

EINSTEIN  
TELESCOPE

---

# Designing a Scheduling Methodology for Einstein Telescope

Real-world Feedback from 8 Young Scientists Using a Cloud Collaborative Tool

Daniela Pascucci  
on behalf of the 8 young scientists

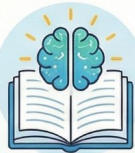
# The training program

## Mastering Scientific Project Management: A Two-Phase Training Program

### Phase 1: Individual Foundation Training

### Phase 2: Collective Application Workshop

#### Build Your Core Skills



A 2-hour, one-on-one online session covering essential concepts and modern management tools.

#### Get Hands-On with Expert Guidance



Learn to manage tasks, budgets, team members, and generate dashboards through practical exercises.

#### Outcome: Confidently Manage Your Own Project



Gain the skills needed to independently manage a project or sub-project.

#### Apply Skills in a Team Scenario



In a one-day workshop, manage a sub-project as part of a larger scientific case study.

#### Analyze Project Interdependencies

Collaboratively define deliverables and see how changes in one area impact the whole project.

#### Outcome: Master Real-World Coordination



Gain practical experience in project coordination, change management, and impact analysis.

Organised by:

- Angélique Lartaux
- Ivan Maksimovic
- Christian Olivetto

NotebookLM



EINSTEIN  
TELESCOPE

# The chosen tool: Easyredmine

	JIRA	MS Project Server	ORACLE Primavera	Easyredmine	ClickUp	Project Libre	Monday
Compliance with all requirements If partial, comments	YES	YES	YES	YES	YES	NO	NO
If No, comments							No critical path No sub-schedule Gantt limited
Price for 200 sub-system manager		11 K€/year University tender 67 K€/year Commercial price	?	36 K€/year	84 K€/year	24 K€/year	
Price for 1300 viewers	Same price for all ET users	0 K€/year University tender 146 K€/year Commercial price	?	78 K€/year	0 K€/year	?? K€/year	
Total price for 1500 users	141 000 \$	213 000 €		114 000 €	84 000 €		
Tool year creation	2002	1984	?	2001	2017	2012	2012
Market share in %	22,90 %	9 %	?		N/A		3,00 %
Annual Revenue	3.9 B \$		?	> 50M€	€200 Millions/Year		>250M€
Number of project users	65000+ companies		?	300 000	10 millions		
Support, Training		YES	?	YES	YES		
Customize Dashboards and indicators	YES		YES	YES	YES	YES	NO
Test in progress		YES	?	YES	YES	NO	YES
Extension plugin	YES		?	YES	YES	NO	NO
Extra plugin	Risk		?	Risk	Documents/free		
Extra plugin	Documents			Knowledge	whiteboard/free		
Extra plugin				Documents	All/paid		
visualization(Gantt, Kanban...)	YES	YES	YES	YES	YES	YES	YES
critical path	YES with AddOn	YES	YES	YES	YES	YES	NO
tasks manager (tasks association, indicators...)	YES	YES	YES	YES	YES	YES	YES
reporting (dashboard, indicators...)	YES	YES	YES	YES	YES	YES	YES
cloud storage	YES	YES	YES	YES	YES	YES	YES
full right mode (~200 users)	YES	YES	?	YES	YES	YES	YES
read-only mode(~1300 users)	YES	YES	?	YES	YES	YES	NO
subproject schedule validation process	YES	YES	YES	YES	YES with AddOn	YES	NO
schedule autoconsolidation update	YES	YES	?	YES	YES	YES	NO
software compatibility	YES	YES	YES	YES	YES	YES	YES
costs (traceability & distribution)	YES with AddOn	YES	YES	YES	YES	YES	NO
in-kind costs	YES with AddOn	YES	YES	YES	YES	YES	YES
EU laws agreement	YES	YES	YES	YES	YES	NO	YES
data (back-up & sustainability)	YES	YES	YES	YES	YES	NO	YES



13 software selected  
for requirement study

2 solutions selected  
for evaluation:

- Easyredmine
- Microsoft Project



# Phase 1: Individual Foundation Training



## Easyredmine Getting Started for Project Manager Role Individual Training Session

This training course, designed as a hands-on workshop, will enable you to become familiar with the EasyRedmine tool in your role as a project manager.

By the end of this course, you will be able to:

- Navigate the tool efficiently
- Use the platform to share news and other information with your team members
- Add or remove members from your project team
- Create and delete tasks within your schedule
- Update and maintain your project schedule
- Record actual expenses for the overall project or for specific tasks
- Create internal subprojects within your main project and define internal milestones
- Report your team members' time allocation on a monthly basis



### AGENDA OF THIS INDIVIDUAL TRAINING SESSION

- |  |       |
|--|-------|
| 1) Brief presentation of Project Management introduction                                   | 10 mn |
| 2) A quick reminder of how this individual training fits into the overall training program | 5 mn  |
| 3) A quick overview of how individual training works                                       | 5 mn  |
| 4) Each subject's progress while simultaneously carrying out the exercises                 | 60 mn |
| 5) Your feedback and suggestions for improvement   | 10 mn |



# Phase 2: Collective Application Workshop

## ET-PP Scheduling training workshop

26–27 Mar 2026  
IJCLab  
Europe/Paris timezone

Enter your search term

### Overview

### Timetable

### Participant List

### Practical information

### Accommodation

### How to reach IJCLab

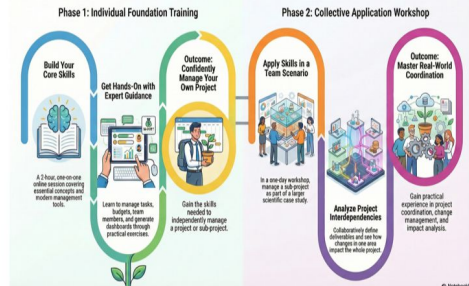
This workshop is organized in the framework of the ET-PP project (WPS), the Einstein Telescope Organization and the Einstein Telescope Collaboration. It is the phase 2 of a training program describe in the infographic at the bottom of this page.

In this workshop, we will apply scheduling tools to the Quantum Noise Reduction system that will be divided into 10 sub-projects, each of them being managed by one of the participant. The training will start by the definition of tasks and deliverables, their interactions between sub-projects. Then a schedule will be made by each sub-project manager and consolidated together with the goal to see how this consolidation is done when delay happens in a sub-project. Finally, we will test the budget and human resources management before taking feedbacks from the participants.

The goal of this workshop is two-sides:

- train the future generation of project manager for Einstein Telescope
- test a tool with 10 sub-project managers working in parallel to see the consolidation of the project

### Mastering Scientific Project Management: A Two-Phase Training Program



Starts 26 Mar 2026, 12:00  
Ends 27 Mar 2026, 21:15  
Europe/Paris

IJCLab  
2010/Bleue - Salle Bleue  
Go to map

Detailed instructions to walk from the RER station –

## THURSDAY 26 MARCH

13:00	→ 13:30	Welcoming	⌚ 30m
13:30	→ 14:30	Introduction to PBS-WBS-OBS Speakers: Angélique Lartaux (IJCLab), Ivan Maksimovic	⌚ 1h
14:30	→ 15:45	Open discussion between participants to define deliverables between sub-projects	⌚ 1h 15m
15:45	→ 16:00	Coffee break	⌚ 15m
16:00	→ 18:00	Modification of each sub-project in the tool by each sub-project manager to add tasks and deliverables	⌚ 2h

## FRIDAY 27 MARCH

09:00	→ 10:00	Analysis of impact of delays in sub-projects	⌚ 1h
10:00	→ 11:15	Budget management	⌚ 1h 15m
11:15	→ 11:30	Coffee break	⌚ 15m
11:30	→ 12:30	Human resources management	⌚ 1h
12:30	→ 13:00	Feedbacks	⌚ 30m



EINSTEIN  
TELESCOPE

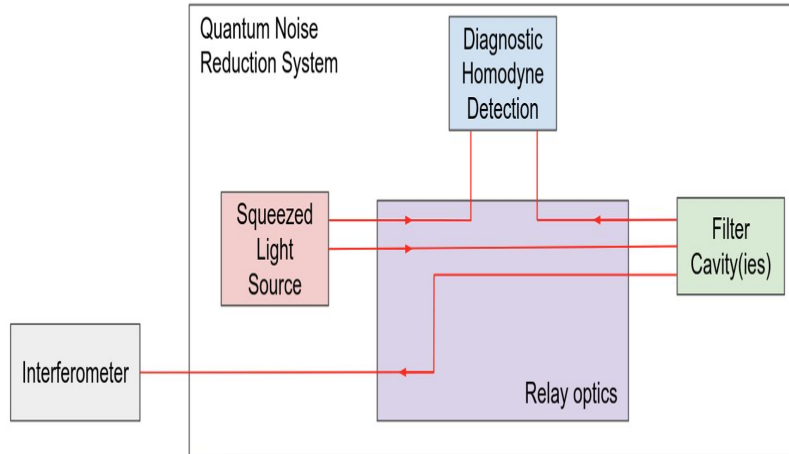
# Test of the tool

---

Test with 8 sub-project managers working in parallel and see:

- How the links are down between the sub-projects
- How the tool managed changes from different sub-projects and consolidate them
- How the top project manager should interact with the sub-project
- How alerts are managed in case of delay of one sub-project
- How the financial and human resources reporting is done

# The project



4 main blocks to produce, characterise and transfer  
Frequency Dependent Squeezing:

- Squeezed Light Source
- Filter Cavities
- Diagnostic Homodyne Detection
- Relay Optics

But also interface with other subsystems :

- Suspensions
- DAQ Electronics
- Vacuum and Mechanics
- Wavefront Sensing and Control

And finally commissioning of the full system up to the impact  
onto the interferometer sensitivity.

# The group

## Sub-project managers:

- Tomislav Andric (GSSI)
- Eleonora Capocasa (APC)
- Tatevik Chalyan (B-Phot, VUB)
- Barbara Garaventa (INFN Genova)
- Julien Gargiulo (EGO)
- Mikhail Korobko (UHAM)
- Daniela Pascucci (UGent)
- Catarina Serafim (CERN)

## Commissioning managers:

- Angélique Lartaux (IJCLab)
- Ivan Maksimovic (ESPCI)
- Christian Olivetto (CNRS/IJCLab)



# Disclaimer

---

Please keep in mind that the purpose of this workshop was to test the tool and not to create a realistic plan for the development of the QNR system.



The project tasks have been oversimplified and the timeline is not realistic.

# Easyredmine: define tasks and deliverables

### W4.1.1 Design of the telescope

#3894

PROGRESS  SPENT TIME RATIO

STATUS	PRIORITY
<b>New</b>	<b>Normal</b>
ASSIGNEE	AUTHOR
	<b>Daniela Pascucci</b>
START DATE	DUE DATE
<b>05 Apr 2026</b>	<b>10 Jan 2027</b>
CREATED	DURATION
<b>26 Mar 2026</b>	<b>201 days</b>
SPENT TIME	TASK TYPE
<b>160.00 h</b>	<b>Task</b>
MILESTONE	PROJECT
	<b>RO (Relay optics)</b>

PRODUCT BACKLOG BOARD

WBS Code  
W4.1.1

Log time

- Details
- Description
- Comments
- Attachments
- Spent time
- Product backlog items (PBIs)
- Coworkers +
- Tags +
- Sub tasks +
- Parent task +
- Related tasks +

ACTIONS

- Copy
- Delete task
- Move

Hide custom fields

### P4.1 SLS to FC mode matching telescope

#3939

PROGRESS  SPENT TIME RATIO

STATUS	ASSIGNEE
<b>New</b>	
AUTHOR	START DATE
<b>Daniela Pascucci</b>	<b>14 Aug 2033</b>
DUE DATE	CREATED
<b>24 Aug 2033</b>	<b>26 Mar 2026</b>
DURATION	ESTIMATED TIME
<b>9 days</b>	<b>0.00 h</b>
SPENT TIME	TASK TYPE
<b>0.00 h</b>	<b>Deliverable</b>
MILESTONE	PROJECT
	<b>RO (Relay optics)</b>

PRODUCT BACKLOG BOARD

PBS Code  
P4.1

Log time

- Details
- Description
- Comments
- Attachments
- Spent time
- Product backlog items (PBIs)
- Coworkers +
- Sub tasks +
- Parent task +
- Related tasks +

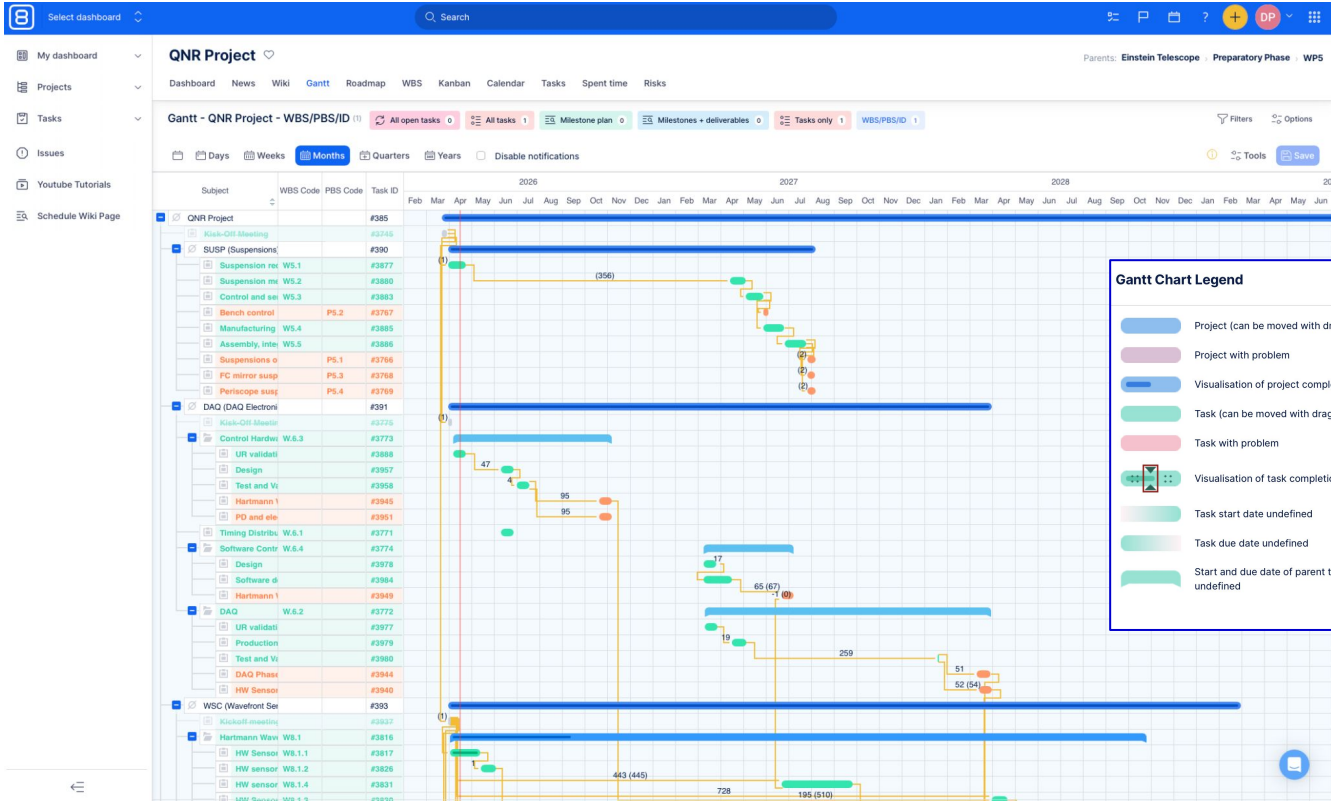
ACTIONS

- Copy
- Delete task
- Move

Hide custom fields



# Easyredmine: Gantt Chart



### Gantt Chart Legend

- Project (can be moved with drag & drop)
- Project with problem
- Visualisation of project completion (% done)
- Task (can be moved with drag & drop)
- Task with problem
- Visualisation of task completion (% done)
- Task start date undefined
- Task due date undefined
- Start and due date of parent task are undefined
- Handles for moving start date / due date
- Handle for drawing relations
- Number indicating delay
- Unlocked (flexible) relation
- Locked (fixed) relation
- Milestone
- Shared milestone
- Visualisation of current day
- Task custom color can be set in context menu

# Easyredmine: inter-project connections

QNR Project ♡

Dashboard News Wiki Gantt Roadmap **WBS** Kanban Calendar Tasks Spent time Risks

Display settings

Legend: Task type

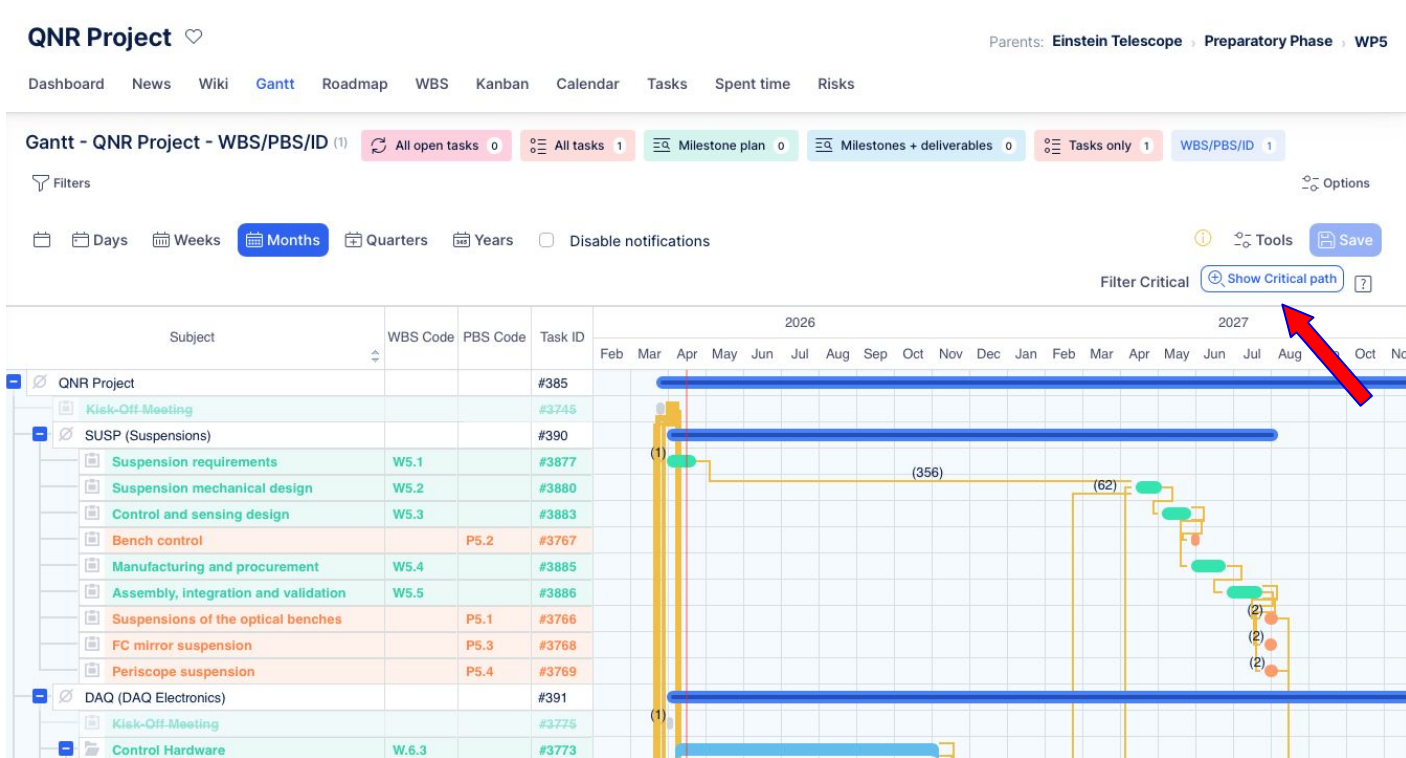
- Project
- Task
- Deliverable

Hide unused ⓘ

Shortcuts



# Easyredmine: critical path



A critical path is the sequence of tasks that **cannot be delayed** without delaying the whole project.

A task is considered critical if its due date can't be pushed out, because that would directly affect the project completion date.

# Easyredmine: critical path

QNR Project

Parents: Einstein Telescope > Preparatory Phase > WP5

Dashboard News Wiki Gantt Roadmap WBS Kanban Calendar Tasks Spent time Risks

Gantt - QNR Project - WBS/PBS/ID (1)

All open tasks 0

All tasks 1

Milestone plan 0

Milestones + deliverables 0

Tasks only 1

WBS/PBS/ID 1

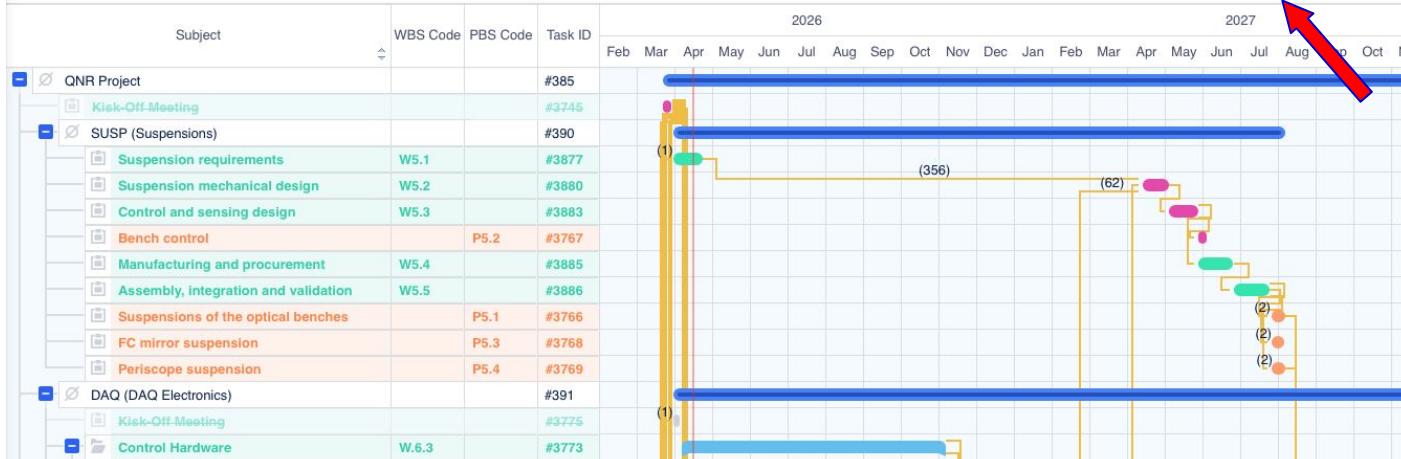
Filters

Options

Days Weeks Months Quarters Years  Disable notifications

Tools Save

Filter Critical [Show Critical path](#)



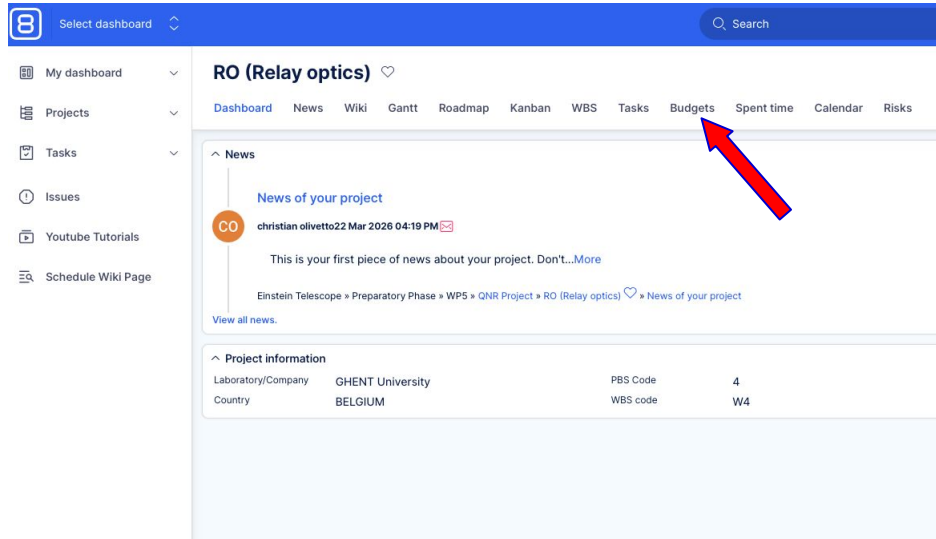
A critical path is the sequence of tasks that **cannot be delayed** without delaying the whole project.

A task is considered critical if its due date can't be pushed out, because that would directly affect the project completion date.



EINSTEIN TELESCOPE

# Easyredmine: budget



The screenshot displays the Easyredmine interface for a project named "RO (Relay optics)". The top navigation bar includes a search field and a menu with the following items: Dashboard, News, Wiki, Gantt, Roadmap, Kanban, WBS, Tasks, Budgets, Spent time, Calendar, and Risks. A red arrow points to the "Budgets" tab. The left sidebar contains a "Select dashboard" dropdown and a list of project management tools: My dashboard, Projects, Tasks, Issues, Youtube Tutorials, and Schedule Wiki Page. The main content area shows a "News" section with a message from christian.olivetto on 22 Mar 2026, and a "Project information" table.

Project information			
Laboratory/Company	GHENT University	PBS Code	4
Country	BELGIUM	WBS code	W4



# Easyredmine: budget

The screenshot shows the Easyredmine interface for the 'RO (Relay optics)' project. The main content area displays the 'Budgets' tab, showing a table with 'Plan' and 'Reality' columns. A red arrow points to the 'New expense' button in the right-hand sidebar.

**Project budget: RO (Relay optics)** Euro

	Plan	Reality
Incomes:	200,000 €	0 €
Total costs:	4,700 €	517,250 €
Personnel costs:	0 €	Spent time 690.0 hrs / 17,250 €
Expenses:	4,700 €	500,000 €
Prof:	195,300 €	-517,250 €
Prof margin		0.0 %
Net margin		103.45 %

**Right sidebar buttons:**

- New Income
- New expense
- Budget settings
- Budgets on tasks



# Easyredmine: budget

The screenshot displays the Easyredmine web interface. The left sidebar contains navigation options: My dashboard, Projects, Tasks, Issues, Youtube Tutorials, and Schedule Wiki Page. The main content area is titled 'RO (Relay optics)' and includes a 'News' section with a recent update from 'christian olivetto' on 2026-04-19. Below the news is a 'Project information' table:

Project information	
Laboratory/Company	GHENT University
Country	BELGIUM

On the right, the 'Budgets' tab is active, showing a 'New real expense' form. The form includes a 'Name' field, a 'Create to' dropdown set to 'Project', a 'Date' field set to '2026-04-15', and input fields for 'Amount without VAT' (0.0) and 'VAT' (20%). There are also fields for 'Total amount' (0.0), 'Currency' (Euro), 'Tags', and 'Repeat?' (Never). An 'Attachments' section at the bottom provides instructions to click or drag files for upload, with a 5 MB limit. A 'Save' button and a 'Save & New' link are located at the bottom right of the form.

# Easyredmine: human resources

The screenshot displays the Easyredmine project management interface. At the top, there is a navigation bar with a search box and a 'Select dashboard' dropdown. On the left, a sidebar lists various dashboard options: My dashboard, Projects, Tasks, Issues, Youtube Tutorials, and Schedule Wiki Page. The main content area is titled 'RO (Relay optics)' and features a horizontal menu with options: Dashboard, News, Wiki, Gantt, Roadmap, Kanban, WBS, Tasks, Budgets, Spent time, Calendar, and Risks. A red arrow points to the 'Spent time' menu item. Below the menu, the 'News' section shows a project update from 'christian olivetto' dated '22 Mar 2026 04:19 PM'. The update text reads: 'This is your first piece of news about your project. Don't...More'. Below the news, there is a breadcrumb trail: 'Einstein Telescope » Preparatory Phase » WPS » QNR Project » RO (Relay optics) » News of your project'. A 'View all news.' link is also present. At the bottom, the 'Project information' section is displayed as a table:

Project information			
Laboratory/Company	GHENT University	PBS Code	4
Country	BELGIUM	WBS code	W4

# Easyredmine: human resources

The screenshot displays the 'Spent time' report for the 'RO (Relay optics)' project. The main content area features a table with the following data:

	User	Date	Project	Task	Activity	Comment	Spent time
Total:							690.00 h
+		June 2026 1	26.09%				180.00 h
+		May 2026 1	28.99%				200.00 h
+		April 2026 2	44.93%				310.00 h

The right-hand sidebar contains a 'Log time' button, which is highlighted with a red arrow. Below this button, there are summary statistics and a list of public filters on spent time.

**Summary:**  
690h Overall spent time  
0h Last month  
0h Last week

**Public filters on spent time:**  
My monthly report  
My yearly report  
Team members report  
Team members report (with estimated time)  
Whole company yearly report

# Easyredmine: human resources

The image shows a screenshot of the Easyredmine web application. A modal window titled "Log time" is open, allowing a user to log their time. The modal is positioned over a dashboard for the "RO (Relay optics)" project. The dashboard includes a sidebar with navigation options like "My dashboard", "Projects", "Tasks", "Issues", "Youtube Tutorials", and "Schedule Wiki Page". The main content area shows project news and information.

The "Log time" modal form contains the following fields and options:

- Time spent on this day:** 0h / 8h
- User\*:** Daniela Pascucci
- Project\*:** RO (Relay optics)
- Task:** (empty)
- Date\*:** 15 Apr 2026
- Duration\*:** 2h15m
- From:** 10:45 AM
- To:** 02:30 PM
- Activity\*:** Work (selected from a dropdown menu with options: Work, Support/Consultation, Meeting)
- Comment:** (empty text area)

At the bottom of the modal, there are three buttons: "Log time" (highlighted), "Log Time & Add Another", and "Cancel".

# Easyredmine: overview of the project

**QNR Project** ▾

Parents: Einstein Telescope Preparatory Phase WPS

Dashboard News Wiki Gantt Roadmap WBS Kanban Calendar Tasks Spent time Risks

### News

News of QNR Project

christian.oliveto22 Mar 2026 04:05 PM

The QNR (Quantum Noise Reduction) project forms the basis of this joint training session...More

Einstein Telescope > Preparatory Phase > WPS > QNR Project > News of QNR Project

View all news.

### Project information

Laboratory/Company	IJCLAB	PBS Code	
Country	FRANCE	WBS code	

### Real Expenses % by Projects (34)

Sum of Amount without VAT: 23.8M €

76.5%	19.5%	2.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%
-------	-------	------	------	------	------	------	------	------	------

■ VAC (Vacuum Mechanics) ■ WSC (Wavefront Sensing & Control) ■ SUSP (Suspensions) ■ DAQ (DAQ Electronics) ■ RIO (Relay optics)  
■ DHD (Diagnostic Homodyne Detector) ■ SLS (Squeezed Light Source) ■ FC (Filter Cavity)

### Total Real Expenses/Planned Expenses

94.7%

Total made: 24.59M | Plan: 25.96M

### Project team

- Angélique Lartaux - Project Management Role
- Barbara Garaventa - Team Member
- catarina.serafim - Team Member
- Daniela Pasucci - Team Member
- eleonora.capocasa - Team Member
- julien.gargiulo - Team Member
- mikhail.kozobko - Team Member

Asset management

Project card

4,401h Overall spent time

33m

06 Mar 2036 Due date

12 Nov 2024 Start date

Progress

Indicator

Regular Priority

Tags

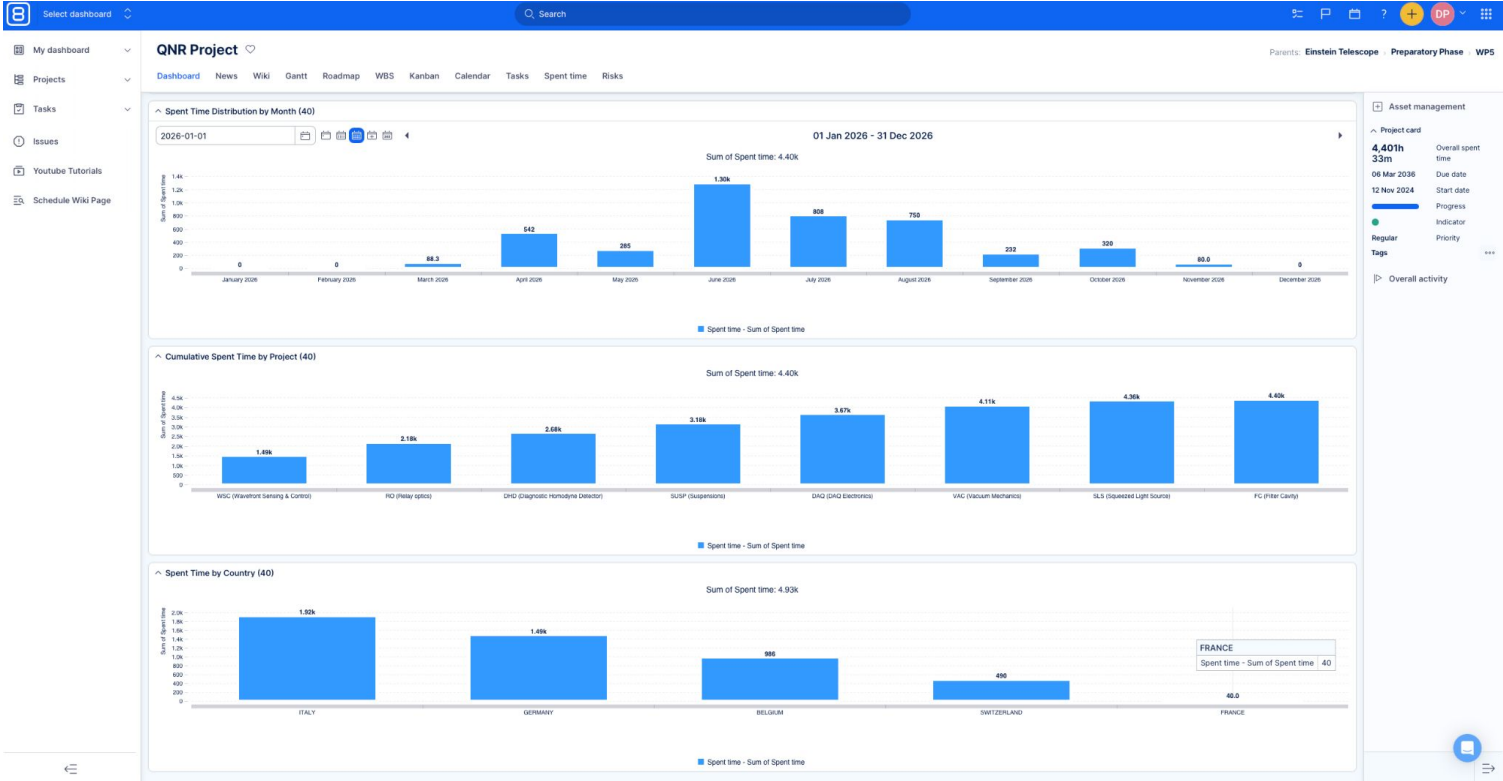
Overall activity



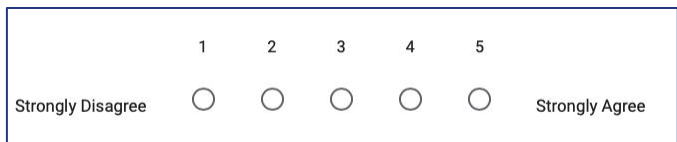
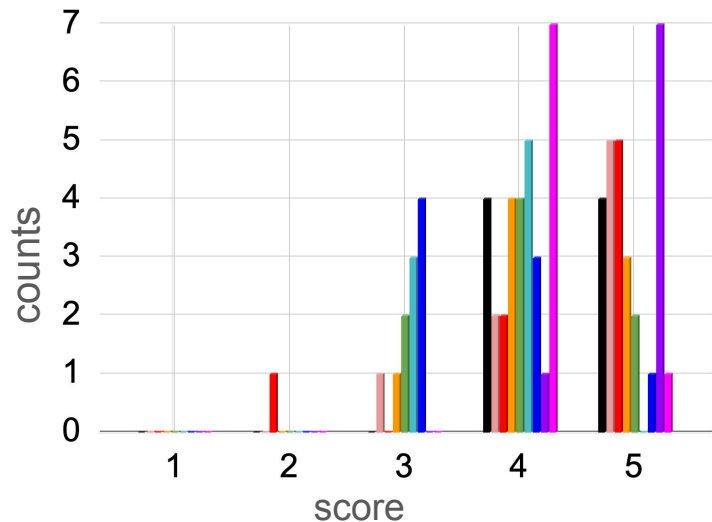
# Easyredmine: overview of the project



# Easyredmine: overview of the project



# The feedback (i)



- **Conceptual Clarity:** How clear is the distinction between PBS and WBS after this session?
- **Relevance to ET:** How applicable do you find this methodology to the specific complexities of the Einstein Telescope project?
- **Methodological Depth:** Was the level of detail provided sufficient for your current needs?
- **Ease of Use:** How intuitive was EasyRedmine interface for such project management exercise?
- **Feature Relevance:** Do you think EasyRedmine will provide the necessary features to manage specific tasks within the ET project?
- **Integration:** How likely are you to use this tool in your daily scientific/technical workflow?
- **Technical Support/Documentation:** How would you rate the clarity of the software online assistance ?
- **Format:** Was the balance between presentation and software session practice appropriate?
- **Overall Value:** How would you rate the global value of this training for your professional development?



# The feedback (ii)

What was the most useful part of this training?

In general, I think it was very useful to learn how to **use this kind of tools**.

Once in front of the planning task, I realized **how many details one should have already had since the beginning**, in order to organize the work efficiently.

**Connecting the tasks.**

What is one thing we could improve for the next session?

It was a bit difficult to enter in the state of mind that the tasks are only examples and have **not to be exhaustive**.

Something that was planned, but it would be nice to have a session dedicated to an "playthrough" of the operation with **some active changes to the budget/schedule**. I.e. pre-set the tasks before the sessions and then simulate what happens when something breaks, something is not delivered, etc.

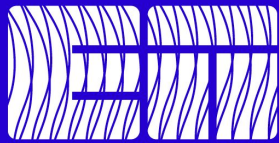
Are there any specific features in the software you would like more training on?

More detailed training on **managing dependencies between subprojects** and using the tool to track and visualize these interfaces, as well as better use of **critical path and delay propagation**, would be very useful.

More training on **linking tasks to deliverables** (maybe also milestones) and interfaces, but the course was very clear.

**Links in between tasks, with days and delays.**





EINSTEIN  
TELESCOPE

---

Thank you!