**Python Accelerator Middle Layer EU COST Action**

*Motivation:* <LAB/Institute/Company name> controls rely on Matlab and java interfaces that may become obsolete in the long terms. It is therefore important to evaluate alternatives that would provide robust operation on the long term. The international community shares the same concerns. Therefore we are seeking to set up a collaboration to define alternative solution.

The collaboration will consist in networking, software development and experimental work activities among beam dynamics physicists, software engineers, companies and operation experts of EU and non-EU laboratories (104 participants presently from 32 laboratories) to produce a python Accelerator Middle Layer (pyAML).

*Key missions:* networking, pyAML software development, application for other EU funds.

*Benefits:*

EU COST Action would finance: Conferences, Workshops, Training, Schools, Scientific Missions. Participation to international conferences, Dissemination of Actions’s work results.

The new effort towards a pyAML will make most advanced tuning tools (including AI and ML) developed by one partner of the Action, available to all others immediately.

The EU COST Action will increase the likelihood to obtain further EU funds as recognized EU Excellence Network. No budget forecast is requested when submitting a COST Action proposal: average funding received during the 4-year duration of a COST Action amounts to 600,000 EUR. About 2 conferences/workshops and 1 school/training per year.

*Resources:*

The COST Action Management Committee will select a Chair and a Grant Holder. The Chair/Grant holder institute will need to provide approximately 30%FTE/year for management, administrative, travelling, and financial tasks.

The Grant holder institution can request up to 15% of the eligible expenses for financial and scientific administration and coordination directly to EU.

Part of the work already being pursued by the <LAB/Institute/Company name> would be used for the WG activities, up to about 50%FTE/year.

*Timeline:*

17 September 2024: Technical Annex finalized. Sent for approval of submission to partners

5 October 2024: Expected submission in the EU COST online portal.

23 October 2024 12.00-noon (CEST): COST submission deadline

March 2025: Notification of Approval

October 2025: First networking activities financed by COST

March 2029: end of COST action.

*Recommendation:*

The Directors are invited to approve the Technical Annex attached for Submission, Evaluation, Selection and Approval of the COST Action Proposals