



Arizona Regional Emission Inventory Collaboration

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Primary Organizations

- Maricopa County Air Quality Dept. (MCAQD)
- Gila River Indian Community (GRIC)
- UNICON software development/consultants



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Project Motivation

- MCAQD nonattainment areas include non-Maricopa County jurisdictions in GRIC and Pinal County, need databases that allow inter-agency data flow
- Need MCAQD database in format for EPA data transmission



Project Purpose

Gather, share, and distribute regional air quality data, and reduce the resource burden among the partners

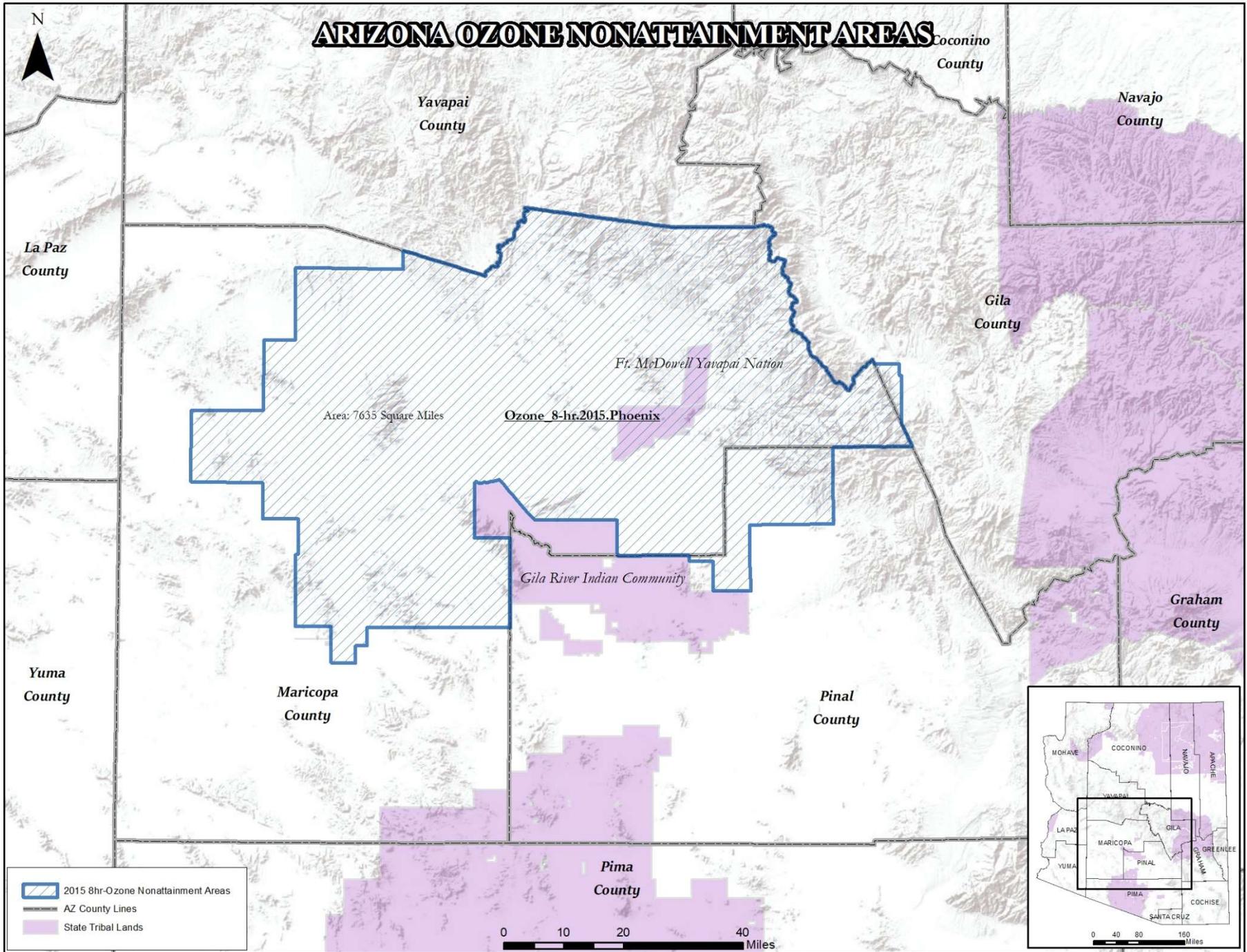
- Both ozone (O_3) and particulate matter (PM_{10}) nonattainment areas extend beyond Maricopa County into GRIC and Pinal County
- Inter-agency data transfer is needed across political boundaries for nonattainment areas
- Common software platform reduces redundant costs across agencies

2015 O₃ Nonattainment Areas

- The 2015 O₃ nonattainment areas are 7,635 square miles and covers Maricopa, Pinal, Gila Counties
- Air pollution does not stop at jurisdictional boundaries



ARIZONA OZONE NONATTAINMENT AREAS

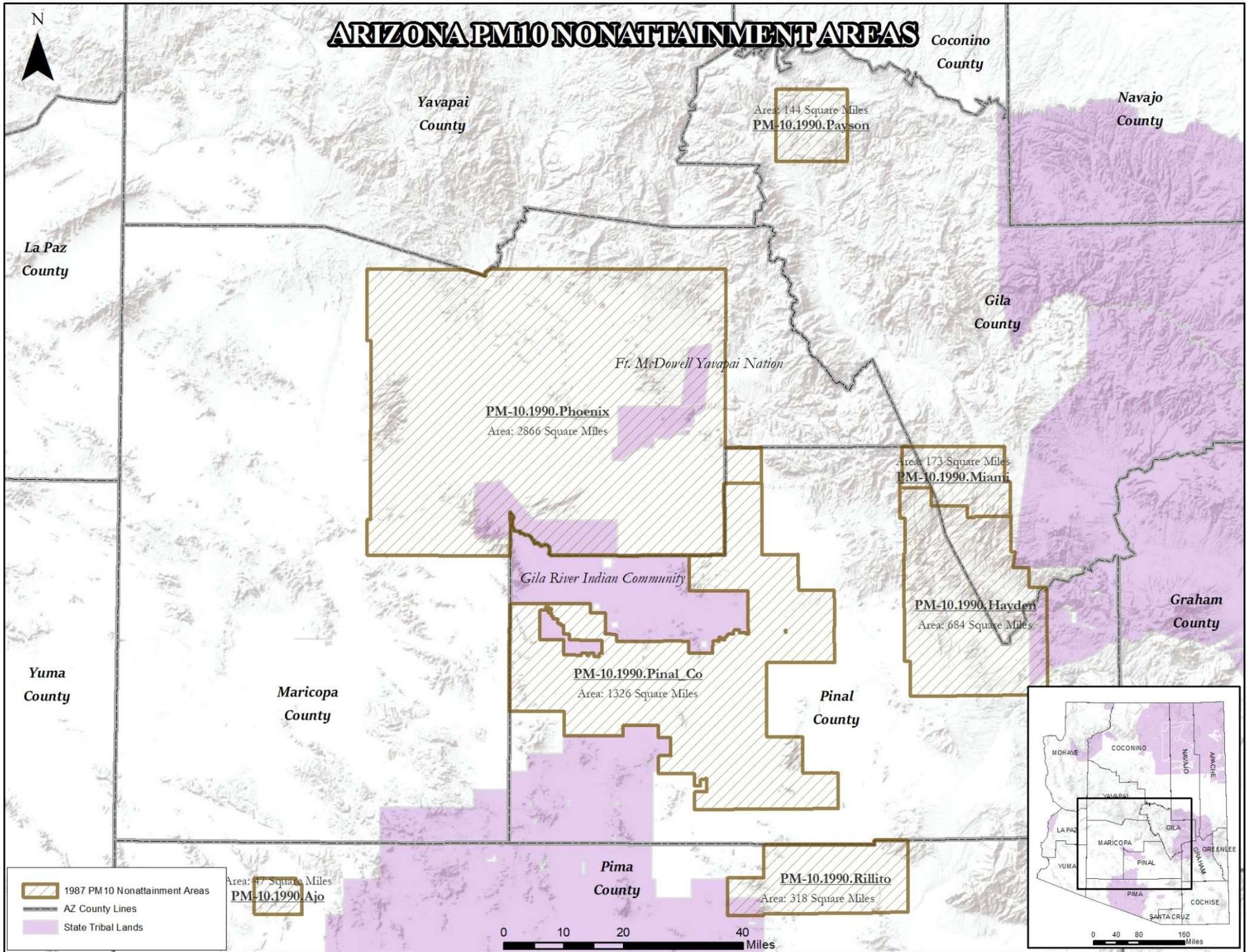


PM₁₀ Nonattainment Area

- PM₁₀ nonattainment areas are 5,558 square miles and covers Maricopa, Pinal, Pima, and Gila Counties
- This project seeks to develop software that facilitates data sharing of air pollution across agencies and political boundaries



ARIZONA PM10 NONATTAINMENT AREAS



Goals

Develop a Free-Standing EPA Cross-Media Electronic Reporting Rule (CROMERR) Portal

- State and Local Emissions System CROMERR component for EPA data export
- Customers conduct digital AQ business with single login across multiple agencies



Goals

- Implement and configure virtual exchange services (VES)
 - File ICIS-Air reports (stationary source emissions/compliance/enforcement)
- Construct RESTful Web-Based exchange and retrieval of machine readable data
- Design emissions inventory electronic report generation and cross jurisdiction data sharing

Project Development/Collaboration

- GRIC initiated a Request for Proposals for software design to implement AQ software
- UNICON selected as consultant to customize existing Wyoming AQD software for MCAQD Inventory, Monitoring, Permitting, and Compliance Tracking (IMPACT)



Project Development/Collaboration

- GRIC, MCAQD, Pinal County and other agencies collaborated with UNICON to modify IMPACT software based on Wyoming version enhanced for shared use in AZ
- AZ created emission units that didn't exist in the WY version, WY heavy in oil and gas but AZ has diverse manufacturing: semiconductors and fiberglass products



Project Development/Collaboration

- **Choice:** individual agency IMPACT vs. shared system?
 - The individual agency IMPACT was selected with shared data tables hosted at the local level
- **Choice:** should IMPACT be hosted on the cloud, on-premises, or as a hybrid system?
 - Server based system selected, with MCAQD server acting as “cloud” for multi-agency shared tables.

Collaboration with Other Organizations

Collaborative meetings began in September 2016

- GRIC managed federal grant funding
- MCAQD technical lead
- Data partners: Pinal County, Pima County, and Fort McDowell Yavapai Nation
- UNICON is contractor performing work



Collaboration with Other Agencies

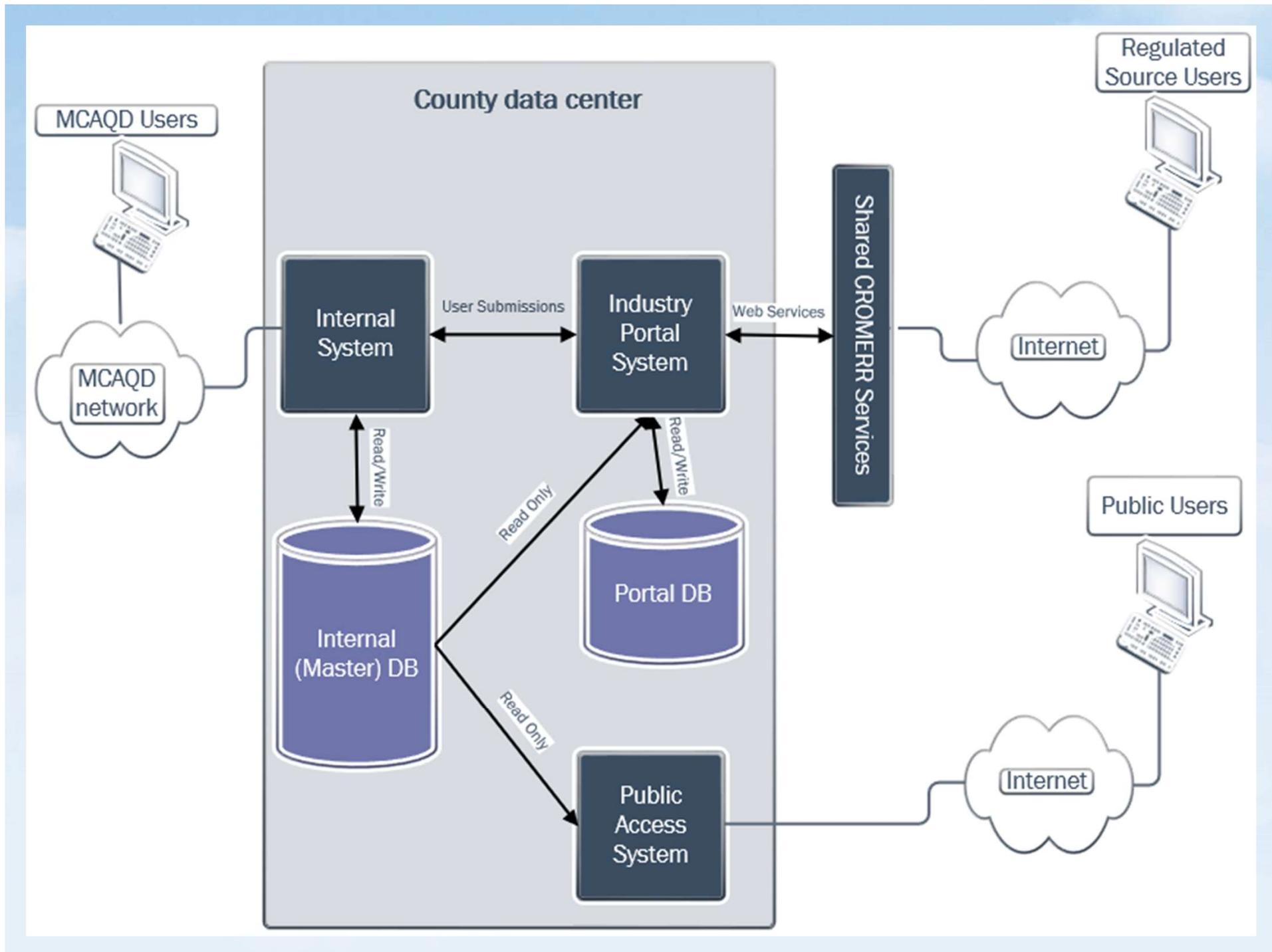
- Determined cloud/partitioning services
- Agreed on need for cross-agency Memorandum of Agreement
- Negotiated how shared tables were updated for cross agency data access



Collaboration with Other Agencies

- Worked on method to provide for confidential data in IMPACT, i.e. throughput
- How to handle retired SCC?
 - Import updated SCC EPA WebFIRE tables
- IMPACT needs to separate fugitive emissions since MCAQD does not charge fee for these





Successes and Challenges

- Maricopa County IT limited primary data tables to internal access to keep data integrity and sharing tables hosted on the “cloud” to allow access by outside agencies
- New IMPACT structure keys off emission unit process SCC, so all permits will need QA/QC to ensure accuracy



Future Goals & Implementation

Develop/implement integrated database for emissions inventory, permitting and compliance

- Legacy Env. Management System did not integrate MCAQD divisions
- IMPACT will create single point of reference for regulated facility with system
- Allows permitting, compliance, and emission inventory to be on the same page



Future Goals & Implementation

- MCAQD testing and development of IMPACT with UNICON for September 2019 roll-out
- MCAQD data migration from old EMS system to IMPACT prior to IMPACT launch
- Starting in 2020, MCAQD emission inventories will be completed using IMPACT
- Continuing partnership with WY on future IMPACT expansion to reduce cost



Funding Grant

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Thank You

Questions?

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