Proposal for the collaboration structure

Current structure

The project is subdivided in 7 Working Packages (WP), coordinated by 7 WP leaders. Table 1, summarizes the current structure and indicates the main tasks assigned to each WP and the coordinator of each one.

Two spokespersons represent the project. They are equivalent but in charge of specific duty:

- one is also National Responsible in CSN2, designed by election every 5 years, today in charge of D. Pinci, INFN-RM1;
- one is E. Baracchini (GSSI), PI of ERC-INITUM and other external funds who takes care of the international relationship, in particular with CYGNUS international collaboration.

To coordinate the project, the spokespersons are codiuvated by a Technical Coordinator (TC), today in charge of G. Mazzitelli INFN-LNF, and by a Steering Committee, formed by the WP leaders as reported in Table 1.

The TC is also RAE and GLIMOS supervising and taking care of safety and environmental issues.

The proper communication and discussions among the Collaboration is ensured by weekly or fortnightly meetings. A general agenda site collects all needed information and links (https://agenda.infn.it/category/1149/).

Since July 2023, the SC as a committee composed by the leaders of the different working packages and Local Responsible with the goal of overseeing to the smooth progress in the work of the CYGNO collaboration through its goals started to work;

An important task is the drafting of some common rules to help the decision making reducing interferences and overlaps and properly indicating who and how is in charge of organise, coordinate and finalise the tasks

Recents events related with Giovanni resigning outlined that still there is need for these rules and, as much as possible, clear tasks assignments

Current structure

Physics WP1		Analysis WP2		Simulation WP3		Detector WP4		Services WP5		R&D WP6		Management WP7	
Elisabetta Baracchini		Giorgio Dho		Giulia d'Imperio (dep) Pietro Meloni		Giovanni Mazzitelli		Andrea Messina		Davide Pinci		Elisabetta Baracchini Giovanni Mazzitelli Davide Pinci	
Task	**Coordinator**	**Task**	**Coordinator**	**Task**	**Coordinator**	**Task**	**Coordinator**	**Task**	**Coordinator**	**Task**	**Coordinator**	**Task**	**Coordinator**
Dark Matter	G. Dho	Reconstruction Development	G. Dho	Prototypes with GEANT	G. d'Imperio	Design	S. Tomassini	DAQ	A. Messina	validating large GEM	L. Benussi	INFN Responsible	D. Pinci
Solar Neutrinos	S. Torelli	Online-Offline software integration	G. Mazzitelli	Nuclear interactions with SRIM	F. di Giambattista	Integration	G. Mazzitelli	Trigger	H. Lima	validating sensors and lens	D. Pinci	Technical Coordination	G. Mazzitelli
Super Nova DM	E. Baracchini	Data Analysis	G. Dho & D. Pinci	Gas properties with Garfield	D. Pinci	CMOS sensor	R. Nobrega	HV	F. Renga	validating field cage component	G. Mazzitelli	Pubblications and Conferences	A. Messina
Sensitivities and discovery potential	G. Dho	3D Reconstruction	D. Marques & D. Pinci	Sensor performance	R. Nobrega	GEM	L. Benussi	Gas System and Slow Control	F. Renga	validating cathode power distribution	G. Mazzitelli	International Collaborations	E. Baracchini
Migdal	A. Messina	Infrastructures	G. Mazzitelli	Integration	F. Petrucci	Performance Studies	D. Pinci	Gas Purification	R. Gregorio	validating R&D for PHASE 2	D. Pinci	Safety and Environment	G. Mazzitelli
LNGS Neutron Flux	F. di Giambattista			Infrastructures	G. Mazzitelli	Light Sensors	F. Iacoangeli	Calibration	G. Cavoto	Negative Ions	E. Baracchini	Call Applications	E. Baracchini
								Storage and Networks	G. Mazzitelli	Materials radioactivity measurements and lag	E. Kemp & D. Pinci	Run Coordinator	S. Piacentini
										Gas Luminescence	D. Pinci	Steering Committee Coordinator	F. Petrucci
										Alternative MPGD	E. Baracchini		
										Gas Mixture	C. Monteiro		

Some proposals

The guidelines of the collaboration are decided by the SC taking into account the CSN2 requirements and the aims and milestones of the ERC-INITIUM.

The timing of the tasks is defined by the schedules and milestones in the TDR and agreed with the referees

The SC should oversee to the smooth progress in the work of the CYGNO collaboration through its goals. Whenever major interferences arise between the activities of two groups or choices have to be made regarding the prioritisation of the activities of a WP, the managers concerned are asked to describe the situation to the SC and the SC proposes the solution to be adopted.

The SC will act also as a kind of Institutional Board taking care of setting up the procedures that the collaboration should follow.

This includes a review of the mandate of the SC and its composition, a review of all the roles in the collaboration (including mandate terms, elections and so on) and in general the proposal of a set of procedures we want the collaboration to adopt.

Some proposals

A single Technical Manager is probably too few to properly follow all tasks needed in a so large collaboration;

We can "split" his/her role in:

1 - a Technical Coordinator (i.e. the one who is not responsible of general deciosion, but sets up the WPs, makes them work with each other) that will also be the SC coordinator (SCC). He/she should work in close contact with the SPs, and the coordinators of the WPs, acting as an interface to ensure a smooth communication among the different coordinators. The TC must also supervise the actual realisation of the activities requested or agreed within the SC pointing out any criticalities, interferences and agreeing with the coordinators on the priorities of the activities. If difficulties arise in a WG due to the need for a larger workforce or ineffective activity or collaboration with other WGs, the co-ordinator should raise the issue with the TC and the co-ordinator of the second WP and if this does not help things to improve he/she should discuss it in the SC.

2- TC can get help from some deputies nominated by him/her. The role of these, will be clearly stated when they are nominated. In general may change over time, according to the different experiment phases

3 - a Resource Manager who keeps track of the financial resources for CORE purchases, indicating criticalities.

4 - in WP7 (Management) we introduce the coordinators of the activities on the prototypes who act as an interface with the rest of the collaboration;

Decision taking

The work within the WGs organized by the co-ordinator, who autonomously manages the timing, assignments and developments in accordance with the stated aims of the collaboration. In addition to the activities mandated by the SC, the group can also take on its own initiatives and different tasks that are proposed by individuals or discussed in the group.

The coordinator keeps an up-to-date document listing the tasks tackled by the group, indicating the name(s) of the person(s) who are following them, and updates over time through periodic meetings or direct communication.

If a need arises in a WG for information or tasks requiring the work of a second WG, it is the task of the coordinator of the first WG to collect the request and communicate it to the coordinator of the second WG and to the TC, who must ensure the correct communication of the needs and supervise the realisation of what was requested.

Appointing Proposals

After several discussions, the SC proposals are:

- Fabrizio, as SCC will also act as the PM and he will find deputies after having discussed people availabilities;

- Davide P. will be Resource Manager;

- Elisabetta is keeping for the time being the interim of RAE and GLIMOS and computing contact person;

Open points

The General Structure with internal tasks and participant should be updated;

We still have to decide how long are the mandates and how people for the major roles are selected;

Publication rules. Fine tuning still needed;

What about shifts? RUN5 started since some days, we should agree on some common rule on how to fairly share shifts. All RL should provide Stefano a list of shifters. Please do it.

We should adopt the <u>code of conduct from INFN</u> to ensure a fair and safe work space for everyone