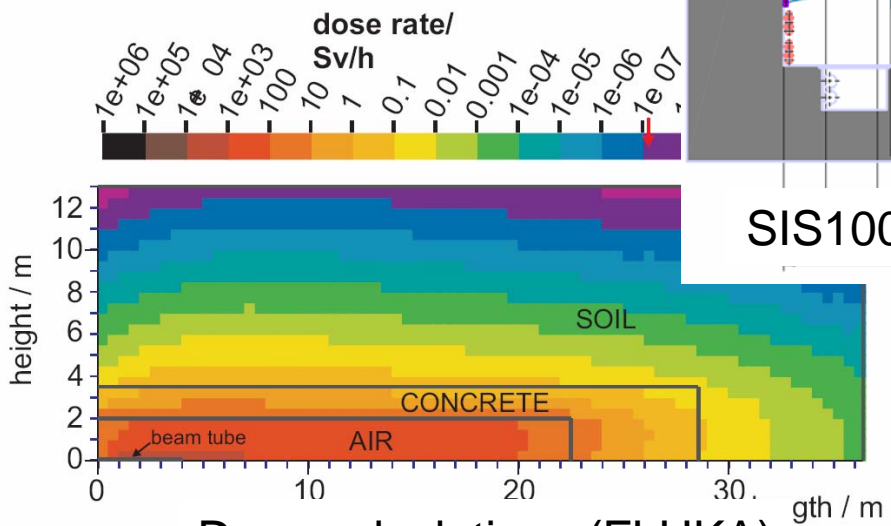
The Interplay of Accelerator Infrastructure, Radiation Protection, Civil Construction and Soil



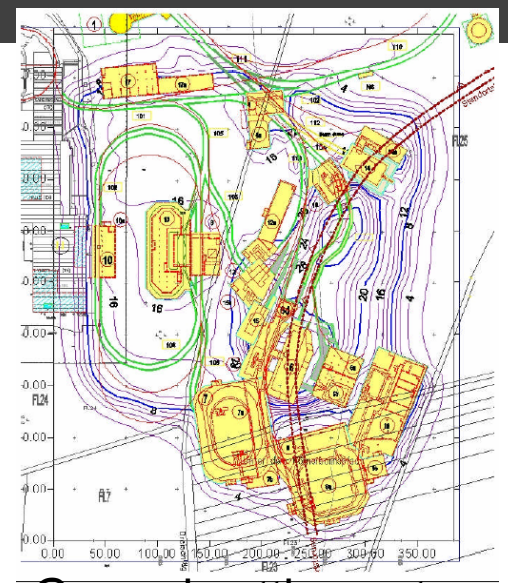
Form follows beam



SIS100 tunnel X-section



Dose calculations (FLUKA)



Ground settlement

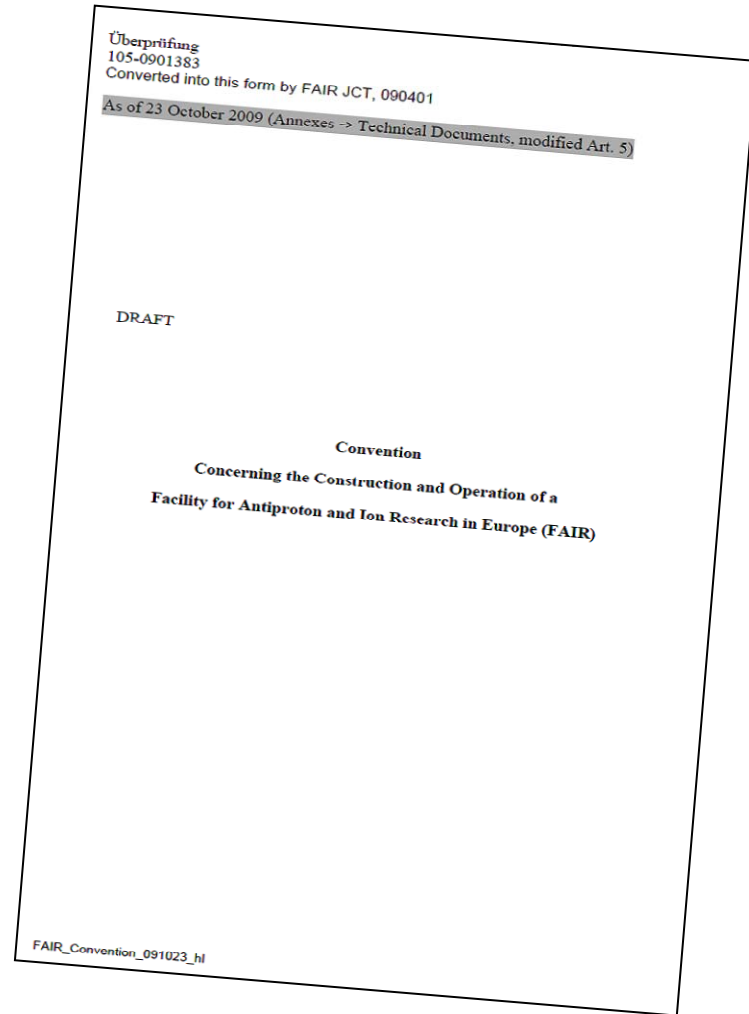
Two Company Model

- FAIR is to be realized in a two company model
- as a German GmbH
- FAIR will be the project executing company within the construction phase
- but will carry on during operation phase
- close collaboration between GSI and FAIR

- FAIR partners will become shareholders of the company
- GSI will be the German shareholder

International Legal Documents

- Convention concerning the Construction and Operation of FAIR
- Multinational Contract



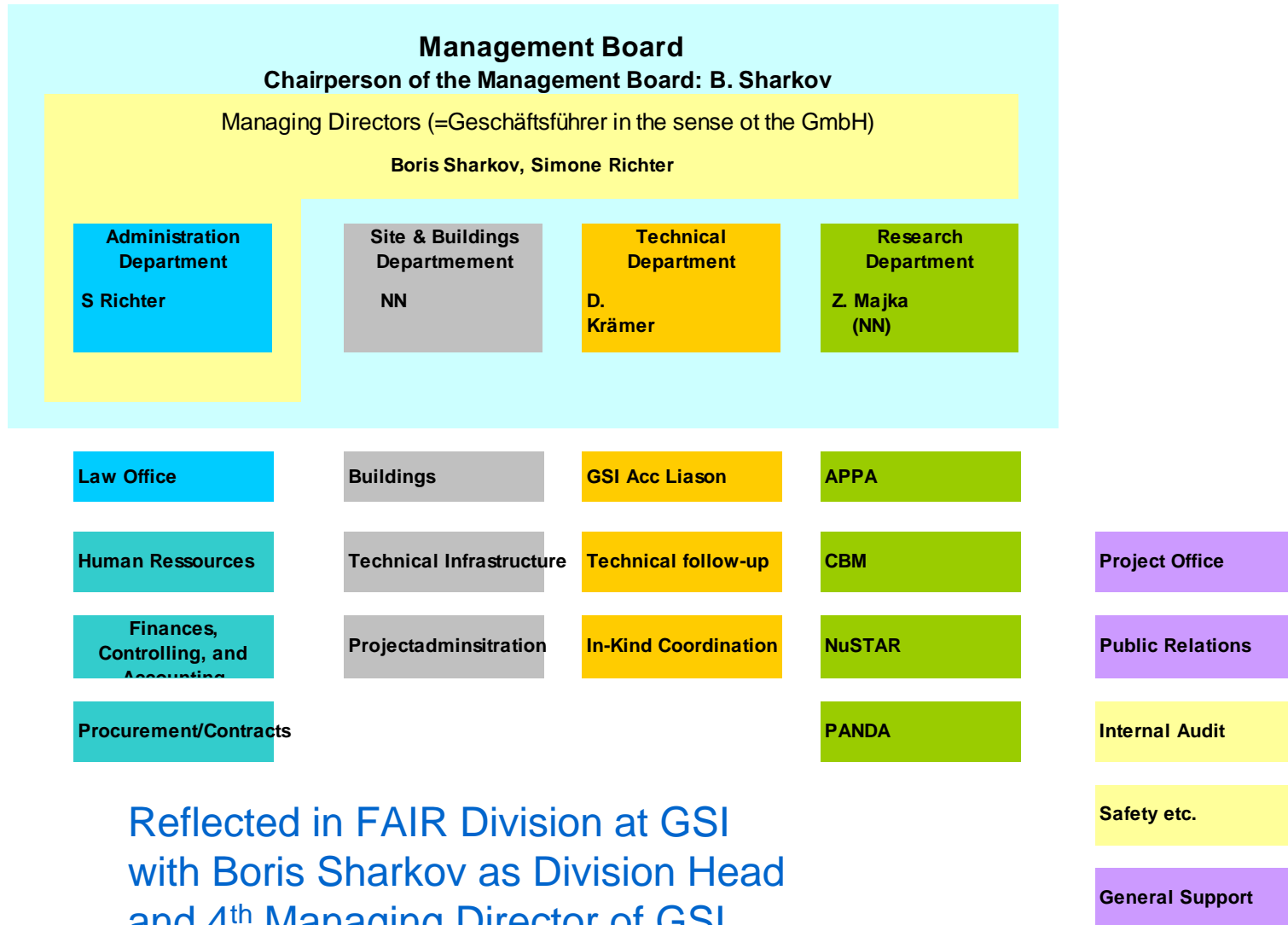
The Translation Process

- Legal documents in five language versions:
 - English, Deutsch, Französisch, Spanisch und Russisch
- Übernahme des Übersetzungsprozesses durch das Auswärtige Amt
 1. Versenden der englischen Fassung
 2. Rücksendung der übersetzten Fassung
 3. Klärung/Harmonisierung aller Sprachfassungen durch AA
 4. Übersetzungskonferenz und Paraphierung der Rechtsdokumente
- Zeichnungskonferenz
Gründung der FAIR GmbH (erwartet für Ende September 2010)

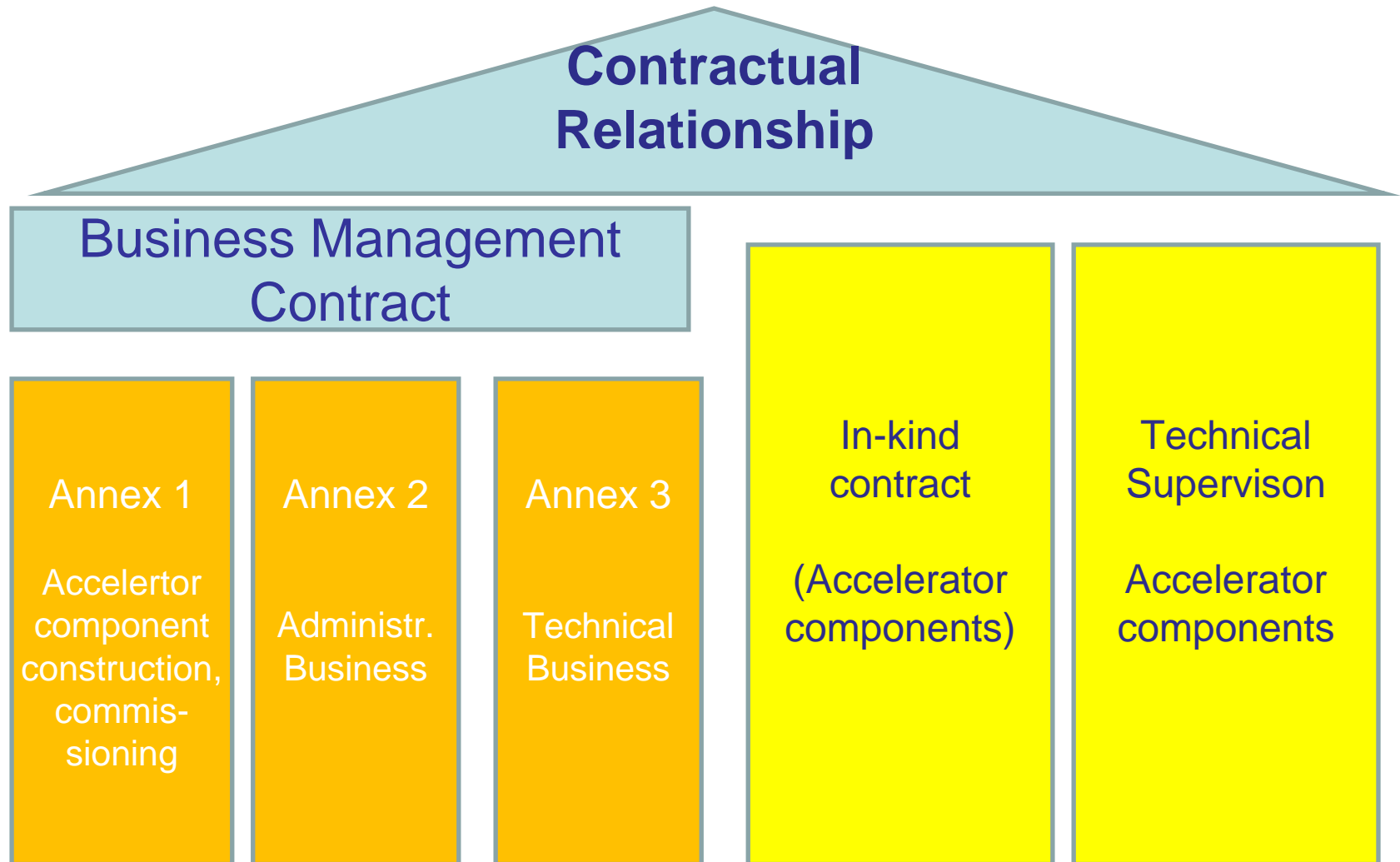
Der Übersetzungsprozess ...

- Rechtsverbindliche Dokumente in fünf Vertragssprachen:
 - Englisch, German, French, Spanish and Russian
- German Foreign Office leads the process
 1. Send-out of the english version
 2. send-back of the translated versions by partners
 3. harmonisation of all language versions through FO
 4. Cross-Checking Conference and signaling of the documents forseen for August 25th – 27th in Berlin
- Signatory Conference forseen September 27th or october 4th
- Foundation of the company FAIR GmbH at the same day

FAIR GmbH Structure



Contractual Relationship between FAIR and GSI





The future is FAIR and the future is now!