

AIDA++ EOI

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EoI guidelines

- Document :
<http://aida2020.web.cern.ch/sites/aida2020.web.cern.ch/files/Detector%20innovation/H2020%20Innovation%20Pilot%20-%20EoI%20-%20guidelines-final.pdf>
- The Innovation Pilots should contain activities aiming at:
 - the development of identified key fundamental technologies or techniques which improve the performance, or create new services of the involved research infrastructures.
 - the prototyping and testing of novel instrumentation, including components, subsystems, materials, and dedicated software, needed to upgrade the involved research infrastructures or construct their next generation.

EoI guidelines

- The new project will contain a mixture of activities:-
 - extensions, **albeit not just simple continuations**, of activities that are part of the ongoing AIDA-2020 project, with demonstrated added value for the community and well identified novel elements
 - new activities which are not presently supported under AIDA-2020.
 - For example, silicon, gas and cryogenic detectors, calorimeters, mechanics and cooling, **electronics**, software, test beam, irradiation and test facility equipment are presently supported under AIDA-2020
 - whereas other areas such as particle identification and precision timing systems, near detectors for long-baseline neutrino experiments and machine learning could be further topics.
- Scope of the Eols
 - strategic R&D on promising or new technologies for detectors at accelerators, including detectors for future accelerator-based projects
 - upgrades of components and instrumentation of detector infrastructures and test facilities. Infrastructure can be interpreted as facilities, tools and platforms serving common interest for detector development, like in AIDA-2020.

Industry participation

- The EC expects involvement of industry, and SMEs in particular, in the Innovation Pilots. Therefore, it is recommended to include, where relevant, European companies in the activities proposed in the EoI. Companies may participate as:
 - beneficiaries (with a contribution to joint R&D activities), or as
 - sub-contractors (e.g. for engineering runs or ASIC / chip manufacturing)
- However, only in the first case the industrial participation maybe considered as strengthening the innovation potential of the proposal

EoI template

- Title: indicate the main topic with possibly some keywords
- Participants(min. 2, max. 6): list the participating institutes, laboratories and industrial partners
- Contacts: 1 name+ e-mail per participant
- Description:(max. 1page)
 - Brief description of the planned activity and the main results-
 - Relevance to future accelerator-based HEP projector an upgrade of existing facility
 - Common interest and added value for the community
 - Role of industrial partners (if any)
 - Innovative aspects: what is new compared to existing R&D programmes and projects, what is the progress beyond work done in AIDA-2020, what is the level of novelty w.r.t. to the State of the Art, is it a new or an improvement of existing technology, etc.
- Deliverables (max. 3): list the expected deliverable(s) of the proposed activities
- Budget estimate : manpower + full cost including personnel (1/3 EC contrib)

EoI proposals (so far)

- 28 nm for advanced trackers/fast ADCs and communications :
CERN/INFN/CNRS/Bonn/AGH : Valerio
- 65/130 nm building blocks for innovative timing detectors and cold electronics : Christophe

CERN/INFN/CNRS/Bonn/AGH

- ~~Advanced 3D interconnects~~ : low mass hybridization INFN/CNRS/Bonn/IZM : Fabjan
- New architectures for timing detectors => move to projects
- High performance CMOS sensors => move to projects
- Cold electronics => move to 65/130n
- ...

