

The International Ocean Drilling Programme (IODP³) occasionally draws upon third-party tools and instruments purchased and developed outside the framework of IODP³.

IODP³ Third-Party Tools and Instruments Policy



**INTERNATIONAL
OCEAN DRILLING
PROGRAMME**

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1. 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 IODP³ Operator (either the ECORD Science Operator (ESO) or the Institute for Marine-Earth Exploration and Engineering (MarE3); hereafter referred to as the Operator).

For the purpose of this document these tools and instruments will now be referred as ‘tools’. Mission-Specific Platform 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 comprise three types: (i) downhole (*in situ*, transient borehole measurements) and specialist coring tools; (ii) observatory (long-term installations left behind in a hole after completion); and (iii) laboratory-based (shipboard or at the Core Repositories). Each category has unique characteristics, but all of them require technical support from the implementing Operator that, in turn, may require approval of associated operating costs by the IODP³ MSP Facility Board (MSP-FB).

Support for the purchase or development of third-party tools and instruments can come from a variety of sources. The MSP-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 an IODP³ expedition or in a Core Repository rests with the implementing Operator.

Third party tools and instruments must satisfy the operational and safety criteria that the Operator applies to their 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 Operator, is responsible for providing funds for planning activities, shipping the tool to the port of mobilisation, and integrating tool deployment into the expedition work and data flow. Work that the Operator is expected to contribute must be identified as early as possible to minimise the impact of potential resource requirements.

Funding of a third-party tool or instrument does not guarantee time or space on-board an IODP³ drilling platform or at the Core Repositories for use of that tool or instrument during an expedition (offshore/onshore). The primary responsibility for integrating a tool or instrument into IODP³ operations rests with the principal investigator (PI) and not with the Operator. Should the Operator 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 IODP³. Furthermore, the data produced through the use of third-party tools is the property of the IODP³. 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.

2. 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 the relevant Operator 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 the Operator is willing to commit during deployment. Development timelines and requirements as described below may be modified by agreement between the Operator and the PI, subject to approval by the MSP-FB.

The following guidelines for third-party tool and instrument development and deployment have been formulated to reflect the fact that the Operator is responsible for assisting with and monitoring third-party tool and instrument developments and reporting their status to the MSP-FB. These guidelines indicate a general progression through which new tools and instruments are introduced to IODP³ drilling operations.

For a tool or instrument to be considered for deployment on an IODP³ drilling 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 on the drilling platform during an expedition.
- 2) The PI must formulate a deployment plan in consultation with the Operator. 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 the Operator 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 MSP-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 (emphasising 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) The Operator will inform the MSP-FB of the submission of development and deployment plans of third-party tools and instruments, which will provide advice on their integration into IODP³ activities.

4) If the Operator endorses the development plan, a staff liaison will be appointed by the Operator to monitor the tool's progress through the development plan. The Operator will provide progress reports on the tool or instrument to the MSP-FB.

5) With a positive recommendation from the MSP-FB, an IODP³ MSP 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 Operator 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 Operator has the right to withdraw the tool or instrument from further consideration for an expedition after consulting with the MSP-FB. Any planned shipboard test may be cancelled, and an agreement may be reached on a revised schedule.