

1 Scope

This document comprises the strategic plan for the MBARI Platforms Engineering Group.

2 Definitions

2.1 Platforms

The distinction between platforms and instruments is not always clear. The circumstances under which this distinction becomes important are:

- When the length and cost of the development cycle are similar
- For purposes of project evaluation, selection and oversight

A platform is defined as follows:

A platform provides and manages shared resources to scientific instruments

Among the resources it provides and manages are

- Energy
- Physical space
- Data storage and telemetry
- Navigation, propulsion, location
- Access to data

Characteristics that may be used to distinguish between platforms and instruments include:

- Multiple science users, shared resources
- Common interface standards
- Reconfigurable
- Generality, modularity of architecture
- Primary use of data products generated

3 Mission

3.1 Mission Statement

Inform and implement the development of platforms and related technologies at MBARI

3.2 Current Capabilities

To fulfill our mission, the Platforms Engineering Group will:

- Monitor trends in scientific research internal and external to MBARI

- Monitor trends in platforms and related technologies and make corresponding adjustments to the development strategy
- Identify and develop strategic opportunities for technical development and collaborations related to platforms
- Develop platforms technologies
- Develop technology standards that serve MBARI and the oceanographic community
- Promote MBARI technologies and standards to the oceanographic community
- Create a public presence through web sites, forums, workshops, publications, etc.

3.3 Stakeholders

The Platforms Engineering Group serves scientists, engineers and operations groups, the MBARI management team, MBARI engineering, external technical and scientific collaborators

3.4 Justification for Existence (what makes us unique)

Within MBARI, the Platforms Engineering Group represents technical expertise in platforms and related technologies.

4 Charter

Our charter describes the platforms group and it's role at MBARI. Functions describe this role (our reasons for existing as a group), where capabilities describe the things we do to fulfill our mission.

4.1 Principles

4.2 Functions

4.2.1 Support MBARI's institutional mission with respect to platform technology

4.2.2 Maintain a strategic plan (technology roadmap) for ocean observing platforms and technologies

4.2.3 Provide expertise and guidance in platforms and related technology to science, operators, management, community, MBARI engineering

4.3 Organization

4.3.1 Composition

The Platforms Engineering Technology Council ("the Council") is comprised of engineering representatives from the Platforms Engineering Group and relevant Research Engineering Labs, appointed by the Director of Engineering. In addition, the Council

may have a number of member science representatives, appointed by the Director of Science and the Platforms Engineering Group Lead, who acts as the Council Chair.

5 Strategic Plan

There are many possible ways to pursue the capabilities described in our mission. Taking into account our environmental analysis (SWOT), we describe the best practices to adopt in order to fulfill our mission.

In order to...	We shall (in general)...
Monitor trends in platforms and related technologies and scientific research internal and external to MBARI	• Foster and maintain good personal and working relationships with scientists on an on-going basis • Develop and maintain good active working relationships with our peers at other scientific, academic and commercial institutions • Share what we learn with each other • Attend relevant conferences • Read relevant papers and journal articles • Establish and maintain baseline competencies in relevant technology and scientific areas through ongoing education and training
Identify and develop strategic opportunities for technical development and collaborations related to platforms	• Meet with MBARI scientists, formally and informally, to discuss scientific research and methods • Actively develop opportunities to work directly with scientists as consultants and participants in their research • Engage scientists formally in the engineering process in order to establish an increasing and vested interest on the part of science, and to deliver technology capabilities of increasing scientific interest and value throughout the course of technology initiatives. • Establish mechanisms for forming science/engineering resource pools to address short term technological needs of scientists • Support scientists to make them successful in adopting new technologies • Focus development efforts on the lowest possible part of the value chain (towards basic technology, away from systems integration) • Extend capabilities of existing assets

	• Use collaborations and partnerships to leverage new advanced basic technologies in development efforts
Provide an interface to entities (scientists, engineers, operations groups, institutions, etc.) seeking expertise in platforms and related technologies	• Hold meetings to engage scientists and understand their interests and needs • Establish a web presence • Hold workshops on platforms related issues
Set the direction of the development of platforms and related technologies at MBARI	• Through the authorship and endorsement of proposals • Through recommendation (to MBARI management) of changes to ongoing projects in response to changes in technical fields and the oceanographic community
Develop technology standards that serve the oceanographic community	• Participate in the development, extension and management of new technology standards • Adopt appropriate technical standards for use by the oceanographic community • Use existing technical standards already in use by the oceanographic community
Promote MBARI technologies and standards to the oceanographic community	• Collect, publish and disseminate data • Produce publications for conferences and peer reviewed journals • Give invited talks

6 Plan Revision Procedure

When will the strategic plan be reviewed and by whom? What process will be used to evaluate and change the mission, strategic plan and implementation?

7 Metrics for Success

What criteria will be used to determine our success in each item in our implementation plan