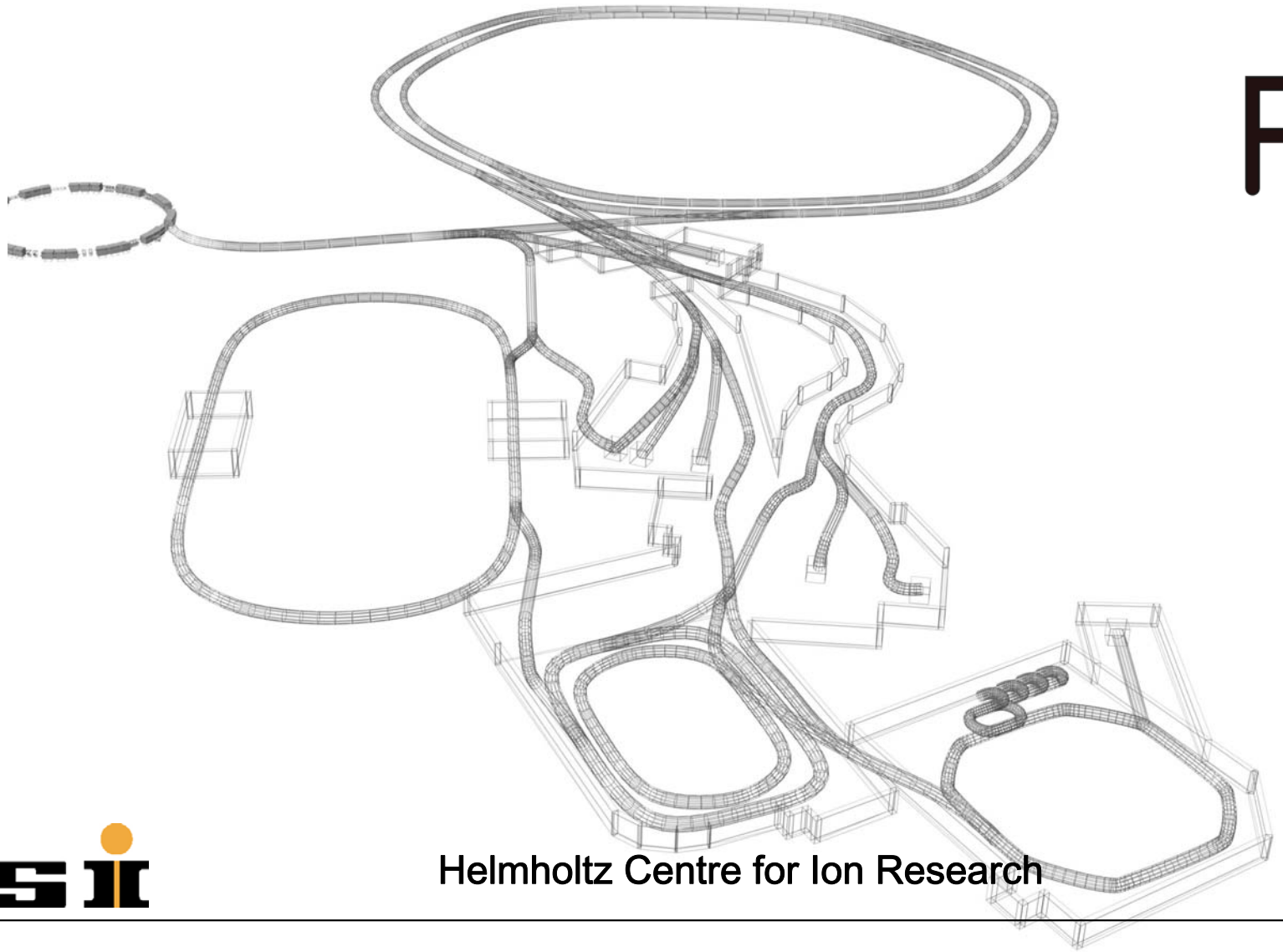
# CR Pre-Collaboration Meeting



Helmholtz Centre for Ion Research

# Welcome

Special thanks to representatives from China (IMP), RUS (BINP, ITEP)

July 4, 2008: Mandate of ISC
Start pre-collaboration on dedicated FAIR accelerators

**ISC supports the creation of pre-consortia/pre-collaborations on the dedicated FAIR accelerators**

# What are the Topics of Today?

Overview on CR

- Status of planning
- Status of EoIs

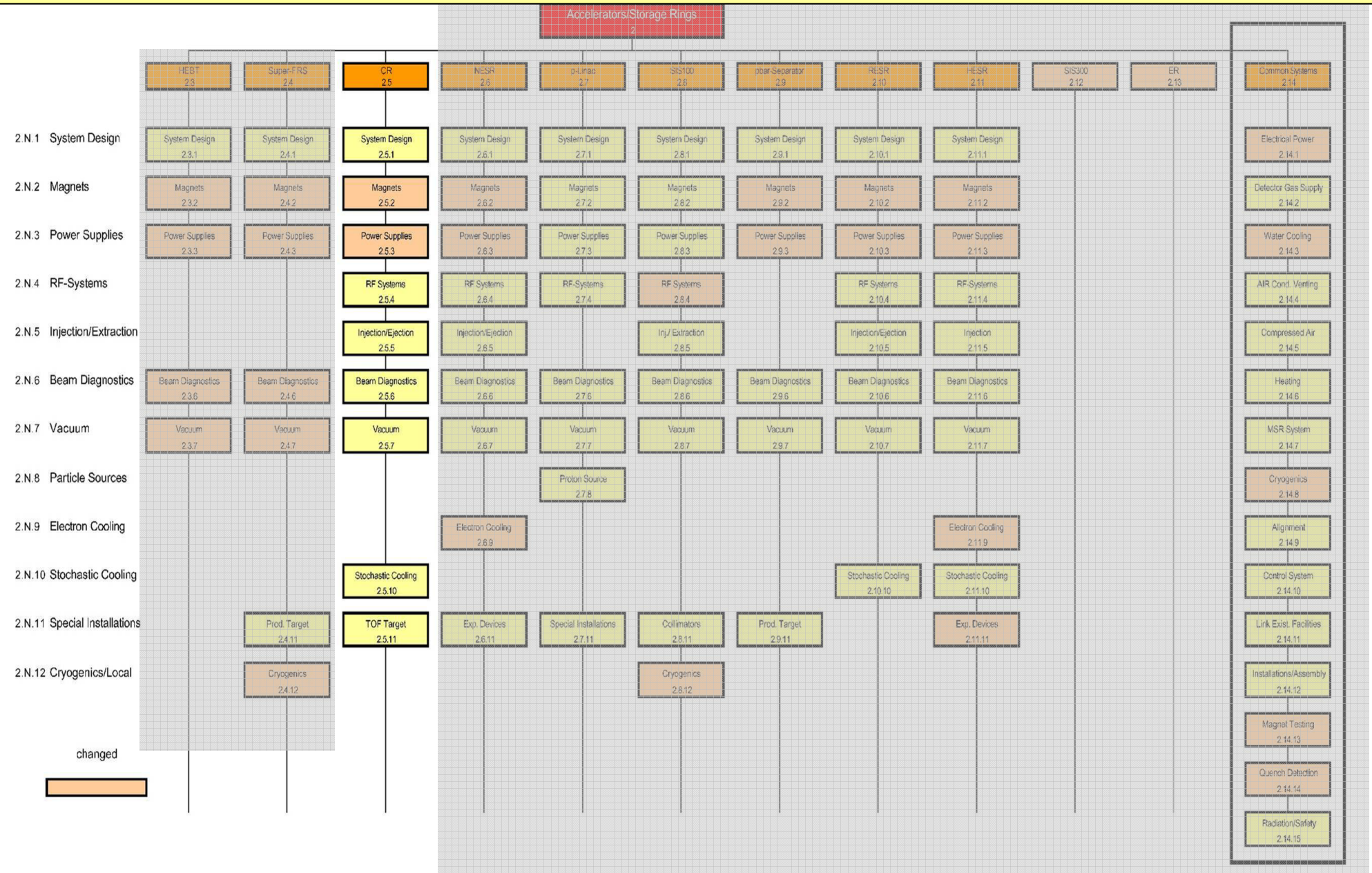
Communication

- EDMS & data excahnge
- procedures, rules

Main Goal

- Derive a Road Map
- take the first steps in the project

# CR WBS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CR 2.5
NESR 2.6
p-Linac 2.7
SIS100 2.8
pbar-Separator 2.9
RESR 2.10
HESR 2.11
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2.N.2 Magnets
2.N.3 Power Supplies
2.N.4 RF-Systems
2.N.5 Injection/Extraction
2.N.6 Beam Diagnostics
2.N.7 Vacuum
2.N.8 Particle Sources
2.N.9 Electron Cooling
2.N.10 Stochastic Cooling
2.N.11 Special Installations
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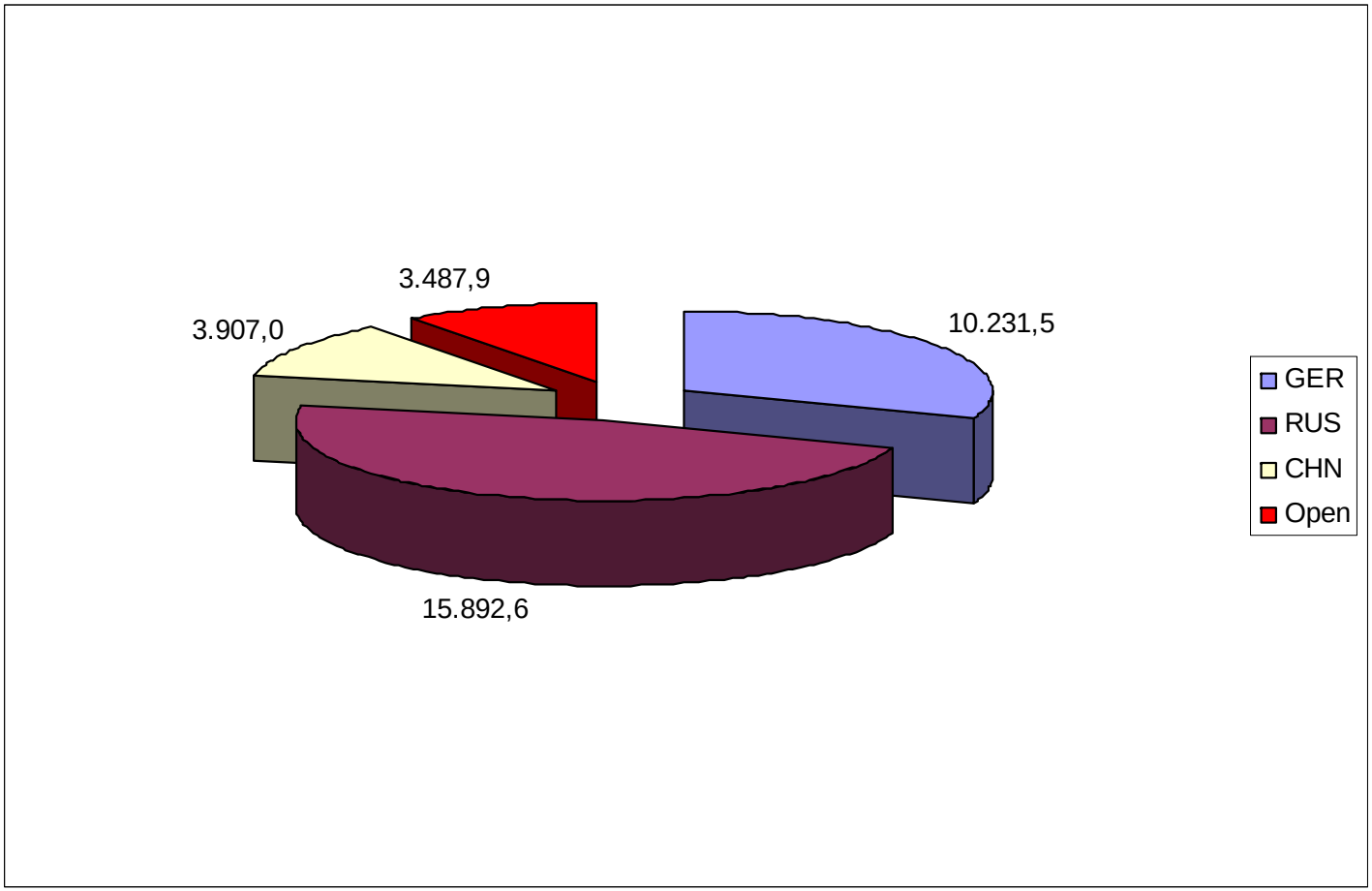
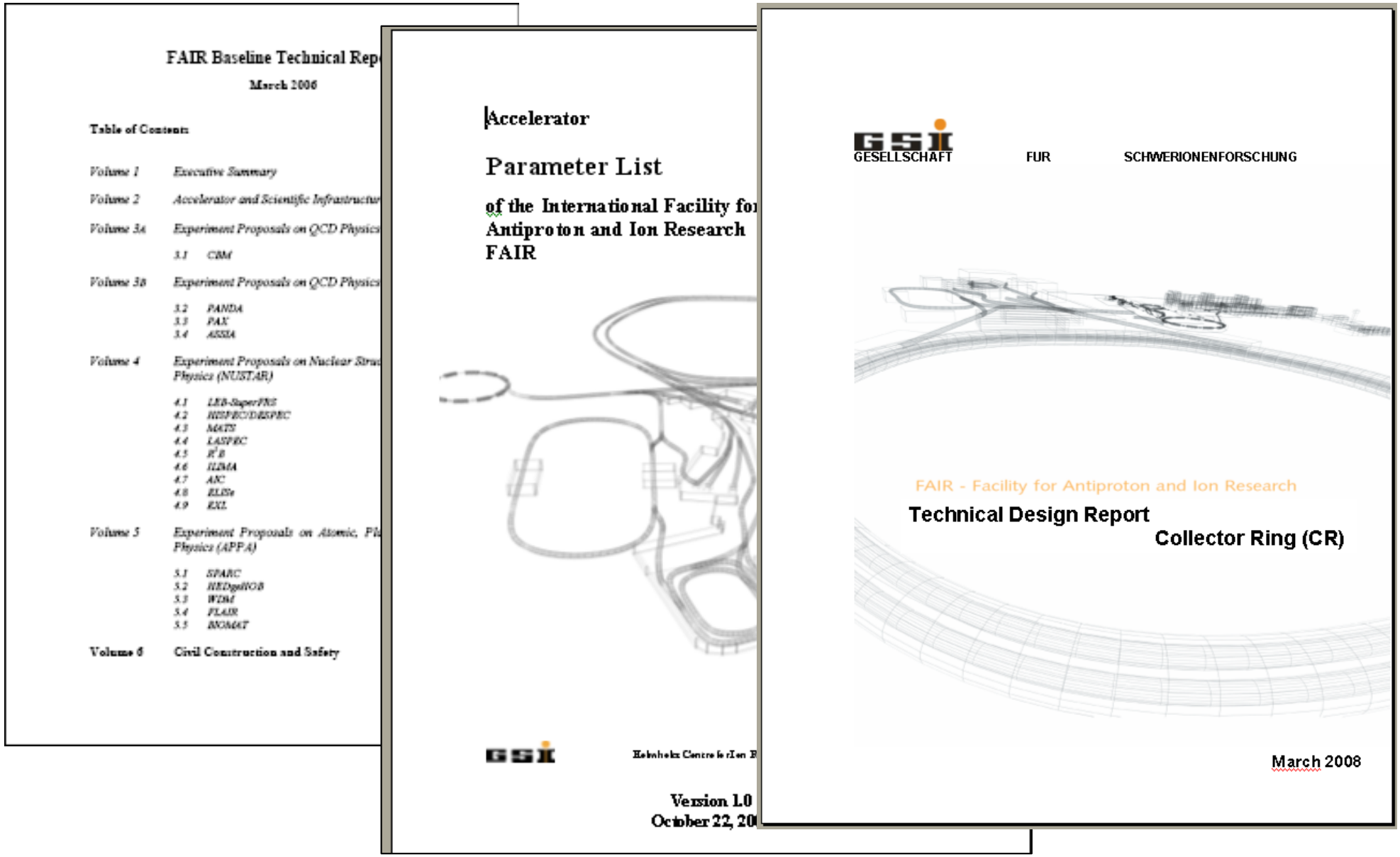
Installations/Assembly 2.14.12
Magnet Testing 2.14.13
Quench Detection 2.14.14
Radiation/Safety 2.14.15
changed

# Status of EoI to CR




**More than 89% of WPs are covered by EoIs**

# Technical Background Documents



FAIR Baseline Technical Rep

March 2006

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Accelerator

Parameter List

of the International Facility for
Antiproton and Ion Research
FAIR

Version 1.0
October 22, 20

GSI GESELLSCHAFT FUR SCHWERIONENFORSCHUNG

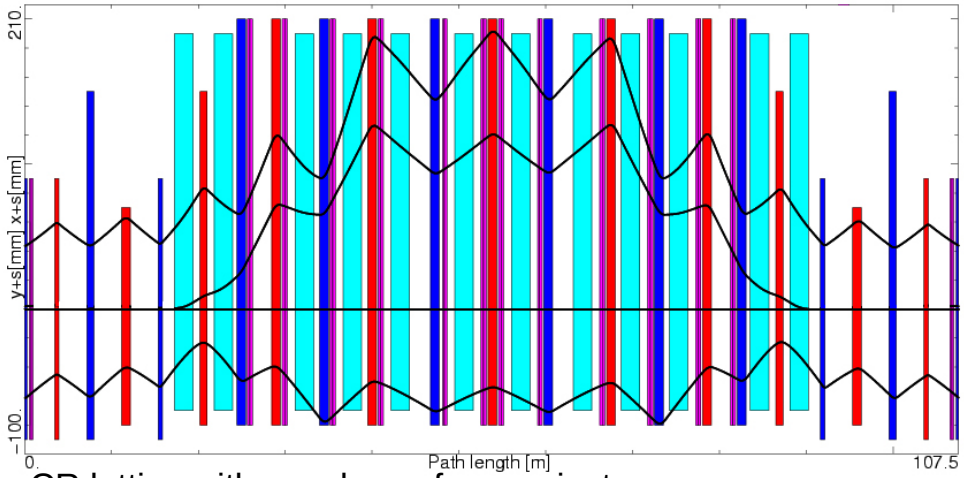
FAIR - Facility for Antiproton and Ion Research

Technical Design Report

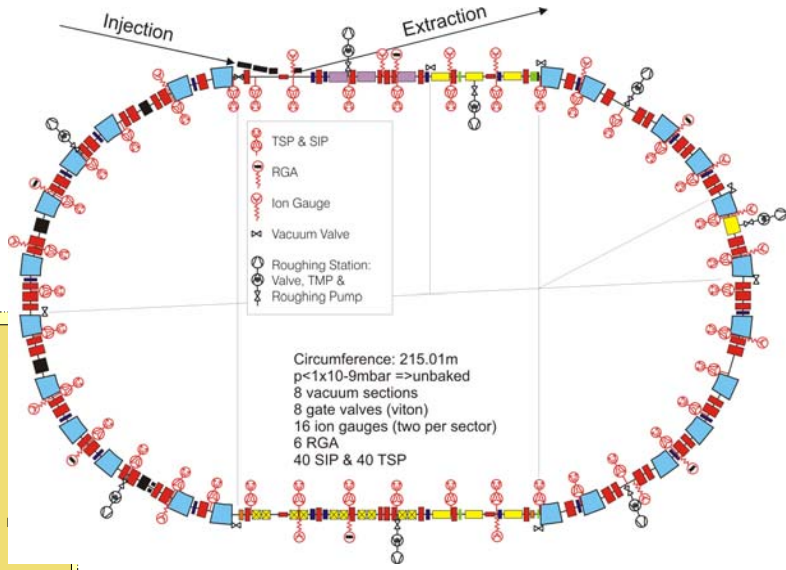
Collector Ring (CR)

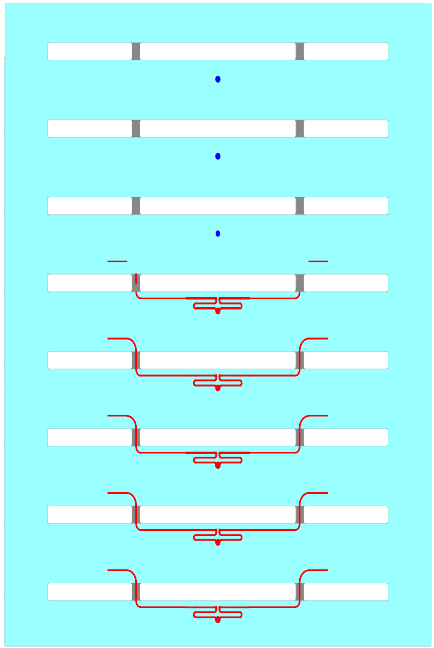
March 2008

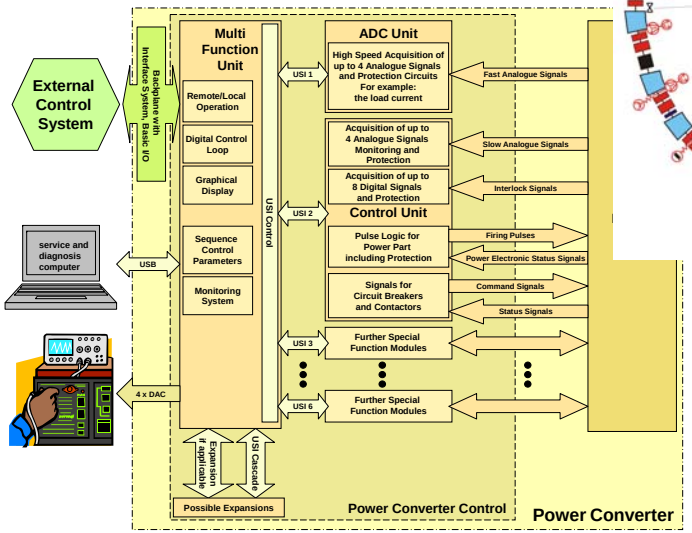
# CR System Design




CR lattice with envelopes for rare isotopes.





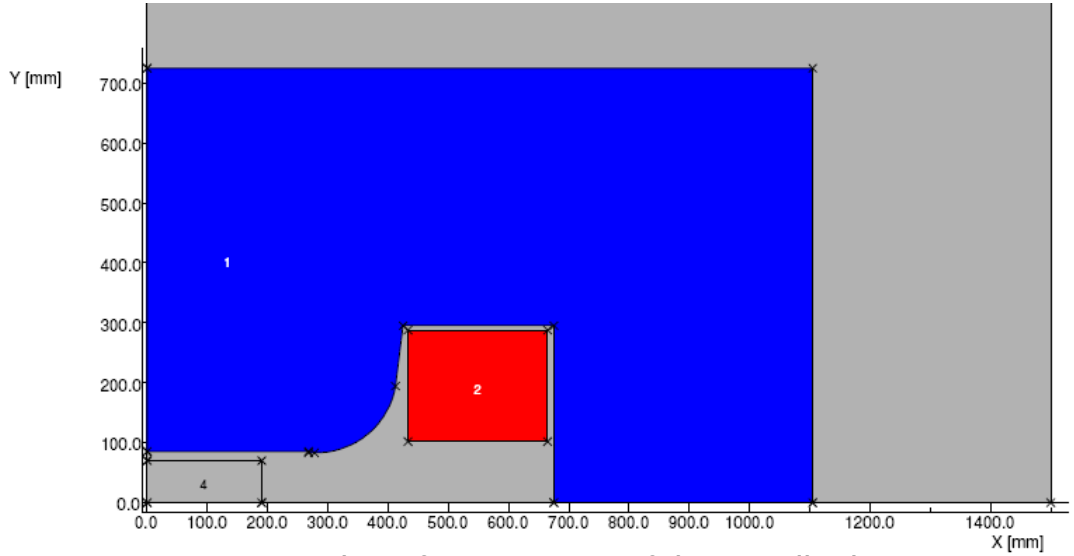

Slotline array with eight slots arranged perpendicular to the beam

# Status of Dipole Prototypes

Iron dominated magnets:

**Radiation resistant nc dipoles**
for Super-FRS
by BINP Novosibirsk
EU/GSI funded
- Yoke ready
- inorganic insolated Cu bars ordered in Canada
- Coil production prepared coil finished in 2008 (?)
- Delivery Feb. 2009

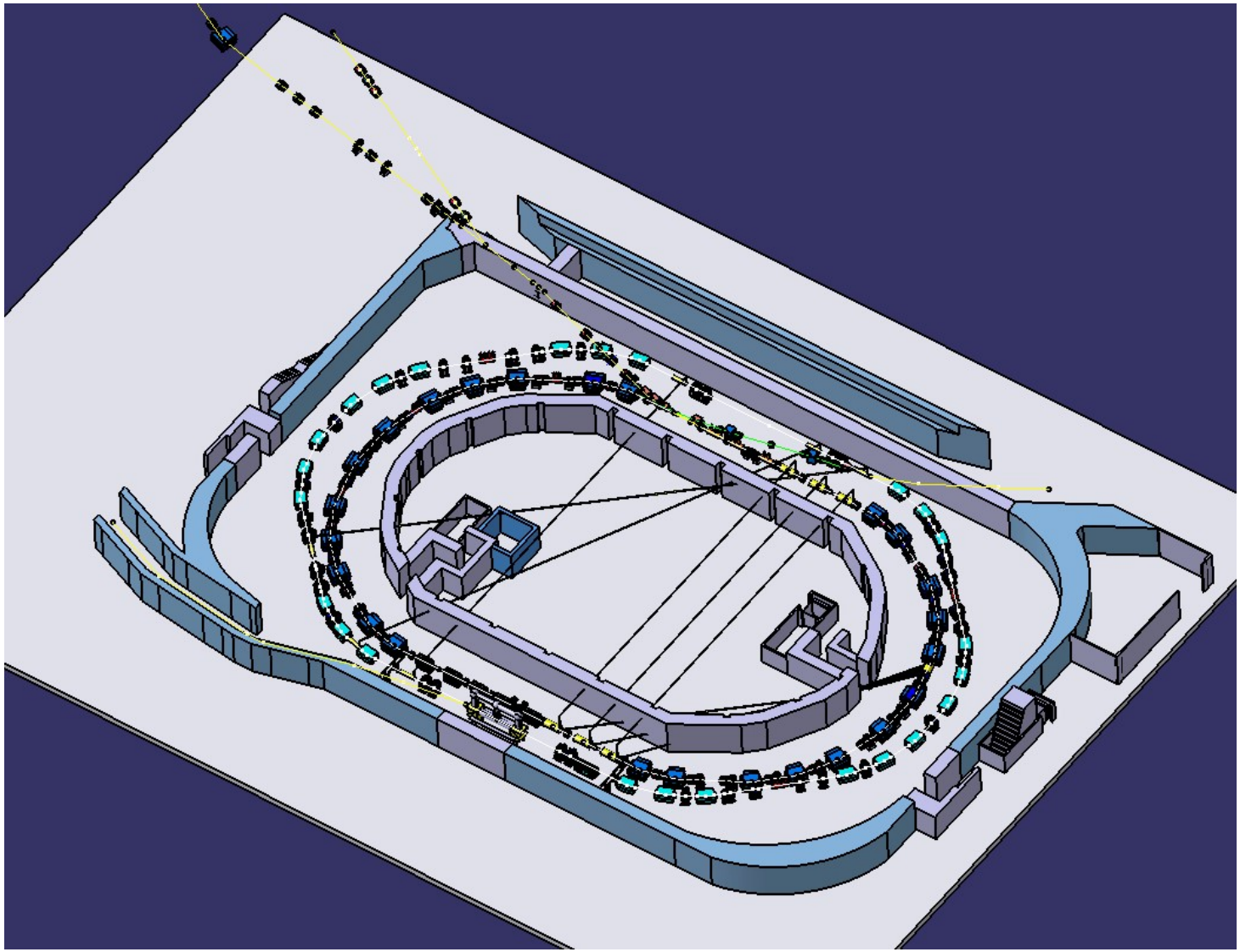
**Superferric dipoles Super-FRS**
by FAIR China Group
China/GSI funded
- Yoke ready
- Coil reads
- cryostat under production
- Tests scheduled for early 2009



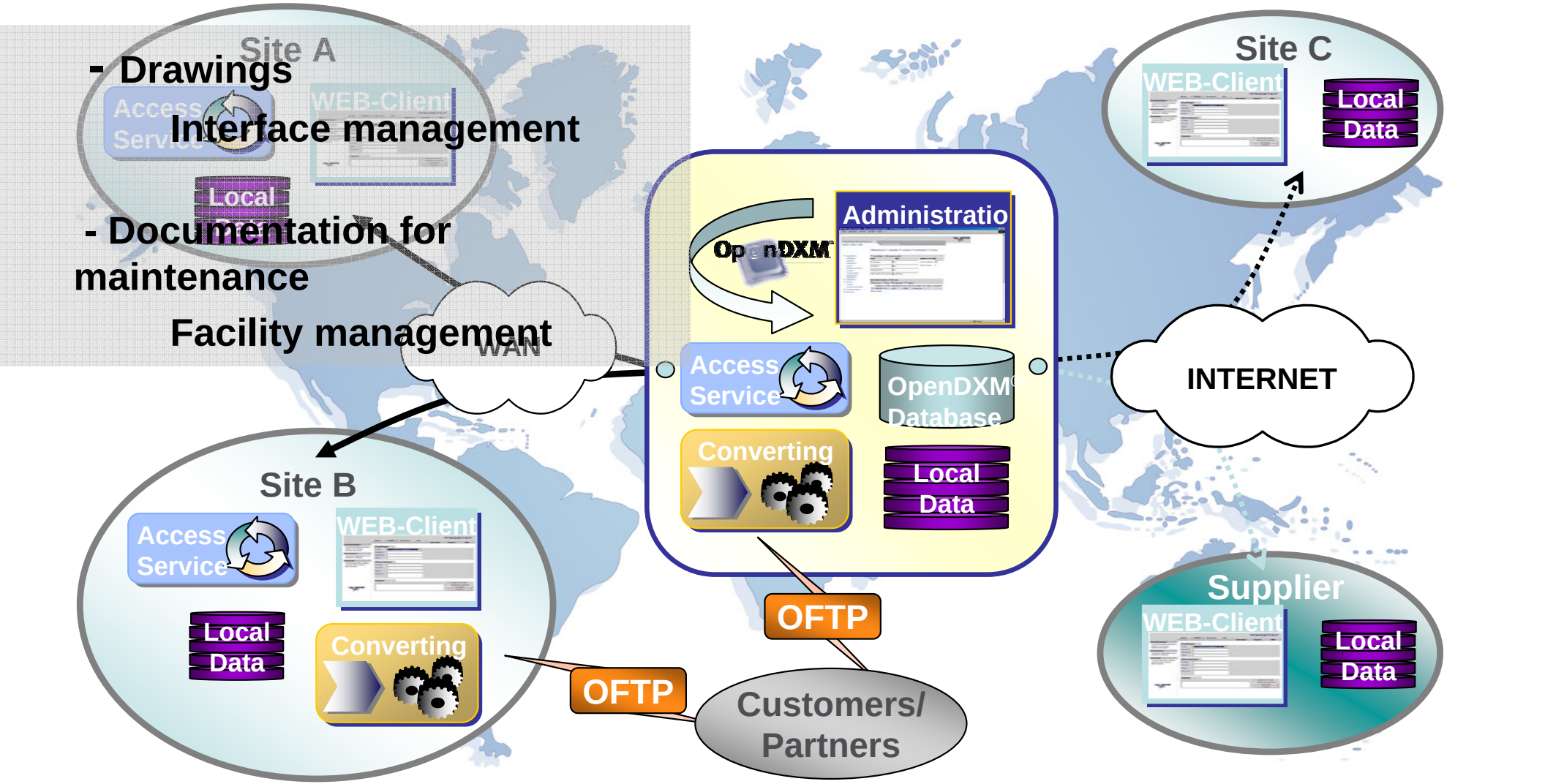
2D-cross section of one quarter of the CR dipole magnet.

Dipole half-yoke at IMP

# CR System Design cont’d



# Standardization in Communication



# Communication

## FAIR Project EDMS is ready for usage

- The FAIR Project Data and Documents are categorized (Naming Convention)
- The Project Structure (WBS) is installed in EDMS
- Groups and Users with read, write access as well as comment/review and approval rights are defined


**FAIR Project Document Naming System**

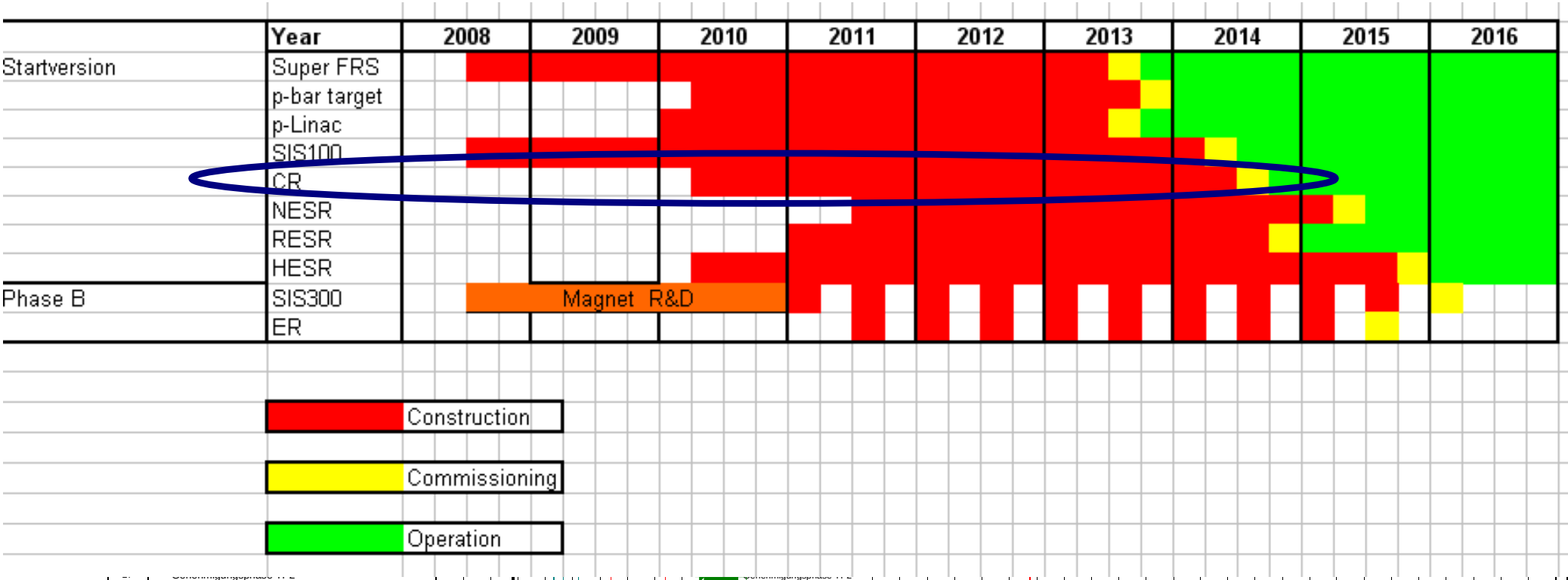
**Version 1.0**
**23.07.2008**

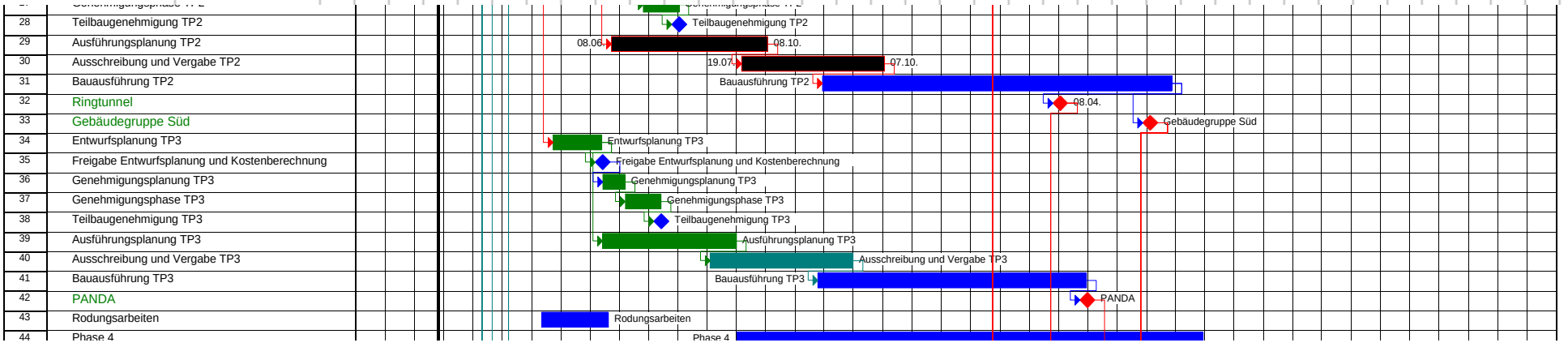
**Document Types** **here: Example Engineering**

| Document Types | | | |
|---|---|---|---|
| Example | | Document Code | |
| Engineering (Plan, Act) | | E | |
| | Technical Design Reports | E | T |
| | Functional Specifications | E | F |
| | Interface Specifications | E | I |
| | Detailed Design Specifications | E | D |
| | Quality Assurance, Test Specifications | E | A |
| | Change Requests | E | C |
| | Drawings | E | W |
| | Technical Illustrations | E | L |
| | Parameter Lists | E | P |
| | Minutes of Reviews | E | M |
| | Engineering reports | E | R |

# Schedule – FAIR Start Version

## How to manage to get CR ready in the 5 ½ years left?



# Out-Come of Today

There will be contracts between Labs, Funding Agency and FAIR GmbH

**Derive a Road Map on CR**

- What is the status of preparation in the partner labs on proposed EoI WPs?
  wrt. project structures implemented, resources allocated

# Agenda



## Wednesday 08 October 2008

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| | | |
|---|---|---|
| 09:00 | Welcome and Goals of the Meeting (20') | Hans-Dieter Krämer (*Gesellschaft für Schwerionenforschung mbH*) |
| 09:20 | Status CR (20') | Markus Steck (*Gesellschaft für Schwerionenforschung mbH*) |
| 09:40 | CR EoIs - Confirmation (10') | Wolfgang Jacoby (*Gesellschaft für Schwerionenforschung mbH*) |
| 09:50 | Coffee Break | |
| 10:05 | Form and Status of Specifications (30') | Hermann Kolb (*Gesellschaft für Schwerionenforschung mbH*) |
| 10:35 | Data Exchange - Rules, Procedures (30') ( document ) | Simone Richter (*Gesellschaft für Schwerionenforschung mbH*) |
| 11:05 | Discussion of CR Roadmap - 1 (1h30') | Markus Steck (*Gesellschaft für Schwerionenforschung mbH*) |

- CR Work Package Distribution (10')
- CR Magnets (10')
- CR Power Converters (10')
- CR Beam Diagnostics (10')
- CR UHV-System (10')
- CR Controls (10')
- CR Stochastic Cooling (15')
- CR RF-System (15')

| | | |
|---|---|---|
| 12:35 | Lunch | |
| 13:35 | Discussion of CR Road Map - 2 (1h00') | Markus Steck (*Gesellschaft für Schwerionenforschung mbH*) |
| 14:35 | Coffee Break | |