Ocean Observatories Initiative Analysis of Alternatives

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OOI by the Numbers

- 7 Arrays of Instrumented Moorings and Vehicles.
  - S. Hem. descoped 2017
- 89 Platforms
- 830 Instruments
  - >30 instrument types
- 65 billion rows of numerical data = 100TB
- Raw data and media files = 335TB
- 25 million data requests/month
- Feed near real-time systems every 1 sec to 30 sec
- ~5 years of full operation so far

What is an Analysis of Alternatives

- Study of new and existing technologies in the market place with the goal of replacing the current CI solution in part or in whole.

- Documentation of the features and functions that are most important in delivering the Program's mission.

- Evaluation of the current solution's ability to meet the above documented features and functions.

- Report of findings and recommendations

Why do it?

- WHOI assumed PMO responsibilities 10/2018.
- A self evaluation was a PYI deliverable for CI with an expectation it would lead to an AoA.
- Feedback from stakeholders, users and staff
- Some fashion of an AoA should always be part of a 3 year roadmap.
- Informative and builds confidence

Who and How

- Cross disciplinary, organizational and role team of open-minded individuals with the patience to participate in an AoA effort.

- Take in self evaluation, participant expertise and documented features/functions to build a metric driven evaluation matrix.

- Build list of alternatives - Google, conferences, papers, experience and conversations with technology leaders.

- Divide up research to create short list and perform interviews with the goal of evaluating alternative against matrix.

- Document process and produce a Findings and Recommendations report

Results

- Five findings and three recommendations.
- Built consensus of CI direction across program.
- Improved understanding of issues and opportunities challenging CI.
- Highlighted that not all "problems" are technical much less an actual CI "problem".
- Strong PYII roadmap