



E-Enterprise for the Environment

EXCHANGE NETWORK TRI REGIONAL STATES MEETING
Philadelphia, PA EPA Region 3 April 10, 2013
Presentation by David Hindin, OECA

Outline

- Vision for E-Enterprise
- Drives and Technology Opportunity
- The components of E-Enterprise and relationship to Exchange Network
- EPA State (ECOS) Collaboration and Governance
- Progress and next steps



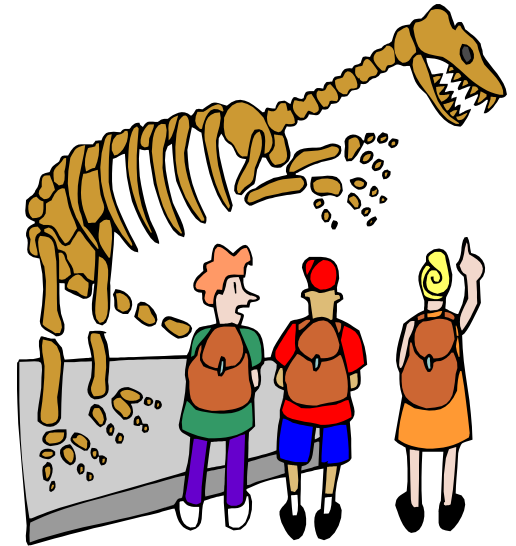
E-Enterprise for the Environment

is a joint initiative of States and EPA to improve environmental outcomes and dramatically enhance service to the regulated community and the public by maximizing the use of advanced monitoring and information technologies, optimizing operations, and increasing transparency.



What are the Drivers?

- Regulated entities and the public expect to conduct transactions with government on-line.
- Paper submission and recordkeeping costs impact all stakeholders.
- Paper submissions cannot satisfy increasing demand for instant information access and transparency.
- The inability to easily view and share data among EPA and states impedes effective environmental protection.
- Inefficient and cumbersome data entry delays timely and accurate access to data. The cost of errors impacts all stakeholders.



What are the Drivers: continued

Multiple state and federal Executive Orders mandate agencies to increase efficiencies, reduce regulatory burdens and build a 21st century digital government with a severely reduced workforce.

More Budget Cuts Likely to State's

But now that the agency has detailed how it is making the \$1.6 billion cut
Because the EPA passes the vast majority of its money through to the states
Washington — are taking the biggest hits



the WHITE HOUSE PRESIDENT BARACK OBAMA ★ ★ ★ ★

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The White House
Office of the Press Secretary

For Immediate Release May 23, 2012

Presidential Memorandum -- Building a 21st Century Digital Government

MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

U.S. House Propose 17% cut to EPA budget

When congressional Republicans cut the Environmental Protection Agency's budget 16 percent as part of a deal with President Obama in April to keep the government running, they hailed it as a blow to a federal bureaucracy that had overreached in its size and ambition. But now that the agency has detailed how it is making the \$1.6 billion cut for fiscal 2011, the reality is somewhat different. Because the EPA passes the vast majority of its money through to the states, it has meant
Washington — are taking the biggest hits

April 10, 2013

EPA and States catching up to the digital world in which we live



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Sex	Date of Birth (mm/dd/yyyy)	Former Last Name	Preferred Name, if not first name
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	City/Town	State/Province	ZIP/Postal Code
	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Permanent Home Phone Number		
	<input type="text"/>		

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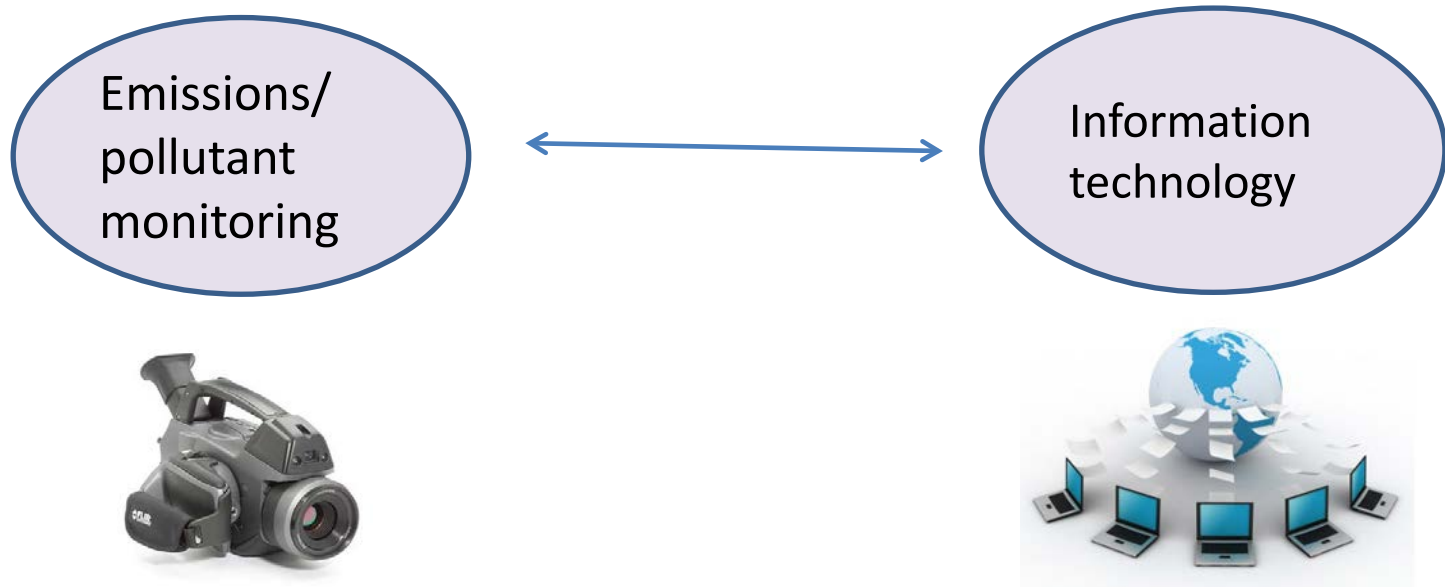
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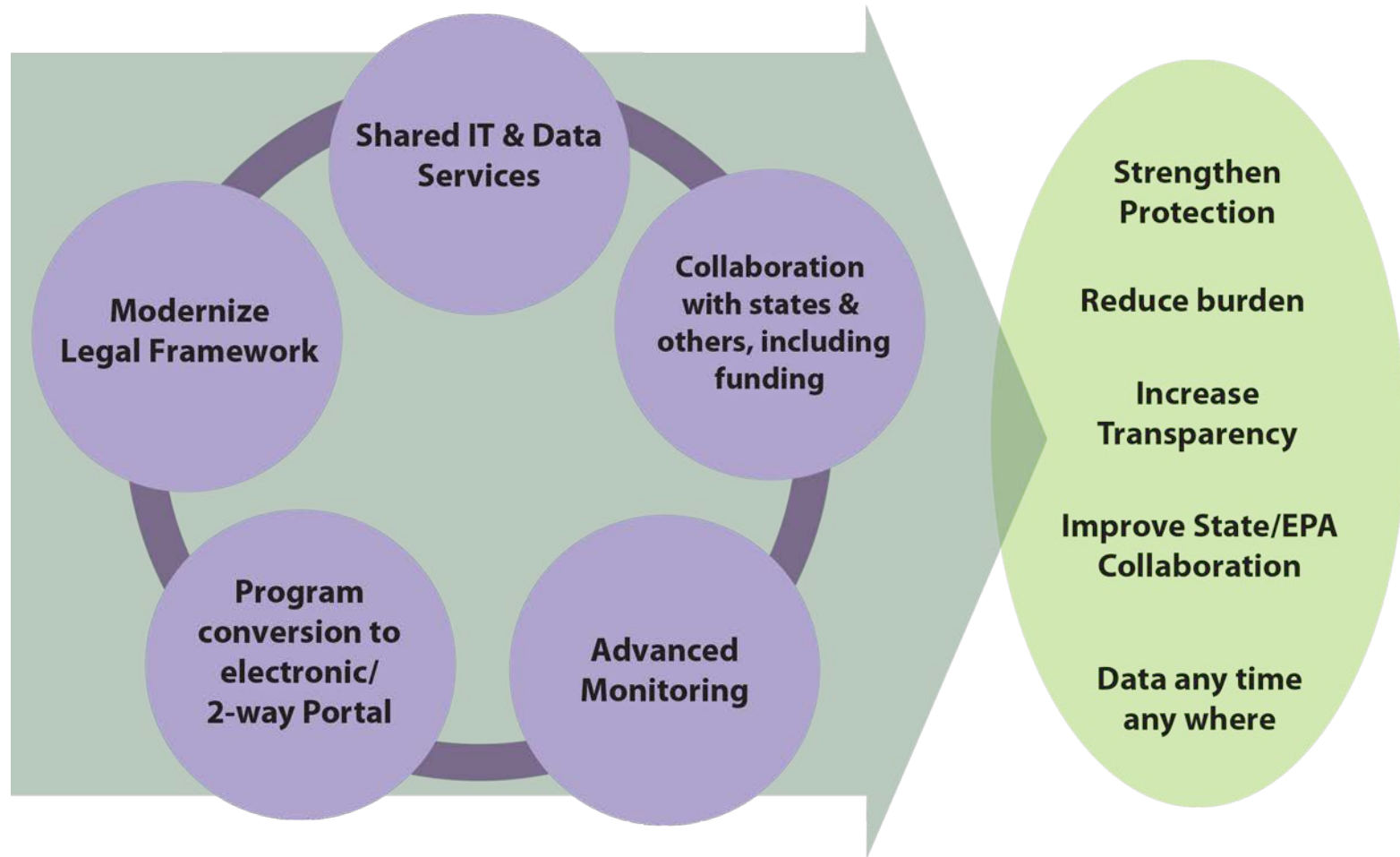
Technology Opportunities



- Advances in these technologies provide the means to:
 - “make the invisible visible”
 - inform industry, government. and the public
 - identify new opportunities to reduce and prevent pollution
 - drive compliance through transparency and accountability
 - support competitiveness and innovation



Major Components and Key Drivers



Smart Portal (regulated entities view)

user-friendly
“smart” portal

two-way
transactions
between agencies
& regulated
entities

better service and
reduced burden

EPA United States Environmental Protection Agency

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Permit Applications
Data for Developers

What does this portal offer?

- ♦ electronic reporting
- ♦ regulatory reform
- ♦ optimum business
- ♦ transparency
- ♦ burden reduction

Notifications
System notifications will alert you of potential data errors or violations.

Sample:
• Annual compliance fee of \$175 for BWP 1W38 is due on January 31, 2013.
[Sign up for Notifications](#)

My Profile

Sign in User
Password
[Forgot password?](#)
New User? [Create Profile](#)

SAMPLE

April 10, 2013

Smart Portal for 2-way Transactions (public view)

major enhancements
to EPA and state
platforms will provide a
more customized
experience through
secure user profiles

United States Environmental Protection Agency

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MyMaps

View maps of EPA and partner data specific to your area of interest. Information on Air, Water, Land, Community, Health and Energy can be visualized on map, downloaded and printed.

More Maps

MyAir

The AQI is an index for reporting daily air quality. It tells you how clean or polluted your air is, and what associated health effects might be a concern for you. [Read More](#)

Stow, MA

Air Quality
97.8%

MIDDLESEX County, Massachusetts
November Average Data (2006 - 2008)

Pollutants	%
Ozone	87.8
PM2.5	8.8
PM10	0.0
SO2	0.0
NO2	0.0
CO	3.3

November Historical Data (2000-2002)

Pollutants	%
Ozone	0.0
PM2.5	25.6
PM10	0.0
SO2	0.0
NO2	0.0
CO	74.4

More Air

MyWater

The Assessment Total Maximum Daily Load (TMDL) Tracking and Implementation System (ATTAINS) provides information reported by the states to EPA about the conditions in their surface waters. This information is required every two years under Clean Water Act Sections 305(b) and 303(d). [Read More](#)

Name	Type	Size	Status
Alewife Brook	Lake	16.1 acres	Impaired
Alewife Brook	River	2.3 miles	Impaired
Griswold Pond	Lake	10.6 acres	Impaired
Blacks Nook			Impaired
Mill Pond	Artificial Path	0.1 miles	Impaired
Mill Pond	River	0.2 miles	Impaired
Bellevue Pond			Not Assessed
Nashoba Brook	Artificial Path	0.0 miles	Impaired
Nashoba Brook	Lake	8.6 acres	Impaired
Nashoba Brook	River	7.9 miles	Impaired

More Water

MyEnergy

The State Energy Data System (SEDS) is the U.S. Energy Information Administration's (EIA) source for comprehensive State energy statistics. Included are estimates of energy

MyHealth

Toxic air pollutants, or air toxics, are those pollutants known or suspected of causing cancer or other serious health problems, such as birth defects. Not all air pollutants are considered "toxics"

MyLand

The National Priorities List (NPL) is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants

Example: E-Reporting

Smart electronic tools guide users and leads to better data

Improve government and industry performance and expand transparency

Long-term cost savings over paper processes

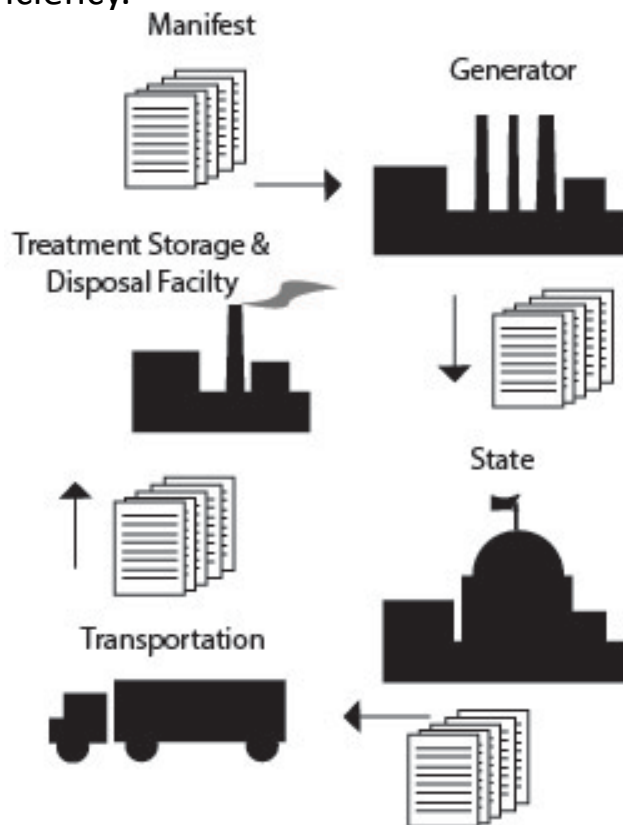
Table 1:

Criterion	Most Preferred Option	Least Preferred Option
Which options are available to submit my TRI forms?	TRI-MEweb- Electronic Reporting	Paper Submission
What is the reporting deadline?	Reporting deadline midnight July 1, 2012	
Is this option available on the Web?	Only applicable to TRI reports between RY 2005 and RY 2011	Fillable/printable forms will be available in January 2012
What are the advantages of this option?	<ul style="list-style-type: none">Automated software checks when entering data.Direct data entry into TRI forms.Data pre-populated into current year forms for returning reporters.No downloads needed to update software.Only TRI application available to report dioxin releases.Prior year revision/withdrawal capability (RY 2005-RY 2011).Any software updates are automatically uploaded into the application software.	<ul style="list-style-type: none">Submitting hard-copy TRI forms to State and EPA does not require computer or Internet connection.

will become mainstream, over time

Modernize Legal Framework and convert to electronic

Example e-manifest required regulatory reform to change typical hazardous waste manifest inefficiency.



Replaced regulatory requirements for paper with electronic manifests on digital platform.

Projected \$75 million cost savings (to regulated entities and regulators) and reduction in potentially 400,000-700,000 FTE hours.



Modernize Legal Framework and convert to electronic: other potential examples

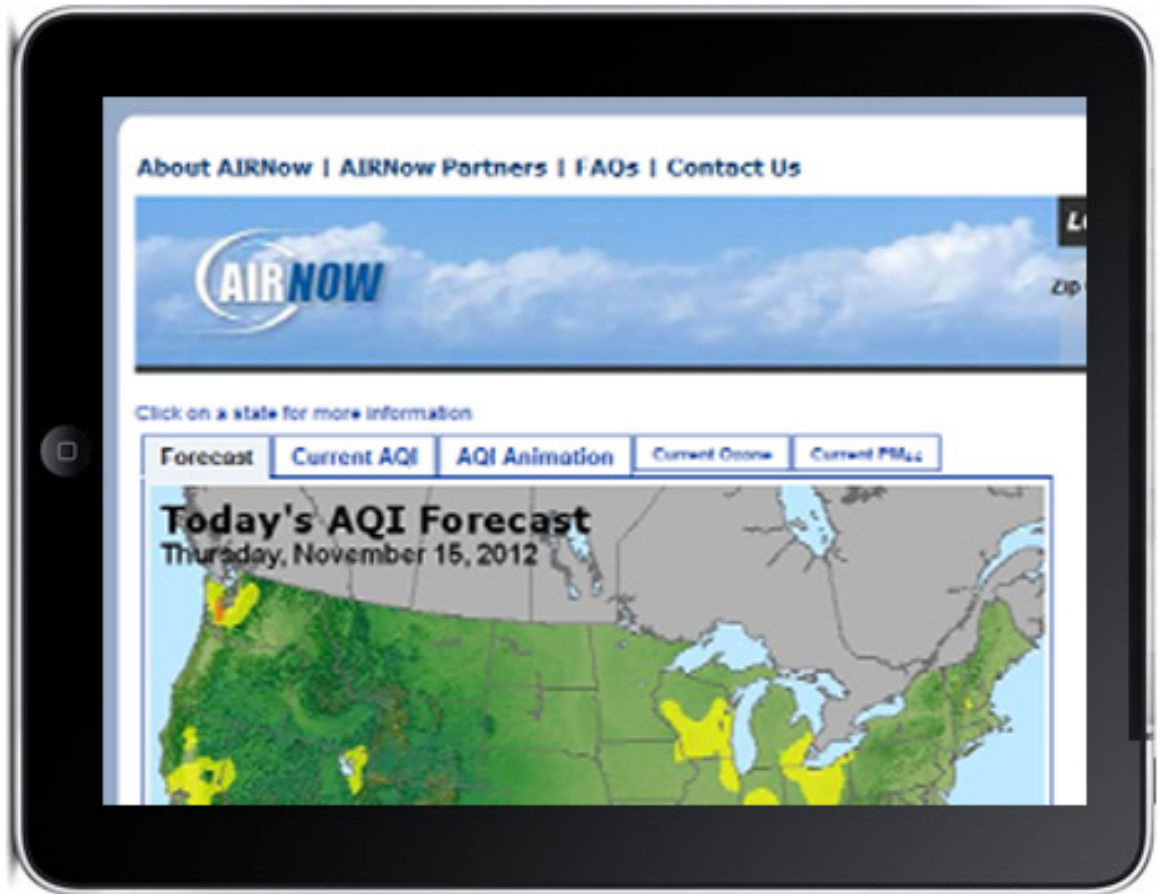
- Reporting required for **financial assurance** under four statutes could be streamlined and consolidated:
 - ✓ Better data through e-reporting to ensure companies have adequate funds for closure, cleanup of spills, and other obligations, which would otherwise fall to taxpayers
 - ✓ Improve ability of companies to understand and comply with their financial assurance requirements
- CAA, TSCA and FIFRA reporting will be simplified and integrated
 - ✓ With e-reporting, customers would complete simple, easier smart forms

Integrate advanced monitoring technology and mobile technologies with our information systems

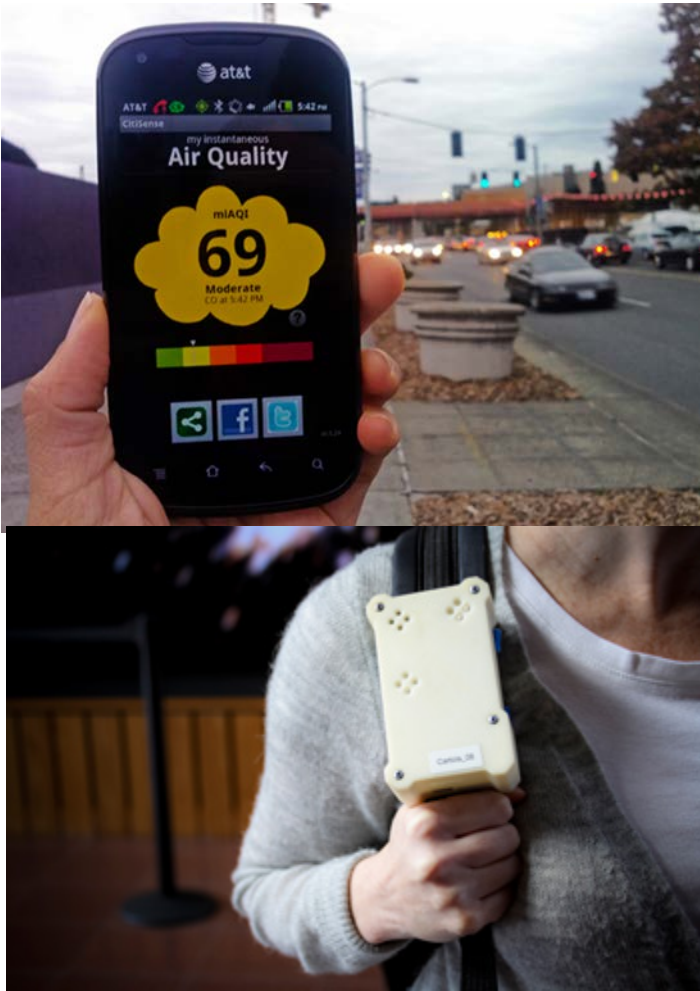
real-time info on releases and discharges of pollutants to air, water or land



Example



Citizen Science: Monitoring will not be done just by government and industry



Invisible
Private



Visible
Public/Shared

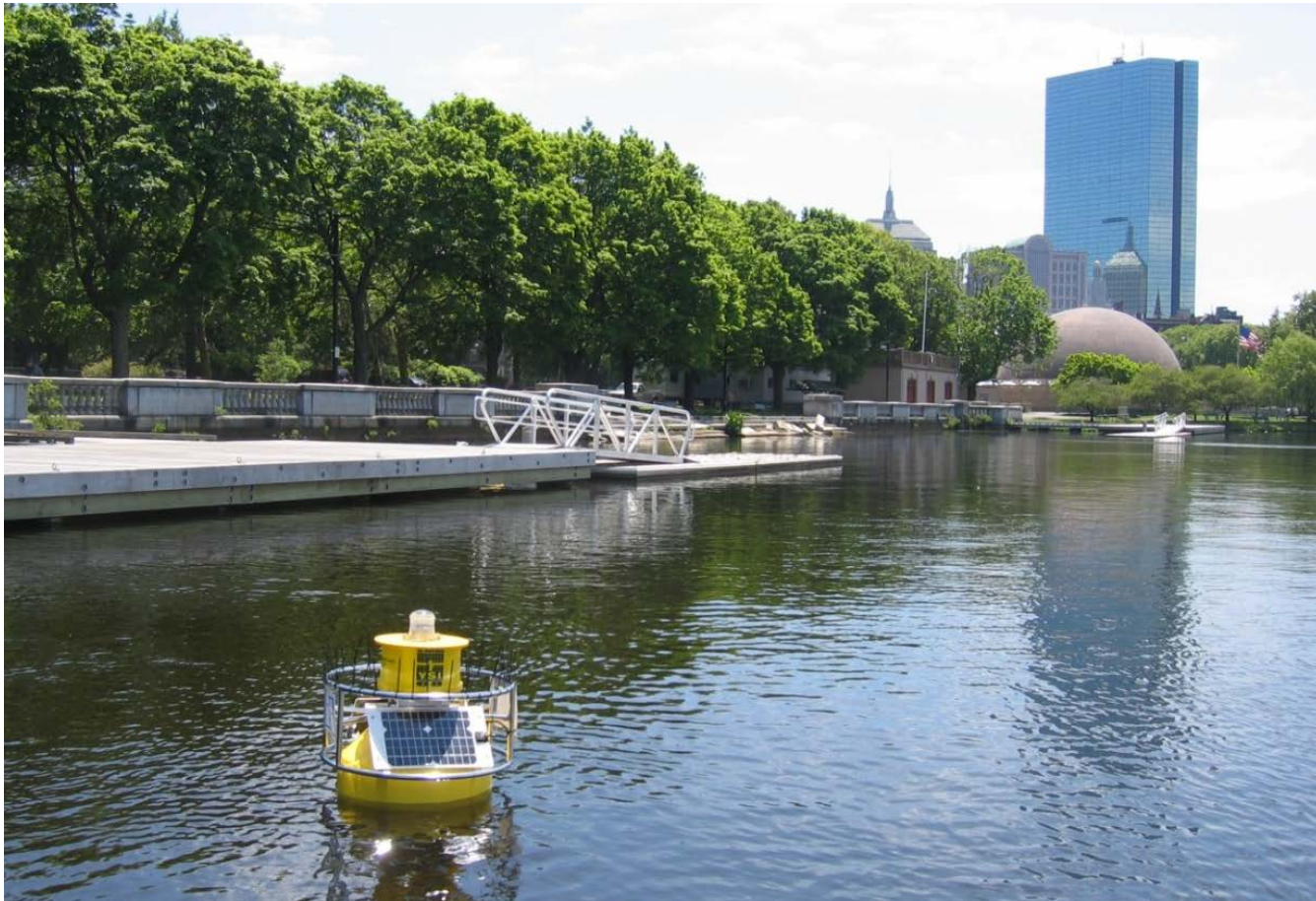
Pollution that had previously been “invisible” becomes “visible” through real-time monitoring



April 10, 2013



Real-Time Monitoring for Cyanobacteria in the Charles River, MA



April 10, 2013

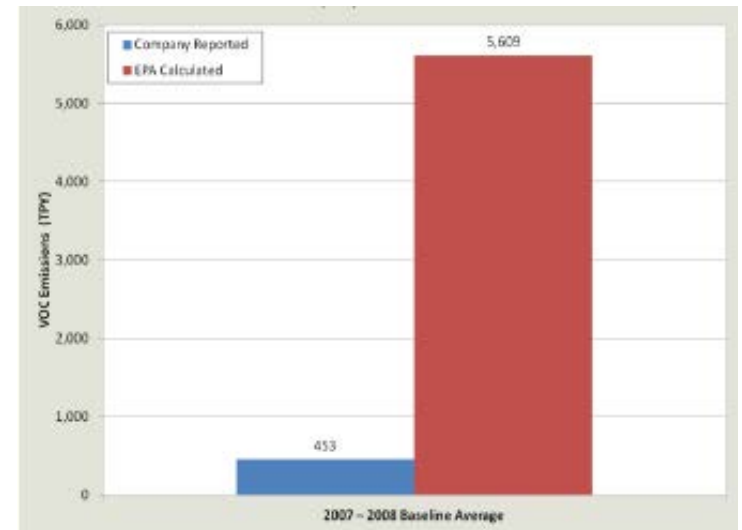
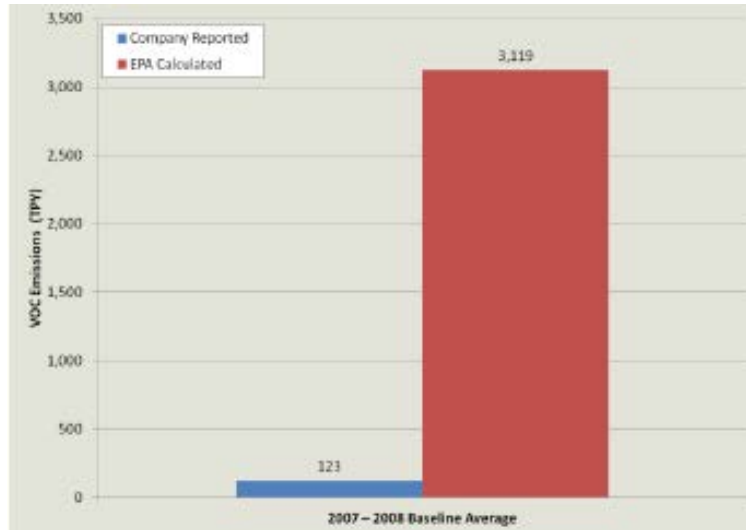
Open-Path Monitors for Checking Flare Combustion

- EPA uses PFTIR to test flares to determine combustion efficiency
- PFTIR works by measuring flare plume gases
- We found many flares with poor combustion efficiency that emitted substantial amounts of VOCs



Advanced Monitoring for Flares

Self-Monitoring and Reporting: *Estimating vs. Knowing*



- Two recent US EPA CAA consent decrees:
 - facilities assumed 98% flare combustion efficiency (i.e., compliance)
 - used emission factors to report low VOC emissions
- But when EPA checked their actual flare monitoring data:
 - real emissions were far higher (lower actual combustion efficiency)
 - communities exposed to far more HAPs than assumed

Shared IT and Data Systems

- Electronic Signature (CROMERR) Services
- Portals
- Within EPA, stop building disconnected data systems and increase use of shared services
- Building on Exchange Network foundation

E-Enterprise Builds on Exchange Network

- Central Data Exchange – an enterprise service
- State EPA Exchange Network Partnership
 - ✓ 30 common data standards and interoperable technology
 - ✓ All 50 States and over 20 Tribes established and exchanging environmental information on the Exchange Network
 - ✓ Exchange Network expanding to other Federal agencies, industry , and public for access and use of information

Enhancing State EPA Collaboration

- EPA and ECOS started working on developing E-Enterprise in June 2012
- E-Enterprise does not change program relationships among EPA and authorized/delegated states.
- E-Enterprise will enhance collaborative management of national environmental program by states and EPA using more complete, timely and shared data.



ECOS EPA Working Group on E-Enterprise with 4 teams

- **Working Group:** chaired by David Hindin (EPA) and Tom Burack (NH), with four teams:
 - Governance: co-chairs Tom Burack (NH)/Andy Battin (EPA)
 - Communications: co-chairs Victoria Phillips (MA)/Ira Leighton (EPA R1)
 - Blueprint: Co-chairs Karen Bassett (AR)/Steve Chester (EPA)
 - Early Successes and Business Case: Co-chairs Scott Nally (OH) and David Hindin (EPA)

Governance Team

Tom Burack (NH) and Andy Battin (EPA OEE)

Team Charge: Create a governance structure that is acceptable to all parties and that will best support the development, implementation and continuous improvement of E-Enterprise.

Key Deliverable: E-Enterprise Governance Requirements and Governance Options - describe the core governance functions and partner roles and responsibilities required to support e-Enterprise.

EPA/ECOS joint governance will foster compatibility among government platforms

E-Enterprise will maximize interoperability and cost-effective investments

EPA portal will not replace state programs or systems

Users will be directed to EPA systems for EPA programs, & to state portals for programs implemented by States

States may opt to use an EPA tool/system

MassDEP Regulated Entity Portal Massachusetts Department of Environmental Protection

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- Municipal Waste Combustor Regulations Posted for Comment
[View Notification](#)
- MWC #12345-EU2 Reported Pollutant/Parameter Carbon Monoxide in excess of applicable limit 100 from 04:00 to 08:00 on January 16, 2012
[View Notification](#)
- Annual compliance fee of \$1,234.56 for MWC #12345-EU2 is due on January 31, 2012.
[View Invoice](#) | [Pay Fee Online](#)
- MassDEP inspection is planned for Friday, February 10, 2012.
[View MassDEP Site Visit Prep Guide](#)

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123 Main Street, North Southland, MA
[Manage Facility Information](#) | [Maintain Key Personnel](#)

- Municipal/Waste Combustor, Air Quality OP (Fac #12345-EU1) - Active
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- Municipal/Waste Combustor, Air Quality OP (Fac #12345-EU2) - Active
[View Permit Details](#) | [View Previous Filings](#) | [Pay Fees](#)
- Ind. Wastewater Sewer Connection, BWP IW38 (W123456) - Active
[View Permit Details](#) | [View IWPS Diagram](#) | [View Previous Filings](#) | [Pay Fees](#)

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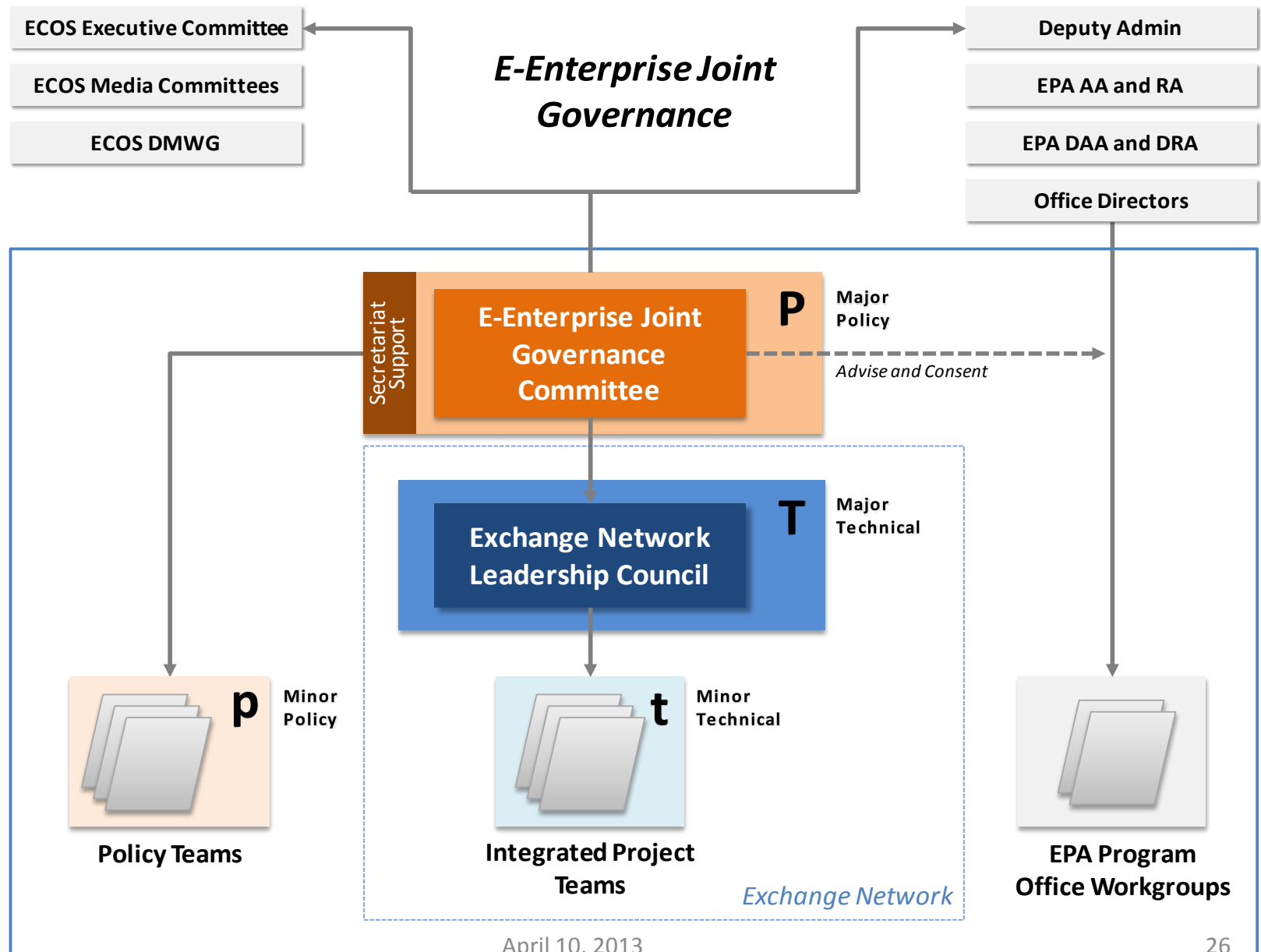


Quick Links

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- [Find or Request Technical Assistance](#)
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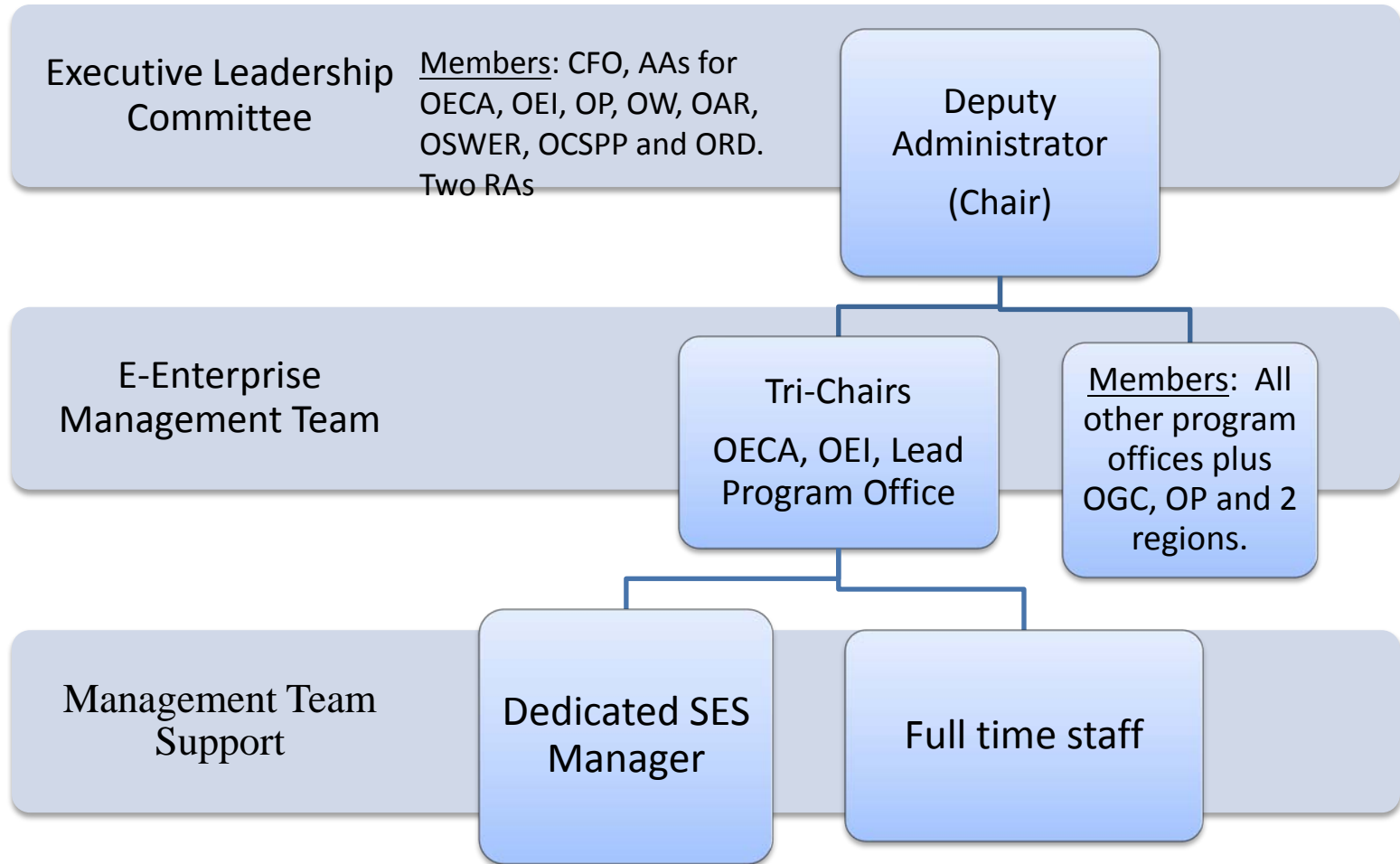
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DRAFT: not approved yet





E-Enterprise EPA Governance Structure



Blueprint Team

Karen Bassett (AR) and Steve Chester (EPA)

Team Charge: develop design principles and “Blueprint.” As part of the Blueprint development, the Team will consider and evaluate the tradeoffs between a functional approach to E-Enterprise and a more traditional program-based approach.

Key Deliverable: E-Enterprise Design and Operating Principles – The deliverable will document a set of founding assumptions used by the State and EPA partnership to guide e-Enterprise design and operating decisions.

Early Success/Business Case

David Hindin (EPA) and Scott Nally (OH)

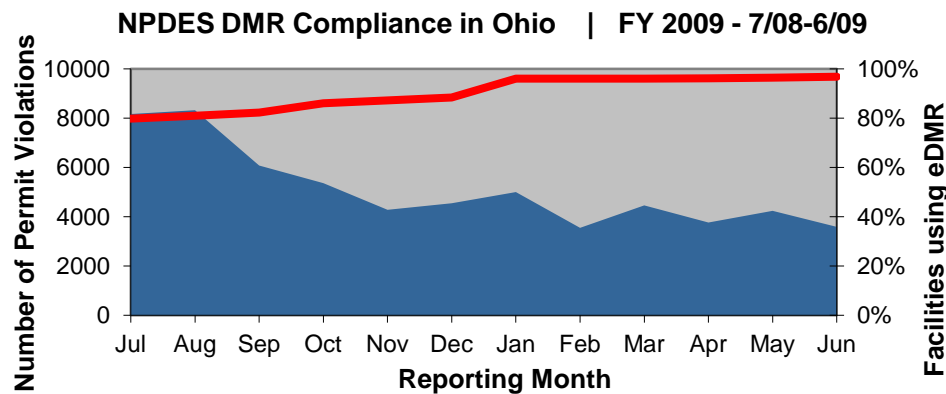
Team Charge: Show success in short term – defined as calendar year 2013/14. Identify new tools, services, products, documents, or processes that could be publicly initiated and/or put into operation.

Key Deliverable: E-Enterprise Business Case - This deliverable will document the e-Enterprise business need, goals, and the Return on Investment (ROI).

Early Successes Business Case Team

Next Steps

- Develop business framework for evaluation
- Identify comprehensive set of examples to illustrate benefits



eDMR Usage



Violations



Example: eDMR

- Ohio's conversion to e-reporting for NPDES discharge monitoring
- As eDMR usage increased, violations decreased by over 50%
- Better user experience - system sends 'alerts' if there are data errors or potential violations
- Long-term cost savings for regulated community and regulators

Communications Team

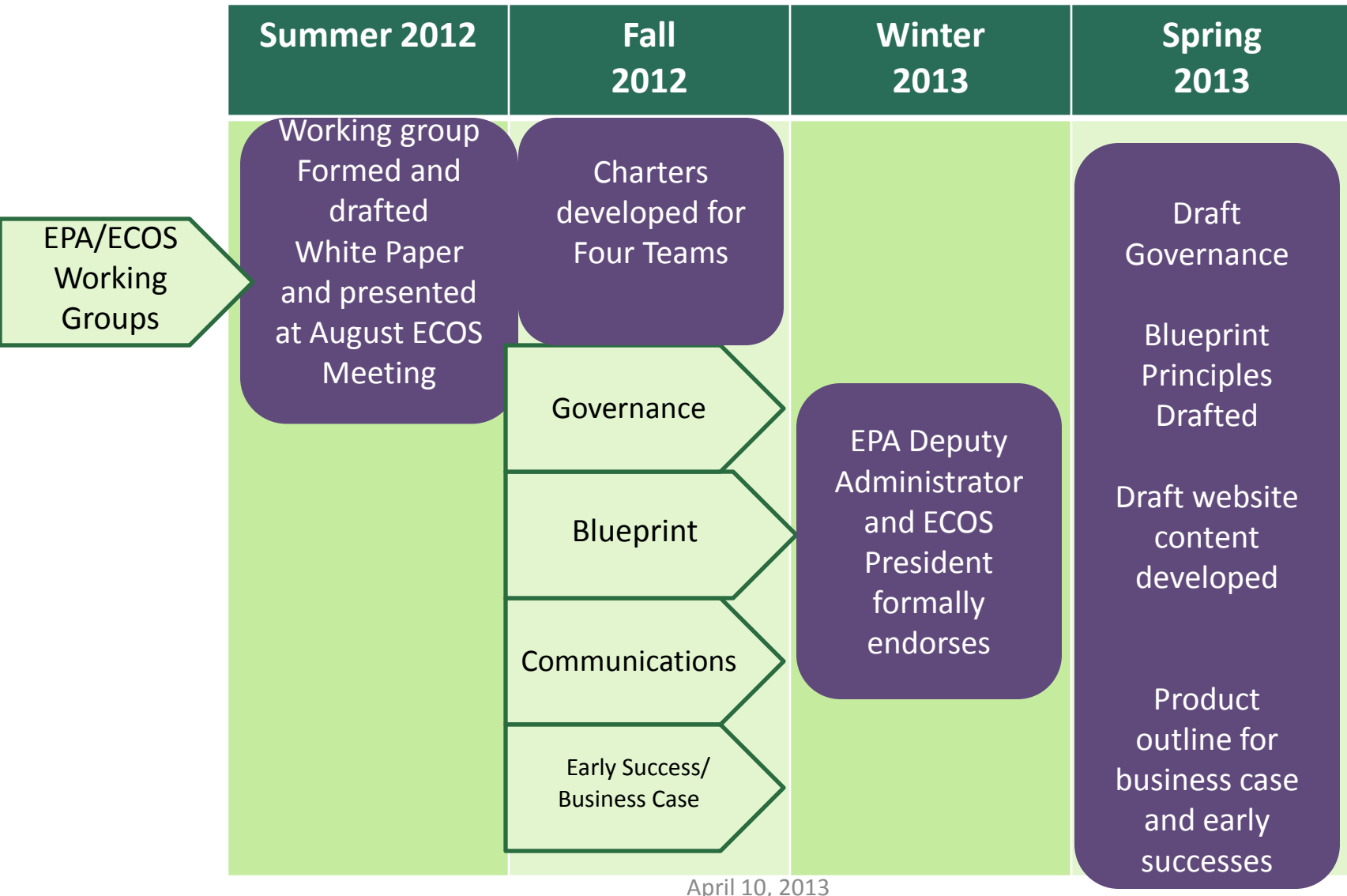
Ira Leighton (EPA R1) and Victoria Phillips (MA)

Team Charge: Develop clear, concise, user-friendly materials that present accurate and effective information to a broad range of stakeholders.

Key Deliverable: List of Target Audiences and Key Messages. Continuous updates to “vision presentation.”



Progress to date: EPA/ECOS E-Enterprise Collaborations





Future Milestones EPA/ECOS collaboration timeline





E C O S

Questions

For more information contact: David Hindin Hindin.david@epa.gov or Lee Garrigan lgarrigan@ecos.org