



UNIFIED PLATFORM
YOUR AIR. YOUR DATA. YOUR WAY.

AAPCA-NACAA-ECOS-EPA Call on Unified Platform Project: Initial Regulatory, Emissions, & Ambient Data Standards Artifacts

July 9, 2026

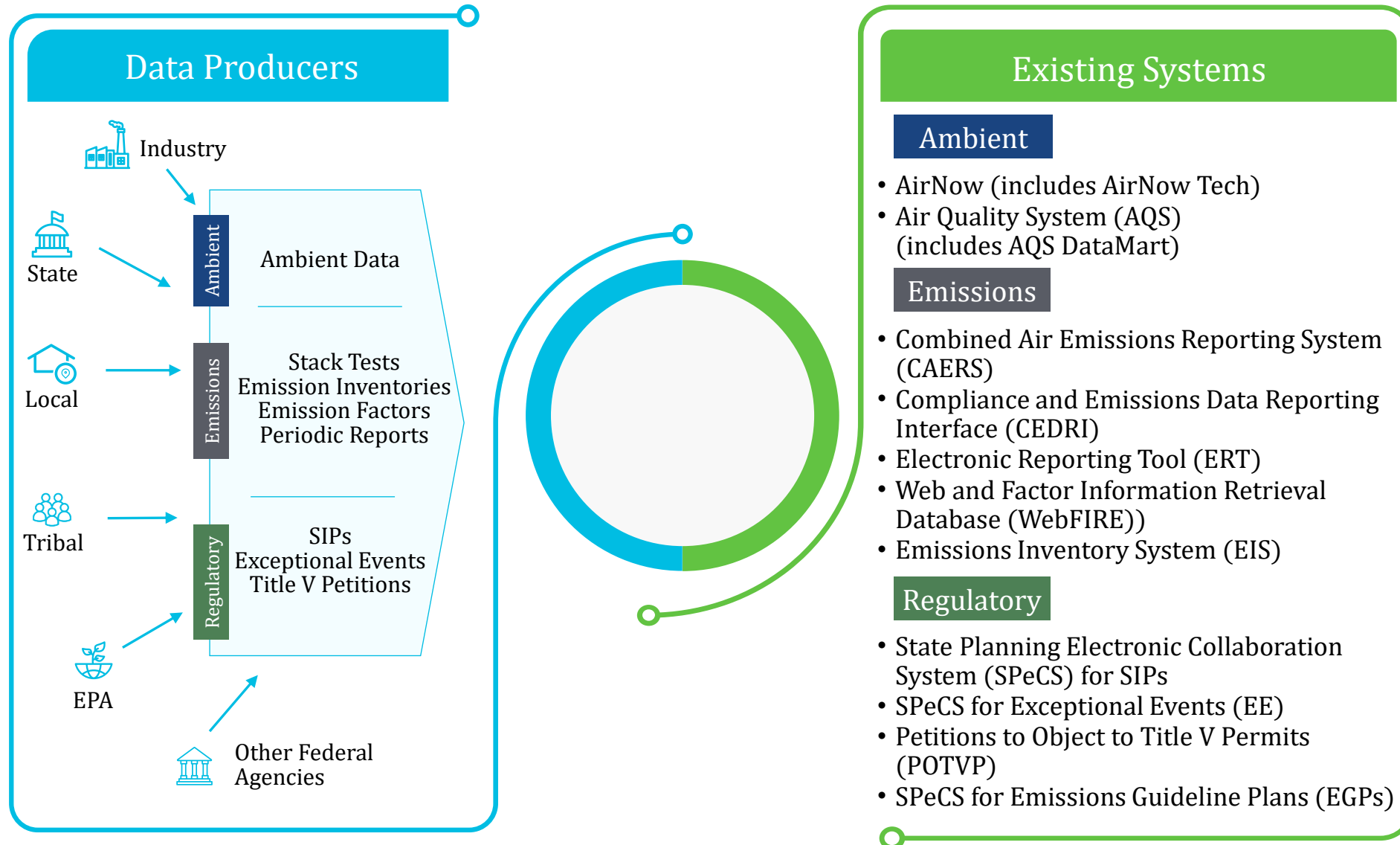
- Unified Platform Project Background and Overview
- Unified Platform Project Data Standards and Conceptual Data Models Overview
- Regulatory Data Standards Package: State Implementation Plans
- Emissions Data Standards Package: Facility Inventory
- Ambient Data Standards Package: Air Quality System (AQS) – Configure a Monitoring Network
- Frequently Asked Questions
- Looking Ahead – Engagement Opportunities
- Q & A

Disclaimer: Please note that the Unified Platform will be undergoing a rebranding, and for the purposes of this presentation, it is referred to as the Unified Platform Project. Additional details regarding the new brand identity will be shared soon.



Background & Overview

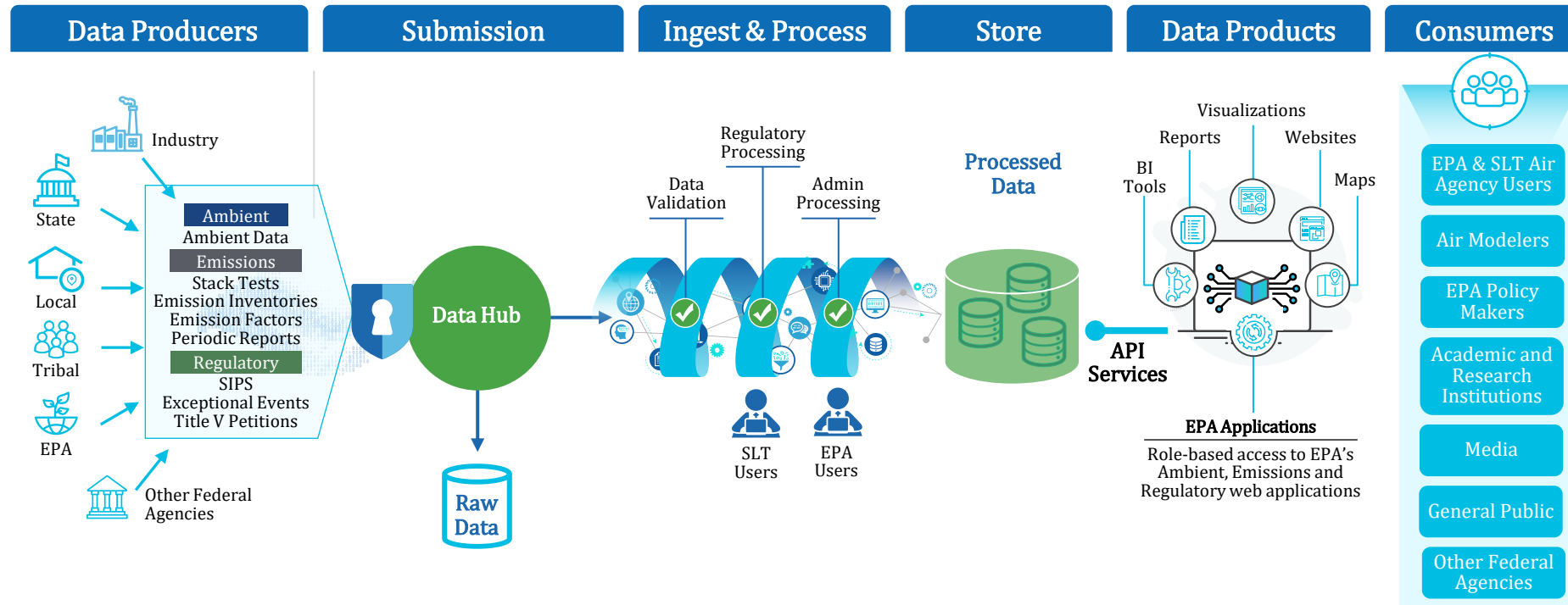
What is EPA's Unified Platform Project?



The Vision for the Future of Air Data



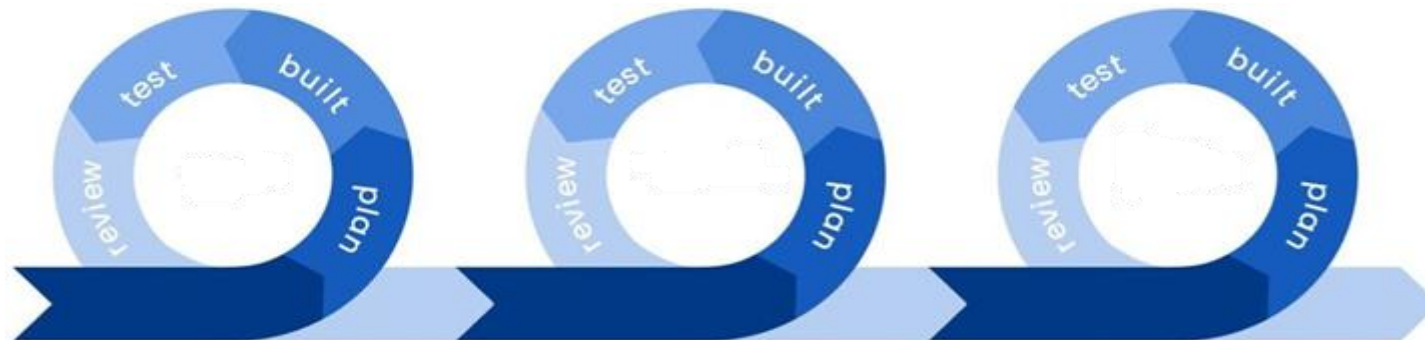
- The Unified Platform Project will result in a *new* modern system that redesigns how we collect, process, store, and share data across programs.



Minimum Viable Product (MVP) Approach



- The MVP approach focuses on delivering small pieces of the new system and building on them over time.
- The initial scope covers:
 - Building the system framework; registering users and managing accounts.
 - State Implementation Plan submissions and tracking.
 - Ambient monitoring networks, submitting ambient air data, performing QC on the data, and view/manage the submitted data.
 - Creating a single set of facility information; limited stack test reporting.
- Engage with internal and external stakeholders throughout the process.



Current Data and Functionality are the Foundation

- Existing data and system functionality are the starting point; the project will evolve as process improvements are identified by the business line teams.

Transition Approach

- New system features will run in parallel with existing systems.
- Existing systems will be retired only after features are tested and ready in the new system.
- Retirement timelines have not yet been determined.



Unified Platform Project Data Standards Overview

June Data Standards: What We Shared and Why



Thank you for your feedback!

We appreciate the thoughtful comments received so far. Your input helps us improve the project as we continue to modernize EPA's air systems.

Why We Shared the Initial Data Standards

The first data standards packages were intended to:

- Establish a common set of business terms and data definitions.
- Introduce the first **Minimum Viable Products (MVPs)** being developed for each business line.
- Show how Conceptual Data Models and Data Standards support future Unified Platform capabilities.
- Clarify that these MVP data standards **do not represent the full scope of future functionality, reporting requirements, or reporting formats.**

Key Message

These are the foundation—not the finished system. Additional capabilities and data standards will be developed and shared over time.

Future Partner Engagement



We Will Continue to Engage Partners Where It Matters Most

Next, we will focus on:

- New or revised file formats
- Data exchange schemas
- Automated interfaces between partner and EPA systems
- Bulk data submissions

Examples

- **Ambient:** Future Ambient Data Exchange Format (planned beginning August 2026)
- **Emissions:** Future emissions inventory data format for submissions
- **Other reporting:** Modernizing PDF and spreadsheet submissions, where applicable

Online Forms (Direct Data Entry in User Interface / Bulk Uploads)

Most Unified Platform capabilities will use online forms.

- We do not anticipate regulatory changes in required data.
- EPA will maintain a comprehensive **Unified Platform Data Dictionary** describing the data used throughout the system, making data sharing easier for common data elements across programs.

Our Goal

Focus partner review where UP implementation may impact existing systems while minimizing unnecessary review and reporting burden.

What Feedback Are We Looking For?



We're Looking For

Correct terminology

Missing objects

Missing relationships

Missing data concepts

Process accuracy

Not Looking For

Database design

UI colors/layout

Technical architecture

Screen design details

Implementation approach

Our goal for the data standards and conceptual data model review process is to allow our external partners to validate our understanding of the business—not the technical implementation.



Data Standards and Business Lines

Managing the Project through Business Lines



Program Business Lines

Ambient	Emissions	Regulatory	Combined	Technical
Focuses on real-time and historical monitoring data. (<i>i.e.</i> , AQS and AirNow)	Covers emissions inventory and facility reporting. (<i>i.e.</i> , EIS, CEDRI, CAERS, ERT, WebFIRE)	Supports Clean Air Act planning, permitting, and exceptional events. (<i>i.e.</i> , SPeCS for SIPs and SPeCs for Exceptional Events, POTVP)	Identifies cross-business line efficiencies. Ensures all business lines teams are working together.	Responsible for developing the architecture, the system, and hosting environments. Ensures compliance with security and privacy policy.

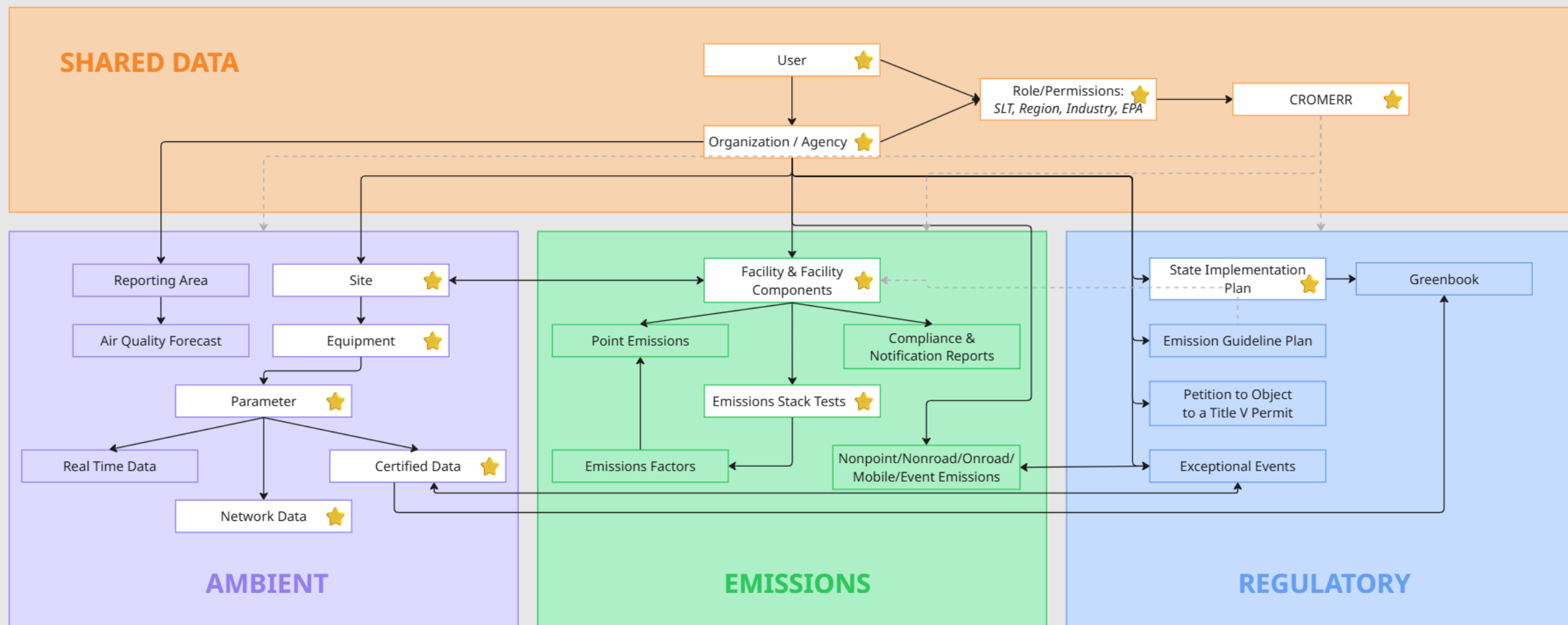
- The project is organized into five business lines – three of these are based on program groupings.
- Program business lines include EPA staff and State, Local, Tribal, and industry representatives.
- Each business line moves at its own pace based on internal and external stakeholder participation.
- Current focus is on developing and delivering MVP features.

Unified Experience Across Business Lines



UNIFIED PLATFORM

MVP Scope = ★ & white box

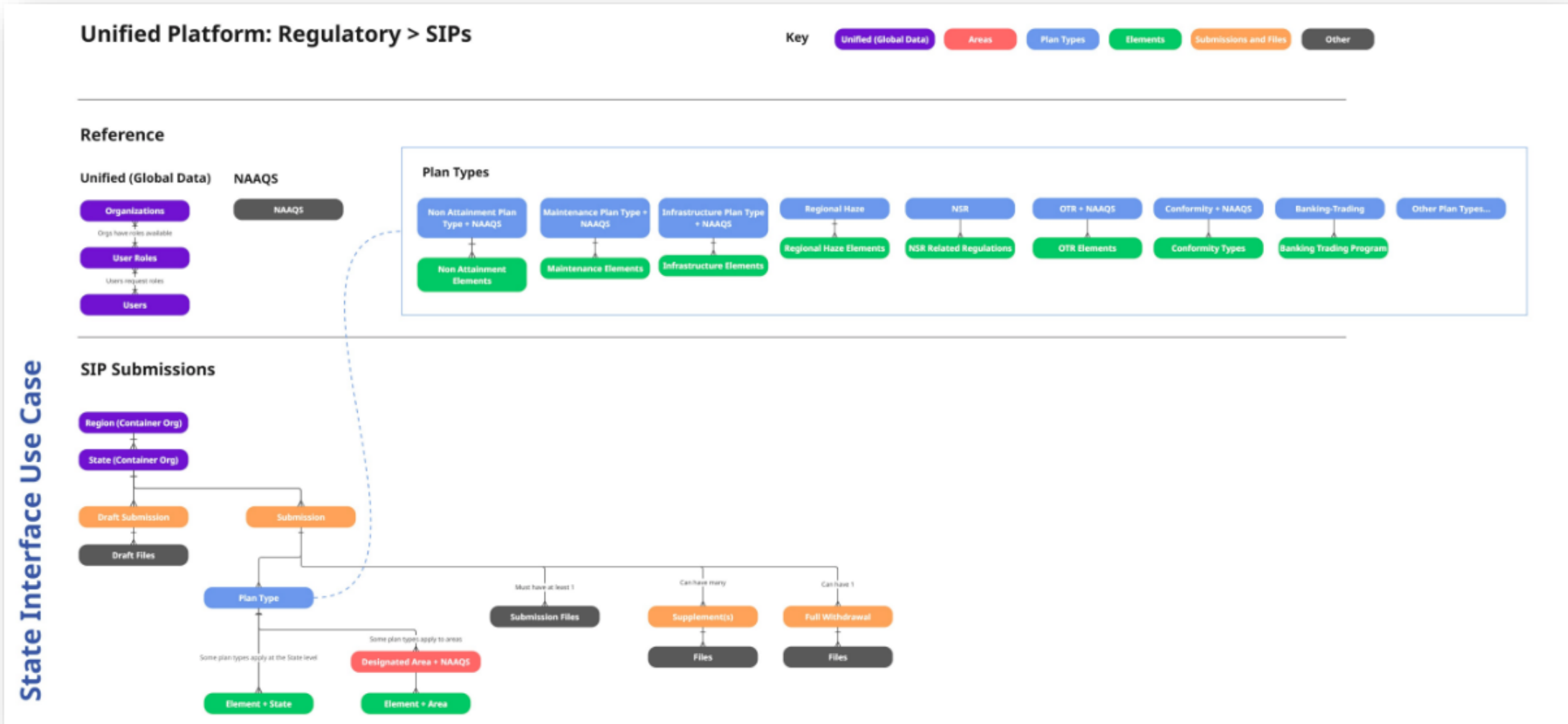




Regulatory Business Line

- **System Performance & Reliability:** Persistent lag and lack of UI feedback hinder timely submissions and frequently result in accidental duplicate filings.
- **Categorization & Flexibility:** The current submission categories are too restrictive and lack options for non-standard plans (such as 111(d)), making it difficult to accurately classify diverse filings.
- **Technical Constraints & Error Handling:** Small file size limits, cryptic error messages, and unclear file name character restrictions create significant roadblocks during the upload process.
- **External Notification Gaps:** Inconsistent and generic submission confirmation emails force states to perform redundant manual follow-ups via email to ensure their submissions were received.
- **Internal Notification Management:** The "all-or-nothing" approach to group email alerts is overwhelming; the system needs customizable notification settings to reduce inbox fatigue.

Regulatory Data Model - SIPs



Regulatory Data Standards - SIPs



SIP SUBMISSION - STATE INTERFACE USE								
Sort ID	Element Name	Description	Element Type	Data Type	Cardinality	Size	Required	Allowed Values
Root	SIP Submissions	This is the root element for the submission Schema	Header		1 Instance of SIP Submission for each submittal		Yes	
1.0	Submission	State SIP Submission Package (Root Submission)	Header		1:1		Yes	
1.0.1	Submission ID	Unique system identifier for the submission	Attribute	UUID	1:1	16 bytes	Yes	
1.0.2	Submission Name	User chosen title used for the submission	Attribute	String	1:1	255	Yes	
1.0.3	State	The US state responsible for the submission	Attribute	String	1:1	255	Yes	
1.0.4	Status	Provides the disposition of the submission	Attribute	Enumeration	1:1	4 bytes	Yes	in_development ready_for_signature submitted
1.0.5	Created Date	When the submission was originally generated	Attribute	Date/Time	1:1	8 bytes	Yes	
1.0.6	Created by User	Who created the original submission	Attribute	UUID	1:1	16 bytes	Yes	
1.0.7	Last Modified Date	When the submission was most recently edited	Attribute	Date/Time	1:1	8 bytes	Yes	
1.0.8	Last Modified User	Who most recently edited the submission	Attribute	UUID	1:1	16 bytes	Yes	
1.0.9	Submitted Date/Time	The date the submission was officially submitted to the EPA	Attribute	Date/Time	1:1	8 bytes	Yes	
1.0.10	Submission Type	Labels whether a submission is a Supplement or Withdrawal to the root submission	Header					
1.0.10.1	Submission Type "Supplement"	Used to edit an existing submitted submission	Attribute	Enumeration	0:1	4 bytes	No	supplement
1.0.10.1.1	Submission Type Supplement ID	Unique system identifier for the supplemental submission	Attribute	UUID	0:1	16 bytes	No	
1.0.10.1.2	Free Form Text	Used to explain reason for supplement	Attribute	String	0:1	255	Yes	
1.0.10.2	Submission Type "Withdrawal"	Used to nullify part of, or an entire, submitted submission	Attribute	Enumeration	0:1	4 bytes	No	withdrawal
1.0.10.2.1	Submission Type Withdrawal ID	Unique system identifier for the withdrawn submission	Attribute	UUID	0:1	16 bytes	No	
1.0.10.2.2	Free Form Text	Used to explain reason for withdrawal	Attribute	String	0:1	255	Yes	
1.0.11	Submission Plans	Group of plans that are categorized by their purpose for the submission	Header					
1.0.11.1	Submission Plan	The category represented in the Submission	Reference	Enumeration	1:Many	4 bytes	Yes	Infrastructure Attainment Maintenance Ozone Transport Region (OTR) Conformity NSR Related Regulations Control Measures

What will we be working on for the rest of 2026?

- Data Elements including updating elements list for each SIPs Plan Type
- SIPs for State Data Migration
- Designated Nonattainment Area Data
- SIPs Public Dashboards

Note: Roadmap items represent the next iterations in our phased, use case-driven assembly line development approach.

Regulatory Artifacts Walk Thru



- **Presenter:** Ben Pappalardo



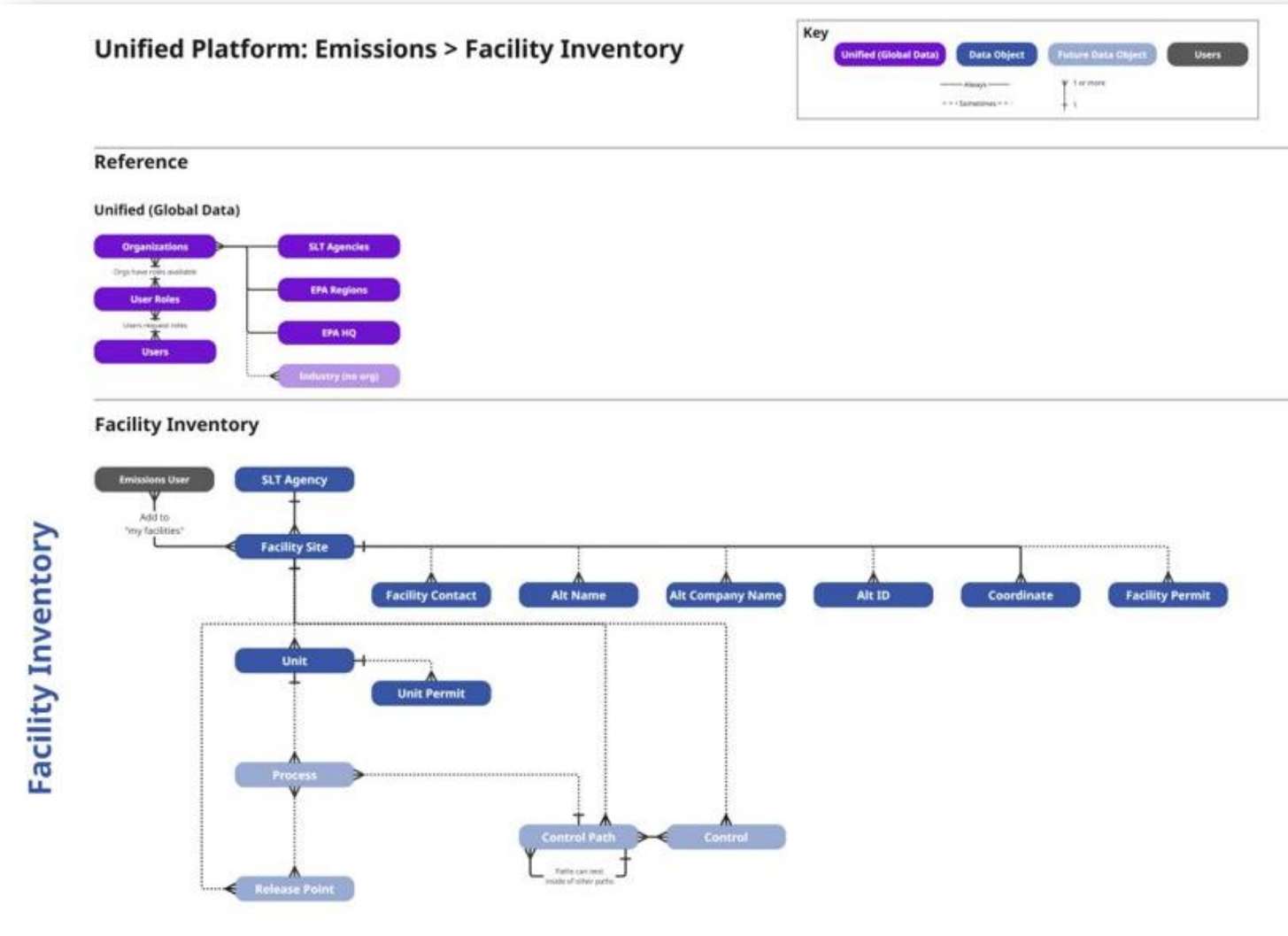
Emissions Business Line

Emissions Facility Inventory Pain Points



- Difficult to search for facilities in CEDRI & Facility Registry System (FRS)
- Easy to mistakenly make duplicate facilities
- Inconsistent facility data across systems
- CEDRI and EIS use different facility IDs
- Difficult to compare emissions data across emissions system
- Sub-facility data reconciliation across programs problematic where it is needed

Emissions Data Model – Facility Inventory



Emissions Data Standards



Emissions Facility Inventory								
Sort ID	Element Name	Description	Element Type	Data Type	Cardinality	Size	Required	Allowed Values
1.0	Facility Site		Header					
1.0.1	UP Facility ID	The unique identifier for a facility that is generated by the UP system when the facility is created.	Attribute	UUID	1:1	16 bytes		
1.0.2	Agency Facility ID	A unique ID for the facility that is assigned by the responsible SLT Agency	Attribute	String	1:1	22	Conditional	
1.0.3	Internal Facility ID	A unique ID for the facility that is assigned by the facility	Attribute	String	1:1	22		
1.0.4	State, Local, Tribal Responsible Agency (or Tribal Authority)	Facility Agency or Tribal Code is the reporting or regulating authority for the facility. This agency may have issued the facility permit.	Attribute	Controlled List	1:1	200	Conditional	Asheville-Buncombe Air Quality Agency TXCEQ - Texas Commission on Environmental Quality BOEM - Bureau of Ocean Energy Management TR780 - Navajo Nation TR201 - Blackfeet Tribe + 115 more...
1.0.5	Facility Name	The name of the facility in the system	Attribute	String	1:1	2-80	Yes	
1.0.6	Operating Status	The current status of operation of a facility	Attribute	Controlled List	1:1	20	Yes	Operating Permanently Shutdown Planned Facility Seasonal Temporarily Shutdown Under Construction
1.0.6.1	Operating Status Last Changed (Year)	The most recent year that the facility's operating status changed	Attribute	Integer	1:1	4		
1.0.7	Service Start Date	The date that the facility started service	Attribute	Date/Time	1:1	10		
1.0.8	Facility Description	A users description of the facility	Attribute	String	1:1	100		
1.0.9	Facility Comment	A users comment about the facility	Attribute	String	1:1	400		
1.0.10	Primary NAICS Code	A NAICS code, or North American Industry Classification System Code, is a six- digit number used to classify businesses by industry. Primary NAICS codes should represent the largest portion of the facility's operations.	Attribute	Controlled List	1:1	6	Conditional	111110 111120 111130 111140 111150 + 1007 more from census.gov/naics
1.0.11	Secondary NAICS Code	Secondary NAICS codes should represent the 2nd largest portion of the facility's operations.	Attribute	Controlled List	1:1	22		See primary NAICS code
1.0.12	Tertiary NAICS Code	Tertiary NAICS codes should represent the 3rd largest	Attribute	Controlled List	1:1	22		See primary NAICS code

What will we be working on for the rest of 2026?

- PS3 RATA data for ERT
- Facility data merging and approvals functionality
- Data syncing from FRS and EIS systems

Note: Roadmap items represent the next iterations in our phased, use case-driven assembly line development approach.

Emissions Artifacts Walk Thru



- **Presenter:** Anthony Perez



Ambient Business Line

Ambient Pain Points & Opportunities



- Creating a common understanding for future ambient data to replace/enhance legacy AirNow and AQS data
- Redefining how data is submitted to the ambient network to ensure uniformity
- Understanding and improving upon data quality standards
- Finding and dropping obsolete and unused data to create a more streamlined system

Ambient Data Model – Monitoring Network Configuration



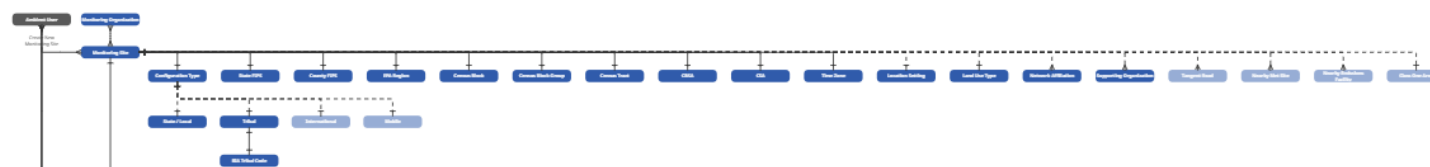
Unified Platform: Ambient > Monitoring Network Configuration

Reference

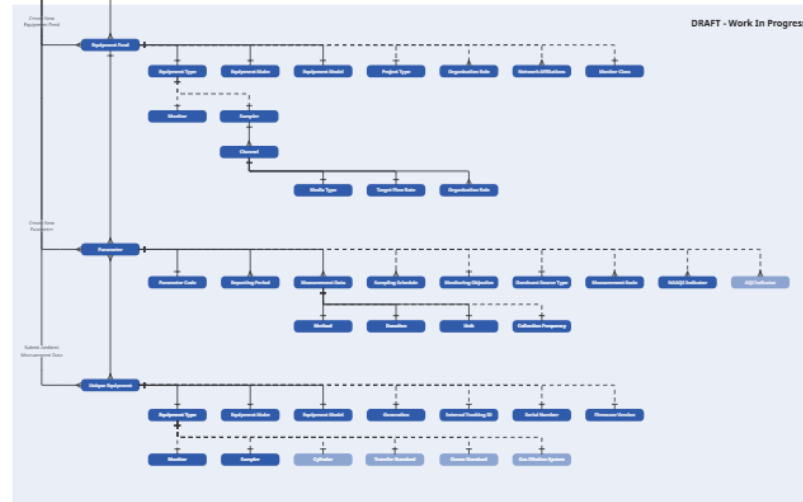
Unified (Global) Data



Ambient Monitoring Network



Monitoring Network Configuration



Ambient Data Standards



Sort ID	Element Name	Description	Element Type	Data Type	Cardinality	Size	Required
Root	Ambient Site Creation						
1	Organizations		Header	UUID			Yes
1.1	Sites	The automatically generated ID for the site	Header	UUID	Many:Many	16	Yes
1.1.1	Configuration Type	The code for the site configuration type (2 character)	Header	UUID	1:Many	8	Yes
1.1.1.1	Name of Configuration Type	The name of the site configuration type	Attribute	String	1:1	200	Yes
1.1.1.2	Active/Inactive	Indicator for whether the Configuration Type is active or inactive	Indicator	Boolean	1:1	1	Yes
1.1.1.3	Created By User	The user who created the Configuration Type	Attribute	String	0:1	200	No
1.1.1.4	Created At Date	The date and time the Configuration Type was created	Attribute	Date/Time	0:1	8	No
1.1.1.5	Updated By User	The user who last updated the Configuration Type	Attribute	String	0:1	200	No
1.1.1.6	Updated At Date	The date and time the Configuration Type was last updated	Attribute	Date/Time	0:1	8	No
1.1.2	Code	The assigned code for the site (4 character)	Attribute	String	1:1	16	Yes
1.1.3	Full Name	The user generated full name of the site	Attribute	String	0:1	240	No
1.1.4	Short Name	The user generated short name of the site	Attribute	String	1:1	100	Yes
1.1.5	Composite Site ID	The unique composite site ID visibal on the front end	Attribute	String	1:1	44	Yes
1.1.6	Latitude	The latitude of the site	Attribute	Numeric	1:1	14	Yes
1.1.7	Longitude	The longitude of the site	Attribute	Numeric	1:1	14	Yes
1.1.8	Elevation	The elevation of the site (feet)	Attribute	Numeric	1:1	14	Yes
1.1.9	Street Address	The street address of the site	Attribute	String	1:1	960	Yes
1.1.10	City	The city of the site	Attribute	String	1:1	200	Yes
1.1.11	Zip Code	The zip code of the site	Attribute	String	1:1	40	Yes
1.1.12	County Federal Information Processing Standard (FIPS) Code	The FIPS code for the county (3 digit)	Header	String	1:Many	12	Yes
1.1.12.1	Name of County	The name of the county	Attribute	String	1:1	400	Yes
1.1.12.2	State of County	The FIPS code for the state the county belongs to (2 digit)	Attribute	String	1:1	8	Yes
1.1.12.3	Active/Inactive	Indicator for whether the County FIPS Code is active or inactive	Indicator	Boolean	1:1	1	Yes
1.1.12.4	Created By User	The user who created the County FIPS Code	Attribute	String	0:1	200	No
1.1.12.5	Created At Date	The date and time the County FIPS Code was created	Attribute	Date/Time	0:1	8	No
1.1.12.6	Updated By User	The user who last updated the County FIPS Code	Attribute	String	0:1	200	No
1.1.12.7	Updated At Date	The date and time the County FIPS Code was last updated	Attribute	Date/Time	0:1	8	No
1.1.13	State Federal Information Processing Standard (FIPS) Code	The FIPS code for the state (2 digit)	Header	String	1:Many	8	Yes

What will we be working on for the rest of 2026?

- Unique Equipment Data
- Equipment Feed Data
- Parameter Data
- Data Submission

Note: Roadmap items represent the next iterations in our phased, use case-driven assembly line development approach.

Ambient Artifacts Walk Thru



- **Presenter:** Alyssa McNamarra



The Ambient Data Format Standard

- Will replace AQS transaction and AirNow AQCSV files
- Describes the file formats and data specifications
- Covers ambient and QA data and metadata
- Submit data in CSV or JSON files

Received extensive feedback from:

- SLT, Tribal, and EPA Regions workgroups
- Data acquisition vendors and laboratories

Document schedule:

- Now: Finalizing internal reviews and addressing comments
- August: Distribute for comment
- September: Distribute Version 1 of the document

Future State Ambient Data Format Standard Document Preview



- **Presenter:** Tim Dye



Frequently Asked Questions

Q1: Are these the future reporting formats?

A1: No. These artifacts establish common terminology and data organization. Future reporting formats will be shared separately when applicable. We provided a preview of the Ambient data formats today that will be released for external partner review in August 2026.

Q2: Why are only portions of each business line represented?

A2: The new system is being developed iteratively. The June release focused on MVP use cases rather than the complete scope of functionality.

Q3: Why are you asking for feedback now?

A3: Because validating business terminology and data relationships early reduces rework later in development.



Q4: Will my existing data submissions change?

A4: Not necessarily. Many capabilities of the new system will continue using online forms with little or no change to the information being collected. When new exchange formats or reporting requirements are proposed, EPA will engage stakeholders before implementation.

Q5: What kind of feedback is most helpful?

A5: We are primarily looking for feedback on: Business terminology, missing business objects, missing relationships, business process accuracy, data definitions. Technical implementation details will be addressed during future design and development activities.

Q6: Will all future capabilities of the new system include Data Standards packages?

A6: No. EPA plans to publish data standards primarily when changes could affect exchanged data, reporting formats, or partner integrations. Capabilities that only involve online forms or internal system functionality may not require a separate data standards release.



Q7: Will EPA continue involving state, local, and Tribal partners throughout development?

A7: Yes. External engagement is a core principle of the Unified Platform Project. EPA will continue engaging stakeholders throughout discovery, design, build, testing, and implementation to ensure the platform reflects operational needs and reduces reporting burden.



Looking Ahead – Engagement Opportunities



- External engagement is a core principle of the Unified Platform Project development approach.
- The Unified Platform Project team is committed to:
 - **Continuous engagement with State, Local, and Tribal (SLT), EPA Regions, and industry partners** to help ensure the platform supports real operational needs and reduces reporting burden.
 - **Commitment to sharing air program related data exchanges** through the EPA Exchange Network Partnership [site](#).
 - **Transparent communication throughout development** so stakeholders can review progress and provide input as the system evolves.
 - **Incorporating stakeholder perspectives into system design and functionality** to better support Clean Air Act program implementation.
- Our goal is to build the new system *with* our partners, not just *for* them.

What is Coming Next?



August	Future
• Business Line Conceptual Data Model and Data Standards Feedback • Ambient Data Format Standard Document • Quarterly Unified Platform Project Webinar with Live Demo on Wednesday, August 19 at TBD	• Ongoing Project Quarterly Webinars • Emissions Data Format Reviews • User Experience Demos • User Testing

Questions



What Feedback Are We Looking For?



We're Looking For

Correct terminology

Missing objects

Missing relationships

Missing data concepts

Process accuracy

Not Looking For

Database design

UI colors/layout

Technical architecture

Screen design details

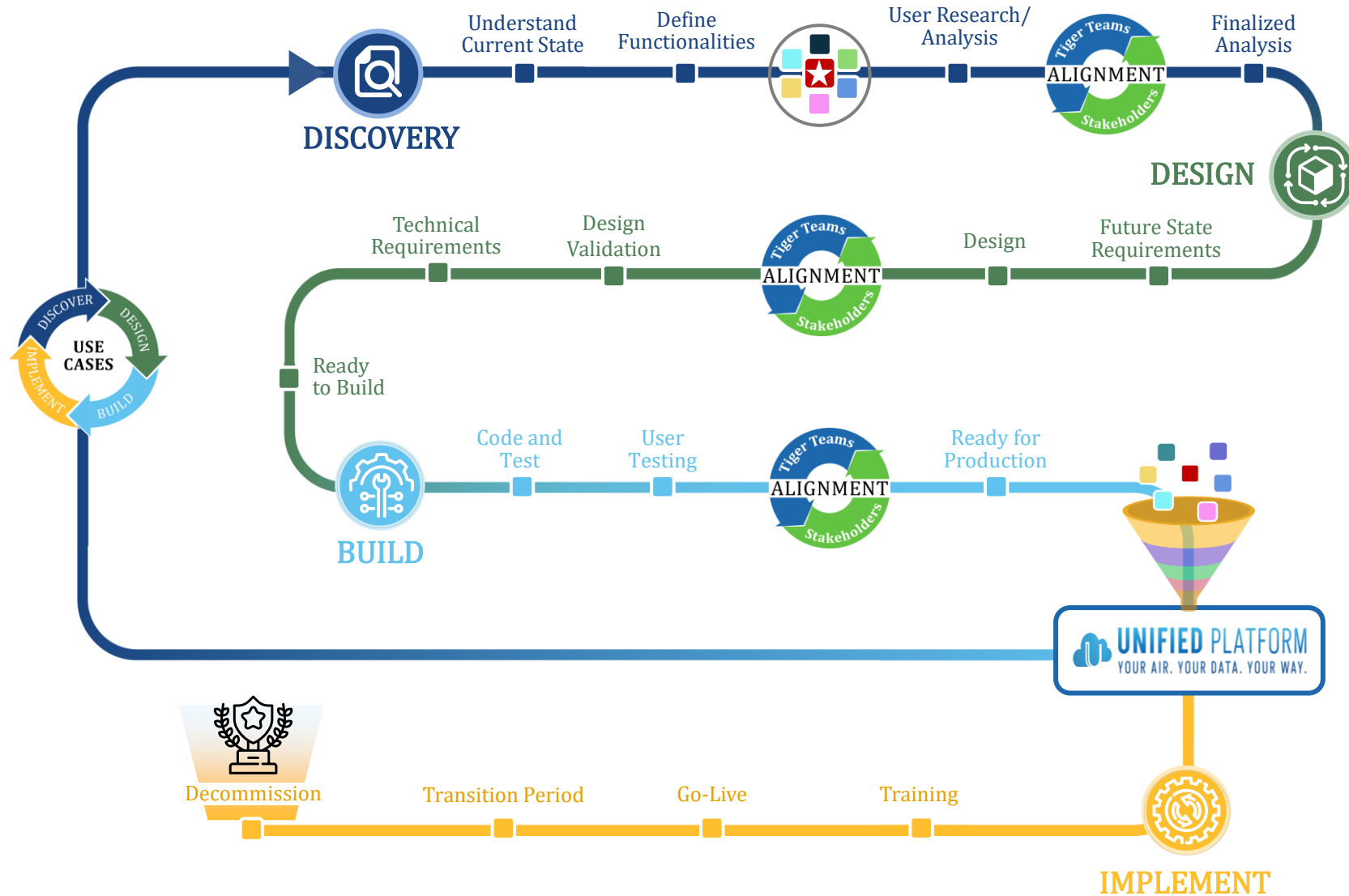
Implementation approach

Our goal for the data standards and conceptual data model review process is to allow our external partners to validate our understanding of the business—not the technical implementation.



Appendix

Assembly Line Process



Example of the Assembly Line Process



Stakeholders:



State



Local



Tribal



EPA



Other Federal Agencies



Industry

Ambient

Organization & Account Creation

Organization & User Management

Configure & Manage Network

Emissions

Facility Inventory Management

Account Creation & User Management

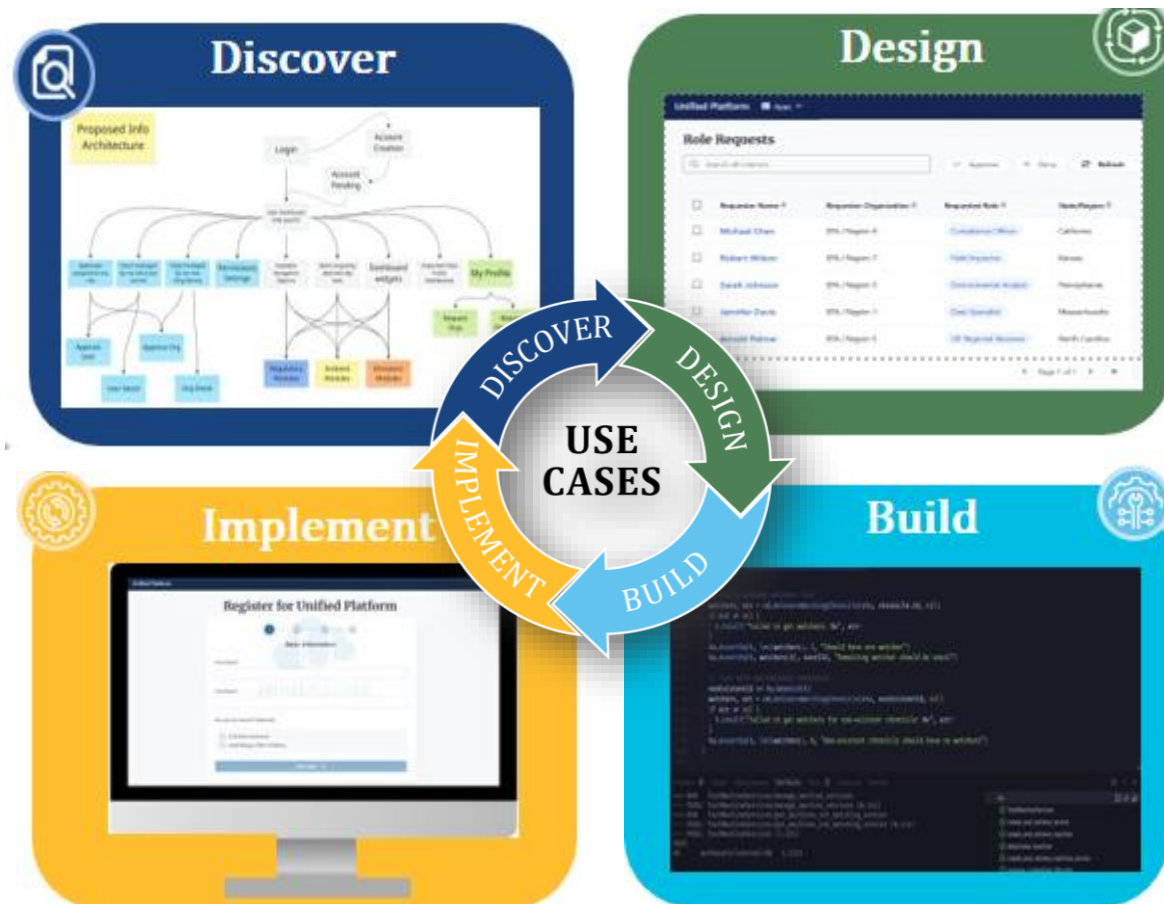
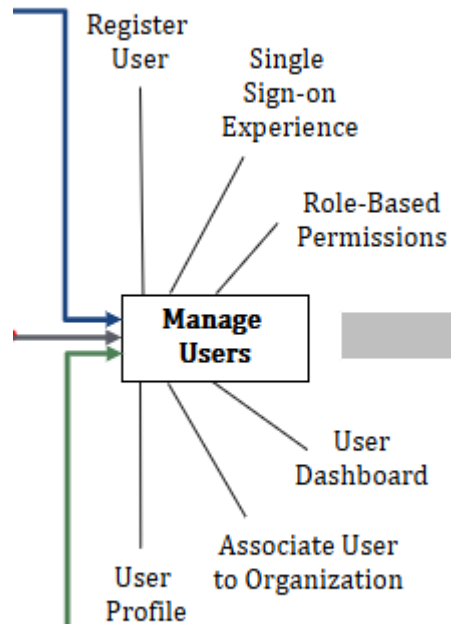
Manage Users & Facilities Access Requests

Regulatory

Account Creation & User Management

Manage User Access Requests

Data Submission



Air Programs and Systems



System	Programs	Regulatory Authority
Air Quality System	- Ambient Air Monitoring - NAAQS - Quality Assurance - Exceptional Events	CAA §109, §172, §182, §189 40 CFR Parts 50, 53, and 58
AirNow	- AQI - Fire and Smoke	CAA§103, §319 40 CFR Parts 58.50 and 58 Appendix G
Emissions Inventory System	Emissions Inventories	40 CFR Part 51
Combined Air Emissions Reporting Interface	- Emissions Inventories - Performance Tests	
Compliance and Emissions Data Reporting Interface	- Performance Test, Notification, Periodic, & Title V Reports - ICRs	CAA § 111, 40 CFR Parts 60, 59, and 61 CAA § 112, 40 CFR 63 CAA § 129, 40 CFR 52
Electronic Reporting Tool	Stack Testing	CAA § 111, 40 CFR Parts 59, 60, and 61 CAA § 112, 40 CFR 63 CAA § 129, 40 CFR 52
Web Factor Information Retrieval Database	Emissions Factors	CAA §111, 40 CFR 60 CAA §112, 40 CFR 63 CAA §130
MOSAIC Platform – SIPs, Exceptional Events, Title V Petitions, EGPs (no existing application)	- State Implementation Plans - Exceptional Events - Title V Petitions - Emissions Guideline Plans	CAA § 109 CAA § 110 CAA §319(b), 40 CFR Parts 50.1, 50.14, and 51.930 CAA § 111, 40 CFR 60 CAA § 112, 40 CFR 63

How External Engagement Participants are Selected



- The Unified Platform Project External Engagement Coordinators worked to identify and invite participants using the following criteria:
 - System Experience
 - Participants were selected based on their direct use of EPA air data systems across the ambient, emissions, and regulatory business lines
 - Workflow Role(s)
 - Users representing key functions such as data submission, review, analysis, compliance, and program oversight were prioritized
 - Stakeholder Representation
 - Users from SLT agencies, EPA Regional Offices, and industry partners where applicable
 - Availability & Alignment
 - Participants were chosen based on their availability and relevance to the specific engagement activities planned for each business line

Planned External Engagement



- External engagement will continue throughout the full Unified Platform Project development phases:
 - Discovery, Design, Build, and Implement
- Our goal is not one-time feedback, but sustained collaboration to ensure the new system reflects real operation needs and regulatory responsibilities.