

# Combined Air Emissions Reporting E-Enterprise for the Environment

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# E-Enterprise



- E-Enterprise for the Environment is **jointly** governed by state/local/tribes (SLTs) and the EPA to collaboratively modernize business processes:
  - To improve **environmental results**
  - To enhance services **to the regulated community** and **the public** by making government more efficient and effective
- A “Combined Air Emissions Reporting” (CAER) project has arisen from two similar proposals in the spring of 2014, made by Arizona and the EPA

# CAER Focuses on Point Sources

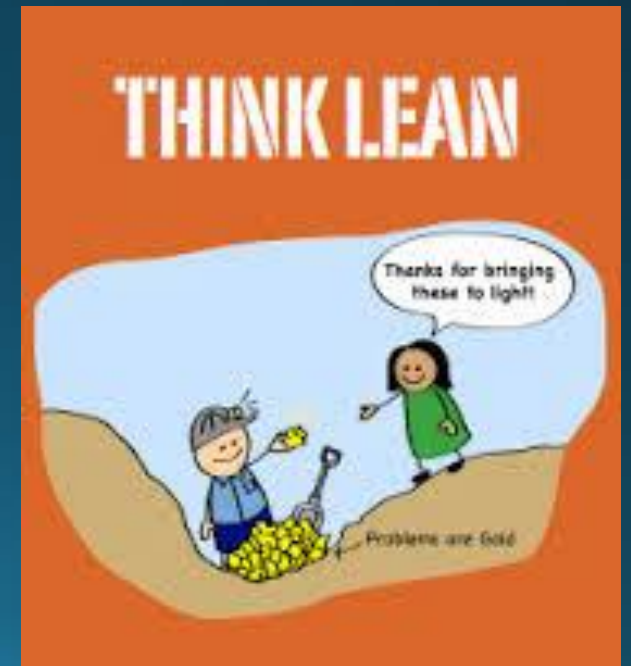
- Focuses on four major air reporting programs



- Different pollutants
- Different facility definitions
- Different data resolution (facility or sub-facility) and types (emissions and stack test data)
- Different program development stages
- Different data flows (e.g., NEI includes states, locals, tribes (SLTs))

# CAER High Level Summary

- The EPA and SLT air agencies collect air emissions data for many separate programs
- A diverse team spent 3 months and had a 3-day Lean event to develop a “future state”. Participants were :
  - EPA (Four programs: GHGRP, NEI, TRI, & CEDRI)
  - States: Arizona, North Carolina
  - Regulated community: Alcoa, Phillips 66, Air Force
- June 2015 return-on-investment analysis indicated positive but uncertain savings
- Short-term win projects are ongoing



# What's the Problem?

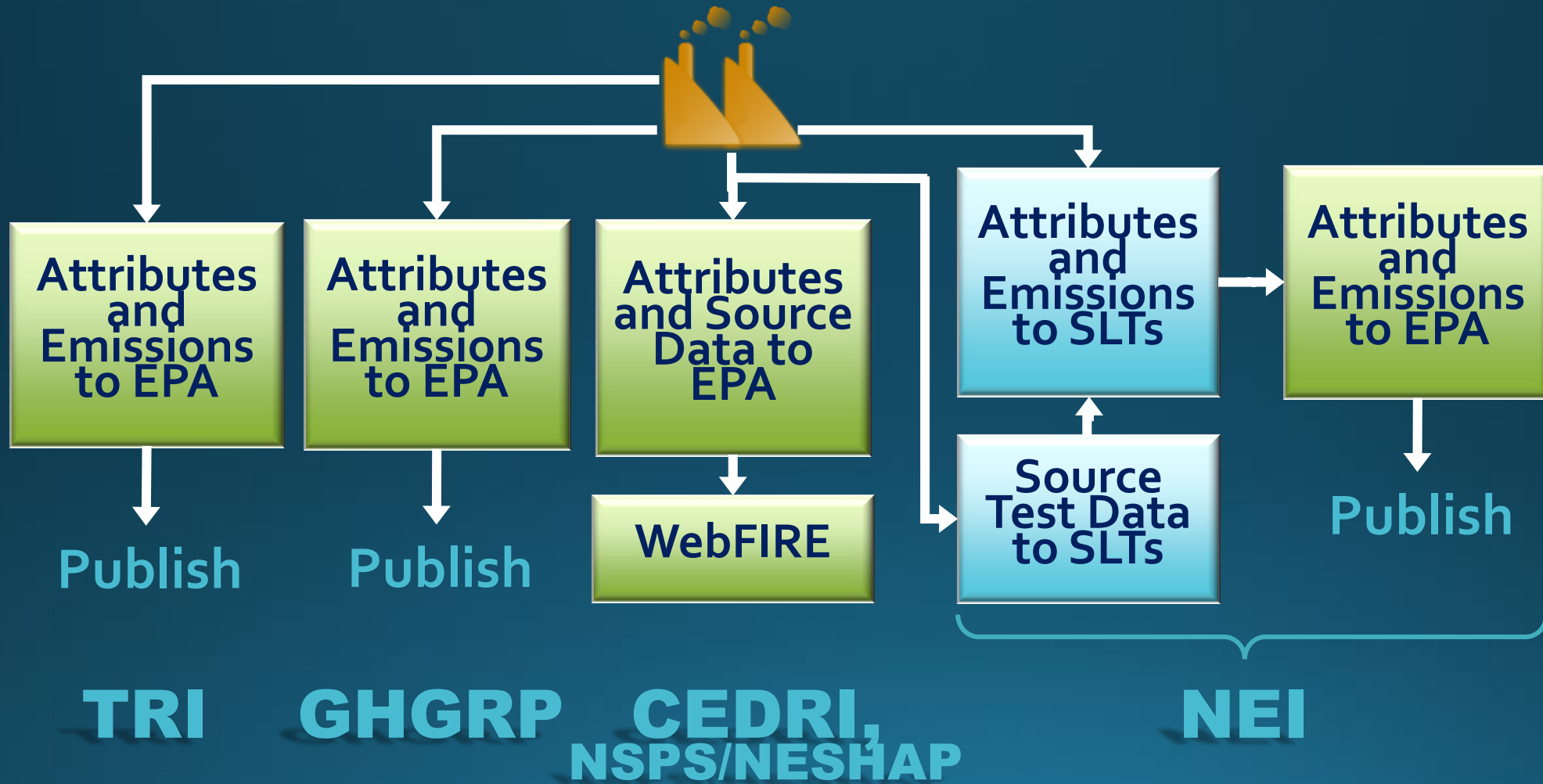
- Currently over 15 different types of reports and notifications potentially required under Title V of CAA
- Some of the information in these reports is redundant and often difficult for both permittees and regulators to track systematically
- Air emissions information is collected in a variety of formats and on different reporting schedules
- Facilities must report the same information numerous times under a large set of formatting requirements
- Current paradigm results in duplication of effort by facilities and results in inconsistent information in EPA databases

# CAER Project Goals

- Reduce industry burden for point source reporting
- Improve timeliness and transparency of data
- Create consistent information across air emissions programs
- Improve data quality
- Improve accessibility and usability of data
- Support more timely decision making

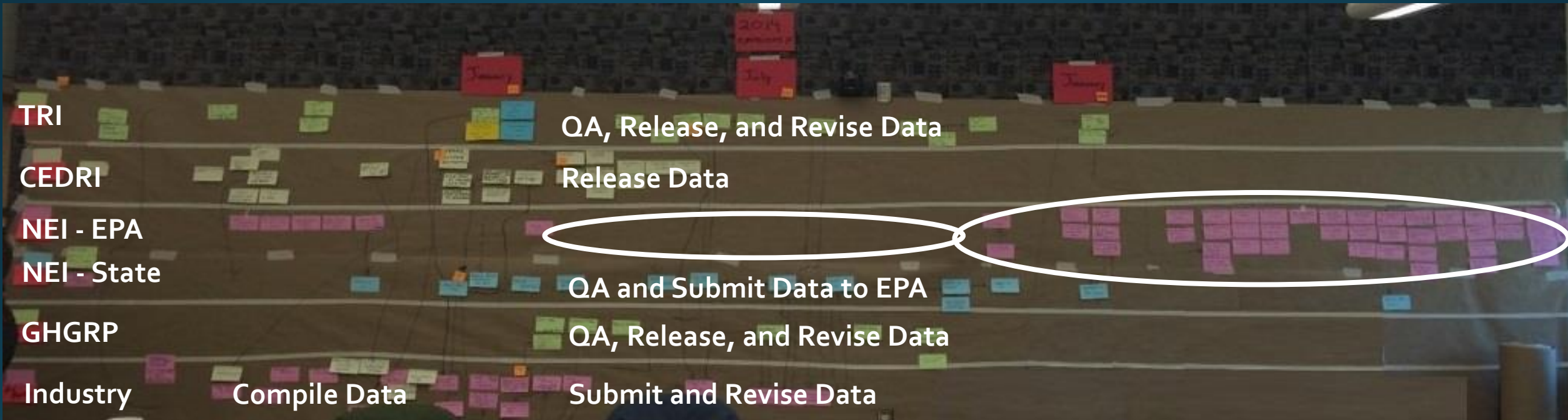


# CAER "As is" State



# “As Is” Value Stream Maps

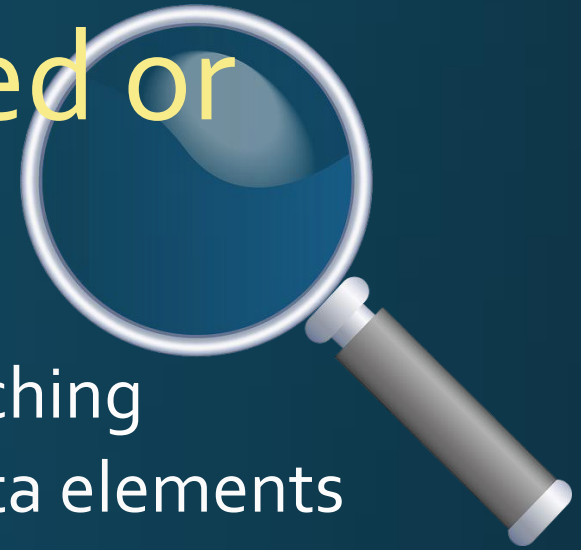
- Example of 2014 inventory year



Prepare Reporting Changes Stakeholder Notification/ Outreach

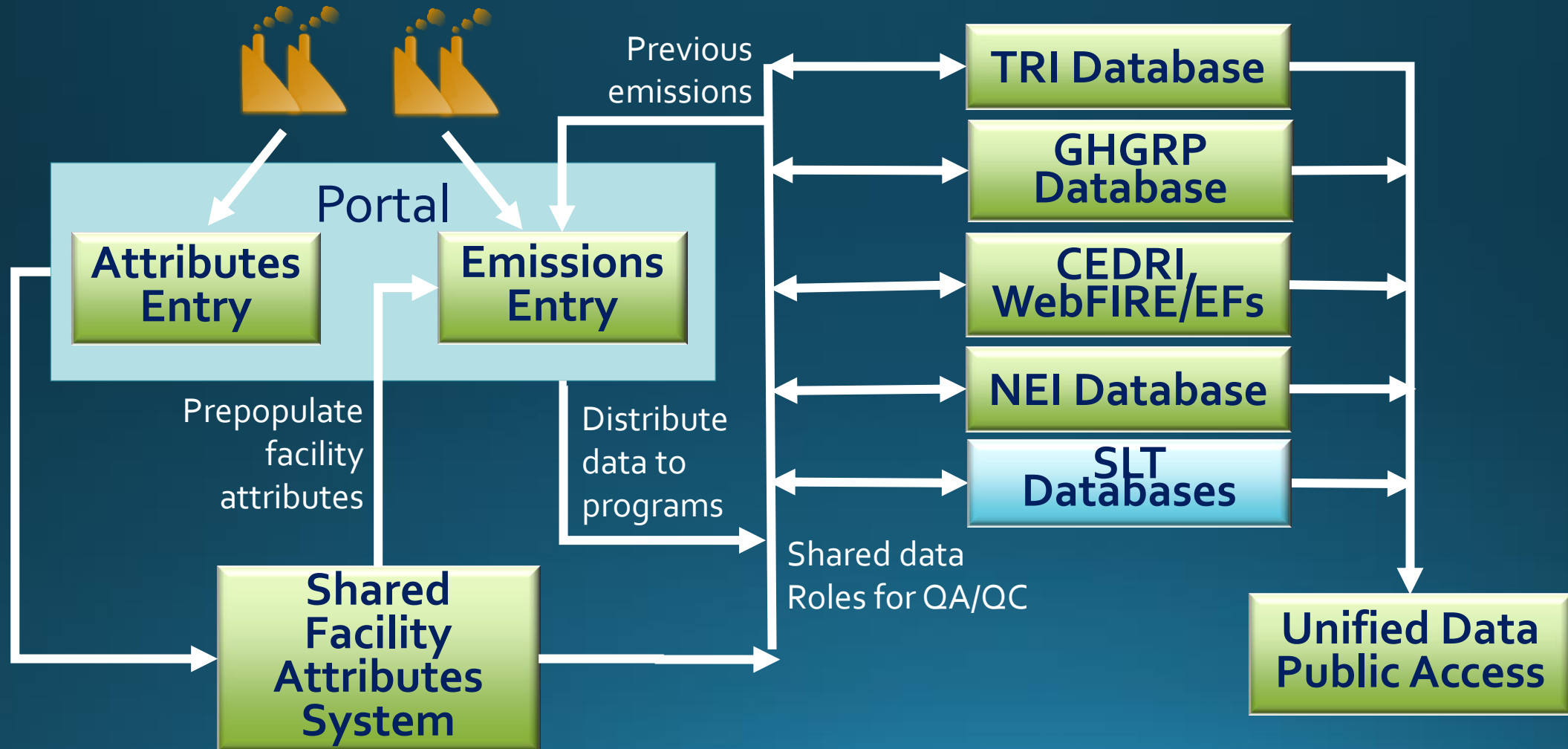


# Key Inefficiencies to be Eliminated or Reduced



- Duplicative and inconsistent facility info / facility matching
- Duplicative data entry and revisions by facilities of data elements that are included in several separate emissions programs
- Wait time caused by current SLT-EPA NEI process
- NEI augmentation steps
- Some duplicative post-submission quality assurance by EPA and SLTs
- Inconsistent emissions data across programs and associated work (e.g. reconciliation)

# Air Emissions – “To Be” Result



# Potential State Benefits

- Less wasted effort
  - Shared/collaborative QA/QC efforts between EPA and States
  - Emission values in NEI and state datasets will agree so no FTE's wasted to investigate inconsistencies
  - Facility attributes would agree across EPA programs and states
- States that want better inventory systems would be able to leverage this to improve their capabilities
- Improvements to emission reporting will allow for quick publishing of NEI dataset
- Quicker NEI results in states using more timely data
- Access to OAQPS inventory data used for Residual Risk and Technology Reviews (RTR) and regulatory development to augment HAP emissions
- Improved emission factors program

# Common Concerns

- Will EPA dictate how everything will change?
  - No, this is a joint EPA-SLT project and we are working together
- Have all of the decisions been made?
  - No, we are reaching out to SLTs and industry to get input on this project to make sure it is done right
- Is this a single big data system that everyone uses?
  - No, this vision is for a connected network of systems that allows for ownership by SLTs who want it and also supports SLTs that need more help
- How will we avoid the pitfalls of past large projects?
  - We are taking a stepwise “Agile” approach that looks for getting the most value out of the least amount of work first, getting lots of feedback as we go



# Short Term Wins



- **Combined Air Emissions Implementation Plan (AR, MA, MN, NC, OK, OR, VT)**
  - Establish the major building blocks of the “to be” state with time frames
  - Identify key unknowns and challenges and how to resolve
  - We completed a 2-day workshop to identify issues and consider narrowing the initial focus
- **CEDRI: WebFIRE export of industry-reported test data (NC, VT, OK, TX)**
  - Add WebFIRE search capability to identify all test data for a particular industry, regulation, etc.
  - Export test data in single data file for selected reports
  - Partly completed
- **Data Dictionary and harmonization of code tables (NC, MA, TX)**
  - Work across all inventory development groups (including SLTs) to compare and harmonize code tables. Partly done and working to finalize.
  - Reduce and eliminate differences where possible to reduce current levels of effort and support future single submission concepts

# Short Term Wins (2)



- **Web-based service for Source Classification Codes (SCCs) (MN, MA, CA)**
  - Support finding SCCs, proposing changes, and requesting new SCCs
  - Publish central and official list of SCCs online for use by all data systems
- **Identify and Eliminate Root Causes of EPA Augmentation for the NEI (AK, AZ, MA, OK, OR, SC, VA, VT)**
  - A pilot project for the 2014 NEI cycle
  - Work with select states to define quality and completeness requirements such that the EPA would not augment state data
  - Survey responses from 36 state and 20 local air agencies
  - Have found a lot of common ground so far

# Pilot project with EPA's Facility Registry System (FRS)

- Pending FY16 funding
- Use a new CAER Shared Facility Attributes approach (OEI/FRS team) to support RTR data collection
- Stretch goal: Implement for an actual collection during FY16
- Will leverage existing other work:
  - FRS New Data model at OEI
  - Facility Portal at OEI
  - Emissions Inventory System (used for the NEI)
  - OAQPS Inventory Consolidation project and team
  - Ongoing discussions with Pulp & Paper industry on Facility Attributes
  - CAER SCC short term win

# Example: Cement Sector Data Sources

- NESHAP/CEDRI – Rule requires submittal of... → PM, HCl, Hg, THC (at most)
- NEI/States (via NAAQS) → CO, NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, NH<sub>3</sub>, VOC, Pb
- GHG Reporting Program → CO<sub>2</sub>, Methane
- States (HAP reporting), TRI, and/or WebFIRE EF (if activity is available) → Other HAPs  
PM → PM<sub>10</sub>, PM<sub>2.5</sub>, Black Carbon, metals  
Hg → Forms of Hg  
THC → VOC and VOC HAPs
- Speciation Profiles (as needed) →





# Key Open Issues

## Facility Attributes

- How to leverage existing systems (i.e., Facility Registry Services (FRS) and state systems)?
- What is centrally maintained and what relies on appropriate state systems?
- How to handle the regulatory and statutory definitions of facility?

## Portal

- What is meant by “portal”?
- How would this impact and interface with existing systems, including state systems that already have excellent systems?

## Distributed and connected program databases

- What steps are the low hanging fruit with clear benefits?
- How to minimize disruptions and expenses for existing systems?
- What are the data ownership business rules for working in this new way?
- How can QA be improved and shared?
- How to use activity information that is considered CBI for some programs but not others?

# Opportunities to Participate

- Facility Integrated Project Team (IPT)
  - Kimberly Hoke, MO, state co-lead
  - Lee Kyle, EPA co-lead
- FRS Pilot Project (depends on sector selected)
- New CAER implementation workgroups will be forming over the next 6 months to tackle key issues, such as:
  - CAER needs/rules for shared facility attributes
  - Emissions data collection
  - Emissions sharing across programs
  - Quality assurance roles across EPA and state
  - Getting industry input
  - Potential regulatory hurdles



# Next Step for the Project

- Completing short term wins
  - Implementation team is developing a schedule
- Outreach and collecting input from wider audiences
- Answering key questions
- Considering implementation issues
- As resources are identified, continuing forward in a stepwise “Agile” way



# Questions?

For more information on the E-Enterprise initiative, please see <http://www2.epa.gov/e-enterprise>

# The Team and Supporters

## EPA (alphabetically)

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- Kong Chiu
- Alice Chow
- Mike Ciolek
- Sally Dombrowski
- Josh Drukenbrod
- Ron Evans
- Lauren Gordon
- John Harman
- Marc Houyoux (co-chair)
- Matthew Kelly
- Theresa Lowe
- Joe Mangino
- Jonathan Miller
- Juan Parra

- Ketan Patel
- Ron Ryan
- Bob Schell
- John Wakefield
- Bob Wayland

## Supporting Roles (alphabetically)

- Julia Gamas, EPA
- Beth Graves, ECOS
- Shana Harbour, EPA
- Lee Kyle, EPA
- Kelly Poole, ECOS
- Tobias Schroeder, EPA

## State/local/tribes (by agency)

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- Heinz Braun, AR
- Michael Burton, AZ
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- Steven Potter, CT
- Nick Page, IA
- Mark Wert , MA
- Chun-Yi Wu, MN
- Tammy Manning, NC
- Gary Saunders, NC
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- Mark Gibbs, OK
- Joshua Kalfas, OK
- Michelle Horn, OK

- Brandy Albertson, OR
- Christopher Swab, OR
- Lynn Barnes, SC
- Paul Mairose, SWCAA
- Erin Chancellor, TX
- Kathy Pendleton, TX
- Bryan Shaw, TX (co-chair)
- Jeff Merrell, VT
- Sue Hines, VA