**Fisheries Information System/National Observer Program Request for Proposals**

FY 2017 Proposal Guidance

October 14, 2016 Abstract Deadline

October 31, 2016 Proposal Deadline

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# Introduction

The Fisheries Information System (FIS) program and National Observer Program (NOP) reside in NOAA Fisheries’ Office of Science & Technology, and the National Catch Share Program (CSP) resides in NOAA Fisheries’ Office of Sustainable Fisheries. Karl Moline is the Program Manager for FIS; Jane DiCosimo is the Program Manager for the NOP; Kelly Denit is the Program Manager for the CSP. Program activities are supported by the FIS Program Management Team (PMT) and National Observer Program Advisory Team (NOPAT). The mission of the FIS program is to deliver fisheries information collection, management, and dissemination solutions to improve the accuracy, completeness, timeliness, and accessibility of fisheries-dependent information. The NOP’s mission of providing a formalized mechanism for NMFS to address observer issues of national importance and support for information collection and program implementation, e.g., use of electronic technologies for fishery dependent data collection, overlaps with FIS and supports collaboration to fund electronic monitoring and/or electronic reporting projects. The CSP supports pre-implementation and implementation of catch share programs across the country and complements the data collection focus of FIS and NOP for these types of programs. FIS and NOP leverage State-Federal partnerships and investments to provide the information needed to help understand the effects of fishing on living marine resources, and to improve the quality of resource management decisions. For more information about the FIS Program visit <http://www.st.nmfs.noaa.gov/fis/>; for the NOP visit <http://www.st.nmfs.noaa.gov/observer-home/index>; for the CSP <http://www.nmfs.noaa.gov/sfa/management/catch_shares/index.html>

FIS and NOP established a combined RFP beginning in FY 2015 in order to consolidate the number of RFPs to reduce the burden on submitters. In FY 2016, based on a request in the President’s budget, an additional $4 million was provided and funded additional electronic technology projects separate from this RFP. In FY 2017, if those funds are provided again by Congress, a majority of those funds will be added to this RFP in addition to FIS and CSP funds.

Awards will be based on proposal merit and **are subject to availability of funds. Depending on the availability of funds, awards may be adjusted between areas of interest as warranted by the number and quality of proposals received.** Awarded funds must be obligated prior to the end of the fiscal year (FY 2017 – September 30, 2017). Depending on the Applicant, it may take several months for this obligation process to be completed, particularly if the obligation involves the NOAA Grant Process. The PMT and NOPAT have prepared the following guidelines and specific instructions for the proposal process.

**Who is eligible**: To further their missions, FIS and NOP are seeking high quality proposals from Regional Offices, Science Centers, Headquarters Offices, Fishery Information Network (FIN) partners, and State partners. Resources will be allocated based upon FIS/NOP priorities (see Areas of Interest). Funding to State partners will be provided through the Interstate Commissions.

Over the past 4 fiscal years this RFP has funded projects in all NMFS regions, including FIN and State partner projects:

* Northeast: 8 Projects for a total of $1,172,000
* Southeast: 18 Projects for a total of $2,005,000
* West Coast: 23 Projects for a total of $2,342,000
* Pacific Islands: 11 Projects for a total of $838,000
* Alaska: 14 Projects for a total of $1,873,000

Examples of projects that were funded in recent years and supported the FIS/NOP missions are:

* *Quality Management Value Stream Map for the Atlantic For-Hire Survey – Office of Science & Technology (OST)*: The purpose of this project is to host a value stream mapping (VSM) workshop, facilitated by a consultant from the American Society for Quality. The workshop will be used to outline the end-to-end process for the Atlantic For-Hire Survey (FHS) and identify areas where improvements can be made to the efficiency of the process and quality of the data. These efforts will result in a plan for improvement to the FHS data collection process. The Fisheries Statistics Division coordinates efforts of several recreational fishing surveys and it is pertinent that those surveys are run in a most effective fashion. The results of the VSM can be shared to help inform other recreational fishing survey data processes and procedures.
* *West Coast HMS Virtual Integration Efforts – Southwest Fisheries Science Center (SWFSC):* This project demonstrates efforts to improve connectivity between data systems and virtually integrate information from data sets that reside in distributed systems. Data sets that contain landing receipts, observer trip information, logbook information, and reference data sets like USCG database, NPS, etc., that are managed in different locations need to be accessed by data managers in order to reconcile information available in each data system. The project will expand on work already underway to virtually integrate trip data with permit data and landings that are stored in PacFIN. In these instances, data are not being physically transferred but accessed real-time through web services or near real-time through materialized views. Compliance reports generated from these three sources will be made available to authorized users through PacFIN’s existing compliance reporting Apex web pages. This distribution of data products through existing resources on separately housed systems exemplifies the immense benefits of sharing resources and functionalities between partner organizations (SWFSC, WCRO and PacFIN) and their systems.
* *Cost and Benefit Analysis of the eLandings Interagency Electronic Reporting System – Alaska Department of Fish and Game:* The purpose of this project was to review and evaluate and report on the costs and benefits of the integration of the eLandings electronic reporting system. The project led to the development of a qualitative assessment that describes: 1) the eLandings system and the "legacy" systems that it replaced; 2) a qualitative description and summary of the costs and benefits that have been realized through the implementation of the IERS; and 3) a review of progress in achieving programmatic goals of the eLandings system that were initially specified by the partner agencies; and 4) areas were stakeholders note the program’s structure could be improved.
* *West Coast Region / Greater Atlantic Region Electronic Monitoring Implementation Workshop – Learning from Each other:* The purpose of this workshop was to allow individuals from the West Coast and Greater Atlantic Regions an opportunity to collaborate, share information, ideas, and approaches to overcoming roadblocks in order to successfully implement Electronic Monitoring (EM) in each region. This project is in support of each Region’s Electronic Technologies Implementation Plans (RETIP). The workgroup will present results to a joint meeting of WCR and GAR Regional Leadership and separately to the Electronic Technologies Working Group (ETWG) via a white paper. The white paper will contain specific recommendations to improve each Region’s use of EM and further support the goals and objectives in each Region’s RETIP. The white paper will also address the applicability of lessons-learned to other regions and make recommendations on issues of national importance for the ETWG to consider.
* *Development and Testing of Effective Discard Methods for Accurate Accountability in the West Coast IFQ Fishery for Bottom Trawl Vessels Equipped with EM – Pacific Fisheries Information Network:* The objective for this project is to assess the ability of EM to be used as a viable monitoring tool on bottom trawl vessels by facilitating accurate identification and weight-quantification of IFQ discards. Establishing methods that enable bottom trawl fishermen to discard unwanted bycatch while simultaneously allowing for accurate identification and quantification of those discards would help to progress the regulation of EM in the bottom trawl fishery. Results from this study are expected to influence future West Coast Electronic Monitoring programs by providing the industry with valuable methods and tools, as well as providing management with data supporting EM in the bottom trawl fishery.
* *Gulf States Database Trip Ticket Versioning System* – *South East Fisheries Science Center (SEFSC), Gulf States Marine Fisheries Commission (GSMFC)*. The SEFSC and GSMFC use trip ticket data for stock assessments and fishing effort estimation. This project will create a globally unique id (GUID) for each trip ticket record collected by GSMFC. The GUID will be a composite key generated from required fields common to all trip ticket systems in the U.S. Gulf of Mexico. This will ensure that partners are using the same trip ticket information when computing changes to incoming records. The results will be a dramatically improved ability to track changes made to trip tickets by state agencies. This project will benefit GSMFC, Federal fisheries managers, State fisheries managers and analysts at all levels.
* *GARFO RTL Quality Management Audit Protocol Enhancement – Greater Atlantic Region Fisheries Office (GARFO):* The purpose of this project is to create an audit protocol interface display of the enhanced RTL trip matching application. This project will provide development support to produce the interface display that will allow the APSD QA team to display RTL output based on regional priorities and assign the trip output to QA team staff. Examples of this are to assign output by FMP, permit, trip type, trip poundage and error type. The interface will also be capable of entering the RTL output into the JIRA issue tracking application through automated issue creation based on defined priorities. This project will have a direct impact on the quality level of the source data utilized by end users for quota monitoring purposes and other fisheries management information products.
* *Reconciliation and Creation of an Authoritative Data Source for Atlantic Highly Migratory Species Dealer Data – Office of Sustainable Fisheries (SF) and Atlantic Coast Cooperative Statistics Program (ACCSP):*  The main objective of this work is to reconcile federally-reported Atlantic HMS dealer data from Maine to Texas with state-reported data for the same federal dealers. In general the Atlantic HMS eDealer initiative complements the primary goal of the NOAA Fisheries’ FIS effort as it provides NOAA Fisheries with comprehensive, accurate, and timely federal dealer data used to support inseason quota monitoring and helps make effective fisheries management decisions in a timely fashion. This project, in collaboration with the state and federal partners, is creating a formalized process for reconciling federal dealer reports collected from Atlantic HMS dealers in the eDealer database with state collected data from federal HMS dealers.
* *Pre-implementation of EM/ER in the North Pacific – Alaska Fisheries Science Center (AFSC):* There have been over 60 EM studies completed over the last 15 years and all of the video collected require manual review of video and still image data to extract meaningful information. Automated image processing has the potential to greatly reduce the time necessary for analysis, further improving the value of image-based sampling. While automated image processing is well established in biomedical and security applications, software packages capable of automated target detection and identification of fish are not commercially available. This project proposes to develop automatic detection, sizing, and classification of fish targets from stereo-video imagery of fish passing on a conveyor belt or sliding on a chute. This project is integrating EM data collection into the Observer database (NORPAC) that may eventually be used in catch estimation. This will be the first time that data resulting from EM collection is used as scientific data for estimation and is a huge step in EM/ER development.
* *Operationalizing Electronic Monitoring in the West Coast Groundfish Catch Share Program-California Risk Pool Project – West Coast Region (WCR):* In this project human observers in the West Coast Groundfish catch share program will be replaced by a system of cameras, electronic reporting, and operational requirements. This will be done under the authority of an EFP approved by the Council in June of 2014. Three fixed gear vessels and four trawl vessels will participate. The three fixed gear vessels will be operating under a maximized retention requirement as will two of the trawlers. The other two trawlers will be operating under an optimized retention requirements, where additional discards are allowed.
* *Development of a cost-effective electronic monitoring system for observing the take of protected species in southeast coastal gillnet fisheries – South East Fisheries Science Center (SEFSC):* In partnership with the gillnet fishery, the Southeast Gillnet Observer Program is testing video monitoring hardware and software to determine the feasibility of developing a cost-effective and reliable system of monitoring protected species bycatch and other shipboard practices aboard smaller gillnet vessels. Data on previous interactions indicates most protected species are primarily captured in the area off North Carolina and the east coast of Florida near Cape Canaveral. Therefore, only vessels currently known to operate in this area will be requested to participate in the program. The project would consist of four components: 1) Outreach to the fishing industry to describe the project and the benefits of video monitoring; 2) Deployment of 5 systems on 5 select vessels over a 2-3 month period; 3) Data analysis; and 4) Evaluation of feasibility of using electronic video monitoring to monitor protected resource incidental take.
* *Trawl Logbook and BDS Data Acquisition and processing redevelopment – Pacific Fisheries Information Network (PacFIN):* The new loading system employs a web based delivery application that reduces the burden on PacFIN data sources with a simple, one step process that could be applied to all data types. The underlying design employs APEX applications for loading, staging and production updates that are easy to maintain, implementing tools that are standards in data warehousing which will dramatically improve access to technical support and future development resources. Perhaps the most important feature of the redevelopment is the capacity to expand the central database in ways that will be a catalyst for future growth and development to meet ever changing management requirements.
* *Observer Program Technology Enhanced Collection System (OPTECS) – Northwest Fisheries Science Center (NWFSC):* The OPTECS project involves two phases progressing simultaneously and collaborating throughout. One phase involves platform hardware acquisition and the second phase is development of the UI application software. The developed UI will be integrated with the selected devices for further testing and modifications. Past and current efforts within the NWFSC’s Fisheries Research Surveys have yielded applicable software, program coding, databases, and electronic data collection system development processes that will serve as templates for creating the OPTECS.
* *Pilot Study to Test Electronic Reporting Via Vessel Monitoring Systems in the Gulf of Mexico Headboat Fishery – South East Regional Office (SERO):* The objectives of this project are to develop logbook software for submission via VMS units; and develop a database for receiving VMS logbook data and integrating it with existing Southeast Headboat Survey ER data. The project relates to FIS’ mission of developing and promoting tools to facilitate timely reporting of fisheries information. The project will also help scientists and managers better understand the utility of VMS logbook reporting for monitoring catches. The results of this study could be scaled to all for-hire vessels and may benefit other regions and partner agencies that manage recreational fisheries. Validation of fishing effort and landings through VMS and electronically reported logbooks would facilitate more-timely reporting for monitoring catches. It would also provide managers with more detailed information on the location of catches. Results of this work would be shared with regional fishery management councils, state agencies, scientific and advisory panels, and other regional offices and science centers.
* *Highly Migratory Species Catch and Release Smartphone App and Webpage – South West Fisheries Science Center (SWFSC):* This project will create a smartphone app that will allow anglers to report and view HMS captures, tag releases, and tag recaptures. The project is in line with the FIS’ mission to provide a context for the design, development, and implementation of data collection and improve the timeliness and accuracy of data reporting.  Every year, the SWFSC receives upwards of 1500 HMS release and capture a large portion of which are hand written and are sent through the USPS with postage paid by the Government. These data are integral to SWFSC’s mission to provide scientific advice for managing HMS stocks. Using the mobile app and complementary webpage, catch and release and tagging data will be made public in near real-time. The information will be of interest to thousands, from many different countries across the Pacific, who have contributed to the SWFSC’s Billfish Tagging Program and should further promote participation in the Billfish Tagging Program and promote catch and release of HMS in general. The benefits of implementation of a mobile app include enhanced collaboration with constituents, more efficient data reporting and archiving processes, and cost saving.

Proposal authors should read the Evaluation Criteria and Proposal Format carefully. Note some of the more significant requirements:

* Quarterly and Final Reports are required to be submitted through the Fisheries Program Information Management System (PIMS).
* Federal labor costs, overhead, or other administrative costs for NOAA or any collaborating federal agency cannot be included in the budget.
* Collaboration among regions and FINs is encouraged and will be considered during the evaluation process and when making a final determination on the amount of an award.
* **Proposals seeking funding at a higher level than the total funding available for each Area of Interest or the maximum specified for any Area of Interest, whichever is less, will not be considered.**
* Proposals must be submitted through PIMS. Proposals that are incomplete or do not follow the template will not be considered.
* Submissions must specify the approver, at the Division Chief level (or equivalent) or higher, and **must be approved by the Regional Administrator/Deputy, Science Center Director/Deputy, Headquarters Office Director/Deputy, or equivalent in the PIMS system prior to consideration**. **State partner proposals must be approved by the relevant Commission leadership.**
* Proposals should address how metadata will be provided for datasets collected or generated as part of the project. Metadata must be submitted to InPort, the NMFS metadata catalog, as required (<https://inport.nmfs.noaa.gov/inport/>).
* Proposals should address how non-confidential datasets collected as part of the project will be made available to the public.

The PMT and NOPAT will strictly enforce the requirements and deadlines in this proposal guidance. Please read this *entire document* and contact the FIS Program Management Office (PMO) if you have any questions: [FIS.PMO@NOAA.GOV](mailto:FIS.PMO@NOAA.GOV).

# Proposal and Project Cycle

Abstracts must be submitted no later than the close of business on October 14, 2016, and all completed proposals must be submitted no later than close of business on October 31, 2016, through the Fisheries Program Information Management System (PIMS) (<https://www.st.nmfs.noaa.gov/pims/>). Please contact Karl Moline (FIS.PMO[@noaa.gov](mailto:@noaa.gov)) for PIMS access and instructions if you do not have a NOAA.GOV email address and have not accessed PIMS previously. Approval by the Regional Administrator/Deputy, Science Center Director/Deputy, Headquarters Office Director/Deputy, or equivalent in the PIMS system is required prior to consideration. Online confirmation from the approver is required prior to proposal reviews. Late submissions will NOT be considered. The proposal review and award process will follow this general schedule:

|  |  |
| --- | --- |
| General Schedule for FIS Proposal and Project Cycle | |
| September 2016 | PMT/NOPAT finalize RFP Areas of Interest. |
| October 14, 2016 | Deadline for submission of Abstracts. **Abstracts will be made publicly available on the** [**FIS web site**](http://www.st.nmfs.noaa.gov/fis/)**.** |
| October 31, 2016 | Deadline for entry of proposals. **Successful proposals will be made publicly available on the** [**FIS web site**](http://www.st.nmfs.noaa.gov/fis/)**.** |
| November 7, 2016 | Deadline for approval and submission of proposals by Regional Administrator/Deputy, Science Center Director/Deputy, Headquarters Office Director/Deputy, or equivalent. |
| November 2016 | Review teams for each Area of Interest review, evaluate and recommend proposals. |
| December 2016 | PMT/NOPAT select proposals to be funded and develop final spend plans. |
| Upon receipt of appropriation | Make funds available to awarded projects s**ubject to availability of funds and OMI processes. Note that funds cannot be distributed until the funding programs receive their budget allocations, and transfers to FIN programs and State partners through the Interstate Commissions can take several additional months due to the Federal grants process.** |
| Quarterly after funds are made available | Quarterly reports due for all funded projects. **Quarterly reports will be made publicly available on the** [**FIS web site**](http://www.st.nmfs.noaa.gov/fis/)**.** |
| One year after initiation of the work | Final reports due for all funded projects. For multi-year projects, the report should focus on the work funded in the current fiscal year. **Final reports will be made publicly available on the** [**FIS web site**](http://www.st.nmfs.noaa.gov/fis/)**.** |

Review teams representing FIS, NOP, and CSP will begin reviewing and discussing the proposals immediately after the proposal submission deadline specified above. The teams will evaluate all proposals against the Evaluation Criteria listed below utilizing the weighting factors as shown. The scoring of each proposal against each criterion will be by consensus scoring of the subcommittee after individual reviews are completed. The summary results of the evaluation by each team will be presented to the PMT and NOPAT for discussion and final approval.

Principal Investigators (PI) are required to submit status reports through PIMS on a quarterly basis. Typically this will include an update on tasks and milestones identified in the proposal. In addition, the FIS Program Management Office or NOP Manager may occasionally request additional information in order to inform NOAA Fisheries Leadership, the FIS PMT, the NOPAT, and the public. A full project report is also required upon completion of the project. The PI for each project is expected to be the primary point of contact for communications and reporting. **Abstracts, successful proposals, quarterly reports, and final reports will be made publicly available on the** [**FIS web site**](http://www.st.nmfs.noaa.gov/fis/)**.**

# Areas of Interest

Funding for FIS/NOP projects is intended to help initiate efforts that emphasize the continual improvement of the quality, utility, timeliness, and integrity of the Agency’s and the Fishery Information Network’s fishery-dependent data collection, storage, and dissemination programs. All proposals should focus on fishery-dependent data collection, storage, or dissemination programs, with an emphasis on moving projects from design to implementation/operation. If applicable, proposals should demonstrate how the project will continue after FIS/NOP/CSP funding ends. Note that each area of interest indicates the approximate total funding available for that area. Funding amounts are subject to change based on the proposals received, final budget allocations, and other factors.

The National Catch Share Program (NCSP) will provide funding to support projects that directly support current catch share programs or catch share programs in development in any of the Areas of Interest listed below.

The source of funding for each project selected will be determined jointly by FIS, NOP, and CSP based on the requirements of each program. For example, funding for FIN or State projects may not be available from all three programs; NOP funds will be limited to electronic monitoring (EM) and electronic reporting (ER) projects associated with regional observer programs; CSP funds will be limited to EM and ER in catch share fisheries.

The FIS PMT and NOP NOPAT have prepared the following areas of interest for FY 2017 proposals:

* Quality Management and Improvement
* Electronic Reporting Pre-implementation and Implementation
* Electronic Monitoring Pre-implementation and Implementation
* FIN Development

## Quality Management and Improvement

In an environment continually seeking to do more with less, NOAA Fisheries strives to find creative solutions that promote high quality, accurate, defensible data that supports timely and cost-effective management and policy.   Though quality management (QM) does include data quality, its reach is much broader.  Quality management includes leadership engagement, strategic planning, the use of process improvement tools and listening to the customer. The overall goal is the successful delivery of products and services across an enterprise.

Additional information on quality management can be found in Appendix A and in the QM area of the FIS web site: (<http://www.st.nmfs.noaa.gov/data/Quality-Management/quality-management>).

A total of $350K is planned to be made available for Quality Management and Improvement projects. Approximately $150K total is planned to be made available for small projects (up to $30K each), of which those that are training events and workshops focused on QM principles, strategies, tools, or data management (improvement) plans following the NMFS Data Management Plan Procedural Directive will be given priority. Approximately $200K total is planned to be made available for larger projects. Projects in the two categories will be considered and scored separately from each other.

The intent of this Area of Interest is to promote the use of QM tools such as Value Stream Mapping, Data Flow Diagramming, Hoshin Planning, Measures & Metrics, Business Rule Documentation, and Project Tracking Applications. Proposals should, to the extent possible, emphasize the training in or use of these tools.

*All proposals should focus on fishery-dependent programs*. With this in mind, the NOAA FIS Quality Management Professional Specialty Group, which is a national team focused on expanding and improving Quality Management practices, has established the following themes for FY 2017 proposals:

* **Training events and workshops focused on QM principles, strategies, or tools -** Proposals may be submitted to fund training events and workshops focused on QM principles, strategies, or tools.
* **Identify and develop solutions to problems within the quality management system** – Proposals submitted under this theme could evaluate business and organizational processes, identify quality management issues within the organization, and outline strategies for process improvement (e.g., upgrade auditing or e-reporting applications, reduce reporting error rates). While completeness of information is a dimension of overall quality, it is not the intent of this theme to fund efforts to fill specific information gaps in regional data collections, storage, or dissemination.
* **Reconcile complementary processes and data collections -** NOAA Fisheries, Fisheries Commissions and States all collect, store and disseminate fisheries data. Processes and data collections will sometimes overlap between organizations. Proposals under this theme might identify data streams where similar data is collected and identify how those data streams can be reconciled to determine the authoritative source or consolidate data streams or they might coordinate duplicative or overlapping processes between agencies (e.g., council rule making process and agency rule making process).
* **Develop regional quality management frameworks** – A Quality Management Framework (QMF) is a specific plan and or document that identifies how an organization will involve leadership, employees and customers in assessing the quality of processes within an organization. A typical QMF plan should involve the concepts of plan, do, check, and act (PDCA). An organization should have a plan on how it will assess processes, make improvements to the processes, check if the improvements are working, and act accordingly if they are not working. A QMF aids in the successful delivery of products and services across an organization. By using quality improvement tools to develop a regional quality management framework an organization will have methods to assess the quality of processes and will be able to identify opportunities to address organizational efficiencies, data quality and customer service. A QMF also provides an interface for the integration of processes and data streams across organizations.
* **Develop a NMFS Data Management Plan** – The NMFS DMP is the officially recognized method for planning, measuring, and documenting improvements to NMFS data systems.

## Electronic Reporting Pre-implementation & Implementation

A minimum of $4.5 million total is planned to be made available for projects in the Electronic Reporting **and** Electronic Monitoring areas of interest **combined**. The distribution between the two areas of interest will be determined based on proposals received.

Electronic reporting is typically considered the collection of harvest and biological data, i.e. fishery dependent data, through electronic means (i.e., electronic fish tickets, electronic logbooks). Projects should emphasize electronic means for reporting and build on existing work, either within regions or from other areas. Projects should be usable by the agency and transferable across regions and fisheries.  Projects may include identifying needs and assessing gaps and should explain how ER will be integrated, as appropriate, with other data collections and how this will lead to implementation. Other proposals that address best practices for ER are eligible for this RFP. Proposals for implementing ER in recreational or for-hire fisheries should address how the projects align with national and regional priorities established for the Marine Recreational Information Program (MRIP). See <http://www.st.nmfs.noaa.gov/recreational-fisheries/index> for more information. Proposals must describe how the projects are consistent with Regional Electronic Technologies Implementation plans if applicable. Consideration will be given to how proposed projects support the relevant Implementation Plans (https://www.st.nmfs.noaa.gov/advanced-technology/electronic-monitoring/index). Pre-implementation projects must include a clear path to implementation, if the project outcome is successful. Electronic reporting project proposals must provide a reference report describing methodology and outcomes, and should address one or more of the following:

* **ER program evaluation.** This area represents projects evaluating existing or proposed ER programs. Proposals in this area should address the *Electronic Reporting Critical Success Factor Trigger Questions* found in Appendix B.  Proposals could include:
  + Development of criteria and/or metrics for evaluating existing and/or future programs and to support strategic planning.
  + A quantitative and qualitative (if applicable) assessment of costs, impacts, timeliness and/or efficiency of moving from paper reporting (or none) to electronic reporting.
  + Evaluation from various perspectives: fisheries managers (including states, councils and tribes), industry, database/IT, scientist, compliance, and budget.
  + An analysis of various cost-sharing approaches.

* **ER feasibility studies and phased deployments.**  This area represents feasibility studies and phased deployments of ER systems. This could include:
  + Assessing the feasibility of implementing ER in a place where it is not used.
  + Testing potential ER systems, including identifying technology options, such as installing an ER system on a sample group of vessels, processing plants. Projects should not duplicate or re-create existing products, though adapting or improving existing products is acceptable.
  + Investigating transferability/portability of ER systems such as across vessel types, fisheries, sectors, regions, etc.
  + Assessing [integration of multiple data streams](https://www.st.nmfs.noaa.gov/data/enterprise-data-management/index) (e.g. observer data, logbooks, dealer reports, EM) for resource management, including data quality and data validation.
  + Feasibility studies and phased deployments must clearly identify steps to full implementation if successful.
* **Migrating ER systems from pre-implementation/limited deployments into full operations:**  This area supports implementation projects based on previous successful ER pilot projects.
  + Based on the results of preliminary testing, move to fully implement one or more ER system(s).
  + Demonstrate improvements to fishery management processes including meeting regulatory requirements or supporting existing agency goals (including cost reduction, use of standards, data accuracy, data timelines, operational efficiency, etc.).
  + Address issues identified in a pilot that will advance effort closer to implementation.
  + Develop infrastructure and system architecture design and integration that would allow ER programs to operate.
* **ER system expansion and enhancement.**This area refers to expanding and enhancing existing ER systems and may include:
  + Providing fishing industry with appropriate hardware/software/equipment while avoiding duplication or re-creation of existing products, though adapting or improving existing products is acceptable.
  + Collaborating with private software providers to improve ER capabilities that meet regional specifications.
  + Developing clear product requirements and acceptance criteria that promote third-party product development.
  + Providing ER solution(s) to unique challenges, e.g., implementing ER on small boats.
* **ER outreach plans, communication efforts, and software training/education.**This area focuses on making ER systems more accessible and desirable to users through education, utility, and ease of use.  Examples include:
  + Improving awareness and promotes adoption of ER systems.
  + Bringing stakeholders together early in the process of developing new ER systems and identifying management and regulatory needs.
  + Sharing lessons learned with user groups and developers.
  + Demonstrating capabilities of ER to potential user groups through training sessions, seminars, etc.
  + Developing regionally/culturally tailored multimedia tools for outreach such as instructional videos, web pages, smartphone apps, etc.

## Electronic Monitoring Pre-implementation and Implementation

As noted above, a minimum of $4.5 million total is planned to be made available for projects in the Electronic Reporting **and** Electronic Monitoring areas of interest **combined**. The distribution between the two areas of interest will be determined based on proposals received.

Electronic Monitoring typically means the use of cameras, hardware, and software to collect and process fishery dependent data (i.e., harvesting or processing operations). Projects should emphasize electronic means for monitoring and may build on existing work or seek to develop new or upgraded technologies.  Projects may include identifying needs and assessing gaps and should explain how EM will be integrated with other data collections. Proposals must describe how the projects are consistent with Regional Electronic Technologies Implementation plans if applicable. Consideration will be given to how proposed projects support the relevant Implementation Plans (<https://www.st.nmfs.noaa.gov/advanced-technology/electronic-monitoring/index>). Pre-implementation projects must include a clear path to implementation, if the project outcome is successful.  Projects should not duplicate or re-create existing products, though adapting or improving existing products is acceptable. Electronic monitoring project proposals must describe methodologies and outcomes, and should address one or more of the following:

* **Image recognition technologies -** to develop and test image recognition technologies for use in compliance and catch accounting including bycatch monitoring, species identification, and length/weight calculations.
* **Conversion of imagery into database-compatible information** - to develop and test a system for converting video into data, using open source software.
* **Information storage and transfer -** to develop and test transfer and storage technologies.
* **Integrate EM and ER systems** - to develop methodologies for integrating regional EM and ER.
* **EM feasibility studies and phased deployments.**  This area represents feasibility studies and phased deployments of EM systems. This could include:
* Assessing the feasibility of implementing EM in a place where it is not used.
* Testing potential EM systems, including identifying technology options, such as installing an EM system on a sample group of vessels, processing plants.
* Investigating transferability/portability of EM systems such as across vessel types, fisheries, sectors, regions, etc.
* Assessing integration of observer data and EM for resource management, including data quality and data validation
* Feasibility studies and phased deployments must clearly identify steps to full implementation if successful.
* **Migrating EM systems from pre-implementation/limited deployments into full operations:**  This area supports implementation projects based on previous successful EM pilot projects.
* Based on the results of preliminary testing, move past the planning process to fully implement one or more EM system(s).
* Demonstrate improvements to fishery management processes including meeting regulatory requirements or supporting existing agency goals (including cost reduction, use of standards, data accuracy, data timelines, operational efficiency, etc).
* Address issues identified in a pilot that will advance effort closer to implementation.
* Develop infrastructure and system architecture design and integration that would allow EM programs to operate.

Proposals in these areas should consider the *Electronic Monitoring Area of Interest* found in Appendix C.

## FIN Development

Approximately $300K total is planned to be made available to support projects not covered elsewhere in this RFP with regional and national benefit related to the FIN programs, focused on implementing recommendations of the 2013 FIN Review. (See <http://www.st.nmfs.noaa.gov/Assets/science_program/Review%20of%20the%20FINs%20-%20Compiled%20Results.pdf>). This includes national collaboration and coordination among FIN programs, strategic planning, outreach, and developing a review and improvement process.

# Proposal Format and Content

## Proposal Template

All proposals must be submitted through the Fisheries Program Information Management System (PIMS) (<https://www.st.nmfs.noaa.gov/pims/>). All fields must be completely filled out in accordance with the instructions provided. Proposals must also clearly identify the relevant Area of Interest, as well as the sub-area category. Links to other documents or websites may be included in the proposal for background information; however all information relevant to the evaluation criteria and themes must be provided in the body of the proposal.

## Project Funding

Proposed projects should provide detailed information regarding the funding request as well as the plan for completing any necessary procurement actions. All submissions must be reviewed and approved by the submitting organization leadership. All funds must be obligated within the current fiscal year. All proposals must include funding implementation plans that outline how the funds are to be transferred to the proposal sponsors and participants, including main financial points of contact. All milestones must be reached and all deliverables must be achieved within one calendar year of the award unless otherwise specified in the project proposal. Funding to State partners will be provided through the Interstate Commissions**. Note that funds cannot be distributed until the funding programs receive their budget allocations, and transfers to FIN programs and State partners through the Interstate Commissions can take several additional months due to the Federal grants process.** State partners should factor Commission overhead rates into their project budgets.

## Multi-Year Projects

FIS and NOP do fund some multi-year projects, and thus will consider funding continuing development costs. However, the decision to continue funding in subsequent years will be made each year through the RFP process and will depend on project performance and the availability of funds. The full plan with projected costs and objectives for subsequent years should be detailed in the proposal. FIS will not fund operations and maintenance costs indefinitely, and projects must provide a plan for covering ongoing costs once development is complete. Proposals that identify an entity that is committed to funding recurring costs will receive a more favorable rating in that evaluation criteria. Please contact the PMO if you have any questions.

# Evaluation Criteria

Evaluation criteria as described below will be used to rank FY 2017 proposals. The criteria have been assigned relative weights that reflect the importance of each criterion. The evaluation criteria (and the relative weight of each criterion) are as follows:

**Matching with FIS/NOP/CSP Goals/Objectives (25)**: Does the project promote the advancement of the priorities of FIS or NOP (and identify how)? Is the project an approved on-going project or does it align with the identified areas of interest? Does the project improve the visibility of FIS/NOP/CSP? Does the project have senior leadership support? Is submission of metadata to InPort part of the plan? How accessible will the data be to the public (if appropriate) and within NOAA? If an electronic reporting or monitoring proposal, how does the proposal address any NMFS/Council Regional Electronic Technology Implementation Plan (<https://www.st.nmfs.noaa.gov/advanced-technology/electronic-monitoring/index> )? How does the proposal address documented regional or national priorities?

**Scope (15)**: How wide of an impact will the project have? Is the project cross-regional or transportable? Does the project involve nation-wide and/or coast-wide collaboration and impact? If so, is there documentation of interest from other partners? Is there a plan for transferring knowledge and lessons learned? How widely will the results be shared/disseminated? Are similar projects already underway in your Region? Does the proposal reflect a literature review of similar projects?

**Timeliness (10)**: When will the impact of the project be felt across the intended scope of the project? Are the timeline and milestones appropriate and realistic? Does the project have the potential to provide easy success? Is there a clear description of the project end-point? Does the project clearly indicate whether it is a one-year project or a multi-year project?

**Cost/Benefit (10)**: Is the proposed cost of the work reasonable considering the expected benefits that will result? Does the project reduce the current cost of collecting or disseminating high-quality data? Does the project involve on-going costs for operation and maintenance or does the proposal provide information about how the project could be supported in the long-term?

**Quality of Proposal (10)**: Is the proposal completed in the correct format? Does the proposal describe the goals and objectives in a realistic manner? Does the proposal provide realistic and complete budgets for the proposed year and future years? Does the proposal include detailed milestones and a timeline for achieving success? Does the proposal demonstrate consensus about desired outcomes among partners who are expected to benefit?

**Leverage (10)**: Does the project take advantage of existing FIS/NOP activities? Does the project use FIS tools (InPort, FOSS)? Are matching funds, personnel resources, or equipment proposed? Does the project involve resource-sharing with other programs, regions, FINs, or states? Will this project be submitted to other RFP processes? What processes?

**Issue Resolution (10)**: Does the project address the resolution of a known issue regarding the accuracy, completeness, and timeliness of fisheries-dependent data? If this is a pilot project, is it redundant?

**Level of Risk (10)**: Is the level of internal or external risk too high? Are there technological or political barriers that will prevent the project from being a success? If there is reliance on outside participation, will that present a barrier or is it appropriate and realistic? Is the project highly innovative and thus the level of risk appropriate given the potential gains?

# Reporting

## Post-Selection

The PIs of selected proposals may be asked to provide more information or respond to suggested improvements. Additionally, revised project timelines may be required upon the distribution of funds.

## Status Reports

The PI for a funded project is expected to be the primary point of contact for providing all requested status report information. Each PI must provide a project plan, quarterly reports, and a final report. Upon completion of the projects, some PIs will be asked to present their projects and outcomes during the next annual PMT or NOPAT meetings. This is intended to be a forum for sharing information and lessons learned among FIS and NOP partners. When applicable, well-documented source code must be provided to FIS or NOP following project completion. Compliance with these requirements is necessary in order to be eligible for future FIS/NOP funding. **All reports will be made publicly available on the** [**FIS web site**](http://www.st.nmfs.noaa.gov/fis/)**.**

## Written Final Report

Each PI must provide the FIS PMO, NOP Manager, or CSP manager, as directed, with a written final report detailing the accomplishments for the completed project. This will be due one year after the funding is awarded. External links to products, references, and related information may be included in the report. Electronic copies of all presentation materials, documentation, and the final report must be submitted through PIMS. The FIS PMO and NOP Program Manager routinely review all aspects of funded proposals and may request additional information during the performance of a project. Occasionally requests are made for anecdotal descriptions of the impact of successful projects in order to keep NOAA management and the public better informed. Investigators who do not provide the final written report will not receive future funding.

# Data Documentation

Proposals must comply with the NOAA Fisheries Data and Information Management Policy. The NOAA Fisheries Data Documentation Directive requires that metadata for all data collected or produced be entered and published in the NOAA Fisheries Data Catalog and Metadata Repository, InPort (https://inport.nmfs.noaa.gov/). **Failure to comply with this policy may make the principal investigator ineligible for the next RFP cycle**. Contact the NOAA Fisheries Information Management Coordinator (IMC) and the InPort Librarian in your respective office for details about these requirements.

# Project Proposals Review

Proposals will be reviewed by members of the PMT, NOPAT, and CSP with input from other subject-matter experts as needed.

# Appendix A: Information Quality Area of Interest

To further its mission, the FIS program has created the Quality Management Professional Specialty Group (PSG) and has set aside funding in FY 2017 that can be applied for by regional programs to support projects and/or training related to the improvement of quality management systems or the improved data quality of a particular data collection. Quality management systems are those QM principals, strategies, and tools that agencies and partners use to address the quality of their systems and processes which in turn create higher quality products (e.g. data, reports, etc.) which meet the needs of internal and external customers. Examples of QM principles, strategies, and tools can be found on the following page in the *Visualizing Total Quality Management* graphic.

Collaboration among regions and FINs is encouraged and will be considered during the evaluation process and when making a final determination on the amount of an award. In general, **proposals in the “small project” category should not exceed $30K.** However proposals from multiple regions and/or FINs are encouraged and may be combined and submitted for a larger amount, up to $30K per partner. Proposals should clearly indicate how the proposed work will benefit the participants and how the work will be accomplished. Note that recurring costs related to information quality projects will not be funded; the requestor’s organization is responsible for these costs.

## Visualizing Total Quality Management

Integration of all organizational assets to meet customers’ needs by building in *quality* processes that produce quality products and services. *Quality* is defined by the principles & strategies deployed by the organization along with standards, measurements and documentation of all processes, systems & data.

**Quality Management Principles**

**(Does the organization value quality?)**

Examples

* Leadership Involved
* Customer Focus
* Involvement of all people in organization
* Continual improvement
* Factual approach to decision making
* Process Approach
* System Approach to Management

**QM Principles Drive Strategies**

**Quality Improvement Strategies**

**(Does the organization have a plan in place to produce quality?)**

Examples

* Training on Tools and Principles
* Documentation of all processes and data
* Standards exist
* Measurement system in place

**QI Strategies Drive Tools**

**Quality Products & Services that meet customer needs**

Customer Examples

* Councils
* Regions, Science Centers
* Scientist in your Division
* Public
* Congress
* FINS

Product & Services Examples

* Data
* Reports
* Computer Applications
* Training

**Quality Improvement Tools**

**(Does the organization have tools & techniques in place to assure quality?)**

Examples

* How we will document data (i.e. InPort)
* How we will document processes
* Hoshin Planning Tools
* Measure and Metric Tools
* Value Stream Mapping (VSM)

**Principles, Strategies & Tools Drive Quality Outcomes**

# Appendix B: Electronic Reporting Critical Success Factor Trigger Questions

The following trigger questions are intended to get fishery managers to think about and evaluate the readiness of their candidate fishery for electronic reporting. These questions are not intended to assure success of any program, but can guide the manager through steps and thought processes in the beginning of implementing ER so that major points are not missed.

|  |  |
| --- | --- |
|  | **List of trigger questions** |
| 1 | Are local record keeping or reporting regulations in place to support, enable, or require ER? |
| 2 | Do the drivers exist to foster ER? |
| 3 | Does the fishery have the characteristics conducive to ER? |
| 4 | Are you designing methods for collaboration with all stakeholders over the program lifecycle? |
| 5 | Will the program provide sufficient incentives to industry to report electronically? |
| 6 | Do you foster a culture of continuity in funding, staff, and infrastructure? |
| 7 | Have you done a proof of concept-feasibility study first to learn what can and can’t be done? |
| 8 | Can the program be designed to allow data access by stakeholders? |
| 9 | Will the program provide a variety of methods to electronically enter and submit data? |
| 10 | Will the program provide for immediate validation of data and business rules? |
| 11 | Will the database have back end integrity providing for minimum errors in data? |
| 12 | Is there an ongoing commitment to continuous training and support and maintenance? |
| 13 | Is there – or will you develop – a program to monitor success of the program? |

# Appendix C: Electronic Monitoring Area of Interest

The goal of fisheries monitoring is to provide cost-effective solutions for collecting fishery dependent data which meets the needs of a range of scientific, management, and compliance objectives. Based on the identified objectives, the design and implementation of any fishery monitoring program should consider the following:

* Timeliness of data delivery (e.g., in terms of GPS/VMS polling interval; transfer interval of video records or e-logbook records);
* Quality of data (e.g., in terms of accuracy, statistical variation and precision of estimates);
* Resolution of data (e.g., in terms of time/polling interval; geospatial scale; pixels/frame rates for images; Details of spatial, temporal and gear characteristics associated with catch to be collected for use in stock assessments, ecosystem science and socioeconomic purposes);
* Capability for integrating and reconciling data from different sources (e.g., inter-operability standards; formats/coding conventions);
* Accessibility of data and statistical results to the various customers (e.g., frequency and timeliness of data availability including access/permissions by submitters, managers, other stakeholders, public, etc.);
* Data needs of customers, such that EM systems are designed to optimize timing and content for the documented needs;
* Industry-shared or borne costs of operation and maintenance (e.g., hardware and software purchase and lease/license agreements; communication charges; training and support contracts (if any)); and
* Flexibility to adapt to changing requirements (e.g., interactions with non-target and protected species, changes in annual total allowable catches).