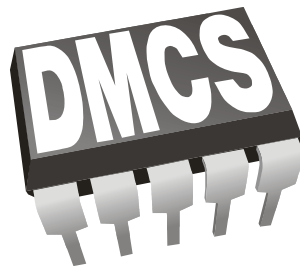


CDR Status and MS Project plan

Mariusz Grecki

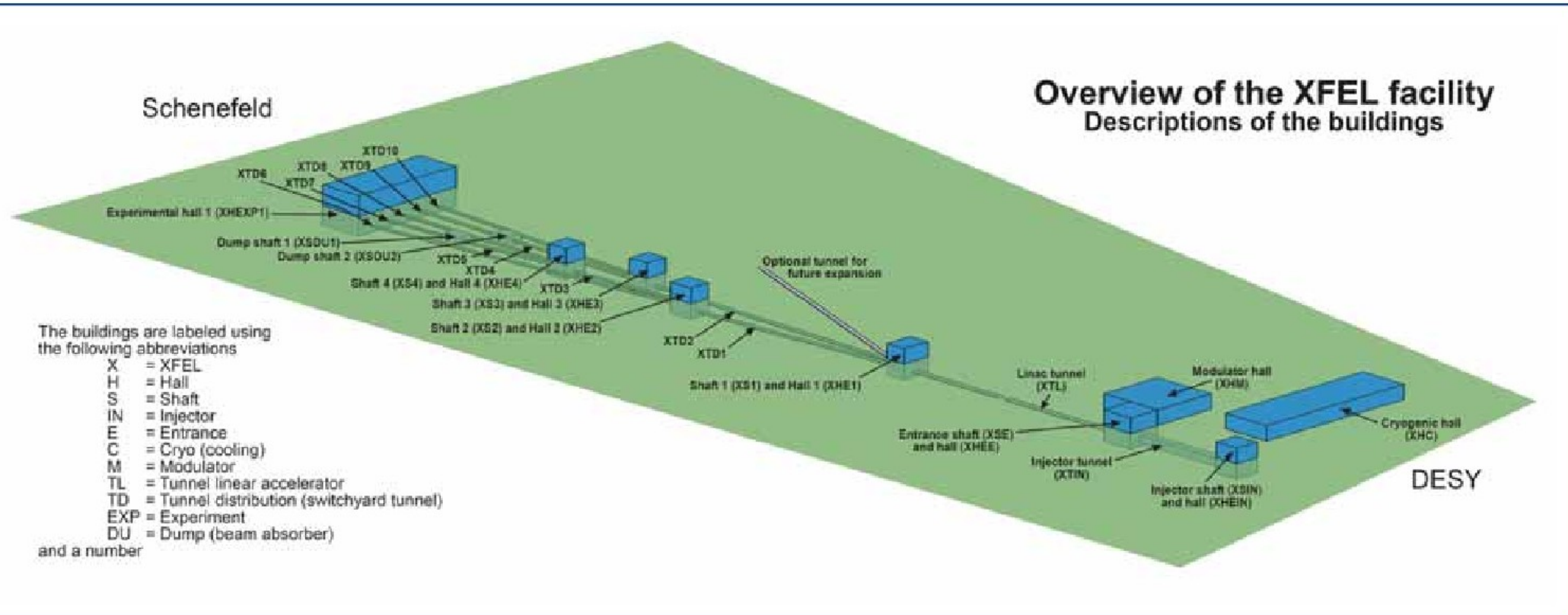


Agenda

- XFEL Project Plan
 - consequences for LLRF
- LLRF project plan
- CDR milestone
 - mandatory reviews (CDR, DR, PPR)
 - documents needed
 - current status
- Conclusion

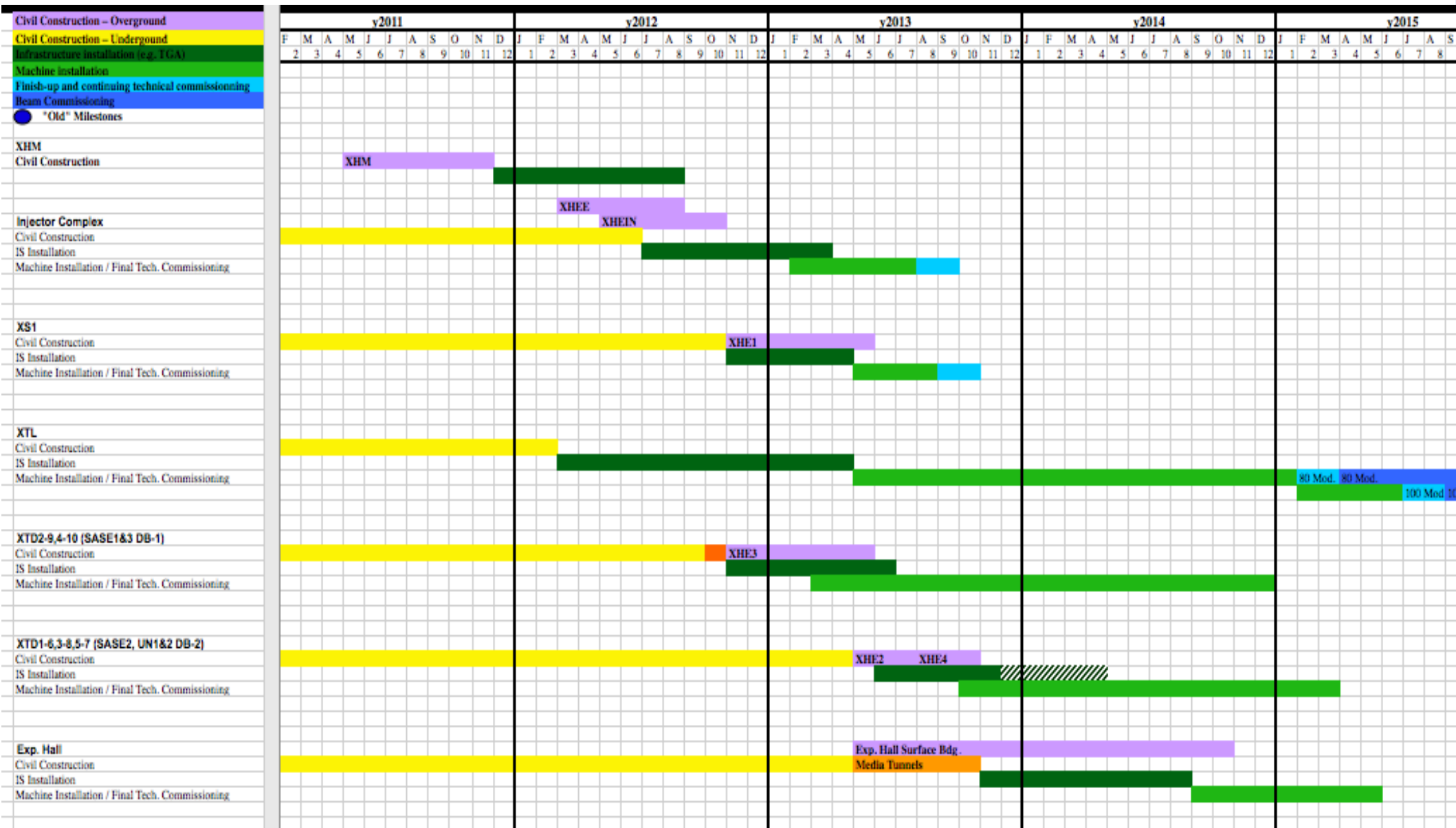


XFEL Layout



General layout of the European XFEL Facility, from the injector building on the DESY campus to the experimental hall located in Schenefeld

XFEL Overall Schedule



LLRF Installation Schedule

- AMTF: March 2012 (AMTF Ready for module tests on 27.09.2012)
- Injector Complex: 31.01-30.07.2013
- XS1: 30.04-28.08.2013
- XTL: 11.06.2013-17.12.2014



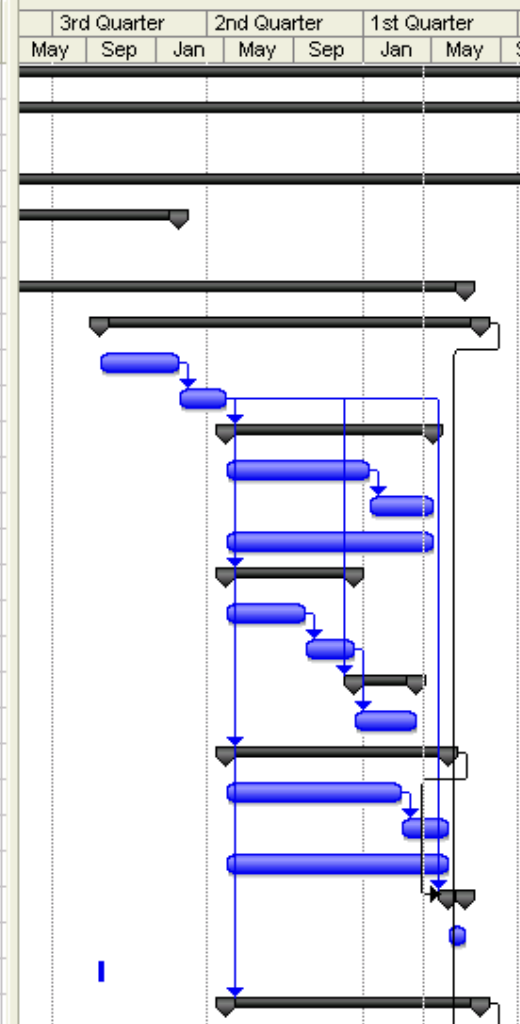
LLRF MSPE

- started by former group leader as an simple list of tasks, without detailed schedule and spendings plan
- modification of the structure must be very careful since many of tasks have already assigned spendings in financial records (they must be kept in the MSPE even if no longer applicable)
- work still in progress (structure is ready, schedule and resources allocation in progress)

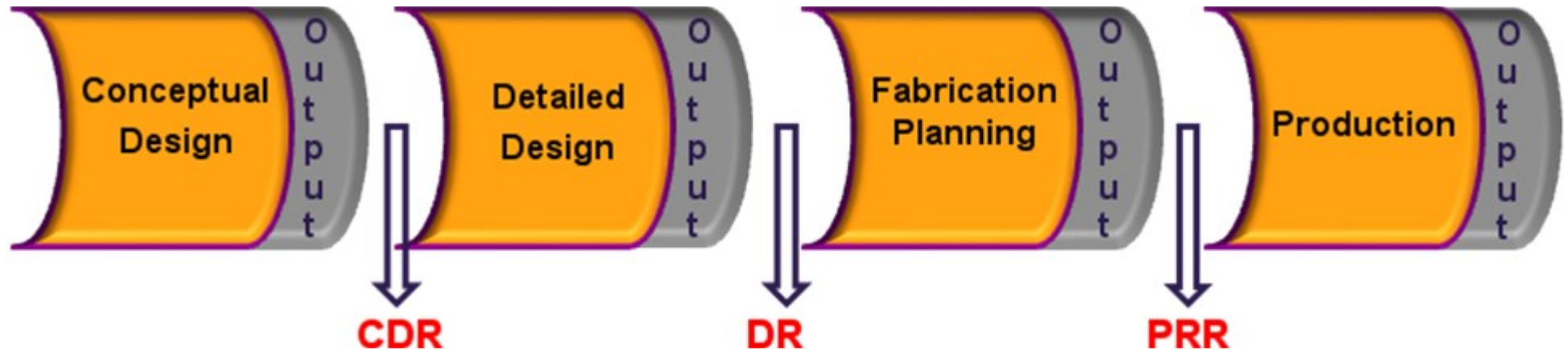


LLRF development schedule (work in progress)

Task Name	Duration	Start	Finish	predecessor:	3rd Quarter		2nd Quarter		1st Quarter		4
					May	Sep	Jan	May	Sep	Jan	May
50 <input type="checkbox"/> 20 Hardware	1765 days	Tue 05.06.07	Mon 10.03.14	2							
51 <input type="checkbox"/> 22 Digital Feedback	1765 days	Tue 05.06.07	Mon 10.03.14	2							
52 Requirements collection	3 mons	Tue 05.06.07	Mon 27.08.07								
53 <input type="checkbox"/> Prototyping phase	1280 days	Tue 05.06.07	Mon 30.04.12								
54 <input checked="" type="checkbox"/> 22.1 Evaluation of development system at FLASH	640 days	Tue 28.08.07	Mon 08.02.10	52							
62 Initial phase of xTCA system development (SimconDSP etc.)	19 mons	Tue 05.06.07	Mon 17.11.08								
63 <input checked="" type="checkbox"/> ATCA based LLRF system	680 days	Tue 18.11.08	Mon 27.06.11	62							
74 <input type="checkbox"/> 22.2.2 uTCA based system development w/o RF backplane	480 days	Tue 22.09.09	Mon 25.07.11	68							
75 uTCA_Architecture	5 mons	Tue 22.09.09	Mon 08.02.10								
76 uTCA crate development	3 mons	Tue 09.02.10	Mon 03.05.10	75							
77 <input type="checkbox"/> uTCA_SIS8300_Board_AMC	260 days	Tue 04.05.10	Mon 02.05.11	76							
78 Rev.1.0	9 mons	Tue 04.05.10	Mon 10.01.11								
79 Rev.1.1	4 mons	Tue 11.01.11	Mon 02.05.11	78							
80 Firmware	13 mons	Tue 04.05.10	Mon 02.05.11								
81 <input type="checkbox"/> uTCA_DWC8300_Board_RTM	160 days	Tue 04.05.10	Mon 13.12.10	76							
82 Rev.1.0	5 mons	Tue 04.05.10	Mon 20.09.10								
83 Rev.1.1	3 mons	Tue 21.09.10	Mon 13.12.10	82							
84 <input type="checkbox"/> uTCA_DWC8300FR_Board_RTM	80 days	Tue 14.12.10	Mon 04.04.11	76							
85 Rev.1.3	4 mons	Tue 14.12.10	Mon 04.04.11	83							
86 <input type="checkbox"/> uTCA_uTLC_Board_AMC	280 days	Tue 04.05.10	Mon 30.05.11	76							
87 Rev.1.0	11 mons	Tue 04.05.10	Mon 07.03.11								
88 Rev.1.1	3 mons	Tue 08.03.11	Mon 30.05.11	87							
89 Firmware	14 mons	Tue 04.05.10	Mon 30.05.11								
90 <input type="checkbox"/> uTCA_uTLC_Board_RTM_VM	20 days	Tue 31.05.11	Mon 27.06.11	86;76							
91 Firmware	1 mon	Tue 31.05.11	Mon 27.06.11								
92 uTCA_AMC_Test_Board	1 day	Tue 22.09.09	Tue 22.09.09								
93 <input type="checkbox"/> Crate 19inch modules	320 days	Tue 04.05.10	Mon 25.07.11	76							



Phase and mandatory reviews for the European XFEL construction project



- prepare all necessary documentation and finalize all required deliverables at the end of a phase
- provide valid and up-to-date information for all interfacing parties/WP to enhance planning certainty
- get the go-ahead from the Project Board to proceed with the work (next phase), e.g. approval place call for tender after PRR

CDR – Purpose & Scope

- CDRs shall generate planning reliability
 - for the responsible WP
 - for the interfacing WPs
 - for the Project Management
- CDRs shall review “entire systems” not components
 - CDRs shall demonstrate that the correct design options have been selected, interfaces to the “system-external world“ have been identified, safety & quality measures are defined, organisational needs and schedule can be met
 - approximately 10 % of engineering drawings or equivalent detailed documents have been created
 - **the detailed technical implementation is not in the scope of a CDR, this is within the DR / PPR scope**
- CDRs shall create essential documentation about the system
 - which shall be kept up-to-date also in the future → Change Management



CDR – Content

- Therefore CDRs shall
 - Identify who the system stakeholders are
 - **List of External Stakeholders**
- Create a mutually understood & agreed “up-to-date” description of the respective system, specifying:
 - The functionalities and performance values that shall be provided by the overall-system
 - The system architecture / layout (sub-systems & key-technologies)
 - The incoming and outgoing requirements & external interfaces
 - **System Concept Description, Requirements & Interface Definition**
- Prove all safety and quality implications are understood and are taken into account
 - **QMP, Safety Analysis**
- Prove the WP has identified and staffed all necessary responsibilities and can deliver the system in time
 - **WP Organisation, Schedule & Milestones**



CDRs – Mandatory Documents

1. List of External Stakeholders

To be reviewed by: All listed Stakeholders and all WP-Representatives

2. Requirements & Interface Definition

To be reviewed by: Each Stakeholder for his requirements & interfaces

3. System Concept Description

To be reviewed by: Designated reviewers/specialists and the concerned Coordinations CLC, MLC, PSC, TC

4. WP Organization

To be reviewed by: PB

5. Schedule & Milestones

To be reviewed by: PB



CDR – Process

CDR Launch

Documents Preparation

Review

Approval

Set up of prerequisites

May require several working meetings

Stepwise document review and release
“Concluding Discussion” if necessary

Approval of the entire document package by Project Leader

- Schedule “CDR Completion Date” in MSPE (WP)
- Identify External Stakeholders & Reviewers (WP & TC)
- Create “empty documents” in EDMS (TC)

- Prepare “mandatory documents” = Word, Excel, PDF files (WP with Stakeholders)
- Add additional files if useful (e.g. drawings, specs. etc.) (WP)
- Send files to TC (WP)
- Upload files to EDMS (TC)

- Submit “mandatory documents” + additions to Reviewers → via EDMS (TC)
- Review and comment in EDMS (Reviewers)
- Analyse comments & sort out remaining disagreements (WP)

- Submit CDR-package (mandatory documents, additions, comments) to Approver → via EDMS (TC)
- Approve / call for rework (Approver)
- Communicate result to WP & Stakeholders (TC)

LLRF CDR milestone

- “almost ready” ending 2009
 - for LLRF ATCA based
 - not finalized
- over 2010 work on CDR postponed due to uTCA based system development
- new deadline: 13.06.2011 – must be completed on time



LLRF CDRs – Document Status

1. List of External Stakeholders

prepared (32 stakeholders), format adjusted , not reviewed by listed Stakeholders and all WP-Representatives

2. Requirements & Interface Definition

prepared requirements (115 toplevel, 19 XFEL and 47 user requirements) and interfaces definition (9 groups), not reviewed by stakeholders

3. System Concept Description

prepared for ATCA based LLRF system, must be updated

4.WP Organization

not prepared yet

5.Schedule & Milestones

under preparation as MSPE plan



Conclusion

- MSPE is constantly updated, it requires some cleanup of items from old structure (must be agreed with project management)
- missing documents for CDR must be urgently created
- updates entered where needed
- complete set of documents must be agreed with partners
- date 13.06.2011 seems reasonable for CRD

