

# ***Mission-Specific Platforms* Third-Party Tools and Instruments Policy**

*March 26, 2015*

## **General Principles Governing Third-Party Tools and Instruments**

DEFINITION: A third party tool or instrument is any additional tool, observatory or laboratory based equipment that a member of the science party wishes to use during an expedition (offshore and or onshore), and is not being provided by the ECORD Science Operator (ESO).

For the purpose of this document these tools and instruments will now be referred to as 'tools'. International Ocean Discovery Program (IODP) *Mission-Specific Platforms* scientific ocean drilling expeditions have historically drawn upon tools or instruments that were purchased or developed outside the framework of the primary contractors. These are known as "**third-party tools and instruments**".

Broadly speaking, tools and instruments encompass downhole (in situ borehole measurements), and specialist coring tools, observatory (long-term installation in a hole after completion), and laboratory-based (shipboard or at IODP Bremen Core Repository/MARUM). All of them require technical support from the implementing organization – the ECORD Science Operator (ESO) – that, in turn, may require approval of associated operating costs by the *ECORD* Facility Board (E-FB).

Support for the purchase or development of third-party tools and instruments can come from a variety of sources. The E-FB cannot impose standards on external funding agencies, but it is hoped that principal investigators and those agencies will ensure that proposals for funding of third-party tools include plans and funds for satisfying the criteria set out in this document. The final responsibility for the use of a third-party tool or instrument during a *MSP* expedition or in an IODP core repository rests with the ESO.

Third party tools and instruments must satisfy the operational and safety criteria that the ESO applies to its own in-house tools and instruments. Careful pre-cruise planning is essential if third-party tools and instruments are to be successfully integrated into the scope of shipboard work. The principal investigator (PI) for a third-party tool or instrument, *in consultation with the ESO*, is responsible for providing funds for planning activities, shipping the tool to the port of mobilization, and integrating tool deployment into the expedition work and data flow. Work that the ESO is expected to contribute must be identified as early as possible to minimize the impact of potential resource requirements.

Funding of a third-party tool or instrument does not guarantee time or space on board a *Mission-Specific Platform* or the IODP Bremen Core Repository/MARUM for use of that tool or instrument during an expedition (offshore/onshore). The primary responsibility for integrating a tool or instrument into IODP operations rests with the principal investigator (PI) and not with

the ESO. Should the ESO accept a tool or instrument for deployment, there should be no ambiguities in operation and support responsibilities.

Data and/or samples acquired through the use of certified third-party tools are subject to the same dissemination rules as any other data or samples collected by the IODP. Furthermore, the data produced through the use of third-party tools is the property of the IODP. For example, the data produced through the use of third-party tools and instruments will be made publicly available after the moratorium period ends. Any third-party tool or instrument deployment plan must specify the current and potential future data and sample deliverables for the tool or instrument. PIs are required to submit a Deployment Report and relevant digital data files for the “*Proceedings*” volume and the PANGAEA or LDEO log database respectively for the expedition.

## **Guidelines for Third-Party Tool and Instrument Development and Deployment**

Communication is the key to the successful deployment of third-party tools and instruments. The scientist wishing to deploy a third-party tool or instrument should consult with ESO early in the planning process and provide specifications and operational criteria. For example, a laboratory instrument to be operated by the PI may simply require power, space, safety information, and a sampling and measurement plan. Off-the-shelf borehole tools will additionally require plans for integration with existing systems (e.g., drilling pipe, cable heads, data retrieval and storage).

For all categories of tools and instruments, the project-planning phase must define explicitly how much time and resources (funds and personnel) are needed and how much ESO is willing to commit during deployment. Development timelines and requirements as described below may be modified by agreement between the ESO and the PI, subject to approval by the E-FB.

The following guidelines for third-party tool and instrument development and deployment have been formulated to reflect the fact that the ESO is responsible for assisting with and monitoring third-party tool and instrument developments and reporting their status to the E-FB. These guidelines indicate a general progression through which new tools and instruments are introduced to IODP *Mission-Specific Platform* operations.

For a tool or instrument to be considered for deployment on an IODP *Mission-Specific Platform* expedition, the following criteria must be met:

- 1) There must be an identified PI who is the primary proponent and point of contact for the use of the tool or instrument by the *Mission-Specific Platform* during an expedition.
- 2) The PI must formulate a deployment plan in consultation with the ESO. This deployment plan should, where appropriate:
  - indicate the usefulness of the proposed measurements and the financial and technical feasibility of the operational procedure, and technical specifications such as dimensions, weight, temperature and pressure ratings, cable-length restrictions, cable type, etc.
  - identify a development timeline, if required, in terms of technical achievements and

reporting requirements, including a specific deadline for a yes or no decision by ESO on deployment

- provide for initial testing on land, when possible and appropriate, and request ship time if testing from an MSP is necessary, subject to E-FB approval
- satisfy safety considerations
- specify shipboard requirements, such as the data processing necessary to make the information accessible on board ship, if applicable, any special facilities (emphasizing where the tool is not compatible with existing hardware and software), and appropriate technical support
- specify the data deliverables
- provide (in terms of both cost and time) for transporting tools and instruments for shipboard testing
- include a signed (pro forma) statement of agreement with these requirements.

- 3) ESO will inform the E-FB of the submission of development and deployment plans of third-party tools and instruments, which will provide advice on their integration into IODP activities.
- 4) If ESO and E-FB endorse the development plan, a staff liaison will be appointed by ESO to monitor the tool's progress through the development plan. ESO will provide progress reports on the tool or instrument to the E-FB.
- 5) With a positive recommendation from the E-FB, an IODP *Mission-Specific Platform* development tool or instrument may be scheduled for testing during an upcoming expedition. During the testing phase, the scientific success of an expedition must not be contingent upon the proper functioning of such a tool or instrument.
- 6) It is incumbent upon the PI to ensure that the ESO is fully advised of the status of the tool or instrument. If the development plan falls seriously behind schedule and the PI is unlikely to have satisfied all of the above criteria prior to a planned deployment, the ESO has the right to withdraw the tool or instrument from further consideration for an expedition after consulting with the E-FB. Any planned shipboard test may be cancelled, and an agreement may be reached on a revised schedule.