FACILITY SHARED SERVICES - IMPLEMENTATION GUIDE

E-Enterprise Facility Team

Version 0.4 March 2018

Table of Contents

Revision Log

Date	Version No.	Description	Author	Reviewers
February 7, 2018	0.1	Preliminary working draft of Facility Shared Services Implementation Guide	Kimberly Hoke, CGI Federal	Susan Joan Smiley, EPA Scott Fontenot, EPA Ron Evans, EPA Josh Kalfas, OK DEQ
February 23, 2018	0.2	Facility Shared Services Implementation Guide working draft with comments incorporated and updated information	Kimberly Hoke, CGI Federal	Susan Joan Smiley, EPA Scott Fontenot, EPA Ron Evans, EPA Josh Kalfas, OK DEQ Nikki Spaeth, CGI Federal
March 14, 2018	0.3	Facility Shared Services Implementation Guide working draft with additional comments and new information incorporated	Kimberly Hoke, CGI Federal	
March 15, 2018	0.4	Final Draft	Kimberly Hoke, CGI Federal	Susan Joan Smiley, EPA Ron Evans, EPA Josh Kalfas, OK DEQ Kien Harris, RIDEM Pam Galli, RIDEM

1.0 Introduction

This Implementation Guide provides information to partners (co-regulator states, tribes, and local governments) who wish to implement shared facility services with the U.S. Environmental Protection Agency (EPA). Web services were developed as part of the E-Enterprise Facility Integrated Project Team (Facility Team) Phase II State Master Data Management (MDM) Pilot. The Facility Team expects that this document will evolve as additional partners implement shared facility services and as we apply lessons learned and updates to later versions of this document.

1.1 State MDM Pilot

During Phase II of the State MDM Pilot, EPA partnered with the Rhode Island Department of Environmental Management (RIDEM) to implement shared facility services that enable real-time sharing of facility information. RIDEM has a state Master Data Management (MDM) application that supports facility integration across their agency. During the Pilot, EPA and RIDEM collaborated to develop three shared web services to enable joint management of facility data. For details on the work completed in the pilot, please refer to the Downstream Evaluation and Lessons Learned document, located on SharePoint at this link.

Although the services were first developed in collaboration with a partner that has a robust MDM program, having an MDM system is not a prerequisite for implementation of all of the available services. For example, any partner can implement the Query Facility Registry Service (FRS) service to enhance search capabilities within a public search page or within a partner application.

Additionally, future versions of the services, or new facility shared services, may provide partners without an MDM system the ability to leverage an application programming interface (API) and incorporate logic to refresh program data. The Facility Team expects to broaden services capabilities and functions through discussion and implementation with a variety of partners.

2.0 Overview of Facility Web Services

2.1 Shared Facility Services Benefits

Implementing shared services enables partners to share data in real-time, which can improve environmental outcomes by providing immediate access to the most up-to-date information in both a partner system and in EPA's Facility Registry Service (FRS). For example, maintaining accurate linkages between facility data can aid in enforcement and compliance by ensuring all interested parties are aware of facility name or owner changes. Use of shared facility services improves data quality across the enterprise, reduces inefficiency for EPA and partners, and ensures that the most up to date information is available to partners and EPA staff, members of the regulated community, and the public.

2.2 Services/API Description

The suite of Shared Facility Services includes two submit services and one query service.

- Submit to FRS – enables real-time sharing of facility information between a partner system and EPA's FRS. This enables an update in FRS upon the addition of a new record or edit of an existing record in a partner's system.
- Submit to Partner – enables real-time sharing of facility information between FRS and a partner's system when an edit is made to the record in FRS.
- Query FRS – enables a partner to perform a real-time call of FRS so a partner can incorporate FRS data directly into their systems or make FRS data available to the public via their system.

This can enhance data quality in a partner system and help to more fully answer the "What's Near Me?" question that many partners address through web queries of their applications. This enables presentation of a more comprehensive view of facilities of environmental interest across state, local, tribal, and federal regulatory programs.

2.3 Services Available In Non-Production Environment

The services are currently only available in a non-production environment. This is to give the Facility Team, EPA, and future partners the opportunity to test how the services will work with additional partners before making them available in production. FRS data provided via the Query FRS and Submit to Partner services come from the test version of FRS data, and any information provided by a partner through Submit to FRS will only be applied to test FRS data.

After the services are available in production, we will continue to implement services in this non-production environment for testing and evaluation with new partners. After all parties have verified that services are producing appropriate results, both EPA and partners will promote them to production.

2.4 Services Description and Documentation

Relevant services documentation can be found at: https://ofmext.epa.gov/facilityiptwebservices. This link has the schema to exchange data, definitions, the ability to demonstrate the services and other important technical documentation. The web service and deserialization code developed as part of the State MDM Pilot will be available to future partners. The code used for the Submit to FRS and Query FRS services is in Java and the code used in the Submit to Partner service is in C#.

A Service Level Commitment (SLC) will be available when the services are moved into production and discoverable by partners. A draft template drafted by the E-Enterprise Interoperability and Operations Team showing what an SLC might contain is provided in Appendix A.

2.4.1 Submit to FRS

When a partner system adds a new facility or makes a change to an existing facility, that system will generate a file and submit it to the Submit to FRS service. FRS will process the file and apply the new or updated record to FRS. The edit is applied to both the FRS facility record and the FRS partner facility record. Figure 2-1 illustrates how changes are initiated and applied.
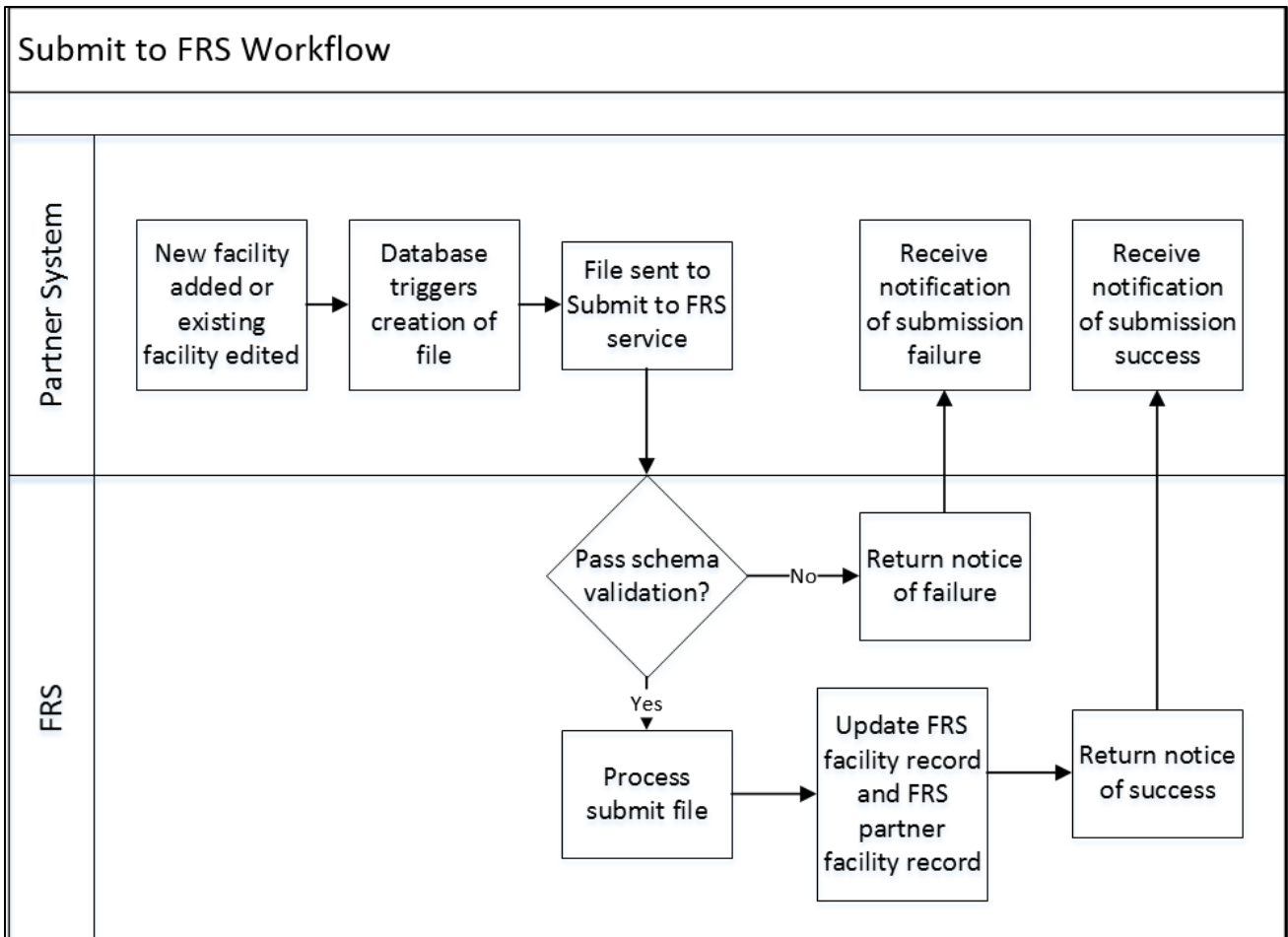
FIGURE 2-1: SUBMIT TO FRS WORKFLOW

2.4.2 Submit to Partner

When FRS makes a change to an existing FRS facility record that is linked to an FRS partner facility record, FRS will generate a file and submit it to the Submit to Partner service. The partner will process the file and apply the new or updated record to their system. Figure 2-2 illustrates this workflow.
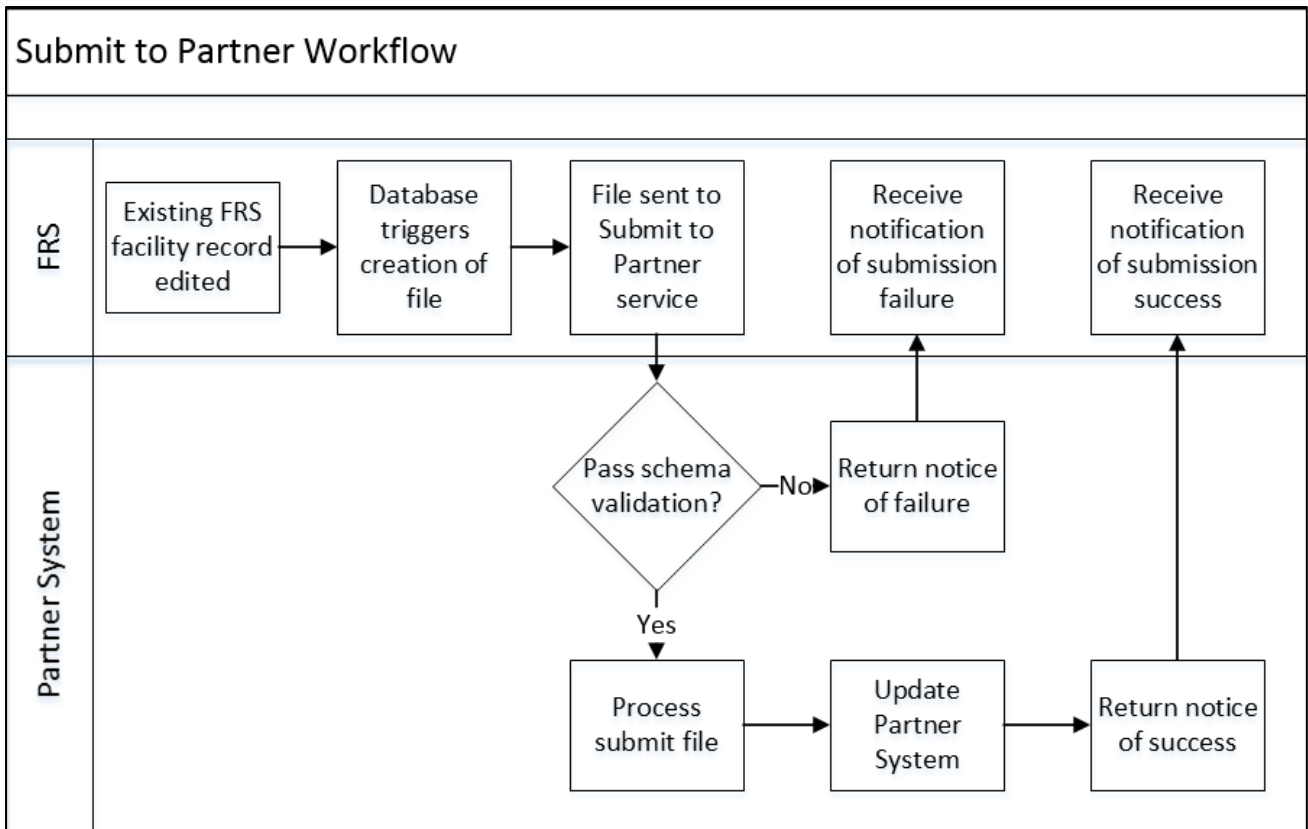
Submit to Partner Workflow

FRS:
- Existing FRS facility record edited → Database triggers creation of file → File sent to Submit to Partner service
- Receive notification of submission failure
- Receive notification of submission success

Partner System:
- Pass schema validation? —No→ Return notice of failure
- Yes ↓ Process submit file → Update Partner System → Return notice of success

FIGURE 2-2: SUBMIT TO PARTNER WORKFLOW

2.4.2 Query FRS

The Query FRS service will enable a partner to retrieve data in FRS and provide that to their system or a User Interface. The workflows illustrated below in Figures 2-3 and 2-4 are examples of how this may be implemented within partner systems. The presentation of the data on a public website or within internal partner systems will be determined by the partner. Partners may choose to incorporate FRS search results into an existing search results page that queries a partner system or implement the FRS query from within a partner application for use by partner staff. The extent of development a partner elects to perform within a web application for user interface is at each partner's discretion.
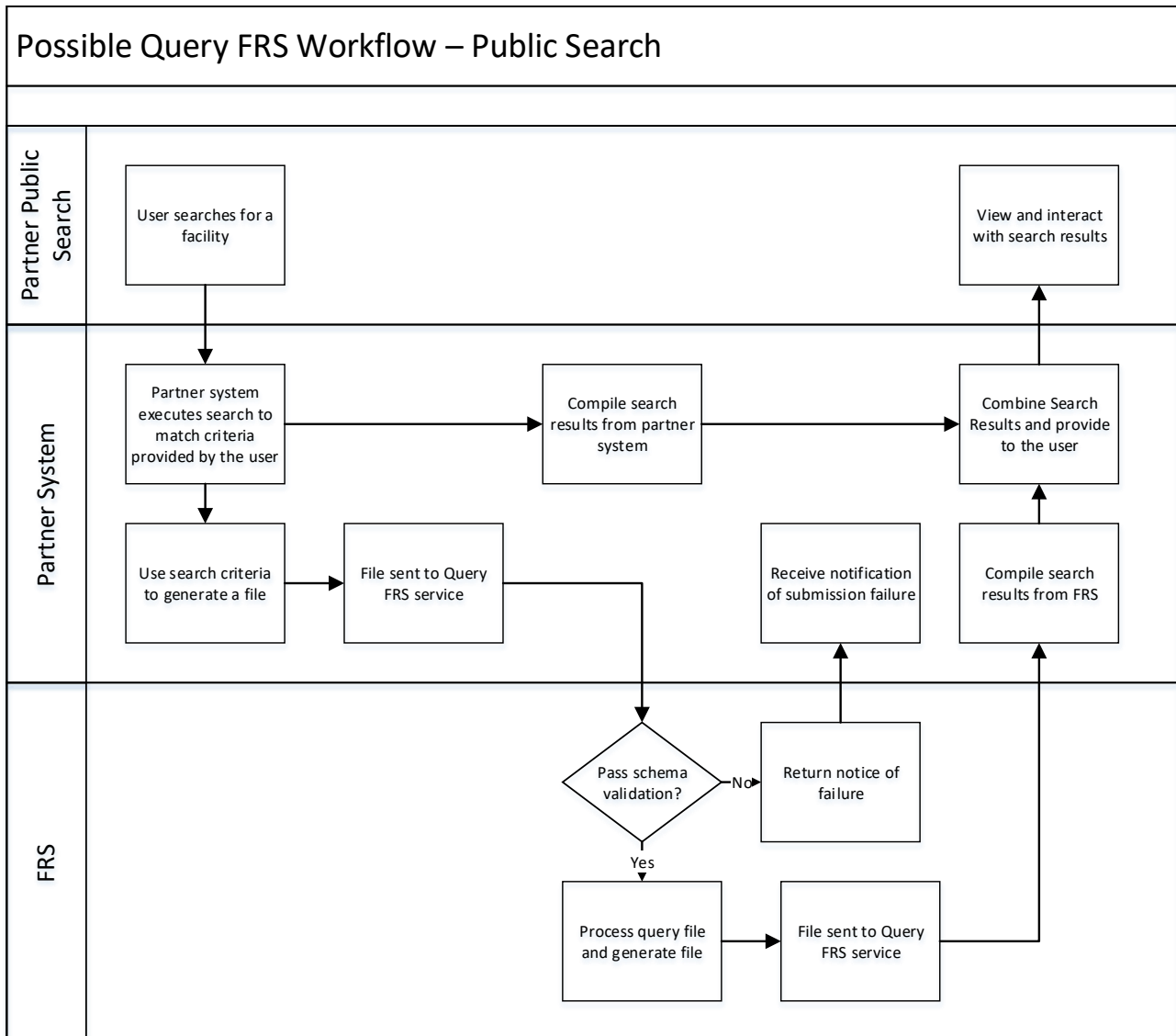
Possible Query FRS Workflow – Public Search

Partner Public Search

- User searches for a facility
- View and interact with search results

Partner System

- Partner system executes search to match criteria provided by the user
- Use search criteria to generate a file
- File sent to Query FRS service
- Compile search results from partner system
- Receive notification of submission failure
- Combine Search Results and provide to the user
- Compile search results from FRS

FRS

- Pass schema validation?
  - No → Return notice of failure
  - Yes → Process query file and generate file → File sent to Query FRS service

FIGURE 2-3: POTENTIAL WORKFLOW USING THE QUERY FRS SERVICE IN A PARTNER'S PUBLIC FACILITY SEARCH.

Possible Query FRS Workflow – Partner System

Partner System

- User in partner system executes a search within partner system before adding a new facility
- Use search criteria to generate file
- File sent to Query FRS service
- Compile search results from partner system
- Compile search results from FRS
- Combine Search Results and Provide to the user
- User selects an FRS facility provided in the search results to indicate the FRS facility matches the one they need to add
- System defaults facility data (name, address, others) to match FRS data, if desired.
- Receive notification of submission failure

FRS

- Pass schema validation?
- No → Return notice of failure
- Yes → Process query file and generate file
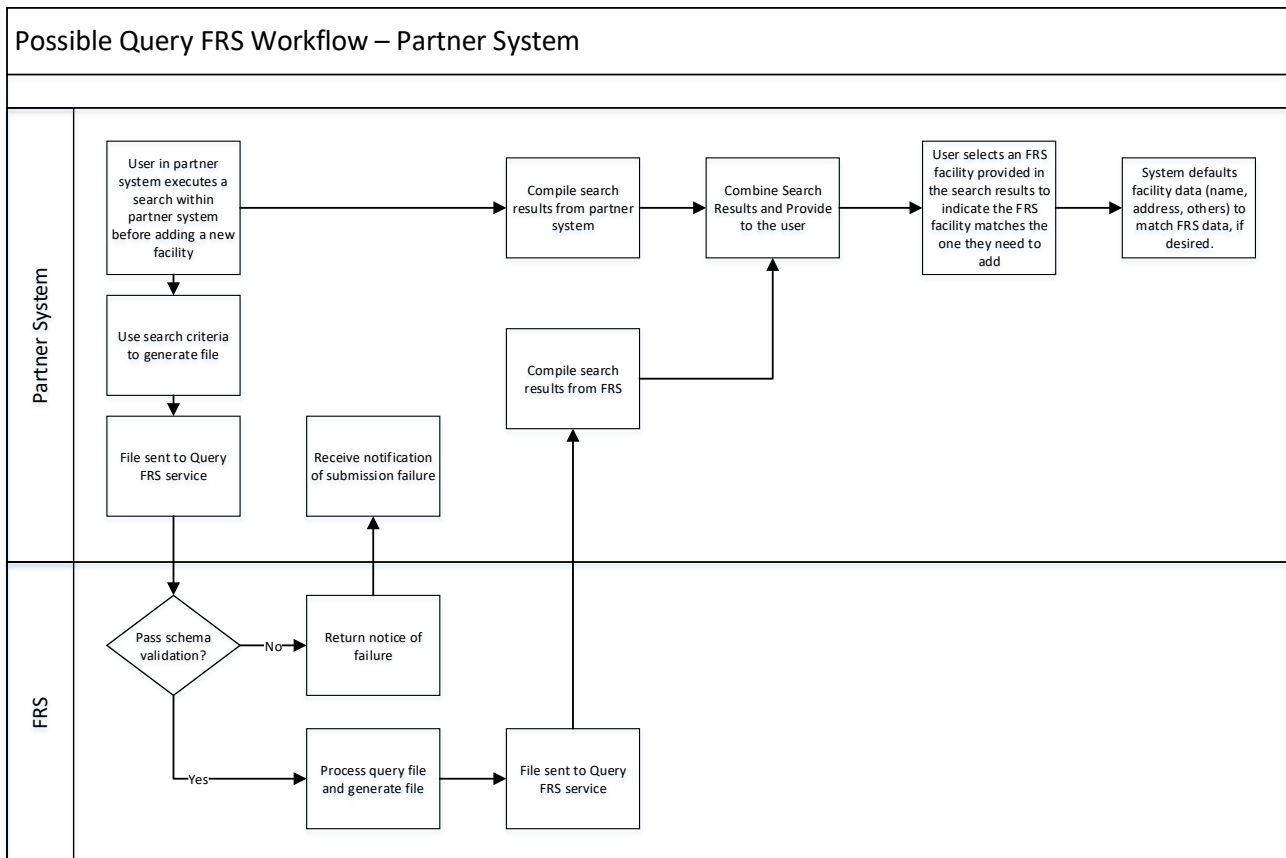- File sent to Query FRS service

FIGURE 2-4: POTENTIAL WORKFLOW USING QUERY SERVICES IN PARTNER'S SYSTEM.

3.0 Planning Considerations for Implementing Services

Each partner's systems and processes are different so their specific implementations may vary. While the goal is for the services to be as standardized as possible, there are sets of decisions and tasks that partners will need to make or perform to implement the services. The following sections provide program and technical questions/considerations to aid partners as they determine how to implement services to best meet their needs. We expect that the suite of services will expand over time and that the services currently available will expand in capability.

When planning to utilize shared facility services, partners first need to determine which services they will implement. While services can exist in isolation, the Facility Team recommends that partners take advantage of each of the three available services. In particular, use of both submit services will enable real-time data sharing between partners, whereas implementing a single submit service will only provide data in one direction.

After a partner has determined which service(s) to implement, there are additional programmatic and technical considerations. By answering these questions, partners will be more prepared to perform the implementation steps outlined later in this document.

This section outlines considerations experienced during the implementation of the pilot services during Phase II for the Facility Team. This document will continue to be updated based on further pilot testing with other partners and as issues arise, lessons are learned, and additional considerations are encountered. The considerations presented here are intended to provide potential partners with an understanding of the decisions that they may need to make before implementing services.

Considerations regarding services availability, and partner and EPA responsibilities will be addressed through the appropriate use of Service Level Agreements (SLAs) or Service Level Commitments (SLCs) between EPA and partner agencies as services are being prepared for production deployment. A draft template drafted by the E-Enterprise Interoperability and Operations Team showing what an SLC might contain is provided in Appendix A.

3.1 Programmatic Considerations

3.1.1 Submit to FRS

The Submit to FRS service enables a partner to submit real-time updates of facility data to EPA's FRS system.

1. Will the partner system provide information on all facilities within their system?

Considerations	A Partner May Decide They Will…	Suggested Approach
Many partners maintain data on state-only or other facilities not under EPA jurisdiction.	Not provide information on state-only facilities.	Determine how to identify state-only facilities within the partner system
Many partners track facilities through an administrative process (e.g., application fee and processing) before that facility becomes "active" or regulated.	Not provide information unless a facility is "active."	Identify how to determine a facility's status within the partner system.

2. Will the partner system submit a change to any data field/attribute?

Considerations	A Partner May Decide They Will…	Suggested Approach
Partners may elect to not submit updates to FRS when fields that are not part of the service are updated.	Provide updates on certain fields.	Identify the fields that will trigger an update to FRS.
Partners may decide that only certain types of changes will warrant an update to FRS.	Provide updates on certain fields in certain circumstances.	Identify the fields and rules that will determine when to send an update to FRS. For example, a partner may not store all of the flags that are available in the service (e.g., small business indicator) and may elect not to include them in their submission.

3. If the partner system has the ability to merge duplicate facility records (i.e., if it is a master data management (MDM) system), will the partner submit those merges?

Considerations	A Partner May Decide They Will…	Suggested Approach

	Submit duplicate facility information.	Utilize the capability in the Submit to FRS service to identify duplicate records.
The recommended approach is to submit merges of duplicate records if the partner system has that capability.	Not to submit duplicate facility information. This applies if the partner system does not have this capability.	Do not utilize the corresponding fields in the Submit to FRS service.

4. If the partner system has the ability to merge duplicate facility records, does it have the capability to un-merge (or de-link) non-duplicate facility records?

Considerations	A Partner May Decide They Will…	Suggested Approach
The recommended approach is to submit de-duplicate information if the partner system has that capability.	Submit de-duplication information.	Utilize the capability in the Submit to FRS service to de-duplicate records.
	Not to submit de-duplication facility information. This applies if the partner system does not have this capability.	Do not utilize the corresponding fields in the Submit to FRS service.

3.1.2 Submit to Partner

The Submit to Partner service enables changes to the FRS facility record to be submitted to a partner system.

1. What will the partner system do with updates from FRS?

Considerations	A Partner May Decide They Will…	Suggested Approach
Some partners may want updates from FRS to go into a "queue" for manual review by staff; other partners may elect to apply the updates directly to the data in the partner system.	Apply all updates to data in their system.	Implement logic to apply updates directly to the data tables.
	Apply updates to a "queue" so they can be reviewed manually before being applied to the partner system data.	Determine where the "queue" will reside, who will review the potential changes and the business process for "accepting" or "rejecting" a change.

3.1.3 Query FRS
The Query FRS service enables a real-time query of FRS.

1. How will the query be initiated by the partner?

Considerations	A Partner May Decide They Will…	Suggested Approach
Will the query be initiated by a search on a partner's public web site, or within a partner application?	Incorporate a call to the Query FRS service as part of a public web site.	Identify the UI changes that will be needed (if any). Determine which fields will be passed to the query.
	Incorporate a call to the Query FRS service as part of a partner system or application.	Identify the UI changes that will be needed (if any). Determine which fields will be passed to the query.

2. How will the query results be used by the partner?

Considerations	A Partner May Decide They Will…	Suggested Approach
Will the query results be returned within a public web page or partner application?	Incorporate results on a public web page.	Identify the UI changes that will be needed (if any). Identify whether to add disclaimer or explanatory language to the UI. Determine which fields will be displayed and how it will be rendered.
	Incorporate results in a partner system/application.	Identify the UI changes that will be needed (if any). Identify whether to add disclaimer or explanatory language to the UI. Determine which fields will be passed to the query.

3.2 Technical Considerations
There are a number of considerations that will involve the input of both programmatic and IT staff from the partner agency. The questions in this section are intended to provide future partners an idea of the kinds of considerations that will be discussed with technical staff.

1. Security

    a. What security does the partner have in place to allow FRS to make calls? The State MDM Pilot with Rhode Island utilized NAAS for authentication purposes. If another approach is needed, it will be discussed during the Configuration Phase, discussed below.

b. Does the partner have any firewall rules that EPA needs to be aware of in order for FRS to submit data to the partner system?

2. Data

    a. For the services that the partner will implement, does the partner system contain all fields required by the services? If not, can any missing fields be derived from existing data?

    b. Does the partner want to exchange data that is not currently included in the services?

3. Technology

    a. Does the partner have any technology or security constraints that could change how services are implemented? For example, are they operating in a Cloud or do they have technology that is not able to easily incorporate services?

4.0 Implementing Shared Facility Services - Configuration

Partners will implement shared facility services through the Configuration process. This process is illustrated in Figure 4-1.

Exchange Information
- EPA provides partner with details on FRS so partners have an understanding of how FRS works and will apply their updates within FRS
- Partners provide EPA with details on their application/system so that EPA understands how the partner system works and how the partner will apply FRS updates within the partner system
- EPA and the partner collaborate to review the existing shared faciity services to document partner needs and determine if any data gaps exist and to answer any questions the partner may have

Prepare Data and Security
- Partner provides initial data set to FRS so FRS can incoporate the data and link it to an FRS facility record, or create a new FRS facility record.
- FRS provides partner corresponging FRS IDs for partner data so they can incorporate them into their system
- Partner confirms or obtains the appropriate security accounts to enable data subission

Implement Services
- Partner updates system logic in their application to generate a submission file to FRS, process a submission file from FRS and/or to call and receive information from the Query FRS service
- EPA updates FRS business logic to process and integrate partner information

Evaluate Services
- Partner and EPA test the servics to ensure they meet partner needs
- EPA evaluates the services for impacts to downstream users of FRS data
- Partner and EPA determine if any adjustments are needed
- EPA updates project documentation and Implementation Guide, with input from the partner

FIGURE 4-1: SHARED FACILITY SERVICES CONFIGURATION PROCESS

4.1 Exchange Information

During this Configuration phase, EPA and the partner will provide each other details on FRS and the partner system. This information will include an overview of security, data, and technology as well as programmatic information like business rules and data governance processes.

EPA and the partner will also examine the current version of the services. The purpose of this step is to determine whether or not the partner system contains the fields required by the service and to determine how to expand the services to include additional data exchange elements. The pilot had a limited number of fields in the data exchange and the Facility Team anticipates that adoption by future pilot partners and in production will include a more robust set of data elements. EPA and the partner will also evaluate whether there are discrepancies in data type or field length for data fields in the services.

The collaboration in the Exchange Information Phase will be conducted via conference call. The Facility Team expects that this phase can be completed in three 90-minute calls.

4.2 Prepare Data and Security

As a prerequisite to putting services into production, FRS will have a data set from the partner system before shared facility services are implemented. Having this data set ensures that FRS has processed partner data and has corresponding IDs to provide back to the partner for them to incorporate into their data system. If a partner routinely supplies data to FRS (e.g., through FACID), then an updated data set may not be needed. If an updated (or initial) data set is needed, EPA will assist the partner in utilizing FACID to provide the data. If use of FACID is impractical, EPA will work with the partner to determine another solution. Once EPA receives the dataset, they will incorporate the data into FRS and provide the corresponding FRS IDs back to the partner.

EPA will also work with the partner to ensure they have established the appropriate security accounts and mechanisms in order to use the shared facility services.

- The current version of the services uses NAAS authentication by validating the NAAS username and password. This is the same authentication used for FACID. Therefore, if a partner has provided data via FACID, there may be little to nothing they need to do in this step.

The partner will provide EPA their Internet Protocol address range so EPA can add it to an IP address whitelist that is part of the services. The partner will also provide EPA any security information EPA may need in order to meet the partner's security requirements to call the Partner Shared Service.

- During the State MDM Pilot, Rhode Island, used NAAS authentication to allow FRS to submit data to the Partner Submit Service.
- If a partner elects to use NAAS, EPA can provide assistance.
- If a partner elects to use a different authentication mechanism for their own services (Partner Submit), they might need to assign FRS the ability to call it.

The Facility Team expects that the Prepare Data and Security Phase can occur via email and one to two 60-minute conference calls.

The Facility Team expects that the method of authentication will expand over time as other mechanisms become more widely available across E-Enterprise. As that occurs, this document will be updated.

4.3 Implement Services

During this phase, EPA and the partner will perform development activities to implement the services and business logic updates to FRS and the partner system.

4.3.1 Submit to FRS

The following table illustrates the actions that EPA and a partner will take to implement the Submit to FRS service. When implemented, changes made in a partner system will be reflected in FRS in real-time. Changes will be applied to the FRS facility record and the FRS partner facility record.

EPA Actions	Partner Actions
• Update business logic to process partner updates and apply them to the FRS facility record. • Make changes to the services, if needed, based on partner needs/requirements.	• Develop logic to generate a file and provide it to the Submit to FRS service upon a facility add or edit.

4.3.2 Submit to Partner

The following table illustrates the actions that EPA and a partner will take to implement the Submit to Partner service. When implemented, changes made in FRS to the FRS facility record will be reflected in the partner system.

EPA Actions	Partner Actions
• Update FRS to call the Submit to Partner service upon an update to an FRS facility record of interest to the partner.	• Develop partner version of the Submit to Partner service. • Develop logic to incorporate FRS data into partner system. • Implement any UI changes (if needed). • Implement any business process changes (if needed).

4.3.3 Query FRS

The following table illustrates the actions that EPA and a partner will take to implement the Query FRS service. Once implemented, a partner can submit a query to FRS and receive real-time results.

EPA Actions	Partner Actions
Make changes to the services, if needed, based on partner needs/requirements.	• Develop logic to manage query results. • Implement any UI changes (if needed). • Implement any business process changes (if needed).

4.3.4 Partner Resource Commitments

It is difficult to estimate the amount of time that a partner will need for this phase due to differences between partner systems and unknowns surrounding which service(s) will be implemented and whether changes are needed to the services. As a means of comparison, the State MDM Pilot was implemented over a twelve (12) week period from December 2017 to February 2018 in collaboration with the Rhode Island Department of Environmental Management (RIDEM). However, the Facility Team expects that future implementations will be shorter because we do not anticipate significant changes will be needed to the services. The services implemented in the pilot are the first facility services building toward integration. As the Facility Team works with more partners, we will learn more about the complexities of integration.

RIDEM completed all of the actions listed in the tables above during this twelve (12) week period. This project was the first time that their team developed and implemented services within their application. If future partners have broader experience with services, then the time needed for this phase will decrease. RIDEM allocated four staff to this effort over the development period. The roles and approximate allocation for RIDEM participants are provided below. All RIDEM team members attended all meetings and provided input, reviewed meeting materials, and provided comment on project documents.

- RIDEM Agency Information Technology Director was dedicated approximately 1% to this project over the development phase. The RIDEM IT Director provided guidance and input over the overall implementation of pilot services.
- RIDEM State Project Manager was dedicated approximately 10% to this project over the development phase. The RIDEM State Project Manager provided programmatic input and coordination throughout this period, acting as the functional (non-technical) lead for RIDEM and provided RIDEM technical staff with programmatic input and guidance.
- RIDEM Programmer and Lead Analyst was dedicated approximately 65% to this project over the development phase. The RIDEM Programmer and Analyst Lead developed and unit tested the Submit to Partner Service and performed development and unit testing on the RIDEM MDM system to enable database triggers and logic changes to call the Submit to FRS service. The RIDEM Programmer and Lead Analyst also tested the Submit to FRS and obtained screenshots necessary for full end-to-end testing with EPA.
- RIDEM Web Programmer was dedicated approximately 20% to this project over the development phase. The RIDEM Web Programmer developed and tested the UI changes to the RIDEM public website as a result of incorporating the Query FRS service. The RIDEM Web Programmer also tested the Query FRS service necessary for end-to-end testing of that service.

4.4 Evaluate Services

- Partner and EPA test the services to ensure they meet partner needs.

- EPA evaluates the services for impacts to downstream users of FRS data.

- EPA updates project documentation and Implementation Guide, with input from the partner.

During this phase, EPA and the partner will collaborate to evaluate the functionality of the services to ensure they meet the partner's needs. The Facility Team anticipates that changes made to the services as more partners implement them will be backwards-compatible and transparent to prior adopters. If changes were made to the services, EPA will evaluate how those changes will impact later, downstream users of FRS Facility data. EPA and the partner will determine whether any additional adjustments are needed based on those results. Once the services are in "final" form, EPA will update or create project documentation as needed. This will include updating service documentation if changes were made, updating this Implementation Guide, and creating or updating any Service Level Commitments, if applicable.

The current version of shared facility services are not available in a production environment. When they become available in production, the last step of this phase will include deployment in production.

It is difficult to estimate the amount of time needed for this phase. During the State MDM Pilot with Rhode Island, this portion of the project was completed within the twelve (12) week window referenced above. The Facility Team expects that, in the future, this phase can be accomplished via email coordination for the testing and evaluation and review of documentation and through two to three 60 minute conference calls.

5.0 Future Services/Planned Future Enhancements

The initial three services represent the work completed as part of the State MDM Pilot in Phase II of the Facility Team. During the pilot, EPA and Rhode Island identified several items that, while important, were not included in the pilot due to time and resource constraints. Ideas for expanding services include the following:

- The Facility Team expects that services will evolve to expand functionality and to potentially incorporate changes to the security approach. Future implementations will need to consider resource availability and take partner's requirements into account.
- Future iterations of shared facility services may include new lookup services, or enhanced capacity in the existing services to broaden the availability of data that can be shared. Lookup services will enable a partner to obtain a set of standard data, such as a code set, from FRS. Implementing a lookup service could reduce submission errors and improve data quality.
- Current services may also be expanded to enable exchange of the full FRS data set, including the expanded FRS data model. These enhancements could include the ability to exchange:
  - Sub-facility fields
  - QA and derived locational information
  - Facility mailing and contact names and addresses
  - NACIS codes
  - SIC codes
  - Tribal data
  - Alternative facility information such as Alternative IDs and names
- In the future, there may be a need to address the correlation between a partner's data that is specific to a regulatory program and the corresponding program records from the equivalent EPA system.
- Currently, services are available in JavaScript Object Notation (JSON) format, but services could be created in Extensible Markup Language (XML) if required by a partner.

6.0 Contact Information

For additional information on shared facility services or to begin the Configuration process, please contact frs_support@epa.gov or the Facility Team Quad Chairs:

Susan Joan Smiley
Office of Environmental Information, EPA
Smiley.susan@epa.gov

Ron Evans
Office of Air and Radiation, EPA
Ron.evans@epa.gov

Joshua Kalfas
Oklahoma Department of Environmental Quality
Joshua.kalfas@deq.ok.gov

Ben Way
Wyoming Department of Environmental Quality
Ben.way@wyo.gov

Appendix A – Sample Service Level Agreement

DRAFT Service Level Commitment	**\<Service Name\>**	
	Commitment Effective Date: MM/DD/YYYY	**Commitment Review/Expiration Date:** MM/DD/YYYY

1	**Service Scope** **DRAFT**	

Description and purpose

Services covered

2	**Service Requirements** **DRAFT**

Technical Requirements	
Machine	
Browser	
Database	
Additional Connectivity	
Additional Tools	
Technical Skill Level	

3,4	**Service Availability** **DRAFT**	Coverage parameters specific to the service(s) covered in this Agreement are as follows:

Type of Service Availability	Availability
Target Uptime	
Responsiveness	

5	**Change Management** **DRAFT**	System-level changes that impact the way a partner interacts with the service or resources required to use the service will be elevated to the IOT or service-specific team. The service's change management plan is as follows:

Change Control and Operational Review Schedules	
EPA Infrastructure and Tier 3 Daily Status	
Engineering Architecture / New and major service changes	
Program Specific Service Change Control (FRS, RCS, LRS, ICIS, etc.)	
Notification to service users	

6	**Service Measurement** **DRAFT**	Service Assistance Center

Service Assistance Center	Regular	Emergency
Hours		
Telephone		
Email	-	-

- -

In support of services outlined in this agreement, the Service Provider will respond to service related incidents and/or requests submitted by the Customer within the following time frames:

Metric Category	Measurement	Performance Target	Definition
Service Availability/Uptime			
Usage/Adoption			
Benefits to User			

7	**Service Assistance** **DRAFT**			

Service Assistance Center	**Regular**	**Emergency**
Hours		
Email		
Telephone		

8	**Service Maintenance** **DRAFT**

All services and/or related components require a regularly scheduled "Maintenance Window" to meet established service levels. These activities will render systems and/or applications unavailable for normal user interaction. Adequate notification of these Maintenance Windows will be provided prior to making the services unavailable.

Anticipated window (if known):	**Method of notification:**	**Timing of Notifications**
	Minor Planned Outages:	
	Major Changes:	

Emergency Maintenance: On occasion, emergency maintenance may be necessary. If required, it will be handled as follows:

Anticipated window (if known):	**Method of notification:**	**Timing of Notifications**

9	**Service Disaster Recovery Plan** **DRAFT**

Services that add and/or retain data must share what type of disaster recovery plan they have in place.

Does service have a Disaster Recovery Plan?

10	**Customer Responsibilities** **DRAFT**	Customer responsibilities and/or requirements in support of this Agreement include:

11	**Costs to Customer** **DRAFT**	The following costs will be incurred by customer (i.e. to the service provider.

Implementation costs:	Participation costs:	Time period for cost structure:	Anticipated changes to costs as usage evolves:

12	**Service Assumptions**	Assumptions related to in-scope services and/or components include:

Assumptions:

13	**Escalation Plan** **DRAFT**	When required, the IOT will be the body where items are escalated. If the plan for this service differs, outline plan below:

13	**Privacy Statement** **DRAFT**	Insert statement to ensure "data privacy" and responsible handling of Service Consumer information.

13	**Disclaimer/Liability** **DRAFT**	Limits of responsibility on behalf of the Service Provider.