

Thermosiphon project management and quality assurance



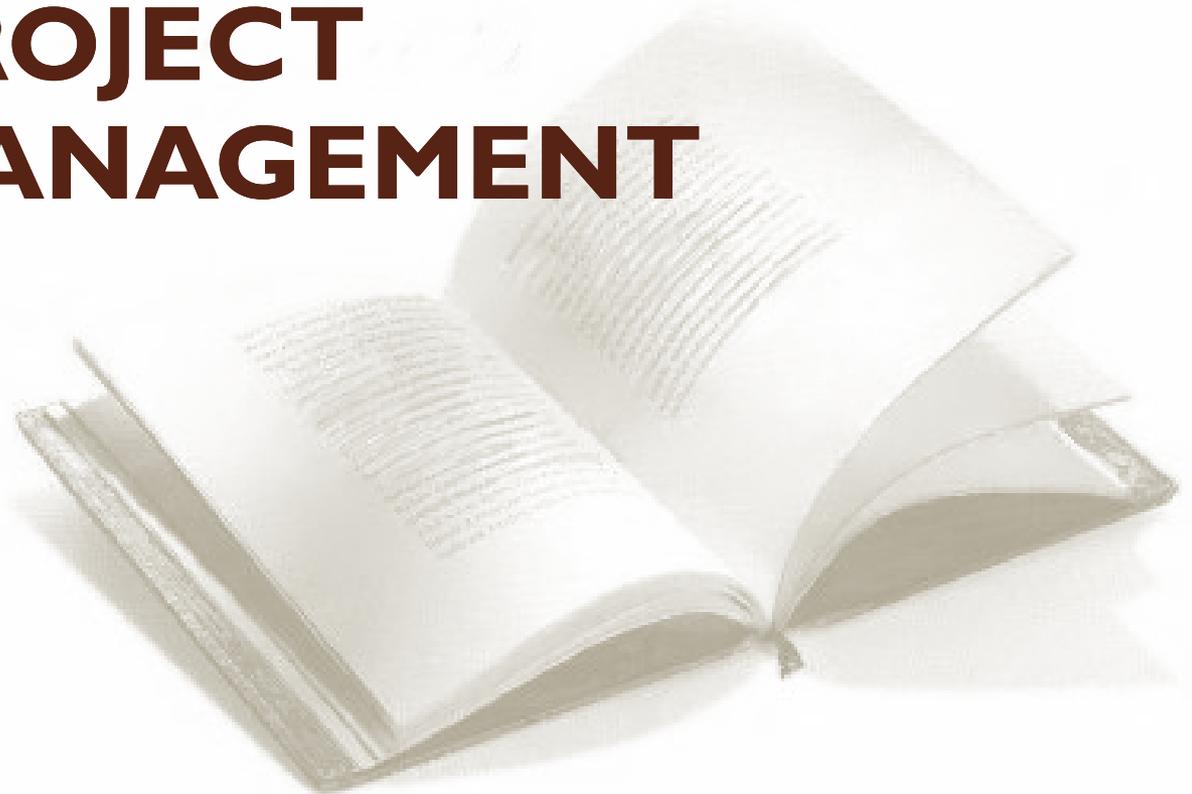
Presentation done by Elena Perez Rodriguez

For further information contact elena.perez.rodriguez@cern.ch



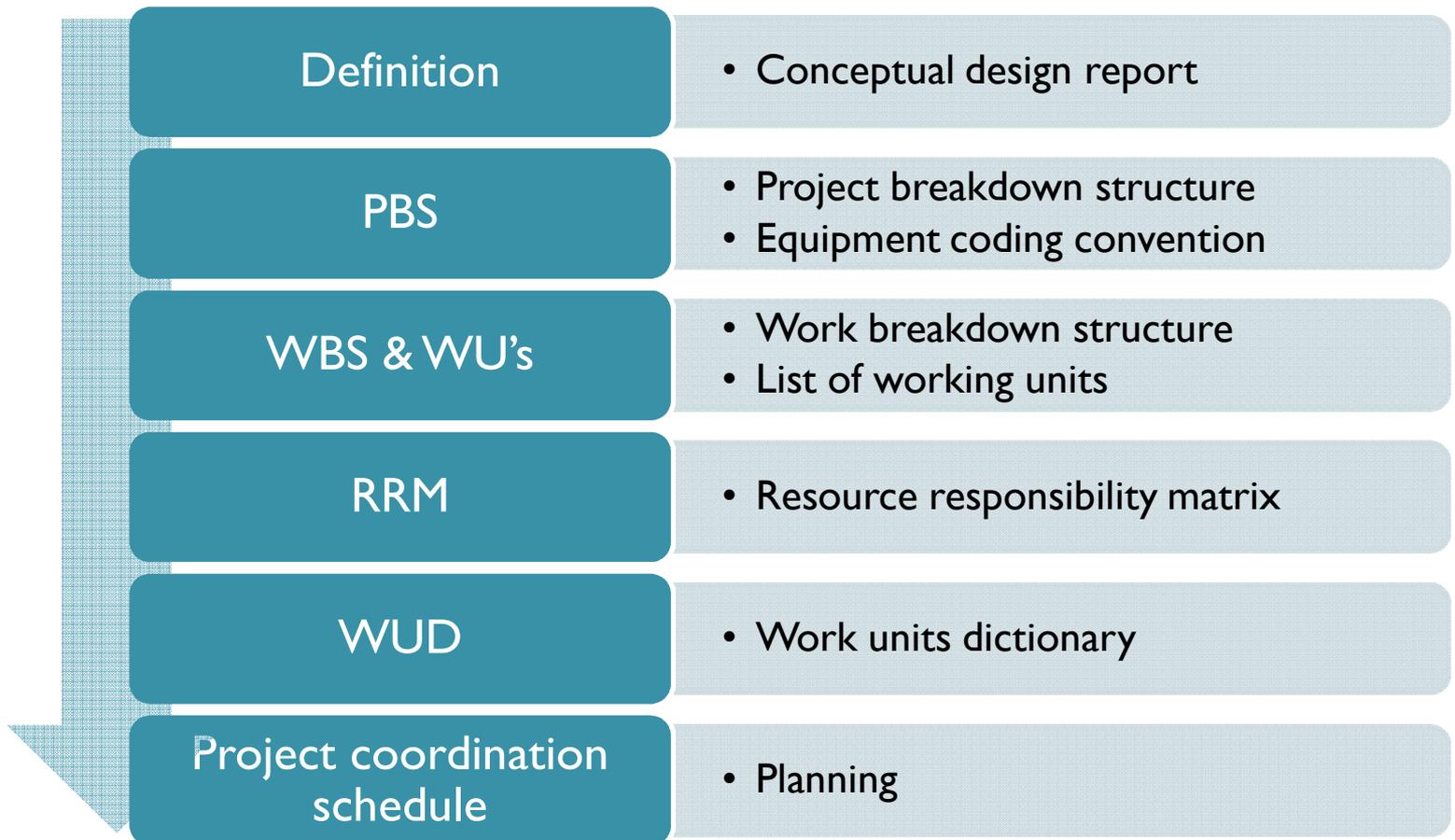


PROJECT MANAGEMENT



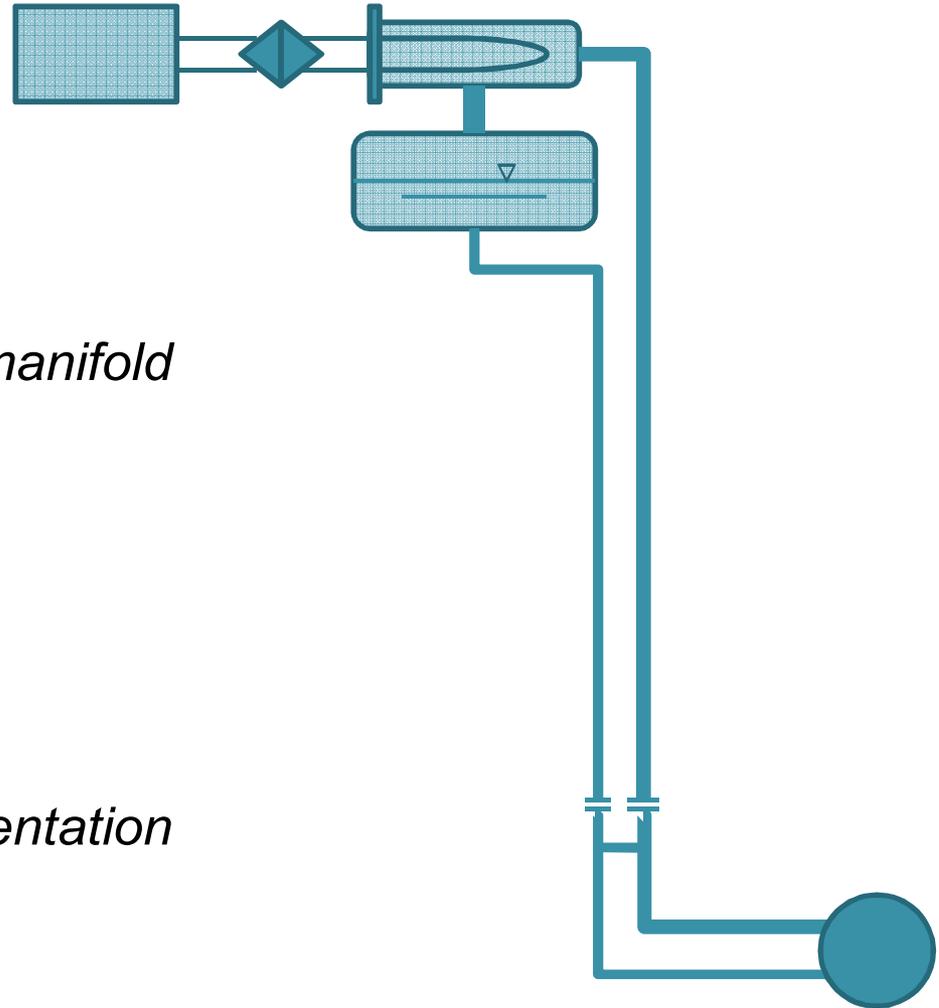
EVM Project management

- This project will follow the Earned Value Management (EVM) technique



Project Breakdown Structure

Piping
 Main pipes
 Small piping and manifold
Tank
 Vessel
 Condenser
Vacuum system
Chiller
Evaporator
Control and instrumentation
Electricity



Working Breakdown Structure

WU list = PBS + project management + installation

WBS Matrix : WU us tasks



94 tasks in this project

- 1 Project management and integration
 - 1.1 Project management
 - 1.2 Integration studies
- 2 Technical studies
 - 2.1 Thermodynamical design
 - 2.2 Mini-thermosiphon test
- 3 Piping
 - 3.1 Main pipes
 - 3.2 Small piping and manifold
- 4 Tank
 - 4.1 Vessel
 - 4.2 Condenser
- 5 Vacuum system
 - 5.1 Vacuum system for tank
 - 5.2 Vacuum system for distribution manifold
- 6 Chiller
 - 6.1 Chiller
- 7 Evaporator
 - 7.1 Dummy load
 - 7.2 Cooling loops
- 8 Control and instrumentation
 - 8.1 Instrumentation for data acquisition
 - 8.2 Hardware
 - 8.3 Software
- 9 Electricity
 - 9.1 General
 - 9.2 Signal cables
 - 9.3 Power cables
- 10 Installation and commissioning
 - 10.1 Infrastructures
 - 10.2 Equipment
 - 10.3 Commissioning
- 11 Operation
 - 11.1 Data acquisition
 - 11.2 Reporting



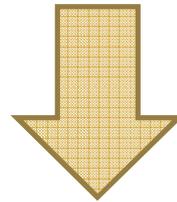
Resource Responsibility Matrix

- RRM :WU's us Resources
- Defines the responsible of the work unit and also
 - X -> Execute the work
 - R -> Review the work done
 - I -> Must be informed
 - H -> Can provide help or tuitions
 - N -> Needed to have the work completed



Working Units Dictionary

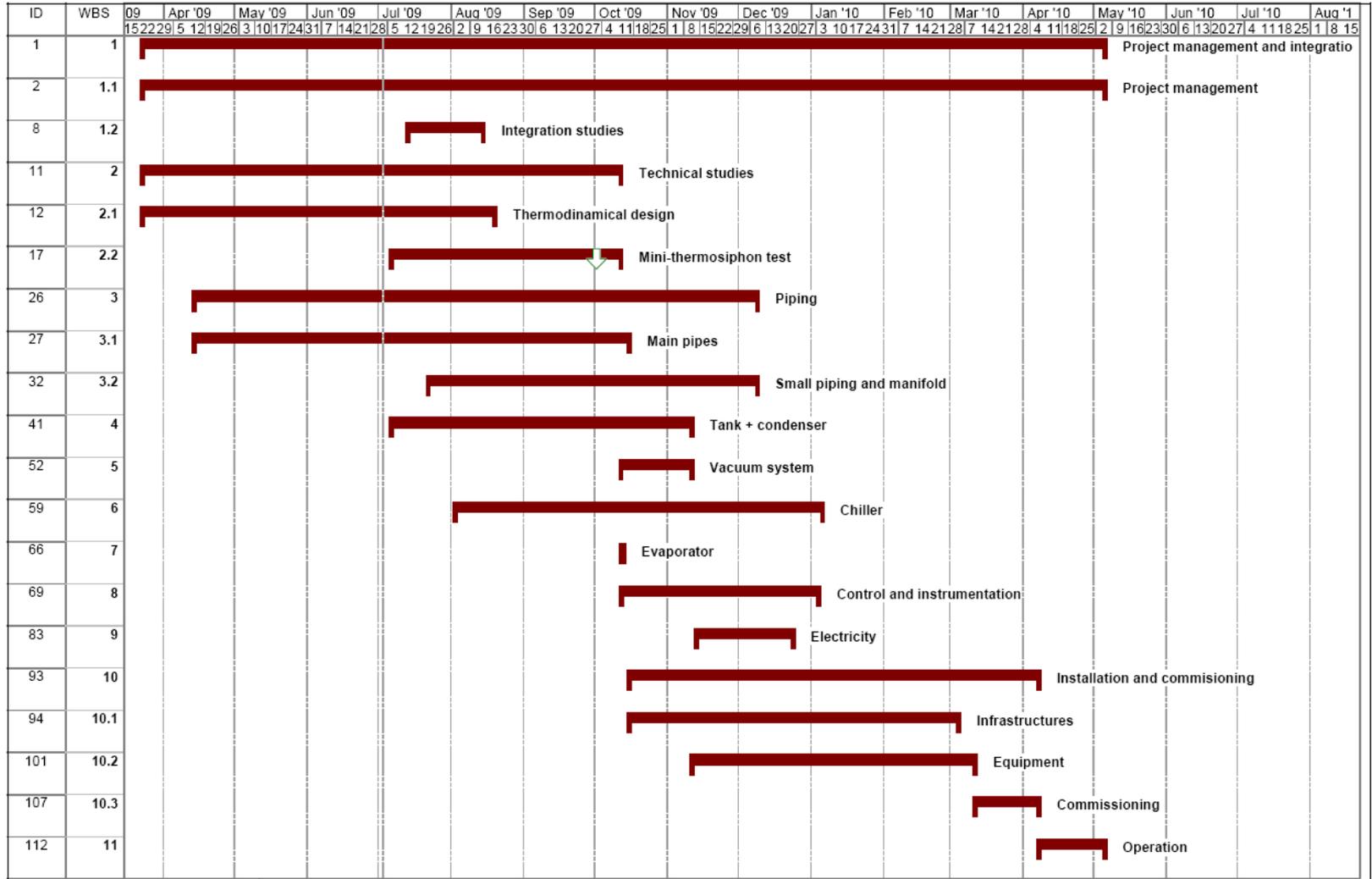
- All the information is then collected in the WUD
 - Includes not only the activities and the responsible person but also the material and persons needed for each task and subtask.



Planning



Planning



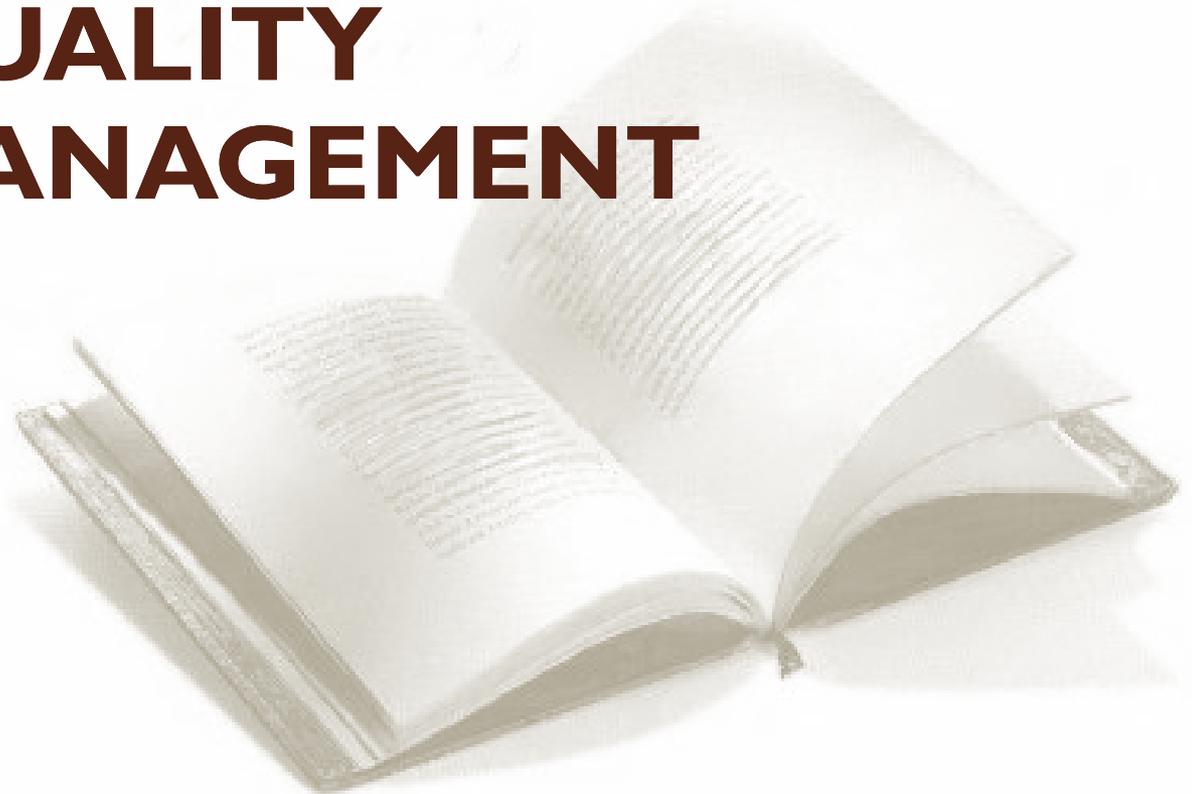
Important milestones

- **August**
 - Safety commission approval of the project
 - Finished purchase of tank and condenser
- **October**
 - Mini thermosiphon test finished
 - Awarded contract for the chiller
 - Installation of the main piping finished
- **December**
 - Distribution manifold built
- **March**
 - Thermosiphon built
- **April**
 - Thermosiphon ready to run





QUALITY MANAGEMENT



Workspace

 EN\CV\Detector cooling thermosiphon project workspace

Announcements

Thermosiphon cooling workshop  **NEW** 30/06/2009 05:21 PM
by Elena Perez Rodriguez
The 6th of July will be the 1st thermosiphon cooling workshop. The link to the indico page is <http://indico.cern.ch/conferenceDisplay.py?confId=61843>

Add new announcement

Calendar

02/07/2009 09:00 AM Weekly meeting
06/07/2009 09:00 AM Thermosiphon workshop  **NEW**
09/07/2009 09:00 AM Weekly meeting
16/07/2009 09:00 AM Weekly meeting
23/07/2009 09:00 AM Weekly meeting
30/07/2009 09:00 AM Weekly meeting
06/08/2009 09:00 AM Weekly meeting
13/08/2009 09:00 AM Weekly meeting
20/08/2009 09:00 AM Weekly meeting
27/08/2009 09:00 AM Weekly meeting
(More Events...)

Add new event



Links

- Detector cooling webpage
- EDMS folder for thermosiphon
- <http://indico.cern.ch/conferenceDisplay.py?confId=61843>
- Add new link

- Sharing working documents
 - Use the workspace
 - Includes a calendar, announcements and useful links !

<https://espace.cern.ch/thermosiphon>

EN\CV\Detector cooling thermosiphon project workspace > Shared Documents

Shared Documents

Share a document with the team by adding it to this document library.

New

View:

Type	Name	Modified	Modified By
	Instrumentation - PI Diagram	11/06/2009 04:09 PM	Alexandre Moraux
	Piping integration	11/06/2009 03:42 PM	Elena Perez Rodriguez
	Planing and management	11/06/2009 03:20 PM	Elena Perez Rodriguez
	Quality management	11/06/2009 03:22 PM	Elena Perez Rodriguez



In case of access problems contact elena.perez.rodriguez@cern.ch

Long term documentation

- Publishing definitive documents
 - Use EDMS folder for the thermosiphon project

CERN-0000078075 v.0

- Main quality documents
 - Naming convention (released)
 - Construction and testing procedure (in progress)
 - Working reports
 - Users manual and technical documentation



Thank you for your attention



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