



ENHANCED
PRODUCTIVITY



TRUSTED
INFORMATION



STREAMLINED
PROCESSES



E-Enterprise Thumbnail Project Summaries



E-ENTERPRISE
for the environment

Modernizing the business of environmental protection

September 2017

Examples of Specific E-Enterprise and E-Enterprise-Aligned Projects, Categorized by Primary Value Delivered



PRIMARY VALUE: ENHANCED PRODUCTIVITY

1. *The E-Enterprise for the Environment Portal (E-Enterprise Portal)*

Enhanced Productivity/Streamlined Processes/Trusted Information: E-Commerce (Deployed):

This new user-friendly web platform modernizes the way in which the public, the regulated community, and environmental agencies conduct environmental transactions and access web resources by integrating data and functionality. As a dynamic online platform for collaboration and innovation, the E-Enterprise Portal supports online permit filing and processing, and online reporting to EPA, tribal, state, and local governments. The portal provides a consistent platform for environmental agencies to interact with regulated entities and the public, and it enables the regulated community and the public to find the information that is important to them, such as information on the best ways to treat their private drinking water systems to remove unhealthy contaminants.

2. *Lean and Information Technology (IT) Toolkit*

Enhanced Productivity/Better Customer Service (Deployed):

This set of materials shows how management approaches to continuous process improvement (Lean) can be combined with modern strategies for rapidly developing usable IT solutions to achieve improved environmental program performance, better customer service, and greater efficiency. Environmental agencies are using what they've learned about Lean from this toolkit to speed processing times in existing and new programs, eliminate backlogs, improve product quality, provide more value to customers, and free staff time to work on other activities. And they're using what they've learned from this toolkit about IT solutions developed through an "Agile" approach to amplify these gains. This is accomplished by automating streamlined processes, incorporating automated error checks to improve quality, enhancing the ability to share data across organizations, developing better IT systems with less effort, and providing better information for decision-makers. The Toolkit is available online at: <https://www.epa.gov/lean/lean-and-information-technology-toolkit>.

3. *Shared Services Integrated Project Team (IPT)*

Enhanced Productivity/Standardization to Support E-Commerce (Completed/Deployed):

Consistent with the E-Enterprise principle of efficient and effective use of limited resources by building tools once and enabling them to be used many times by all interested parties (including states, territories, tribes and EPA), the team cataloged all of the essential underlying processes to support the development and deployment of these so-called "shared services." Most shared services take the form of different types of computer software that can readily and inexpensively be adapted for use by numerous states or programs, and this team jointly developed a priority list of such shared services for near-term development and deployment.

4. *Smart Mobile Tools for Field Inspectors*

Enhanced Productivity/Streamlined Processes/Trusted Information: E-Commerce/Streamlined Compliance (Under Development; Launch Expected in 2017):

Enabling compliance inspections to be conducted using state-of-the-art mobile computer technology (such as tablets) will save businesses time and money and make inspections more useful by reducing the length of inspections and supporting the provision of real-time compliance status information. A combination of "smart" software and lightweight, portable computer equipment will provide instantaneous access to each facility's historical records, applicable requirements, compliance checklists, and technical assistance information, thus enabling local, state, and EPA staff to conduct compliance assurance activities in a consistent, efficient, well-informed, and constructive manner. Information gathering will be automated and streamlined, ensuring appropriate data collection and retention practices and more efficient data sharing to support decision-making. The initial launch in 2017 will support Resource Conservation and Recovery Act (RCRA) Subtitle C field inspections. Future iterations will support compliance inspection activities in other waste, water, and air programs, as well as multi-media evaluations.

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PRIMARY VALUE: ENHANCED PRODUCTIVITY continued

5. *E-Enterprise Measures and Metrics Project*

Enhanced Productivity/Standardization
(Under Development):

This project is developing an easy-to-use Performance Measurement Toolbox to provide states, tribes and EPA with metrics and evaluation systems to support quick determinations of the likely long-term benefits of a streamlining or modernization proposal. The toolbox will enable project-level evaluations of anticipated improvements in efficiency and effectiveness, as well as system-level evaluations of long-term improvements. These capabilities will help to ensure the cost-effectiveness of modernization activities intended to streamline process, enhance productivity, and provide access to trusted information.

6. *E-Enterprise Integrated Identity Solution (ISOL) Project: Enhanced Productivity*

Enhanced Productivity/Standardization to support E-Commerce (Under Development):

This technically complex project is developing a way for existing and future state, tribal and EPA computerized database systems to communicate and exchange information in an efficient and streamlined manner. The integration of online digital systems will improve delivery of information to regulated entities, the public, and government agencies, and will reduce overall costs and time required to gather and assess information and make decisions. This is an Exchange Network project that is seeking to make comprehensive use of the Identity Bridge system developed by EPA for linking data systems.



PRIMARY VALUE: TRUSTED INFORMATION

7. *Local Government Portal (LGP)*

Trusted Information/E-Commerce (Deployed):

Connected to the E-Enterprise Portal, the Local Government Portal helps leaders in local and tribal governments access key national, state, and tribal services and information to better address the environmental needs of their communities, including water infrastructure funding, compliance, management of critical assets, health, sustainability and resilience, and other issues. The LGP provides powerful, easy-to-use tools that enable local governments to make better decisions; save staff time and money; build technical, managerial, and financial capacity; and provide higher levels of service to community members.

water quality monitoring data from diverse sources and enabling water quality managers at all levels of government to more fully evaluate the health of watersheds and local water resources and make more timely and informed decisions.

9. *Tribal Water Quality Data Roadmap*

Trusted Information/Enhanced Monitoring (Deployed):

This project simplifies and streamlines how tribal environmental agencies collect and submit water quality monitoring data, thereby ensuring the legacy of the data collected and a reliable basis for making well-informed environmental decisions. The project also provides a roadmap for developing and delivering water quality monitoring data, even during times of staff turnover.

8. *Interoperable Watersheds Network*

Trusted Information/Enhanced Monitoring/
Standardization (Field Tested; Deployment Expected
in 2017):

This project streamlines the process of assessing water quality in rivers and streams, thereby accelerating the process of restoring and protecting waterbodies nationwide. Development of a common set of data formats and criteria enables the use of new, inexpensive water quality monitoring sensors, thereby providing near real-time access to watershed-level

10. *Village Green Station – Measuring Air Quality from a Park Bench*

Trusted Information/Enhanced Monitoring (Completed/
Deployed):

This E-Enterprise-aligned project developed an innovative prototype air and weather measurement system, called the Village Green station, that is providing new ways for communities to learn about pollutants that affect local air quality, including ozone

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PRIMARY VALUE: TRUSTED INFORMATION continued

and fine particles (also known as PM 2.5), as well as local weather conditions that may contribute to unhealthy air. Village Green stations have been installed in six communities including Durham, NC, Washington, DC, Philadelphia, PA, Oklahoma City, OK, Kansas City, KS, and Hartford, CT. Each station includes a number of solar-powered instruments that provide continuous, minute-by-minute measurements of air pollution and weather, which are automatically quality controlled and streamed to a public web page.

11. *SPeCS for SIPS: State Plan Electronic Collection System for State Implementation Plans*

Trusted Information/Enhanced Productivity/Standardization: E-Commerce/Better Planning (Under Development):

This modernization project will provide a state-of-the-art information technology system for authorized states, territories, and tribes to submit and manage State Implementation Plans (SIPs) under the federal Clean Air Act. These partner agencies will be able to submit proposed SIPs through a secure web-based system, and EPA will be able to more efficiently develop, manage, track, and obtain information about those SIPs. For industry and environmental stakeholders and the public, SpeCS provides plan approval status updates, links to approved plans, and plan information at the state and national levels.

12. *Advanced Monitoring Strategy and Implementation*

Trusted Information/Enhanced Productivity/Standardization (Underway):

This project is studying ways that the national environmental enterprise can most effectively harness and benefit from the recent, rapid development of environmental monitoring technologies that are smaller, more portable, and less expensive than traditional methods. These technologies, when used in a manner consistent with their capabilities and limitation, offer unprecedented opportunities to augment the capabilities of air and water quality monitoring networks and enable alternative approaches to pollution reduction that are far more effective, efficient, and transparent. This project includes: assessing the feasibility of establishing an independent, third-party system for evaluating new types of environmental sensors; defining a structured process for regulatory agencies to use to scan the market for promising new technologies and make information about them available to agency users; developing guidance and tools for interpreting and visualizing the data generated by new sensors; developing uniform standards for sensor data to facilitate the exchange and analysis of information from many sources; and streamlining processes for approving technologies for regulatory use.



PRIMARY VALUE: STREAMLINED PROCESSES

13. *Pesticides Data Accessibility and Label Matching Streamlined Processes*

Streamlined Processes/Simplified Compliance/Standardization (In Development; Launch Expected in 2017):

The latest computer technologies and hand-held devices are enabling streamlined compliance approaches by moving from labor-intensive, paper-based reviews of pesticide labels to optical scanning reviews that can save time and ensure that pesticides are being used for their approved uses. The processes seek to ensure that the right pesticides are used in the right ways, for the right purposes, and with the right

user protections. An integrated, mobile application reduces the pesticide labeling program's complexity and cost, improves efficiency and impact, promotes increased and more proactive regulatory compliance, and ensures protection of human health (e.g., of farm workers and children) and the environment.

14. *Decision Support Tools for RCRA Waste Generators*

Streamlined Processes/Simplified Compliance (Deployed):

This online compliance tool enables users of liquid solvents across numerous industries to easily determine if
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PRIMARY VALUE: STREAMLINED PROCESSES continued

liquid solvents wastes must be managed as hazardous wastes under the Resource Conservation and Recovery Act, which is administered by EPA, states and tribes. Developed through a Lean process that included substantial engagement by regulated, private sector facilities, these easy-to-use compliance tools help facilities make more accurate determinations on their liquid solvent wastes. The tools also enable them to easily find information about recycling or reusing their solvents, which can reduce waste management costs and the nation's need for virgin materials. The tool was viewed more than 3,000 times and downloaded more than 200 times within the first nine months of its deployment. See <https://www.epa.gov/hwgenerators/guide-how-determine-if-solvents-can-no-longer-be-used-workplace-are-hazardous-waste>.

15. **Hazardous Waste Export-Import Tracking System (WEITS)**

Streamlined Processes/Trusted Information/Enhanced Productivity: E-Commerce/Simplified Compliance/Standardization (Deployed):

By consolidating and streamlining regulatory requirements, and introducing a standard electronic report system, the import of some 3,000 shipments and export of some 49,000 shipments of hazardous waste annually into and out of the United States has been expedited, and greater protections are being provided to the workers who handle and transfer those shipments. Stronger coordination and enhanced data sharing among EPA, states, tribes, U.S. Customs and Border Patrol, and the regulated community are helping the regulated community by reducing the uncertainty, cost, and time to process export notifications.

16. **E-Permitting Scoping Study**

Streamlined Processes/Simplified Permitting (Completed/Deployed):

Online systems are speeding the processing of many types of environmental permits at the federal, state, and local levels, and this evaluation has identified where some of the greatest opportunities may be found for future efforts to streamline the submission, review, and approval of a wide range of permit types. By documenting what enables an e-permitting approach to be successful and to overcome the barriers of transitioning from a paper-based system to an online system, this study provides a platform for understanding how best to build new systems. It also shows how to

expand and integrate existing systems, share lessons learned across states and agencies, and develop a framework of measures for evaluating return on investment for e-permitting tools that might be shared by multiple states.

17. **NPDES E-Reporting Rule Implementation Plan**

Streamlined Processes/Trusted Information/Enhanced Productivity/Standardization: E-Commerce and Simplified Compliance (Completed/Deployed):
This project made it easier for states that implement the National Pollutant Discharge Elimination System (NPDES) permit program through a new system of online submission of mandatory reports on permitted discharges of pollutants to the nation's waterways. The suggested Implementation Plan Template developed by the group has saved many states thousands of hours of staff time. Moreover, its use led to streamlined process approvals by EPA and simplified the compliance tasks for NPDES permit holders, including business and municipalities.

18. **E-Enterprise Facility IPT**

Streamlined Processes/Standardization to Support E-Commerce/Simplified Reporting (Phase I Completed; Phase 2 Underway):

This project seeks to eliminate duplicative reporting requirements and difficulties in coordinating information about a regulated facility by developing a comprehensive approach to facility registration and identification. Among other benefits, this project will streamline and simplify data collection and reporting for regulated industry and provide a shared ID approach to facilitate a multi-media compilation of a facility's environmental permits and aspects.

19. **e-Manifest for Hazardous Waste**

Streamlined Processes/Trusted Information/Enhanced Productivity: E-Commerce/Simplified Compliance (Development Underway/Launch Expected in 2018):
EPA, with active participation of states and the user community, is developing a national hazardous waste electronic manifest (e-Manifest) tracking system covering all federal and state wastes that must be manifested. The result will be a unified tracking system for all electronic and paper manifests. EPA estimates the national e-Manifest system will ultimately reduce the

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PRIMARY VALUE: STREAMLINED PROCESSES continued

burden associated with preparing shipping manifests by between 300,000 and 700,000 hours and result in cost savings of more than \$90 million per year for states and industry. The e-Manifest system will significantly improve access to higher quality and more timely waste shipment data, empower communities through increased transparency, and provide more accurate information on completed waste shipments and management trends.

20. Combined Air Emissions Reporting (CAER)

Streamlined Processes/Trusted Information/Enhanced Productivity: Standardization to Support E-Commerce/Simplified Compliance (Development Underway; Launch Expected in 2018):

This comprehensive and technically complex project is bringing together EPA, state, and tribal air quality staff with regulated entities and other parties to develop a process for integrating reporting under numerous different air quality databases managed by EPA or by states or tribes under various federal laws and requirements. The project is expected to reduce burdens on industry for point source reporting, improve the timeliness and transparency of data, create consistent information across air emissions programs, improve data quality and the accessibility and usability of data, and support timely decision-making.

21. State Drinking Water Information System (SDWIS) Prime

Streamlined Processes/Trusted Information/Enhanced Productivity: Standardization to Support E-Commerce/Simplified Reporting and Compliance (Under Development? Have some phases been launched?): Modernizing the electronic systems that track water

quality in public water systems is enabling local, state, and federal governments and water system operators to ensure the provision and monitoring of public water in a compliant, timely, accurate, transparent, cost-effective, and efficient manner. This updated data system is business friendly, designed to meet the needs of states, tribes, EPA, and water system operators, and readily adaptable to accommodate necessary changes to address new threats to the safety of public water supplies nationwide. Among its many benefits, the estimated annual burden reduction of SDWIS Prime is 867,000 hours, much of which is being achieved by streamlining business processes and modernizing the electronic portal through which laboratories and water systems electronically report compliance monitoring data.

22. Leak Detection and Repair (LDAR) Rule Modernization

Streamlined Processes/Simplified Compliance (Under Development):

A team of state and EPA experts is studying whether there are more cost-effective ways to implement LDAR program monitoring requirements while achieving greater environmental benefits by using modern tools such as newer technologies and methods than are permissible under the current LDAR rule. Modernization elements could include the use of optical gas imaging, incorporation of low-emission technologies, and modernization of data recordkeeping and reporting requirements. The LDAR rules, adopted to fulfill requirements of the federal Clean Air Act, must be complied with by thousands of facilities nationwide, and efforts to modernize, streamline, and simplify the rules likely would reduce overall compliance costs, shorten inspections, and improve environmental conditions.