



WHAT IS P2IO?

P2IO is one of the 100 laboratories of excellence (Labex) approved by the Government in March 2011 within the framework of future investments funded by the large governmental loan, officially called "Grand Emprunt" of 2010.

P2IO defines itself as the network of all laboratories in Paris region involved in physics of the infinitely small to the infinitely large and study of conditions for the appearance of life.

Laboratories and partner teams depend on five institutions: CEA, CNRS, Ecole Polytechnique, Université Paris Sud and Université Paris Diderot and are constituted of the following units: CPHT, CSNSM, IAS, IMNC, IPHT, IPN, IRFU, IRSD, LAL, LLR, LPT, SERMA.

P2IO includes 2000 persons including 1000 researchers and lecturers.

P2IO acts like as such networks, in a direct way, by funding a number of actions, and more indirectly, by promoting better cooperation between its members and providing a contact point for external partnerships, including those from the Saclay's Plateau.

MISSIONS OF P2IO

The 3 missions of P2IO: Explore, Transform, Structure, are clearly detailed in the submitted file.

The mission "**EXPLORE**" consists in supporting the most advanced research activities within the four P2IO scientific thematics:

- symmetries in the subatomic world
- dark components of the universe
- nuclear matter strongly coupled
- formation of star systems and conditions life emergence

as well as the three P2IO technological thematics:

- innovations in accelerator science and their applications
- new generation sensors and their results
- data exploration and simulation

and of the two transverse thematics Energy and Health

The mission "**TRANSFORM**" aims at strengthening synergies between all partner laboratories in view of the major changes that will be made possible within the framework of Plan Campus Operation by 2020.

Collaboration between P2O partners will bring a great added value. Laboratories get together within P2IO to eventually create common technological platforms of the best international level and to stimulate research at unprecedented levels. P2IO will also focus on renewing the capacities of teaching and training of our laboratories.



The mission "**STRUCTURE**" consists in taking advantage of a single contact point to strengthen all collaborations of P2IO partners, mainly at the interdisciplinary level. Indeed, the presence within the FCS Paris-Saclay in a near future of about ten Labex covering all disciplinary fields will make interactions and programs discussed in inter-labex very fruitful. The same kind of structuralization with Parisian Labex in themes close to P2IO will allow to keep a coherence at the Paris region level. On the other hand, the answers to various national or international calls for projects will benefit from a stronger impact if they are coordinated at P2IO's level.

MEANS OF ACTION

P2IO direct means of action are based on calls for tenders for:

- A post-doctoral action, which allows hiring 8 post-docs with a 2 year contract every 2 years.
- R&D programmes, mainly upstream, which allow, during odd years, between 5 and 10 small projects but with great potential, and during even years one (or maximum 2) more ambitious and more structured projects.
- An annual support for operation and rejuvenation of existing infrastructures within P2IO.
- Actions to support training and education which are divided into recurring funding for summer schools or to allow students to visit our major research facilities, and a concerted programme of updating of our laboratory works (TP) level M2.
- Scientific promotional events, to organize seminars, workshops and conferences, or invitation of high level personalities for short stays.
- Communication and outreach activities.

P2IO's indirect means of actions are related to the development of synergy between all its members and in its contact role towards its external partners.