

E-ENTERPRISE FOR THE ENVIRONMENT

Integrated Management Plan

January 16, 2015

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Section 1. Introduction

E-Enterprise Vision

A modern, well-integrated, national enterprise of environmental protection jointly governed by states, tribes and EPA.

E-Enterprise for the Environment (E-Enterprise) is a transformative 21st century strategy to modernize the way in which government agencies deliver environmental protection. Through joint governance, the states, U.S. Environmental Protection Agency (EPA) and tribes are collaboratively streamlining business processes and driving and sharing innovations across agencies and programs. These changes will improve environmental results and enhance services to the regulated community and the public by making government more efficient and effective.

The evolving relationship of the EPA, states, and tribes over more than four decades is reflected in environmental programs developed under statutes that used different approaches and funding mechanisms to address varied environmental problems. While these programs have achieved dramatic improvements in environmental quality during this period, challenges remain. To tackle these complex environmental challenges, EPA, states and tribes have an opportunity to transform the way we implement these programs, as a shared responsibility, into an integrated national enterprise for environmental protection.

1.1 Core of E-Enterprise: Strengthening Environmental Protection through Business Process Improvements Enabled by Joint Governance and Technology

E-Enterprise Mission

Protecting the environment through modern business processes, technology, and partnerships.

The core purpose of E-Enterprise is to *improve environmental protection* by streamlining, reforming, and better integrating our programs, both across programs and among partner agencies. Higher performing programs will operate more efficiently and effectively to deliver positive environmental results.

With this streamlining in hand, we can use advances in information and monitoring technologies to *deliver enhanced services for the regulated community, the public, and environmental agencies*. The improvements of these services –process efficiencies, burden reduction, and transparency – can be realized only if technological modernization also incorporates the means for better program performance. Without streamlining and reforming our programs first, we risk that technology will automate unchanged, inefficient, fragmented processes.

At the heart of E-Enterprise is a commitment by the governmental co-regulators in the national enterprise for environmental protection to *operate this partnership as a transformative model for joint governance*. Joint governance encompasses a broad principle of early engagement and collaboration among EPA, state, and tribal partners: working collaboratively to streamline, modernize and integrate our shared business processes and management approaches. Joint governance is essential to drive integrated process and management improvement. Without it, process improvements and technology changes undertaken by individual agencies may further entrench fragmentation among EPA, states and tribes.

With the continuing reality of limited resources, joint governance serves to organize the E-Enterprise partnership to elevate its visibility, boost our capacity to collaborate, and help ensure the integration and effectiveness of our shared improvements. Our vision is that Joint Governance will provide the leadership and inspiration to imbue all of our work with this new perspective, so that eventually it simply becomes how we do all of our business, and no longer needs to be called “E-Enterprise”. The current environmental protection system developed over nearly 45 years, so E-Enterprise is a long-term transformative strategy.

1.2 Document Purpose and Audiences

This Integrated Management Plan has three purposes: to articulate our goals and to provide clear direction on what it means to align our work with these goals and the E-Enterprise principles; to outline the E-Enterprise joint governance and management framework; and to illustrate by examples of current and planned projects and program activities how E-Enterprise will operate to align our work with the goals and principles. The principal audiences for this document are the E-Enterprise Leadership Council (See Section 3), all staff responsible for implementing E-Enterprise, staff and managers within EPA, state and tribal agencies and others who seek to better understand this innovative approach to delivering environmental protection.

Section 2. E-Enterprise Goals and Objectives

E-Enterprise is a strategy to drive systemic reform, enhance services, and thus improve environmental outcomes. The E-Enterprise goals operationalize this strategy through a set of statements that describe what we seek to accomplish.

Goal #1: Improve environmental protection through better program performance

E-Enterprise will improve the performance of current programs by developing new practices to implement them. This goal represents the ultimate marker by which success of E-Enterprise will be assessed: does it improve environmental protection?

Objectives:

1. Streamline and modernize business processes, both across programs and among partner agencies.
2. Integrate E-Enterprise goals and principles into applicable new policies and regulations.
3. Develop and implement new and more effective environmental management approaches.
4. Promote adoption and integration of advanced information and monitoring technologies.

Goal #2: Enhance services to stakeholders and agency partners

The E-Enterprise partnership will improve the quality of services delivered to the public and regulated entities and improve the efficiency of environmental agencies’ operations. E-Enterprise will reduce transaction costs and burden by modernizing our programs and developing innovative management approaches. This will include using shared services, converting from paper to more advanced electronic forms, streamlining program requirements related to reporting and similar transactions, and applying advanced monitoring to streamline information collection. Enhanced services to the public focus on improving transparency.

Objectives:

1. Reduce transaction costs and burden for the regulated community.
2. Reduce transaction costs for E-Enterprise agencies.
3. Improve transparency of environmental conditions, regulated community and government performance, and governmental administrative processes.
4. Improve the qualitative user experience for the public and regulated community.

Goal #3: Operate our partnership as a transformative model for Joint Governance

Integrated environmental protection requires a new level and form of partnership, one which moves beyond simple coordination. We've begun by chartering a joint governance body, the E-Enterprise Leadership Council, to establish strategic direction and policy, and to set priorities and oversee management of day to day joint work. Our framework of joint governance goes beyond our formal governance body to include the broad principle of encouraging early and meaningful engagement and collaboration among EPA, states, and tribes for all our related work.

Objectives:

1. Jointly establish strategic direction and priorities for E-Enterprise
2. Collaborate in an early and meaningful manner at all levels to solve problems common across partners
3. Develop and promote the use of innovative solutions
4. Establish and use shared regulatory, technical, and policy tools

Section 3. E-Enterprise Joint Governance and Management

E-Enterprise represents a major expansion of the range of topics around which EPA and its partners seek to collaborate and co-manage through joint governance. Joint governance provides a new, unique venue hosting a new level of collective conversation, negotiation and direction setting focused on strengthening a national enterprise of environmental protection. If the system is working, efforts in this venue will support transformative reforms, and over time these conversations and the projects they support will contribute to a culture change from business as usual to "business as unusual."

3.1 The E-Enterprise Leadership Council

E-Enterprise joint governance (See figure 1) is led by the EELC. The EELC is composed of ten EPA Senior Executives (i.e., Deputy Administrator, Assistant and Regional Administrators or their Deputies) and ten State Commissioners (or other high-level state officials). The EELC has had tribal participation for its most recent meetings and anticipates increasing tribal engagement in 2015. The EELC responsibilities include identifying, soliciting, reviewing, and prioritizing E-Enterprise focus projects, identifying new and existing State and EPA resource investments needed to support these focus projects, and ensuring alignment of projects and program activities with E-Enterprise goals and principles. Further, the EELC responsibilities include addressing policy issues impeding E-Enterprise project implementation, developing performance measures to track progress, ensuring inclusion of all relevant stakeholder perspectives, and taking other

actions as deemed necessary to achieve the vision of E-Enterprise. See the EELC Charter¹ for more detailed information on E-Enterprise Joint Governance. Appendix A describes a set of management strategies the EELC will use to guide its work. For a description of the management structures supporting joint governance see Appendix C.

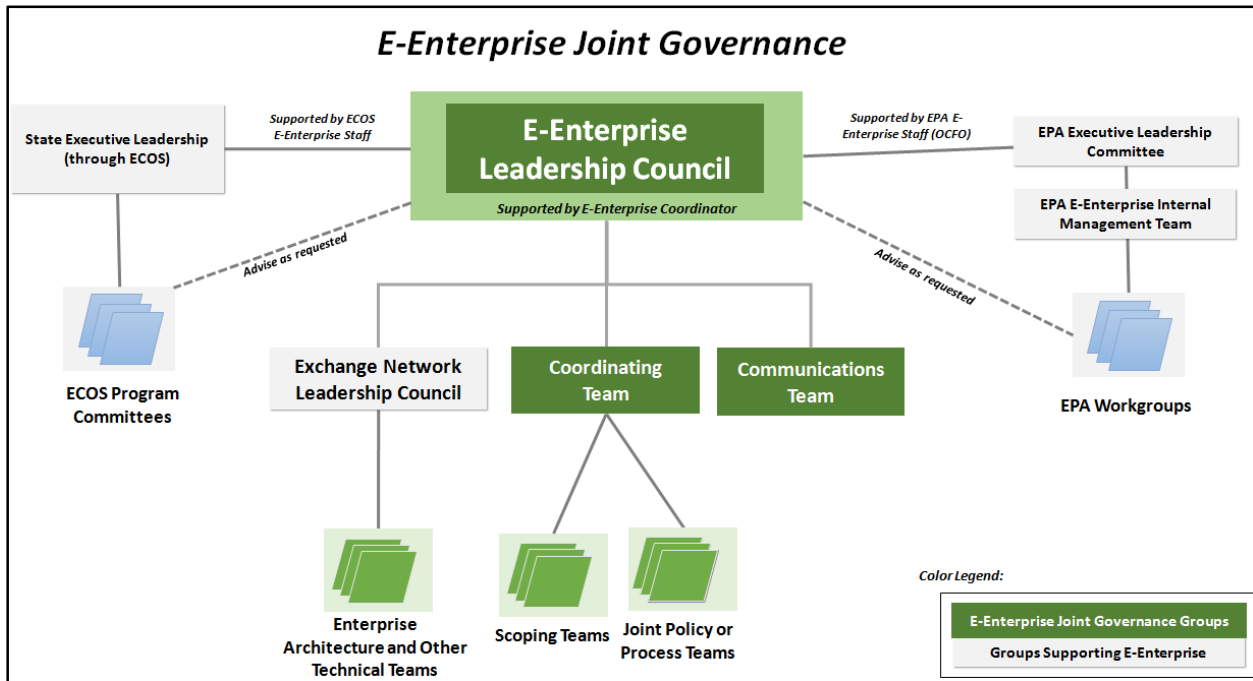
3.1.1 E-Enterprise Leadership Council Projects

As noted above, the EELC initiates and oversees the implementation of projects and activities that include three types of work:

- Projects implementing and operating shared technical and program infrastructure, including systems or tools that are used across the states, tribes and EPA.
- E-Enterprise Leadership Council focus projects, as inaugurated in May 2014, emphasize projects that achieve benefits through reforms of underlying business processes along with applications of advanced technology and monitoring tools.
- Partnership support activities, enabling joint governance operation and more broadly the operation of the E-Enterprise partnership. These can include planning for major multi-project investments such as the E-Enterprise Enterprise Architecture Task Team, support for topic-specific EELC teams such as scoping teams, stakeholder outreach, and support for EELC management and policy development.

Current EELC projects are identified in Section 4.2.

Figure 1: E-Enterprise Joint Governance Diagram



¹ <http://www.exchangenetwork.net/wp-content/uploads/2014/03/09-16-13-Signed-EELC-Charter.pdf>

3.2 Joint Governance Key Modes of Operation

The EELC provides a senior level, enterprise focused venue to perform the functions summarized in Section 3.1. It also serves in a sense as an incubator for the capabilities and experience of its members to operate in multiple roles – both in their capacities on the EELC itself, and as senior leaders in their respective organizations. For E-Enterprise to be successful, members will need to operate in these roles in both venues, their individual agencies as well as the EELC. The roles are to be *champions*, *synergizers*, and *promoters*.

1. In the *championing* role the EELC as a whole, and its members in their agencies, will directly initiate implementation projects as well as policies, guidance and program infrastructure that advance E-Enterprise goals. This role can also include acting as issue champions in both venues, by helping directly to solve problems or by actively driving change in an issue.
2. In the role of *synergizer* the EELC and its members in their organizational capacities help “connect-the-dots” between separate but related projects across partners and across their own organizations. This can also include working to develop reusable solutions for common problems. In both cases, these synergies promote alignment (see this section below).
3. The *promoter* role means the EELC members and their staff advocate broadly for E-Enterprise and promote integration of its goals across their agencies and into their programs. This includes the work to revise processes and procedures within EELC member agencies and their respective programs to institutionalize E-Enterprise.

3.2.1 E-Enterprise Aligned Projects and Program Activities

Over time we want E-Enterprise thinking to guide all of our joint work, in other words we want these projects aligned with E-Enterprise. But what does it mean for a project or program activity to be “aligned”? The success of E-Enterprise begins with the work of the EELC, but institutionalizing it into the national environmental protection enterprise requires all partners incrementally to build its goals and principles into our projects, business processes and programs – in short, to align them with E-Enterprise.

The vast majority of E-Enterprise-related actions and investments will be “aligned” projects and program activities. A subset will be activities directly sponsored by the EELC. To support all these alignment efforts, E-Enterprise provides: shared infrastructure to reduce costs and improve performance; a broad vision for intergovernmental services to provide a more seamless experience for regulated entities and the public; business process improvement tools, and; the EELC itself as a capable and respected forum to raise issues needing a joint and enterprise perspective for resolution. Each of the three roles of the EELC and its members are designed to promote this alignment. Although supported by broad policies and procedures, alignment will happen one project and program activity at a time, with the leadership and guidance of EELC members and the agency managers and staff who take up the challenge.

3.3 Implementing E-Enterprise in Our Work

For managers and staff in E-Enterprise partner agencies seeking to identify and consider how to “align” an ongoing or planned project or program activity, it may seem challenging to translate the E-Enterprise goals into concrete operational steps or approaches. While there are no set recipes on exactly how to proceed – and this is a learning process for those directly involved in E-Enterprise as well – we are by no means starting from square one. Every partner environmental agency has gradually and in disparate ways been putting in place approaches that would advance the three goals. In that respect, E-Enterprise is a means to apply these approaches in a more systematic way that will complement and mesh with similar work being done by partner agencies. This plays to the power of joint governance by providing a strong norm to

maximize the early engagement and collaboration of E-Enterprise partners in alignment activities. Agencies may have an understandable skepticism about investing in a front-loaded process, and this reality check may help to confirm whether an issue has “pay me now or pay me later” consequences. It is a foundational theme of E-Enterprise that our individual work cannot be effective unless it is effective for all our partners. As E-Enterprise matures and the goals and objectives are refined into more specific guidance and capabilities, it will be easier to describe to managers how they can align their projects with E-Enterprise. It is through these capabilities, resource and guidance put to use by agency managers everywhere that most E-Enterprise implementation will occur.

3.3.1 Building E-Enterprise into EPA and Partner Agency Administrative Policies and Procedures

As mentioned in Section 1, the E-Enterprise strategy integrates the business process and jurisdictional components of partner agency programs into a shared national enterprise of environmental protection. This requires both procedural and organizational culture change. One of the most durable ways of initiating and reinforcing such change is to incorporate reforms into an organization's standard policies and procedures. There are many such opportunities at the EPA, State and Tribal levels, which can be pursued over both the near and longer term. Example opportunities for consideration by EPA and partner agencies – to stimulate individual projects and policy activities that will illustrate the potential of broader change, or more comprehensive, programmatic efforts over time – are summarized in the table below. While some of the opportunities listed in the table below are primarily internal EPA policies and procedures, nearly all of them will translate into programmatic requirements for partner agencies, as well as external stakeholders, and so are more broadly relevant.

In considering actions to take within or beyond the areas listed in this table, E-Enterprise partners may want to think through these questions:

- Which have the broadest influence?
- Which have the quickest influence?
- Which is the simplest to implement?
- What is the approximate amount of resources each will take?
- What are the benefits of the changes?
- Which Stakeholders will benefit from the changes?

Procedure/Policy Area [Current Scope]	Key Question for of Considering E-Enterprise Integration Into Procedure/Policy Area
Action Development Process [EPA]	How could incorporation of E-Enterprise goals and principles into EPA’s regulatory development process (called the Action Development Process) modernize and improve environmental protection?
Information Collection Request [EPA]	How could incorporation of E-Enterprise goals and principles into the Information Collection Request (ICR) process identify potential overlaps and opportunities for efficiencies?
Burden Reduction Metrics [EPA, states, and tribes]	How could E-Enterprise goals and principles be used to establish shared burden reduction metrics across EPA, states, and tribes?
E-Enterprise Project Benefit Metrics [EPA, states, and tribes]	How could E-Enterprise goals and principles be used to establish shared quantitative (cost/benefit) and qualitative metrics to support return-on-investment analyses across EPA, states, and tribes?

Procedure/Policy Area [Current Scope]	Key Question for of Considering E-Enterprise Integration Into Procedure/Policy Area
Regulatory Lookback Analysis [EPA]	Incorporation of E-Enterprise burden and benefit metric methods into retrospective looks at cumulative actual burden/benefits from regulations. These analyses are run by EPA OP. How could incorporation of E-Enterprise goals and principles into EPA’s Regulatory Lookback Analyses help identify opportunities for burden reduction and other efficiencies?
Lifecycle Management and Investment Reviews [EPA, states, and tribes]	How could incorporation of E-Enterprise goals and principles support efficient IT systems planning and development, and maximize the re-use of existing shared services (build once-use many)?
EPA Grant Guidance [EPA]	How could incorporation of E-Enterprise goals and principles into EPA grant programs foster more effective state/tribal environmental program implementation including business process improvement and maximizing the use of information technology/advanced monitoring?
NPM and NPM Biannual Operating Guidance [EPA, states, and tribes]	How could operating guidance aid in aligning existing work processes with the E-Enterprise goals and principles?
Acquisition guidance and policies [EPA, states, and tribes]	How could incorporation of E-Enterprise goals and principles into EPA’s acquisition guidance ensure optimal use and re-use of acquired resources?
Enterprise architecture guidance and policies [EPA, states, and tribes]	How could incorporation of E-Enterprise goals and principles into EPA’s IT policy framework, aid in the re-use of shared services to maximize efficiencies?

This list is provided as an illustrative starting point. While the activities it ultimately envisions are potentially far-reaching, some may be relatively simple and quick to implement. Broader changes will generally require several years to gain greater experience and practical understanding of how best to carry out E-Enterprise goals and principles and to implement. The bulk of these efforts will involve aligned projects where the partners should undertake greater engagement as the realization of the joint governance goal. Where EELC involvement is appropriate, the Coordinator can assist in coordinating EPA and partner agency engagement for changes to EPA or respective partner agency policies. Over time, these procedural reforms will help E-Enterprise evolve from a separate initiative into standard business practice. Undertaking these ambitious changes will demand a great deal of collaboration and some difficult conversations. Joint governance is crucial to ensure that these conversations lead to lasting changes and fully institutionalized improvements.

Section 4. E-Enterprise Near-Term and Future Activities

The success of E-Enterprise will ultimately be judged by the ability of our partnership to provide tangible improvements in providing environmental protection to the nation. In addition to committing to a new level of partnership, we have started several projects and longer term planning efforts to launch E-Enterprise activities. Table 4.2 provides descriptions and timing of some of the efforts underway (pending the outcome of EPA’s FY2015 Budget).

Equally significant is our commitment to provide solid evidence to demonstrate the impact of E-Enterprise. We are establishing performance measuring and tracking systems which will allow focused oversight by the

EELC. We are also establishing a framework for evaluating the business case for EELC projects prior to initiation. Appendix C provides details on these systems and the business case framework.

4.1 Describing Select E-Enterprise Ongoing activities

The table in the next section provides a high level description of some of the most significant E-Enterprise projects already underway and expected timelines for results. We have divided the table into five major activity areas which cover the breadth of E-Enterprise efforts. Each is briefly described below.

- **Program Modernization²:** For many years, EPA and the states have been modernizing their programs and systems through efforts like electronic reporting or implementing business process improvements using techniques such as Lean. There are several EPA projects which the Agency funds to support these improvements. States are using their own funds and in many instances have used EPA Exchange Network grant funding to carry out modernizations of their own programs.
- **Advanced Monitoring:** EPA and the state are participating in efforts to support innovations in measurement equipment, data analysis tools, and the ability for citizens to collect and analyze high quality data. These innovations are changing how environmental improvements will be realized.
- **Shared Services:** In addition to modernizing business processes, another significant benefit of E-Enterprise is the principle of “build it once, use it many times”. Through the Exchange Network, EPA and the states have developed common reporting and data exchange standards resulting in significant benefits. E-Enterprise will continue to build on these successes as well as focus on business process improvements.
- **Modernize Legal Framework:** Adopting E-Enterprise goals and principles as a way of business requires changes in how EPA and the states operate. This includes changing agency policies. For example, in September 2013, EPA issued a policy that all future reporting regulations will require electronic reporting. Similar regulatory changes may be necessary to fully realize the streamlining efficiencies under E-Enterprise.
- **Management, Collaboration, Outreach, and Support to states:** Successful collaboration requires effort and resources. EPA and the states have developed the framework and joint governance structure for E-Enterprise. Continual effort is required to enable innovation and transformation. Projects in this activity area are designed to provide that.

² The term “program modernization” – as used in this section and EPA’s budget planning – includes the range of activities in the program modernization entry in table 4.2, including streamlining activities such as Lean. This document uses the term “modernization” to describe the application of new technology to automate processes, and distinguishes it from the term “streamlining” which refers to process and program simplification and improvement.

4.2 E-Enterprise Projects Table

Activity Area	Existing and Near Term Anticipated Joint Accomplishments (thru the end of FY16)	Long Term Joint Activities with Significant Anticipated Accomplishments
Program Modernization	<ul style="list-style-type: none"> • 1M hours burden reduction <ul style="list-style-type: none"> ○ Electronic Reporting for water discharge permits (NPDES) Q1FY16 ○ Electronic Reporting for public drinking water systems (SDWIS) Q1FY16 • Massachusetts DEP Energy and Environment Public Access and Information System (EIPAS) Project • Pilot electronic system for consolidation of fuel reporting • EPA Lean Examples (incl. the 15 intergovernmental examples) • New Hampshire Department of Environmental Services Hazardous Waste Coordinator Certification 	<ul style="list-style-type: none"> • E-Enterprise E-Permitting Capability: Develop a business case and Return on Investment analysis for consolidation and streamlining E-Permitting across multiple environmental programs (TBD) • E-Manifest: cradle to grave electronic tracking of hazardous waste (end of FY18) • Air Stationary Source Reporting: electronic reporting for performance and compliance reports (FY19) • Combined Air Emission Reporting project (post scoping) (TBD) • Pesticides Label Matching (post scoping) (TBD) • Smart mobile tools for EPA and State inspectors (post-Scoping) (TBD)
Shared Services	<ul style="list-style-type: none"> • Reg/Public Portal Phase 1 • Facility Registry (FY15) • Substance Registry (FY15) • CROMMER Authentication (FY15) • E-Enterprise Architecture (FY15) • Wisconsin Department of Natural Resources (DNR) Switchboard e-Business Portal • Virtual Node (FY15) 	<ul style="list-style-type: none"> • Reg/Public Portal Phase 2,3,4 (FY18) • Federated Identity and Access Management • Implementation of E-Enterprise Architecture plan • Local Government Portal (post scoping)
Advanced Monitoring	<ul style="list-style-type: none"> • Develop a detailed collaborative plan for how states, tribes and EPA will prepare for the future of advanced monitoring to leverage its benefits and address the challenges. (FY 15) 	<ul style="list-style-type: none"> • Implementation of Watershed Monitoring Project (post-Scoping) (TBD)
Modernize Legal Framework	<ul style="list-style-type: none"> • Update of the Business Case Template used for Scoping projects (FY15) • Performance and management tracking systems (FY15) 	<ul style="list-style-type: none"> • Update of Administrative Procedures (Section 3.3.1) • Rulemaking for mandatory electronic reporting as appropriate

Activity Area	Existing and Near Term Anticipated Joint Accomplishments (thru the end of FY16)	Long Term Joint Activities with Significant Anticipated Accomplishments
Management, Collaboration, Outreach, and Support to States	<ul style="list-style-type: none"> • Five (5) Scoping Projects with Business Cases/ROI Analyses (Q3FY15) <ul style="list-style-type: none"> ○ Combined Air Emission Reporting ○ Local Government Portal (Scoping) ○ Pesticides Label Matching ○ Smart Tools for inspectors ○ Integrated Watershed Monitoring Networks • E-Enterprise Website, Federal Register notice and roundtables for Portal • Annual State and Tribal Assistance Grants 	<ul style="list-style-type: none"> • EPA/State/Tribal Program and Project Inventory: inventory will be used as a resource for program consolidation opportunities and collaboration • E-Enterprise Ambassadors, coordination with appropriate existing EPA FACA groups • Annual State and Tribal Assistance Grants

Section 5. E-Enterprise Out Year Costs and Benefits Estimates

Through E-Enterprise joint governance, states, tribes, and EPA together are streamlining and modernizing environmental programs, and achieving economies of scale on key information technology projects to improve efficiency and environmental outcomes. Investment in E-Enterprise will allow the expansion of those efficiencies systemically across the environmental protection enterprise, including EPA, states, tribes the regulated community and the public.

5.1 E-Enterprise Costs and Benefits

EPA has begun investing in E-Enterprise through use of existing program project funds in FY2014 and in FY2015 requested from Congress new funds (within an overall reduced EPA budget) to advance E-Enterprise. EPA developed an analysis of existing and estimated future costs and benefits using examples of existing projects to respond to the House Appropriations Committee request for such information. In that analysis, some of the costs and benefits have been estimated through rigorous analysis documented in economic analyses supporting rule development or information collection requests, others reflect a rough order of magnitude estimated using best professional judgment and will be refined as more information comes available. The costs are illustrative of future requests for E-Enterprise and subject to change. According to our analysis, additional federal investment over 11 years of \$172 million in State Assistance Grants and \$108 million in extramural funds, (an average of \$25 million per year) would yield an out-year cumulative net savings of over \$1.3 billion dollars across the enterprise of environmental protection, with most of those savings favoring States and industry. EPA estimated the savings using a subset of example projects that are completed or under development (See section 5.2). This estimate is conservative because additional program streamlining, will very likely push the total savings higher because of the inclusion of additional positive return projects already identified. A central E-Enterprise tenet is identification and establishment of a positive return on investment prior to project initiation. We intend to investment in improving our ability to estimate burden and benefits. Figure 2 illustrates the return on investment and Table 1 provides a summary of the estimated costs and benefits through 2025 (over 11 years).

Qualitative benefits such as increased transparency; improved data quality and accuracy, timeliness of receipt of data; and increased accessibility are equally important as they contribute significantly to more effective and efficient program implementation and improved services to the regulated community, the

public and other stakeholders. All of this will speed up response times and result in a shift of precious resources from data management activities to program management.

Figure 2: Return on Investment from E-Enterprise Example Projects

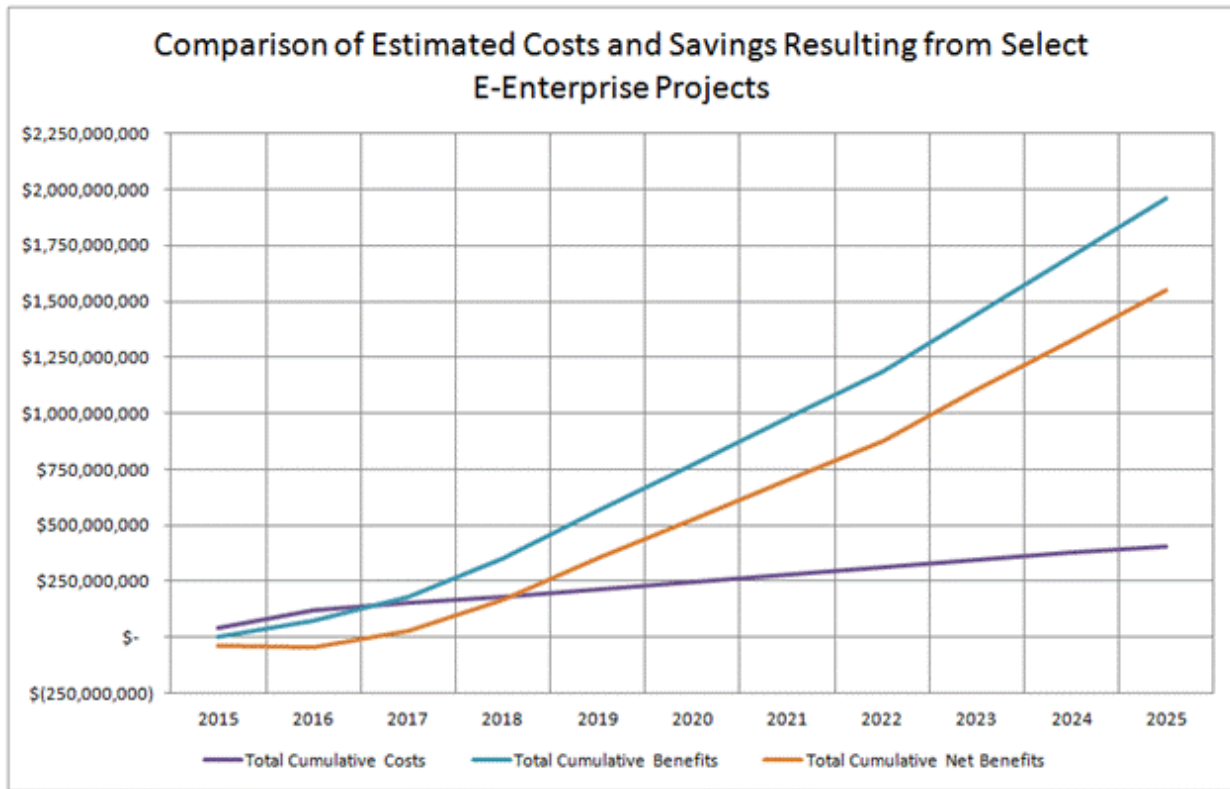


Table 1: Federal Costs and Enterprise-Wide Benefits from Example Projects (in 1,000s)

Categories of Investment	Federal Costs ³	Enterprise-Wide Benefits (in terms of costs avoided)
Essential Enabling Investments		
State Assistance Grants	\$172,700	\$167,040
EPA Extramural	\$108,000	
Shared Services	\$29,481	\$172,793
Base Program Projects Aligned with E-Enterprise	\$60,773	\$1,455,730
TOTAL CUMULATIVE NET BENEFIT	\$1,386,699	

³ The values in the table were generated by assuming the President’s FY15 Budget for example projects and that funding for the example projects would continue, decreasing, increasing or remaining steady, over 11-years according to the project’s life-cycle.

5.2 E-Enterprise Return on Investment Analysis Description

The E-Enterprise return on investment analysis calculated costs and benefits in three areas:

1. Strategic Investments to Enable the E-Enterprise

EPA is investing in foundational work including planning and assessment, strategy management and infrastructure development that guide E-Enterprise work and development of cornerstone modernization and streamlining projects. With additional funding to supplement the Agency's financial commitment, E-Enterprise benefits will be realized much sooner. Planning and assessment work will not have direct benefits but will help inform the out-year priorities and ensure the best strategic approach for implementing the E-Enterprise. EPA anticipates significant and varied benefits from the infrastructure development work. The overall cost for enabling E-Enterprise over 11 years were estimated to be \$172 million for State and Tribal Assistance Grants, and \$108 million in EPA extramural funding. This would result in a \$167 million benefit (in terms of costs avoided) enterprise wide, with a net cost of \$114 million.

- State Assistance Grants (STAG) will assist with state participation on project development and implementation. This investment will benefit states directly.
- Business process modeling and enterprise architecture will identify redundancies, opportunities for program integration or harmonization (within, between, and among EPA, states, and tribes), and opportunities for use of shared services.
- Regulatory and Public Portals will be developed that will allow for customized interfaces between the user, states, and EPA and allow for more convenient interactions with the Agency and states. For instance, regulated entities required to report directly to EPA will be able to view their last reports, applicable compliance assistance information, and receive reminders of upcoming reporting periods. The Regulatory Portal could allow for integrated reporting under multiple programs.
- Seed funds will allow for scoping and development of projects identified by the E-Enterprise Leadership Council for their potential to streamline or modernize parts of environmental programs. The current projects being scoped are integration of air emissions reporting; local government portal for utility management; watershed sensor data usage; electronic tools to facilitate inspections; and pesticide labels that can be optically scanned. A positive return on investment will be a significant consideration to decide if projects go forward.

2. Shared IT and Data Services

EPA estimates shared IT and Data services would cost \$29 million in EPA extramural funding. This would result in a benefit of \$172 million (in terms of costs avoided) enterprise wide. The overall net benefit is \$143 million across the enterprise by 2025. This is based on the assumption that 20 EPA and 20 state systems will transition to enterprise shared service components for electronic signature authorizations, facility identification, chemical substances identification, data exchange, and cloud software hosting. Development and use of additional services would produce even greater savings.

3. Program and Business Area Projects Aligned with E-Enterprise

Several existing EPA projects are aligned with E-Enterprise. NPDES Electronic Reporting, SDWIS and e-Manifest were used to demonstrate the anticipated return on investment. EPA estimates a cost of \$60 million in EPA extramural funding, which in turn will achieve efficiencies for EPA, states and the regulated communities at over \$1 billion in net costs avoided, based on regulatory impact analyses for NPDES and e-Manifest and on a study of potential burden reduction for SDWIS. The savings come from the efficiencies gained with electronic reporting, increased data accuracy, faster transactions, and avoided costs of

managing paper records (keying data, paper costs, mailing costs, costs for filing, storing paper). EPA expects other E-Enterprise aligned projects to provide additional net benefits. These additional opportunities are discussed in the “Potential of E-Enterprise” below.

5.3 Potential of E-Enterprise

Ultimately, a much greater opportunity exists than what has been covered in the preceding discussion. Additional program streamlining opportunities will be defined by the results of the enterprise architecture, business process modeling, and stakeholder engagement. Examples of potential projects include but are not limited to those listed below.

Fuels reporting integration: currently, a facility may be subject to almost 90 individual compliance forms under 40 CFR parts 79 and 80. After conducting a business process review, the Agency identified ways to consolidate reporting. A project is under way to combine industry submitted reports into one cyclical report through a single “smart” form.

Leak Detection and Repair: Fugitive emissions at a facility can be detected more thoroughly and quickly by replacing heavy, hand-held sampling probes with infrared camera technology. This will increase efficiency of the inspection process, improve safety for facility staff and, where the technology is deployed by regulated entities, help quickly identify problems for correction without government involvement.

e-Permitting: The EELC is researching states’ and EPA’s efforts to streamline, modernize, and/or harmonize permitting work flow processes and how E-Enterprise can facilitate enterprise-wide efficiencies through shared software, infrastructure, and methodologies as more programs begin to move to electronic permitting solutions. This offers the potential of faster, more integrated, and more transparent permitting processes, and is supported by industry and non-governmental organizations alike.

5.4 Strengthening the Business Case Methodology and Improving Our Ability to Assess and Project Costs, Burden Reduction Potential and Other Benefits.

EPA programs and states have a long complex history of estimating and quantifying project costs, burden reduction, and other benefits. This plan calls for codification of best practices in these methods to yield greater robustness and uniformity in the estimates produced and strengthen our ability to aggregate results and use them effectively. E-Enterprise staff have identified a number of potential analytical efforts which would have both EPA and joint governance elements, these include:

Codification and Enhancements to the E-Enterprise Business Case Template: This task would codify and enhance the template used to quantify benefits for the EELC’s 5 focus projects to make it easier to use and more robust. There would likely be two tools, 1) a shorter screening tool for initial project filtering, and 2) a more advanced full quantitative business case template. Ideally, this would be done in time for the next round of EELC project selections (pending resource availability).

Strengthening and Aligning our Estimations of Transaction Costs and Burden Reductions: This effort would develop better tools for burden reduction estimation for use by both EPA programs and states. Common use of these tools would, over time, yield more comparable estimates. These estimates are very important in EPA’s project budget justification process and the EELC’s prioritization (through the Business Case).

Strengthening and Aligning our Estimations of Monetized and Non-Monetized Benefits: in addition to burden reduction and costs avoided through use of shared services, the full range of E-Enterprise projects (e.g. advanced monitoring and project streamlining) provide benefits such as improved:

- Qualitative improvements in services to regulated entities
- Environmental performance
- Program efficiencies
- Decision making/resource allocation
- Improved transparency of environmental conditions, regulated community and government performance, and governmental administrative processes
- Faster, easier information access

These benefits can provide value to specific stakeholders and although this value may be difficult to monetize, some can be quantified in meaningful ways.

Investments in the areas identified above should provide EPA (and states) with an improved ability to estimate the full lifecycle costs and benefits of E-Enterprise projects, individually and in aggregate, which include some or all program reforms, automation and advanced monitoring elements.

An important objective of all these methodology improvements would be to consistently capture more costs and benefits of program and system reforms in a way that does not miss or double count any factor (explicitly including non-IT).

Section 6: Summary and Next Steps

This Integrated Management Plan puts forth how the founding partners of E-Enterprise for the Environment – the states, EPA and the tribes – will go about the business of transforming the delivery of environmental protection in this country in order to achieve the E-Enterprise vision:

A modern, well-integrated, national enterprise of environmental protection jointly governed by states, tribes and EPA.

The Plan brings this vision more into focus with a set of goals and objectives; it describes the approach to and role of joint governance in leading and managing the E-Enterprise portfolio of activities and projects; it provides some detail on the near-term and longer-term activities and projects that collectively represent the scope of E-Enterprise; it explains how performance measurement tools and techniques will be used to track and report on progress over time; and it quantifies the estimated costs, benefits and return on investment for this portfolio of activities and projects.

As stated in Section 1 of this Plan, the core of E-Enterprise is strengthening environmental protection through business process improvement enabled by joint governance and technology. The joint governance body, the E-Enterprise Leadership Council, is the cornerstone to success. If E-Enterprise is truly going to represent “business as unusual”, if everything is on the table for discussion, if the vision is more than just words, then it will happen because the members of the Leadership Council drive the change and functions like a board of directors for the national enterprise of environmental protection – both in their capacity as members and their positions as senior leaders in their respective organizations. They must actively embrace all three roles mentioned in Section 3 - champions of projects and activities that they initiate, synergizers to help connect-the-dots between separate but related projects across partners, and promoters to work to revise processes and procedures within partner agencies and their respective programs to institutionalize E-Enterprise. And they must always keep in mind that all of this work is only worthwhile if it helps to produce better environmental results.

The E-Enterprise Leadership Council will continue to hold monthly calls and to meet face-to-face twice per year in order to lead and manage this effort. Over the next year, their priorities include:

1. To continue to meet, evolve and strengthen the partnership in order to individually and collectively implement actions that will help to achieve the vision of E-Enterprise in the near-term and well into the future;
2. Complete the scoping phase of the five projects initiated by the Leadership Council, evaluate the business case and return on investment, and move forward with those projects that clearly demonstrate a positive return on investment and will be good signature projects to reflect the goals and principles of E-Enterprise;
3. Continue to oversee and drive progress on the portal, identity management and E-Enterprise architecture projects, all included in Table 4.2, as the technical foundation to E-Enterprise, with a target of September 2015 for the portal proof-of-concept that tackles the question of interoperability between EPA, states and tribes and demonstrates to the public and the regulated community the type of improved service envisioned by E-Enterprise;
4. Continue to identify, support and make use of the enterprise elements of those State projects and activities aligned with E-Enterprise such as the ones included in Table 4.2;
5. Actively promote the increased use of existing shared services (through policy or regulation), such as the Virtual Node and Shared CROMERR Services, as opportunities for significant savings of time and money for co-regulators of delegated federal programs and as tangible examples of the potential of E-Enterprise;
6. Begin looking at the process of electronic permitting, either for a particular program area (such as Title V air permits) or across the spectrum of a number of programs, as the Leadership Council's first "focus area" for large scale reform as outlined in the E-Enterprise Conceptual Blueprint document (should probably have link here); and
7. Continue to oversee and redirect as needed the range of projects in the E-Enterprise portfolio included in Table 4.2 in the program modernization and shared services categories and anticipated as near-term joint accomplishments.

Appendix A: Management Strategies

This section describes eight high-level management strategies under consideration by the EELC to guide E-Enterprise management activities.

Phased Implementation

E-Enterprise envisions a broad integrated network of EPA and partner programs, systems and shared technical infrastructure. E-Enterprise identified its initial Joint Governance Portfolio and aligned projects and activities from existing work and proposals and they therefore represent a range of development stages (from early-stage planning to full implementation). On the technical side, early in 2014, the EELC initiated work on an E-Enterprise Enterprise Architecture. This work, along with similar work on the E-Enterprise Portals, and elsewhere, seeks to define a “to be” technical architecture for E-Enterprise, including interoperability with Partner systems. While these planning efforts are underway, however, system and infrastructure development proceed apace. This means that E-Enterprise will for the foreseeable future face a universe of systems at varying stages of development. Some will be too far completed to incorporate elements of shared infrastructure or other elements, while projects just starting will have the advantage of knowing the technical landscape in which they will be operating.

The phased implementation approach is a strategy to accommodate and mitigate the timing and the availability of E-Enterprise program elements, and the expectations for their use. This strategy includes several elements. First, the design of the E-Enterprise EA Task as series of sprint-developed modules the results of which can be used immediately to inform design and implementation decisions. Modules are phased to provide the most urgently needed products early. This is especially important to EPA program and partner managers who must plan years ahead for the implementation of major program modernizations, systems or advanced monitoring options. Second, as described below, this plan proposes a systems and projects inventory which can be used to identify project dependencies/opportunities as early as possible and use this information in resource prioritization decisions.

E-Enterprise Adaptive Management Framework

The E-Enterprise Joint Governance and Management framework itself is a first generation product. Some of the uncertainties under which it operates include year-to-year variations in resource availability for EPA and State support; the adoption rate by EPA programs and states of shared technical infrastructure; and the challenges associated with undertaking programmatic modernization and streamlining. In the face of these and other uncertainties, the role of the EELC and the evolution of E-Enterprise’s influence within EPA and among partners is likely to evolve. This evolution will be informed by the experience of implementing the other management strategies described here. As described elsewhere some of the issues most likely to require adaptation of the framework include:

- The EELC’s role as a new enterprise-level forum in which topics can be raised, by any agency. Agencies may raise an issue with the EELC instead of or in addition to raising an issue in program-specific forums, particularly to seek an authoritative and integrated response. The appropriate scope, timing, and process/practice of issue screening and management in these instances will have to be refined as it is used.
- The implementation of E-Enterprise’s “soft” authority to seek alignment with its goals and principles and infrastructure by EPA Offices and partner agency projects.
- Application of the Business Case Template analysis to prospective projects.

- Refining the components and meaning of ‘alignment’ to make it easier to understand, based upon our evolving implementation experience. Building on the foundation of the Design and Operating Principles, one refinement is development of the broader, more comprehensive goals in this IMP.

Establishing Partner Program and Project Inventory to Support Joint Governance Planning

E-Enterprise envisions an evolving constellation of interconnected business processes, systems and monitoring technologies. Achieving this vision will require a new level of information and sharing in the current capabilities, needs and plans of the E-Enterprise community so that governance can assess the need and opportunity landscape. This information will support the identification of:

- Innovations in business processes, systems, or advanced monitoring technologies that could be supported and/or transferred to other partners
- State of systems at the earlier stages of planning/development which present the opportunity for full incorporation of e-Enterprise goals and principles
- Concentration of need and/or development work in related business areas which could be the subject of improved coordination, or investment

This information currently exists in isolated silos of states, vendors, program offices and associations. Coordinated collection of this information by the E-Enterprise community will require a modest investment of resources but should yield a substantial return in terms of the improved ability to leverage existing efforts and drive and diffuse innovation across the enterprise. Some key challenges in managing this collection will be defining its scope and navigating legal constraints including the Paperwork Reduction Act. The EELC Coordinating team is currently investigating the appropriate approach and mechanisms for this collection, it will be both an enabler and a strong visible manifestation of joint governance.

Use multiple avenues to engage and communicate with stakeholders

As an interagency effort, E-Enterprise requires stakeholder engagement at the individual project and agency/enterprise levels, as well as on policy, program, and technology issues. Obtaining and integrating this input into E-Enterprise is an E-Enterprise principle and key component of success. This management strategy focuses on the need to structure and coordinate this engagement.

The EELC has a full time team to support communications needs. The E-Enterprise Communications Team is actively working to build capacity and expand the communications footprint of E-Enterprise. Specifically, the communication team is:

- Assisting in the development and refinement of the E-Enterprise Vision and Mission statements and overall messaging materials
- Developing and launching E-Enterprise websites
- Developing a pool of “Ambassadors” to conduct outreach
- Developing and maintaining a library of E-Enterprise outreach materials, including communications tools for EELC members
- Developing a quarterly newsletter on E-Enterprise

For project level communications and to provide a familiar context, the EELC will engage stakeholders, including the regulated community, nongovernmental organizations, and the public, by leveraging existing State and EPA program channels. A communications team is working with a broad base of constituents to develop consistent messaging on E-Enterprise. This strategy ensures an integrated E-Enterprise voice and

common reception of stakeholder input. This type of input will be essential for agency-wide projects such as the E-Enterprise portals.

The goals and principles commit the partnership to ensuring the user's perspective is included in program and system design. This type of engagement requires a different approach from traditional outreach-based marketing. For the projects in the EELC portfolio, this includes developing tools and approaches for ensuring that the user's perspective is solicited and considered during the normal course of designing and managing that project. However, for the Aligned Projects, ensuring inclusion of the user's perspective occurs through consistent dialogue regarding the importance of this principle with the project owner.

If – after collecting individually-provided input from a wide range of users on specific projects or issues – it appears that it would be important to get group advice, or explore the potential scope of agreement among stakeholders on a particular issue, EPA may engage the deliberations of an appropriate Federal Advisory Committee to provide such advice or agreement under the authority of the Federal Advisory Committee Act (FACA).

Defining Clear Examples of E-Enterprise Success for Business and Program Areas

What does success, over the next 5-10 years for E-Enterprise in a given business or program area look like? The Partner Program and Project Inventory will provide the current and near-term snapshot of key partner projects and capabilities. To complement this inventory, a series of short joint planning effort could be launched in a few areas to provide concrete examples, including specific projects and outcomes which would fully illustrate application of the E-Enterprise management philosophy. This work would be conducted by short term scout teams commissioned by the EELC to consolidate and build off of existing strategic planning work for a given business or program area and extend them with an E-Enterprise perspective into a vision for what and how E-Enterprise goals and principles can be applied. Where successful these products could be used by the EELC to coordinate and prioritize investments and identify where the EELC Joint Governance can accelerate progress in a given area.

These visioning efforts could also be used identify common approaches or patterns that could be transferred from one program or business area to others (in the EELC's "Synergizing" mode). Given the effort required and the timing of ongoing parallel planning efforts the EELC may elect to commission 2-3 of these strategies per year on a rotating basis. As a preparatory step in commissioning these efforts the EELC could direct the EELC Coordinating team to establish a pilot project for one area. The objectives of the pilot would be to validate a set of starting questions on vision and strategy (i.e., what it means to operationalize the goals and principles for that business area) and to determine the utility of the efforts themselves.

Driving Interoperability of Systems, Services, Business Processes

Interoperability is a core E-Enterprise concept. It is mentioned directly or indirectly in half of the Design and Operating Principles and includes all areas in which information or business processes span jurisdictions. The Exchange Network established a specific vision of interoperability for the limited domain of information exchange around regulatory reporting. E-Enterprise has a much larger scope and its task is, accordingly, much larger.

A framework established by the Federal Government for Enterprise Architecture⁴ planning provides a useful perspective on the need for interoperability. It identifies “levels” of architecture work spanning from individual applications, thru individual agency architectures to what it calls “national” architectures for a given line of business. Examples of these include the areas of transportation, telecommunications and emergency response. These systems depend upon effective interoperability across levels of government, and we have high expectations for their performance as seamless systems. This is the E-Enterprise aspiration for the national enterprise of environmental protection.

While it is a broad concept, interoperability is achieved project by project. Therefore an overarching vision for interoperability is needed to inspire and guide projects. A process for evaluating and prioritizing interoperability will also be required. Many forms of interoperability will yield cost savings (such as reuse of shared infrastructure or synchronized business processes). However other interoperability options while attractive and technically feasible may not be cost effective. Three key current/planned activities will contribute to better specification of the practical opportunities for interoperability, and these are:

- The E-Enterprise Architecture effort staffed by an EELC Integrated Project Team. This effort has recently been expanded to include explicit consideration of interoperability with State systems and business processes;
- The portal scoping work should provide additional detail on the most important and cost effective kinds of interoperability for our users between the portal and other systems/services; and
- The Program area visioning efforts described above should identify what forms interoperability will be necessary in order for that business area to operate as a system

From whatever source, the E-Enterprise technical community needs a list of practical examples/use cases for the most feasible and valuable types of interoperability, to aid in further refining this concept. As a starting point, the Conceptual Blueprint identifies the following domains and layers of possible technical interoperability between or among:

- The E-Enterprise Portal and EPA or state systems, including state portals
- EPA hosted shared services and partners integrating those services
- EPA and state systems and mobile and advanced monitoring devices.
- EPA, states and third party users via data download and application programming interface services; and
- Partner business processes that are compatible and within which workflow handoffs occur smoothly.

Developing a Strategy to Accelerate Program Reforms and New Management Approaches

Recent EELC meetings make it very clear that the EELC considers the E-Enterprise objectives to streamline environmental programs and pursue new management approaches the paramount focus of E-Enterprise. However, E-Enterprise has not yet established a strategy for how to systematically engage on and support such projects. The Conceptual Blueprint originally called for selection of one “focus area” project each year, with a programmatic reform emphasis for support by the EELC. The EELC expanded on this recommendation in its selection of five projects for scoping, some of which have elements of programmatic reform.

⁴ http://www.whitehouse.gov/sites/default/files/omb/assets/egov_docs/common_approach_to_federal_ea.pdf

It would be useful and important for joint governance to establish in the near term a strategy to increase emphasis and support to streamlining and reform-oriented projects and program activities. These resources could be considered “programmatic improvement infrastructure” as a parallel to the shared technical infrastructure component of E-Enterprise. Options already under consideration include:

- Resources permitting, initiating a second solicitation/selection round for an additional focus project(s). Per the first round, multiple projects could be selected for initial scoping. This approach could be adapted to select and focus available resources on (only) one major programmatic reform oriented project or program activity per the related “one per year” proposal in the Conceptual Blueprint.
- Closer coordination with EPA and State Lean efforts including the national and regional Lean summits and projects
- Use of the E-Enterprise community to solicit project and program activity ideas
- Resources permitting, establishing some program reform infrastructure, such as on call consulting services made available through the EELC
- Use of the inventory described above to identify projects and program activities in early stages of planning whose programmatic reform orientation could be strengthened
- Use of a pilot business area vision/strategy to identify reform projects and program activities
- Opportunities presented by Performance Partnership Grants/Agreements
- Opportunities for program reform identified in the program 5-10 year visioning efforts described above

A critical component of this strategy will be the refinement of where, operating in one of its three capacities (See Section 3.2), the EELC can add unique value, given the breadth of possible projects and the existing venues for collaboration. The EELC should also consider the staffing resource constraints which often preclude staff from devoting the time necessary for major program reforms during the current budget environment of level or declining resources.

Appendix B: Performance Measurement and Tracking

Information on individual project status and performance, as well as overall progress in meeting E-Enterprise-wide program goals, are essential for the management and coordination functions of the EELC. This section outlines an E-Enterprise performance measurement and tracking approach.

Partnership Context for Measurement and Evaluation

The following contextual factors shape the performance measurement and tracking approach outlined in the following sections:

Scope and Complexity of E-Enterprise: As the scope of the E-Enterprise partnership is intentionally ambitious, so is the scope of performance measurement and evaluation. It cuts across both organizational and functional boundaries, integrating information from OEI, EPA program offices, states, and tribes. It includes objectives and targets that apply in aggregate to the overall partnership level which are measured directly or rolled up from project level metrics.

Integration and compatibility with existing performance tracking systems: EPA programs, and especially its IT projects operate within a complex web of performance tracking and reporting systems. States and tribes have such systems as well. E-Enterprise must seek to leverage these existing systems to avoid the overhead – and more importantly, the potential disconnect – of layering on yet another reporting requirement. Second, over the long term, E-Enterprise seeks to have the E-Enterprise goals and principles adopted and integrated into partner policies and procedures, including those for performance tracking as a way of institutionalizing E-Enterprise practices.

Measurement of many key E-Enterprise objectives will be difficult: E-Enterprise Goal #1 seeks to make a direct connection between improved program performance and improved environmental protection. Measuring environmental protection is difficult. Therefore, this framework takes the approach of using existing linkages between program performance and environmental protection in EPA and State planning documents and focusing on measuring improved program performance. Many other performance attributes are also difficult to measure, including concepts such as “transparency” or “innovation.”⁵

Strengthening the Business Case Methodology and Improving Our Ability to Assess and Project Costs, Burden Reduction Potential and Other Benefits.

EPA programs and states have a long complex history of estimating and quantifying project costs, burden reduction, and other benefits. This plan calls for codification of best practices in these methods to yield greater robustness and uniformity in the estimates produced and strengthen our ability to aggregate results and use them effectively. E-Enterprise staff have identified a number of potential analytical efforts which would have both EPA and joint governance elements, these include:

Codification and Enhancements to the E-Enterprise Business Case Template: This task would codify and enhance the template used to quantify benefits for the EELC’s 5 focus projects to make it easier to use and more robust. There would likely be two tools, 1) a shorter screening tool for initial project filtering, and 2) a

⁵ Developing measures for transparency may require a separate dedicated analysis effort, it is an especially complex attribute.

more advanced full quantitative business case template. Ideally, this would be done in time for the next round of EELC project selections (pending resource availability).

Strengthening and Aligning our Estimations of Transaction Costs and Burden Reductions: This effort would develop better tools for burden reduction estimation for use by both EPA programs and states. Common use of these tools would, over time, yield more comparable estimates. These estimates are very important in EPA's project budget justification process and the EELC's prioritization (through the Business Case).

Strengthening and Aligning our Estimations of Monetized and Non-Monetized Benefits: in addition to burden reduction and costs avoided through use of shared services, the full range of E-Enterprise projects (e.g. advanced monitoring and project streamlining) provide benefits such as improved:

- Qualitative improvements in services to regulated entities
- Environmental performance
- Program efficiencies
- Decision making/resource allocation
- Improved transparency of environmental conditions, regulated community and government performance, and governmental administrative processes
- Faster, easier information access

These benefits can provide value to specific stakeholders and although this value may be difficult to monetize, some can be quantified in meaningful ways.

Combining These Enhancements to Provide Improved Comprehensive Out-Year Estimates of Costs and Benefits

Investments in the areas identified above should provide EPA (and states) with an improved ability to estimate the full lifecycle costs and benefits of E-Enterprise projects, individually and in aggregate, which include some or all program reforms, automation and advanced monitoring elements. As a starting point EPA has estimated the out-year costs and benefits of selected E-Enterprise projects over a 10 year horizon. This analysis focuses on those attributes which are most readily estimated at present, these include direct system investments, shared infrastructure costs implementation and operation, cost avoidance through program and state use of shared infrastructure, burden reduction to state program implementers and burden reductions to regulated entities. Even without quantification of the additional types of benefits identified above, this preliminary analysis shows large positive returns on the selected investments.

An important objective of all these methodology improvements would be to consistently capture more costs and benefits of program and system reforms in a way that does not miss or double count any factor (explicitly including non-IT). Some of these factors could be very significantly changed under major program reforms:

- An e-permitting system not only reduces information collection burden, but provides a qualitative improvement by allowing permittees and stakeholders to track the progress of the permit through the process.
- Advanced monitoring installations could, conceivably, eliminate the need for some forms of monitoring and retention/reporting, thereby reducing multiple forms of burden and providing improved access to performance data to stakeholders

The E-Enterprise Architecture work may provide an additional tool for this analysis by decomposing various environmental management lines of business into component interactions whose costs and benefits could be estimated at a finer resolution.

A final complement to all of these estimation/prediction improvement efforts will need to be a systematic means of tracking and evaluating the *actual* costs and benefits achieved. Such analysis could be incorporated into EPA’s ongoing “regulatory look back” analysis.

Development of the E-Enterprise Performance Tracking System

Given the complexity and import of performance measurement, this plan proposes that the EELC consider convening as soon as possible an integrated project team to develop a first generation tracking system to get performance tracking and coverage information to the EELC as fast as possible, while laying the groundwork for more intensive metric development.

Coordination of E-Enterprise Performance Tracking with Existing EPA Systems

As described in Section 6.1, several of the goals and associated objectives are closely related to measures/information already tracked by existing EPA systems. The table below summarizes some of these systems and their application to a performance tracking system:

Area	System/Tool	Owner	Element	Discussion
EPA Performance Management System	Annual Commitment System and Performance Dashboard	OCFO/OPAA	Agency Performance Goal Measure	EPA has three FY15 goals on burden reduction, advanced monitoring and the portal. See Appendix C.
IT Capital Investments	CPIC/eCPIC	OEI/OTOP	Operational Performance Measures	Over time, E-Enterprise objectives could be integrated into the performance measures tracked in this system
Regulatory Burden/Impact	Economic analysis performed as part of development process	OP	Estimated Costs and Benefits	Improved and more consistent methods for estimating costs and benefits from program/system reforms would be incorporated into these analyses in support of regulatory development
Information Collection Burden		OEI/OIC	Collection Burden Estimates	Burden estimates for individual systems would be tracked for improvements, these would then be aggregated for an enterprise level measure
Grants	Integrated Grants Management System		Grant performance targets	

Routine Collection and Reporting of E-Enterprise Performance Tracking Information

The EPA and ECOS E-Enterprise staff working with the E-Enterprise coordinator (or the Coordinating Team) will issue the necessary data calls to EPA and states and wherever possible working from existing sources. The EELC will receive a comprehensive report on program performance on an annual basis, scheduled prior to EELC consultations on EPA budget priorities and the Exchange Network and E-Enterprise grant program. On a bi-annual basis the EELC will review individual project and activity status and performance information for half the universe per session. State information will be updated annually. These reports will be prepared by EPA and ECOS E-Enterprise staff working with the E-Enterprise coordinator (or the Coordinating Team).

Appendix C: Management Structures

The EPA has established a full-time Office Director for E-Enterprise whose responsibility is to shepherd budgets, manage and track progress of E-Enterprise projects across the EPA, and advocate for E-Enterprise within EPA. The Office Director and staff support EPA's internal E-Enterprise governance and support the Agency's role in joint governance, including supporting the EPA's co-chair (the Deputy Administrator) on the EELC. As E-Enterprise is inherently a corporate endeavor, so too must be the authority of this project management support role. The Office Director reports to and draws the authority to coordinate budgets and to track progress from EPA's Chief Financial Officer.

In addition to the full time staff at EPA, the states provide support to E-Enterprise through ECOS. Dedicated ECOS staff members support state participation on the EELC and work to collect and organize broader state perspectives.

The states and EPA both participate on the E-Enterprise Coordinating Team. The Coordinating Team tracks, supports, and/or implements the decisions of the EELC and is staffed by an E-Enterprise Coordinator. Until a full-time coordinator is hired in 2015, an interim coordinator was appointed by the EELC to staff E-Enterprise work. The Coordinating Team meets weekly and membership includes the state EELC Co-chair and EPA's Office Director for E-Enterprise. These co-chairs ensure that the Coordinating Team is tightly focused on supporting the work of the EELC. In addition to the Coordinating Team, the EELC has established a standing communications team to focus on the development of messaging and key documents. The Coordinating Team is also responsible for the delegation of technology tasks and issues to the Exchange Network Leadership Council (ENLC), including the currently active E-Enterprise Architecture IPT and other teams as required in the future.

Appendix D: E-Enterprise Design and Operating Principles

The E-Enterprise Leadership Council (EELC) developed the Design and Operating Principles as part of the Conceptual Blueprint in January 2014. These principles are the foundation of our evolving understanding of “alignment”, and thus were the basis for developing the broader, more comprehensive goals in the IMP.

E-Enterprise Design and Operating Principles

The design and operating principles are a set of joint state-EPA commitments to:

1. Manage E-Enterprise from the beginning as a partnership led by a joint governance body and work together to develop funding mechanisms and inform the independent resource investment decisions of partners.
2. Respect existing delegations and operating agreements throughout program changes that are driven by E-Enterprise. If seizing improvement opportunities calls for changes, negotiate these changes through existing channels.
3. Streamline and modernize programs before automating them. Streamlining and modernizing programs includes exploring use of new environmental management approaches to harness program improvements and technologies. New environmental management approaches may require tackling challenging or controversial issues, regulatory changes, and take a long time to complete.
4. Use a business case approach to prioritize activities.
5. Ensure that the program and system development explicitly takes into account the user’s perspective.
6. Establish a seamless and secure network of services and systems to improve two-way business transactions between the regulated community and partners and among partners.
7. Ensure systems will work smoothly together, for staff, regulated entities, and the public.
8. Automate access to data to promote re-use of information and services by users and their application developers.
9. Explore the integration of advanced monitoring, data collection, and analysis techniques into programs and explore the new management approaches they might enable.
10. Lower cost of program and technical implementation by providing funding and shared infrastructure.