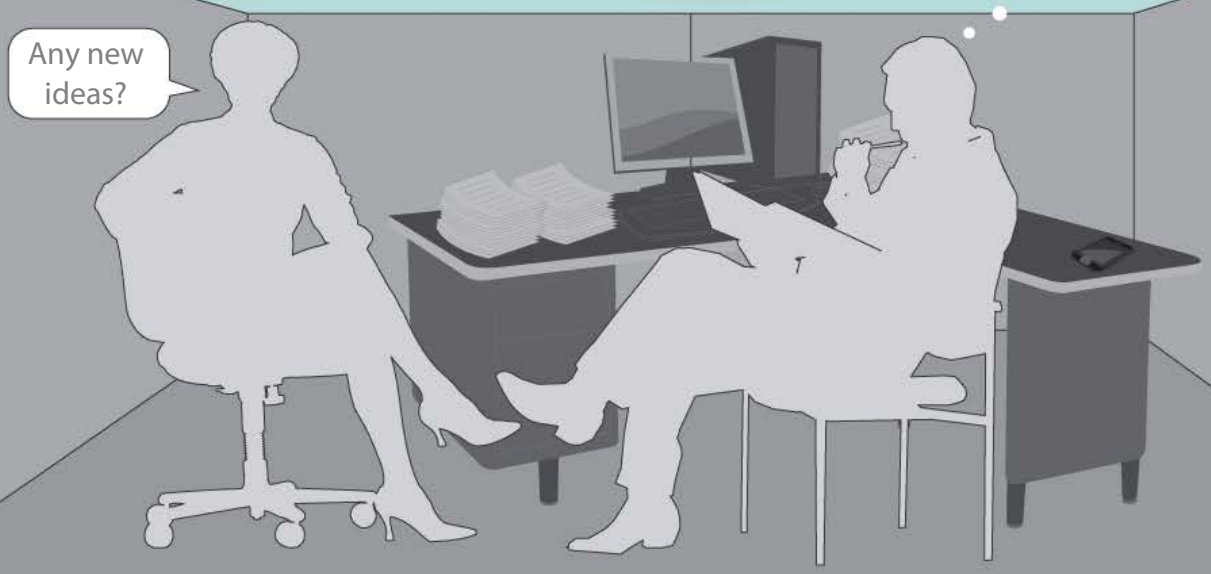
Creating an Innovative Workplace in EPA: A Manager's Guide

Lessons Learned from 10 Years of Innovation in OSWER



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Getting past the roadblocks to government innovation

BY TOM FOX

Innovation can take many forms in government, from implementing improved work processes and more effective

government said they wanted to be innovative, but did not feel they were getting

especially at a time of reduced

Federal employees say government innovation is slipping

BY JOSH HICKS

Federal employees say government innovation is on the decline, accordi

looking to improve their work, but only 57 percent said they feel encouraged to do so, and just 36 percent said their agencies reward creativity and innovation, the

provide concrete examples of success, foster collaboration among workers and offer incentives to reward fresh approaches.

The Transportation Security Administration finished with the

Harvard's Ash Center announces 'Top 25 Innovations in Government'

BY EMI KOLAWALE

This is a story about government, but not sequestration, gridlock or any of the activities widely looked upon as pain points or failures. In fact, this is a story about innovation in government

announced its list of the "Top 25 Innovations in Government" Wednesday. The list spans federal, city, state, local and tribal governments. The winner and four finalists for the "Inno

The list, as presented in a release from the Ash Center, is divided into four categories: nominees with a culture

Federal Buzz: The price of innovation in federal government

BY ALLISON PRIMACK AND GOVLOOP

To what lengths should government go t discover the next great innov

processes, leveraging technology, and integrating government customer-facing activities.

Two conversations on GovLoop covered the gamut of potential

"It would be very important to publicize the projects and show and track the results just as you would have to do in the private sector. It would only take a few key wins to make this a success."

New York is not the first government to come up with the

Innovation is a matter of perspective

BY EMI KOLAWOLE AND JOSH HICKS

The federal government has an innovation problem -- or does it? The answer depends on whom you ask.

Surveyed federal employees have had a declining view of government innovation over the past three years. But that doesn't mean Uncle Sam

felt that, in their agency, creativity and innovation were rewarded -- a 2.5 point drop from 2011.

And while 91 percent of federal employees said they were consistently looking for ways to improve in their jobs, just slightly more than 57 percent felt encouraged to do so.

The assessments are part of an analysis by the nonprofit

Between 2011 and 2012, federal employees' scores for overall innovation in government dropped 1.7 points to 61.5 out of a possible 100, the Partnership said.

"It's not an immense drop, but year to year it's a troubling one, especially in an environment where we need an innovative government," said Max Stier,

EXECUTIVE SUMMARY

Innovation is seeking out the best ideas to meet a challenge and putting full effort into making them work. A manager's role in an innovative workplace is to facilitate staff involvement by inspiring new ideas and making them come alive.

Breaks New Ground	✓ **Cultivate Big Ideas** ✓ **Clearly Communicate Organizational Challenges** ✓ **Reward All Ideas** ✓ **Stay Open to Different Visions** ✓ **Take Bigger Risks**
Leads to Broader Impact	✓ **Encourage Starting Small** ✓ **Ensure Project is Proving the Point** ✓ **Key Your Eye on the Innovative Vision** ✓ **Be Ready for Next Steps**
Builds Partnerships	✓ **Develop Right Mix of Partners** ✓ **Communicate Needed Commitments** ✓ **Get it in Writing** ✓ **Consider Establishing Workgroup or Advisory Committee** ✓ **Ensure Ongoing Support During Project** ✓ **Establish Roles Post-Pilot**
Connects to Key Programs	✓ **Help Ensure Right Program Offices/Regions Involved** ✓ **Communicate Needed Commitments** ✓ **Help Establish a Workgroup** ✓ **Get it in Writing** ✓ **Ensure Workgroup is Active During Project** ✓ **Leverage Workgroup Post-Project**
Wildly Persistent Staff Level Champion	✓ **Give Staff Time to Develop Idea/Implement the Project** ✓ **Create "Buzz" for Project** ✓ **Offer Frequent Feedback and Encouragement** ✓ **Ensure Project Retains High Priority** ✓ **Reward Effort, Not Success**
Take Decisive Next Steps	✓ **Ensure Results Documented and Lessons Learned** ✓ **Objectively Evaluate Success of Project** ✓ **If Successful, Sell Value to Upper Management** ✓ **If Successful, Help Leverage Funding/Support for Next Steps** ✓ **If Not Successful, Move on to Next Big Idea**

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INTRODUCTION

Government bureaucracy and innovation are not mutually exclusive. History is filled with innovative government initiatives and programs. NASA's mission to the moon is one of the most famous examples. Other prominent examples include Department of Defense developments such as GPS satellites and the Internet. Well known EPA innovations include the ENERGY STAR labeling system, the Brownfields Redevelopment Initiative, and tradable emission permits. The challenge at EPA is to continue to find creative solutions to our toughest environmental challenges. How do we, as EPA civil servants, keep pushing environmental policy forward in new, creative, and sustainable ways? This document synthesizes insights from running an innovations program for over 10 years in EPA's Office of Solid Waste and Emergency Response (OSWER).

> *"What I try to teach young people, or anybody in any creative field, is that every idea should seemingly be outrageous."*
>
> **—George Lois**
> (an advertising legend that inspired the *Mad Men* television series)

One of the most important insights from the program is that innovation is about finding and implementing ideas, and the best ideas come from an innovative workplace. An innovative workplace encourages people to articulate creative, ambitious ideas and try out the best ones. There are lots of ideas in government, but an innovative workplace creates an environment that encourages staff to look for the right ideas to address tough organizational challenges. An innovative workplace is enabled through management. Managers are in the best position to properly articulate the goals and challenges of the organization. Managers are in the best position to create a culture where big, creative, and sometimes crazy-sounding ideas are welcomed and encouraged. Managers are also in the best position to go out and get the funding needed to try out new ideas, and managers are the best people to encourage, promote, produce, and create buzz for successful projects. So, while innovation encourages ideas from everybody, it is up to managers to clear the runway for ideas to take off.[1]

> *"Good management is the art of making problems so interesting and their solutions so constructive that everyone wants to get to work and deal with them."*
>
> **—Paul Hawken**
> *Natural Capitalism*

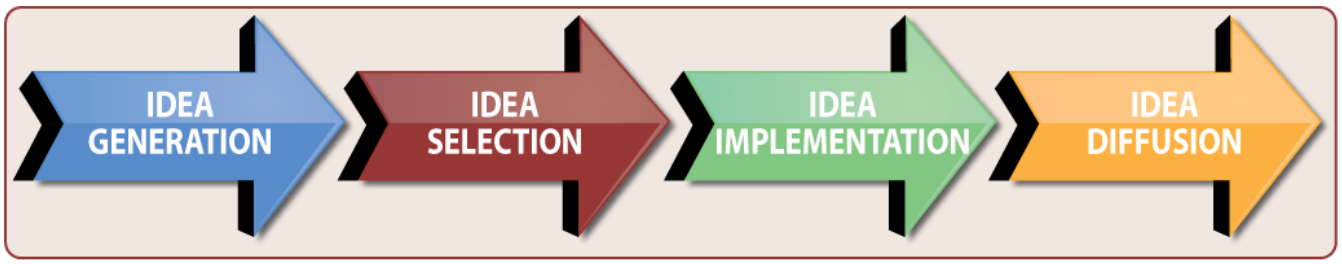
It is also up to managers to avoid stifling ideas from the beginning. The box on the right lists the "Top Innovation-Killing Statements at EPA" that can deflate and discourage employees with innovative ideas. The final item, "We've tried it before and it didn't work," should be given special attention. Conditions change all the time. A project that did not work the first time may work the next time around due to technology changes, leadership changes, political changes, external partners, or internal partners. There are many reasons an idea could work even if it did not before.

TOP INNOVATION-KILLING STATEMENTS AT EPA

- We can't do that, it will set precedent.
- Upper management will never buy it.
- It's too complex or costly.
- It's ['their'] office's purview.
- We've tried it before and it didn't work.

[1] The Executive Core Qualifications, the attributes that the Office of Personnel Management has determined to be essential for federal government executives, lists "creativity and innovation" as the first competency for Leading Change.

FIGURE 1: INNOVATION PROCESS[2]



Some of the best innovation projects are found and implemented in a systematic process that sifts out the best ideas (*see Figure 1*):

- **Idea Generation** is the process of collecting ideas. This can be as quick as a brainstorming meeting or as extensive as a multi-office competition.
- **Idea Selection** is the process of identifying the best idea(s) to meet the organization's challenges. This can be done by an individual or by committee, but ideally the project idea is selected with as much objectivity and fairness as possible.
- **Idea Implementation** is funding the selected project(s) and giving full support to staffers to ensure completion of the project(s).
- **Idea Diffusion** recognizes that even successful projects do not necessarily lead to programs or initiatives once they are complete. Taking critical steps to align stakeholders, management, and funding requirements requires decisive action from managers at multiple levels of the organization.

The innovative workplace is an essential foundation for all steps of the innovation process. In 10 years of implementing projects in the OSWER Innovations Program, six keys emerged to creating an innovative workplace. Each chapter of this report is devoted to a key, with examples provided from the program.

SIX KEYS TO AN INNOVATIVE WORKPLACE	
Breaks New Ground	Managers should encourage bold, creative ideas that have high potential to make significant strides in meeting a challenge.
Leads to Broader Impact	An innovative idea does not have to be a big, expansive program right away. Managers should work with staffers to design a pilot and scale it up if it works.
Builds Partnerships	Very few projects are successful in a vacuum. Managers should help staffers build broad support from key stakeholders.
Connects to Key Programs	Managers can mentor staffers by connecting them to internal offices with subject matter experts that can help leverage partners, funding, and management support.
Wildly Persistent Staff Level Champion	Managing innovators should be done in a way that allows them to pursue their innovative idea, devote as much time as needed to ensure the project's success, and be ready to defend the idea against naysayers.
Take Decisive Next Steps	When a project is completed, it is critical to mine the lessons learned, determine success of the project, and take decisive steps to either follow up with continued work or move on to the next big idea.

[2] Adapted from: "The Public Innovator's Playbook: Nurturing Bold Ideas in Government." William D. Eggers and Shalabh Kumar Singh

BACKGROUND ON THE OSWER INNOVATIONS PROGRAM

The OSWER Innovations Program sponsored more than 100 projects from 2002 to 2012. Some of these projects were extraordinarily successful. As shown in the case studies throughout the report, the projects often led to further policy and program development in significant ways. In other cases, some of the most productive projects presented creative and bold ideas that just were not right for that time and place. No one regrets trying them, and many valuable lessons were learned from those experiences.

> *"It is common sense to take a method and try it. If it fails, admit it frankly and try another. But above all, try something."*
>
> **—Franklin D. Roosevelt**

INNOVATIONS WORKGROUP

OSWER formed the Innovations Work Group (IWG) in 2002. Comprised of EPA innovators from all 10 EPA regional offices and most of the headquarters offices, the IWG includes the program's strongest advocates. IWG members serve as advisors to those within their region or office with an interest in pursuing new ideas. The IWG members are a critical resource for OSWER management, with their ears to the ground on the latest environmental challenges while promoting innovative ideas across all program offices and regions.

THE INNOVATIONS COMPETITION

Starting in 2002, the IWG held a competition for innovative ideas, funding anywhere from four to 12 projects each year. In the beginning, the program supported projects through grant funding. Beginning in 2008, the IWG offered contractor funds to program staff to more directly explore and pilot ideas that address OSWER's priority areas. Projects were selected based on their potential for broader application across sectors, industries, and geographic areas, and impact on environmental policy.

BLAZING NEW GROUND

Success of the Innovations Program is measured by whether EPA staff learned from the project and can move forward with policy, internally or externally, as a result of those lessons learned. By that measure, most of the innovations projects were successful. Examples of projects that played a role in changing or creating EPA programs are provided as case studies at the end of each chapter.

> *"So when a good idea comes, you know, part of my job is to move it around, just see what different people think, get people talking about it, argue with people about it, get ideas moving among that group of 100 people, get different people together to explore different aspects of it quietly, and, you know — just explore things."*
>
> **—Steve Jobs**

KEY #1: BREAKS NEW GROUND

Bold or big ideas—such as wireless phones, computers, and the Internet—challenged the status quo and radically changed the way many people communicate and interact with each other and the world. The OSWER Innovations Program operates on the assumption that breakthrough ideas can be cultivated in an innovative workplace. The Program leverages the creative imagination of EPA staff within a competition framework to generate compelling and well-articulated ideas, provide a means to pilot new ideas, and help grow what works.

> *"The mere formulation of a problem is far more essential than its solution, which may be merely a matter of mathematical or experimental skills. To raise new questions, new possibilities, to regard old problems from a new angle, requires creative imagination and marks real advances in science."*
>
> **—Albert Einstein**

An annual competition is only one means to unleash the flow of big ideas. Beyond a competition, new ideas can only flourish and be sustained in an environment or culture that is open to new approaches and solutions. The environment should offer a robust and transparent process for selecting the best ideas and also provide the capacity or authority to think and act big—take bigger risks, celebrate success, and gain valuable insights.

CULTIVATE BIG IDEAS

The stream of novel ideas can only thrive and be sustained in an environment where they are always welcome and creative thinking is the norm. This is the key to initiating an innovative workplace. Further, managers should encourage big, bold ideas. Ideas should be aggressive and ambitious enough that they will make a true difference in the organization. Managers should consider reserving a portion of their budget to explore innovative ideas. Even a small amount of grant or contractor funds can incentivize staff to articulate their ideas.

CLEARLY COMMUNICATE ORGANIZATIONAL CHALLENGES

Not all ideas are equal. Many ideas, while interesting, may not be meeting the organization's toughest challenges. Linking a new idea to a program objective or organizational challenge can help achieve accelerated mission outcomes and provide the justification needed to support a new project at all levels of the organization. Once challenges are clearly articulated, staff can establish the relevance and significance of their idea within the context of what is important to management or even the Agency as a whole. For example, the OSWER Innovations Program requires those who apply for funding to indicate how their project idea supports program priorities and to demonstrate how the project will be executed. By making these clear connections, proposed ideas provide a stronger case for managers to take on the risk of investing in creative ideas.

REWARD ALL IDEAS

New ideas need to be recognized and rewarded, even if they are not funded. For example, managers can provide career incentives by integrating the generation of new ideas into employee performance plans (e.g., ask staff to generate five new ideas that address environmental problems in a fundamentally new way). They can also encourage their staff to suggest new ideas by setting aside money in the annual budget to fund

promising ideas offered by employees throughout the year. Recognition and rewards do not necessarily need to involve money. Offering vacation days, informal recognition, celebratory events or program, or Agency-wide acknowledgment are other ways of encouraging staff to suggest new ideas. A reputation for acknowledging successful new ideas can be an important factor in attracting and retaining high performing staff, thus creating a continuous circle of innovation.

STAY OPEN TO DIFFERENT VISIONS

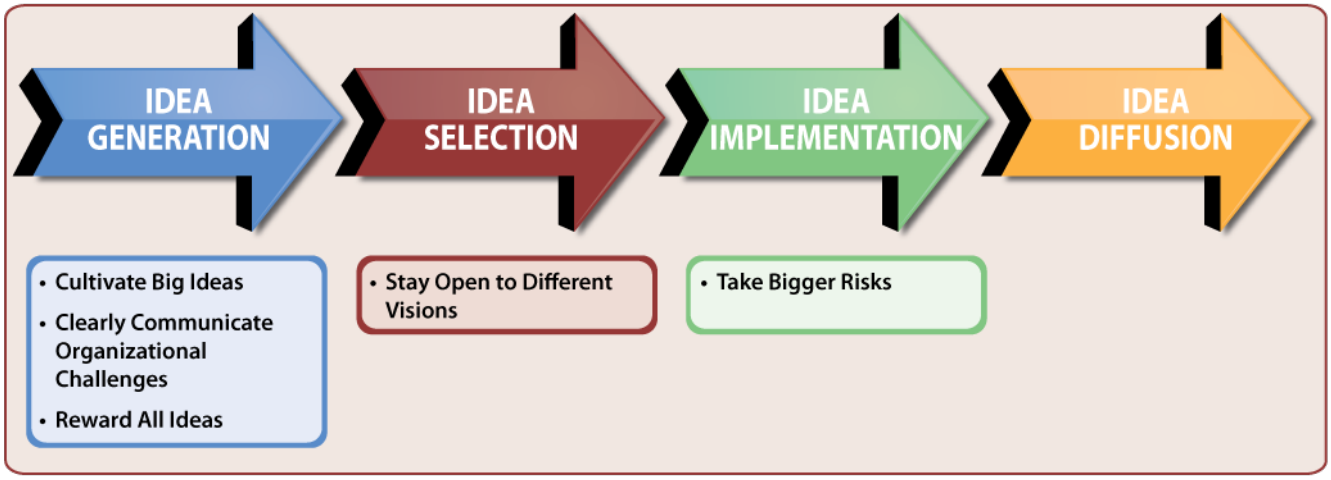
> *"Do not go where the path may lead, go instead where there is no path and leave a trail."*
>
> **—Ralph Waldo Emerson**

To maximize the generation of new ideas, managers need to be open to new ideas and different visions for meeting an environmental challenge. There are many different approaches to solving problems. Innovation rarely means the approach is easy—if it were easy, it would be done already. The challenge is to find a vision that meets the nexus of bold, achievable, and within budget. If the vision will require a massive budget infusion at some point in the process, managers should help the project officer look ahead to decide if enough momentum will be behind the idea that investment (from EPA, other federal agencies, and/or partners) will be realistic. If a manager thinks to herself/himself, "this is crazy, but it just might work if everything comes together at the right time, and the result will really help us meet the challenge," she/he has found an excellent innovative idea.

TAKE BIGGER RISKS

Most government offices are not designed to invest in risky ideas. Government agencies like EPA are increasingly under pressure to improve performance and meet a plethora of stakeholder expectations. They are also expected to ensure significant payoff on all investments to demonstrate the effective use of every dollar spent, leaving failure as an unacceptable result. This leaves managers reluctant to invest in new ideas that challenge the status quo. Without the incentive of financial support (and recognition for ideas that are not awarded), the flow of ideas may eventually slow down or even stop if staff perceives a lack of support from their management. For managers to encourage and fund high-risk, high-reward ideas, they must communicate that failure is an acceptable outcome.

FIGURE 2: BREAKS NEW GROUND



SUSTAINABLE TRANSIT LEADERSHIP

Challenge: Most light rail programs typically did not have innovative green efficiency practices beyond establishing standard recycling programs. EPA had worked minimally with transit authorities, who typically do not show strong interest in sustainability, and needed to find a way to promote green practices.
Opportunity: Partners experimented with green practices using Bay Area Rapid Transit (BART), one of the largest light rail transit agencies in the United States and used the lessons learned as a basis for nationwide guidelines for transit sustainability practices.
Results:

- Adopted sustainability practices in BART's facility planning, construction, and operations.
    - Piloted parking garage energy lighting power reduction system to cut energy use by 25 percent (955,190 kWh/yr)
    - Created 530 bicycle parking spaces
    - Diverted 6,450 tons of waste and avoided $645,000 in disposal costs
    - Saved 876,000 gallons of potable water by recycling at BART vehicle washing facilities
- Pilot efforts led to the nation's first Sustainable Transit Practices Compendium and Transit Sustainability Guidelines, which are being used by numerous transit agencies across the country.

Transit Sustainability Guidelines

ECOMMERCE PACKAGING AND SHIPPING DESIGN

Challenge: The rise in eCommerce has led to massive increases in delivered packages. EPA needed to find innovative solutions to the environmental impacts of growing packaging waste since the Agency lacked design professionals to develop creative alternatives.
Opportunity: EPA implemented an international design challenge to develop sustainable packaging and design solutions for value recovery of packaging. Design students and professionals were leveraged for packaging expertise.
Results:

- Formed the Sustainable Packaging Coalition (SPC), which developed design guidelines for sustainable packaging, developed a software design tool (Comparative Packaging Assessment (COMPASS) tool), and developed a consensus definition of sustainable packaging—all of which support the goal of reducing the amount of material and packaging in the municipal solid waste stream. Today, more than 200 companies are members of the SPC.
- COMPASS has been adopted by a number of U.S. companies including Procter & Gamble and Johnson & Johnson. EPA is now partnering with the American National Standards Institute (ANSI) to develop the nation's first sustainable product standards.

PAINT PRODUCT STEWARDSHIP

Challenge: An estimated 10 percent of the more than 750 million gallons of architectural paint sold each year in the United States is unused. Postconsumer paint accounts for the largest volume of waste collected by local household hazardous waste programs.
Opportunity: Project partners needed to find a way to reduce paint waste; efficiently collect, reuse, and recycle leftover paint; increase markets for recycled paint (including non-paint products); and develop a sustainable financing system to cover any resulting end-of-life management costs for past and future products.
Results:

- Supported by more than 200 dialogue participants, an historic agreement was signed in October 2007 by paint manufacturers, government agencies, paint recyclers, painting contractors, and other participants calling for the establishment of an industry-funded and nationally coordinated paint management system.
- Led to the first-ever U.S. paint product stewardship program, signed into law in the State of Oregon in July 2009. In September 2010, California enacted paint product stewardship legislation, followed by Connecticut in June 2011.

KEY #2: LEADS TO BROADER IMPACT

If ideas are truly breaking new ground, organizations may find themselves stymied by a simple thought: *where do we begin*? Often a team or individual will approach a manager with a great idea for changing the way EPA does business or meeting an environmental challenge in a dynamic new way, but the approach may be complex, wide-ranging, or costly. The manager of an innovative workplace recognizes these challenges and encourages his or her staff to test an idea on a small scale, typically in a pilot setting, and then expand it to a larger market (e.g., geographic or programmatic). This requires a strong vision for identifying opportunities for expansion beyond the pilot.

ENCOURAGE STARTING SMALL

Ideas can have far-reaching implications for the organization. Whether an idea with merit will be adopted depends in large part on the innovator's ability to demonstrate that the idea is effective and that the organization will benefit from its implementation. Given that most great ideas are ambitious, it is unlikely that most ideas can be funded to their conclusion. Instead, managers need to challenge innovators to either scale down projects or prove only one part of an idea. For example, a project to determine whether alternative energy could be used at cleanup sites might work with one type of alternative energy (e.g., wind energy) at one site. If that works, then managers can continue to support next steps (e.g., identify ideal conditions for using alternative energy or try using other alternative energy sources).

> *"Communication networks are clearly important to program replication and the larger and more established those networks, the better. But regardless of how well-developed the communication network, complicated ideas just don't seed well."*
>
> **—Jonathan Walters**
> Excerpt from *Understanding Innovation: What Inspires it? What Makes it Successful?*

ENSURE PROJECT IS PROVING THE POINT

A pilot attempts to prove a policy point on a smaller scale, for example, at only one site or working with one local government. A danger of working at a smaller scale is that discussion of the challenge of meeting the project's needs can overtake the discussion of the point the project wants to make. For example, a project using wind energy on a remediation site may encounter zoning issues, neighborhood resistance, and funding requirements; while all important considerations, those issues may distract from the critical data needed to answer the question of whether the technology will work. When evaluating a project, managers should determine whether the project seems likely to prove the point the innovator wants to make. Just as importantly, in evaluating a scaled-down pilot, the manager should ensure the project will significantly help the program in question. During implementation, the project should be flexible, but it cannot change so much that it is not proving its original point.

KEEP YOUR EYE ON THE INNOVATIVE VISION

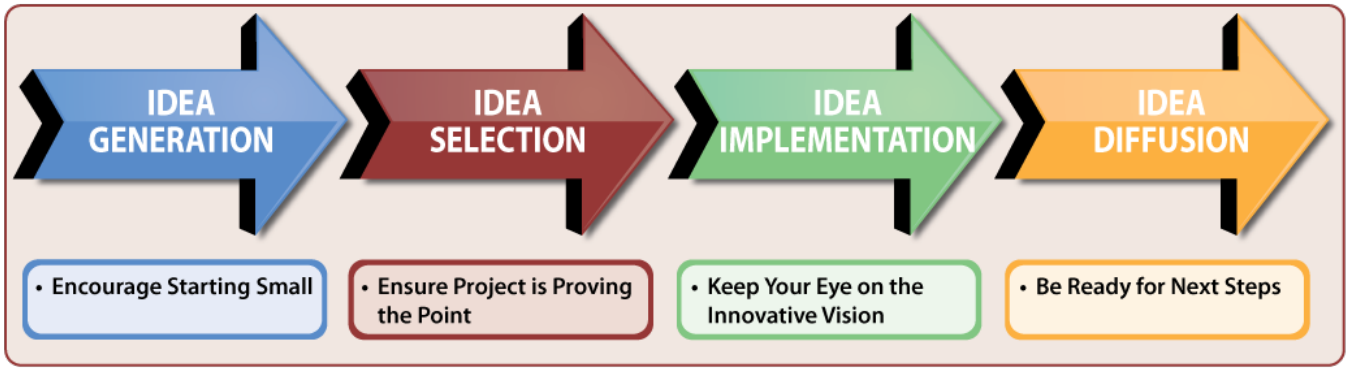
Pilots that are smaller in scope are likely to prove only part of an overall vision. Therefore, it is critical to continually express the vision when communicating about a pilot. When the idea is being reviewed, the vision must be ambitious enough that the reviewer sees it as innovative and worthwhile. Visioning can be

difficult; managers should encourage dialogue with others to develop solutions that are transferrable. By identifying opportunities for pilot expansion and potential stakeholders in the early planning stages, project officers will best ensure the pilot idea goes far beyond the project level and perhaps even generates a new initiative or program.

BE READY FOR NEXT STEPS

In most cases, keeping an eye on the vision may not be enough. Even as a project is unfolding, managers should be keenly aware of the next steps and start informing upper management and stakeholders of what will be required if the project is successful. If it appears that the project will not meet expectations, the manager should "smooth the landing" and help inform stakeholders that follow-up (beyond assessing lessons learned) is unlikely. In some cases, one of the other project partners may have an opportunity to take on the next steps. Most importantly, there will be some projects that are not right for expansion beyond the pilot. This is the time to document results, congratulate the innovator, inform the stakeholders, and move on to the next big idea.

FIGURE 3: LEADS TO BROADER IMPACT



CASE STUDIES

GROUND WATER REMEDIATION POWERED BY RENEWABLE ENERGY SOURCES

Challenge: Remediation projects involving ground water are energy intensive and can take years or decades to complete, raising the question: how can EPA make remediation sites greener? This was a broad vision for changing EPA's approach to remediation. What pilot could begin to prove the point?
Opportunity: Project partners designed, installed, and operated a 10 kilowatt wind turbine at an existing ground water circulation well (GCW) on a Superfund site.
Results:

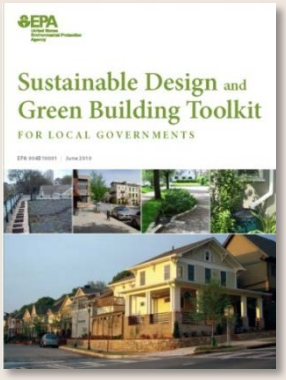
- The wind-powered GCW removed 52 kilograms of trichloroethylene (TCE) from more than 24 million gallons of ground water without any net loss of water to the aquifer and the wind turbine generated 13,335 kWh of electricity, enough to pay back the costs of constructing the wind turbine system within 10 to 13 years.
- The pilot proved that cleanups can be "greener" by using far less traditional energy and using renewable energy when available, and played a fundamental role in developing EPA's green remediation strategy and initiatives.

A 10 kW wind turbine powers a ground water circulation well

SUSTAINABLE DESIGN AND GREEN BUILDING TOOLKIT FOR LOCAL GOVERNMENTS

Challenge: Local codes and ordinances across the nation were creating barriers to green building, rather than encouraging more efficient buildings. EPA needed to pilot the idea of better codes with one city.
Opportunity: EPA developed the first cross-media (i.e., air, water, land and materials) Sustainable Design and Green Building Toolkit that helps local governments comprehensively assess and adjust their ordinances. It also supplies a framework for making local regulatory changes. The City of Roswell, Georgia piloted draft versions of the toolkit.
Results:

- The final tool includes an assessment tool, a resource guide, an action plan for implementing the necessary regulatory and permitting changes, and an interactive Excel spreadsheet version of the assessment tool.
- Used OSWER Innovation funding as seed money to leverage more than $100,000 in additional funds.
- Hosted the first informational webinar in March 2011, which garnered interest from more than 500 people across the country.



Sustainable Design and Green Building Toolkit for Local Governments

IMPROVING MANAGEMENT OF HOUSEHOLD PRESCRIPTION MEDICATION WASTE

Challenge: Household prescription medication waste presents a significant environmental concern due to the improper disposal of prescription medication in the municipal solid waste stream. EPA needed to experiment with a collection system on a pilot level that could affect national policy.
Opportunity: During a one-day New England pilot event for collecting and properly disposing of prescription drugs, 52 people from 17 Maine communities brought in more than 700 containers of medicine totaling approximately 50 gallons in volume. This included almost 1,300 medications classified as controlled substances, with an estimated street value of more than $5,000. Substances collected included antibiotics, antidepressants, anti-cancer drugs, tranquilizers, and estrogen.
Results:

- Building upon the practices created through the pilot, some U.S. cities (e.g., Mesa, Arizona) have established their own prescription drug collection programs.
- On a larger scale, a collaboration of the U.S. Fish and Wildlife Service, the American Pharmacists Association, and the Pharmaceutical Research and Manufacturers of America led to the creation of the "SMARxT Disposal" campaign, which educates consumers about how to dispose of medicines in a safe and environmentally protective manner.

KEY #3: BUILDS PARTNERSHIPS

Partnerships are essential for leveraging resources and driving new ideas forward. Indeed, some of OSWER's most successful projects were the result of strategic partnering that helped shape, identify, implement, and diffuse a new idea on the ground, while EPA's role rested on analyzing and experimenting with policy implications. Building strong partnerships has helped Innovation Program projects overcome resource and internal constraints, share and minimize risks often associated with investing in untested approaches, gain new perspectives, and apply new ideas and practices that produce better environmental results more quickly and cost-effectively.

WHY PARTNER?

- Build capacity and transfer knowledge
- Increase the impact of public investment dollars
- Mitigate (or spread) risk
- Access technical expertise and cutting edge technologies
- Strengthen stakeholder networks
- Ensure project results will be used

DEVELOP RIGHT MIX OF PARTNERS

"Our success has really been based on partnerships from the very beginning."

—Bill Gates

The best innovation projects include the right partners for completing all facets of a project. Managers need to help project officers identify and get commitments for any partner needed to make the project better. To develop the optimal partnership mix for any given project, managers should help project officers clearly define project needs, objectives, connections to relevant priorities or programs, potential challenges, and opportunities for expansion. Next, they need to identify potential EPA internal (e.g., EPA Offices and Regions) and external partners that can meet each critical need (e.g., technical, financial, implementation). Does the project need a certain expertise? Are there stakeholders that need to participate? Are there trade associations for those stakeholders? Who would stand to gain from the project and can they help with funding or other resources? Determining the right mix of partners can be challenging and time consuming. However, investing quality time upfront to develop the right mix of partners actually saves time and delivers greater return in the long-run over hastily conceived partnerships.

COMMUNICATE NEEDED COMMITMENTS

Matching the right partner to each need is a critical first step, yet is likely fruitless if roles, responsibilities, and expectations are not clearly communicated and understood by all partners. Some projects may require very little participation, while others will require significant time and resource outlays. When communicating needed commitments to partners, be clear, concise, and detailed about each commitment needed (e.g., time, funding, etc.) for each phase of the project, including specifying the project's end date.

GET IT IN WRITING

Agreements come in many shapes and sizes, ranging from a simple e-mail to a formal Memorandum of Understanding. The type of agreement reached will depend on what is being asked of the partner. When drafting a written agreement, clearly state what is expected from each partner before, during, and after the project. Well-crafted partnership agreements can also serve as a resource to help advisory committee members ensure everyone stays on track and meets their obligations. Not all partnerships work out; be sure there is a plan in place to address any changes in partnerships that may occur. Partnerships may end for reasons not related to the project.

CONSIDER ESTABLISHING A WORKGROUP OR ADVISORY COMMITTEE

Like projects, partnerships need to be managed. Establishing a workgroup or advisory committee helps provide ongoing support for partners during the pilot, keeps partners engaged and informed, coordinates actions, and ensures everyone stays on track and meets their obligations. All committed partners should be invited to participate in the workgroup or committee. Also, people with an interest in the outcome of the project may be invited, especially if that stakeholder has the potential to be leveraged on a subsequent scale-up project. Members can serve as an objective sounding board, offering ideas, expertise, and sincere advice. Once selected, managers need to define and document the advisory committee's purpose and scope, communicate commitments, and obtain commitments from committee members in writing.

> *"Insiders don't always act alone, of course. While taking the clear lead in pushing change, they frequently reach to outside stakeholders to collaborate in making that change."*
>
> **—Jonathan Walters**
> Excerpt from *Understanding Innovation: What Inspires it? What Makes it Successful?*

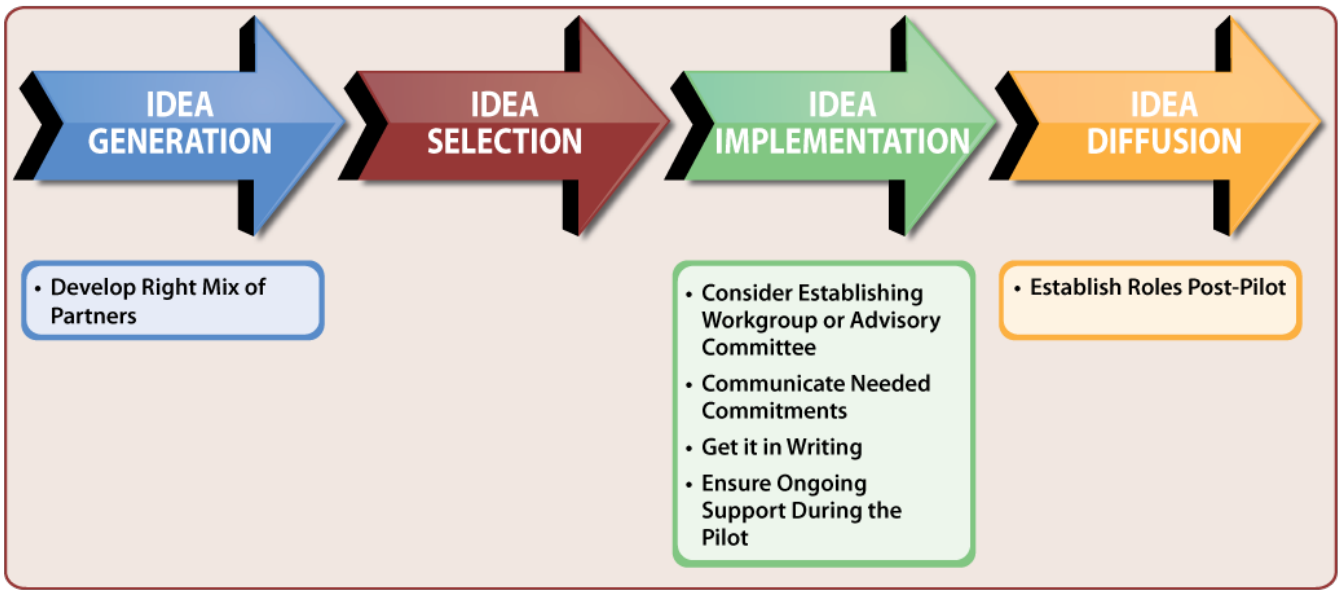
ENSURE ONGOING SUPPORT DURING THE PROJECT

Even the right mix of partners needs ongoing nurturing, maintenance, and the occasional reenergizing to thrive. Ongoing support from managers is key for ensuring that tasks are completed, valuable information is disseminated, major milestones and accomplishments are recognized, and issues that arise during the project are addressed, ideally through a collaborative process. Often, not all project partners will commit significant time to a project due to regular job responsibilities or other commitments. Using the written commitments if necessary, partners may need to be reminded of the vision for success, timeline, and expectations on a regular basis.

ESTABLISH ROLES POST-PROJECT

Managers must be decisive in taking next steps once a project has been completed, as discussed later in the report. These next steps include establishing future roles for project partners, which will largely depend on the outcome of the project. For example, it may be envisioned that one of the partners will manage a tool, standard, or resource website. Managers will need partners to help promote and expand a new idea to a larger market (e.g., geographic or programmatic) or to document results and share lessons learned to help inform future projects. Managers need to evaluate whether an existing partner or a new partner or partners are needed for idea diffusion, or if partnership changes occurred, revisit post-project commitments (e.g., disseminate lessons learned) agreed to and signed-off on by partners.

FIGURE 4: BUILDS PARTNERSHIPS



"SAVE THE GREENS": RESOURCE RECYCLING, RECOVERY, AND COMPOSTING PROJECT

Challenge: Municipalities nationwide implement curbside recycling and composting programs to divert organic waste from landfills. Compost produced from yard trimmings alone is of relatively low quality, making it difficult for municipalities to recuperate program costs due to little market demand. EPA needed to find a commercial scale method to improve the quality of municipally-produced compost without adding cost.

Opportunity: EPA and the City of McAllen, Texas partnered with a local Wal-Mart to collect its unsold produce, which would ensure regular availability of green food waste to enhance compost yield and quality.

Composting and recycling at the McAllen, Texas Site

Results:

- Championed a cost-effective, new commercial scale model for producing high quality compost.
- Sale of high quality compost increased revenue, helping the municipality offset program costs.
- Wal-Mart stores throughout Texas now have a composting program modeled after this project.

COLLECTING AND RECYCLING USED COMPUTERS VIA A REVERSE DISTRIBUTION SYSTEM

Challenge: Used electronic products are the most rapidly growing waste problem in the world due to the high amount and volume driven by rapid obsolescence. Alone, state and local governments lack the funds and necessary recycling infrastructure to better manage end-of-life products.

Opportunity: Project partners tested and demonstrated the feasibility and cost-effectiveness of electronics retailers taking back unwanted computer equipment using a reverse-logistics collection, transportation, and recycling model.

Results:

- Championed a new model that shared electronic waste management responsibility among manufacturers, retailers, governmental and non-governmental organizations.
- Staples, an office supply and electronics retailer, used the pilot model to implement "Eco-Easy," the first national retail electronics collection program. Several other retailers and manufacturers are also using this model and providing a variety of convenient opportunities to recycle computers including Best Buy, Dell, Sony, HP, Office Depot, NEC, Toshiba, Fujitsu, and Reconnect (a Dell and Goodwill partner).

PROMOTING INNOVATIVE GREEN MATERIAL RECYCLING CONCEPTS IN ROAD CONSTRUCTION

Challenge: In 1900, Americans used and consumed 161 million metric tons of resource materials, which increased to 2.8 billion metric tons in 1995—the equivalent of over 10 tons per person. Innovative green building and sustainable development concepts continued to emerge to encourage material reuse instead of disposal, but not all relevant stakeholder groups were adopting these sustainable practices.

Opportunity: Project partners recognized the need for a collaborative network of stakeholders that would encourage the formation of partnerships. This network would provide stakeholders with the opportunity to learn about innovative green building and sustainable development concepts and ideally, lead to their implementation in future projects.

Results:

- EPA Region 5 established a large network of stakeholders for long-term collaborative partnership opportunities that includes multiple EPA Regions and Program Offices (e.g., OSWER and Office of Water), state partners (Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin), local public works programs, university researchers, the Federal Highway Administration, composters, industrial byproduct generators, end users, and contractors.
- Presented webinars to more than 700 participants nationwide, approximately one-half to two-thirds of whom were motivated to try the best management practices (BMPs) shared.
- Some states, such as Wisconsin, are currently working to get approval from their stormwater management programs to use these techniques and increase their use of recycled material in road construction.

KEY #4: CONNECTS TO KEY PROGRAMS

The Innovations Work Group (IWG) found that a project's most important resource is often a relevant key office at the headquarters or regional level. As such, it is important to treat key programs as partners. Internal partners add different value to projects than external partners, but it is important to leverage internal partners as a valuable resource that must be engaged on a regular basis. A program or subject matter expert knows the background, internal politics, key players in other offices, and technical nuances, which can help get things done. Key programs can utilize existing networks to help address project challenges, identify important partners, highlight successes or promote project outcomes. Additionally, program office contacts can lend historical perspective to a topic area and help ensure that the project timing and management support align with the project idea. By receiving insight into timing and management considerations, a project can achieve a higher level of success more quickly.

EXPERTISE: LOOKING BEYOND EPA HEADQUARTERS

Internal expertise is often found in the EPA Regions. For instance, capacity for border-related issues exists at EPA Headquarters, Region 6, and Region 9. Additionally, each region will have different insight on local government and economic drivers that can help inform the feasibility of scaling up a pilot project to another region or area.

HELP ENSURE THE RIGHT PROGRAM OFFICES/REGIONS ARE INVOLVED

Similar to developing external partners, project officers need to carefully consider who the right internal partners should be. Each EPA program office specializes in specific topic areas and can offer broader access to technical expertise and subject matter experts. Identifying the right program or offices requires the same strategic process delineated in the previous chapter. It is difficult to keep a group constantly informed on projects, but it is important to include broad interests, including links to Agency-wide initiatives and programs. By identifying and making these clear connections, managers not only ensure that the right program offices are involved, but also become more likely to take on the risk of investing in bold ideas.

"Start with good people, lay out the rules, communicate with your employees, motivate them and reward them. If you do all those things effectively, you can't miss."

—Lee Iacocca

COMMUNICATE NEEDED COMMITMENTS

Once connections and relationships are established, managers need to help project officers network and communicate needed commitments to the key program contact(s). As discussed in the *Builds Partnerships* chapter, when communicating needed commitments, managers need to be clear, concise and detailed in each commitment needed (e.g., time, funding, etc.) for each phase of the project, including the project end date and potential commitments for expansion beyond the project. A common mistake is to ask an internal partner to be on a workgroup, but to ask for no other commitments. Internal offices need to be given clear objectives for the project and their potential roles during and after the project is completed.

HELP ESTABLISH A WORKGROUP

The experience of the OSWER Innovations Program has shown that projects are best served by forming workgroups that include key EPA staff, ideally (but not necessarily) from both headquarters and regions. Workgroups can play an integral role as a "one-stop shop" for information on current activities and progress of a project. The flow of information can also go the other way, as workgroups can spread the word about a project and pique the interest of staff that are well-versed in the relevant topic areas. Managers should help set a tone for open communication between all parties involved.

GET IT IN WRITING

Members of internal workgroups rarely need to enact lengthy formal agreements. However, roles should be recognized and established. Different workgroups demand different amounts of time commitments and it is important to set expectations from the very beginning, especially if the time commitment will be more extensive than simple attendance and issue tracking. Managers should help staffers develop an e-mail or document setting out the needs of the workgroup and ask for all members of the workgroup to respond with a commitment. The bottom line is, establishing roles and commitments from each office sets a serious tone for the project and keeps other offices interested and engaged in its progress.

ENSURE WORKGROUP IS ACTIVE DURING THE PROJECT

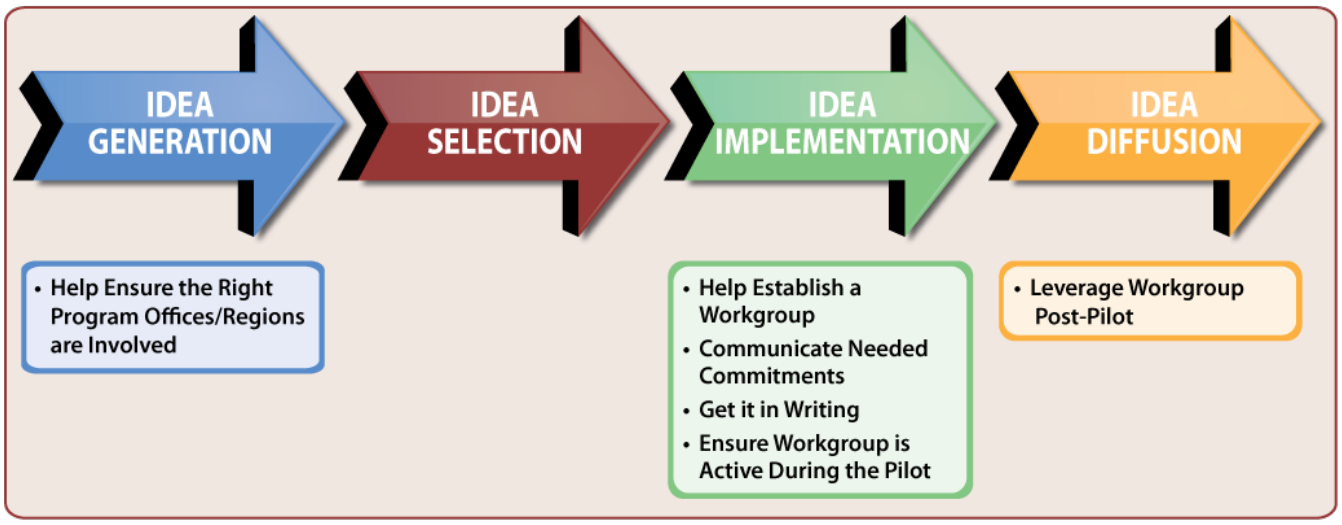
To reap the full benefits that workgroups can bring to a project, they must be active and fully engaged early and throughout the process. Workgroups often function as cross-functional teams where individual work is not closely followed, so managers need to be informed of workgroup activities throughout the life of the project. Managers need to ensure that workgroups are fully engaged and informed, that actions are coordinated, and that everyone stays on track and meets their obligations.

LEVERAGE WORKGROUP POST-PROJECT

Establishing connections and relationships with relevant key programs often becomes most important in strategizing next steps after the successful completion of a project. By doing this early and throughout the project, managers help to ensure that a successful new idea gains broader attention. Post-project, key program contacts can help managers position the project in policy strategies. Making these connections can lead to opportunities for projects to be included in current or new strategic initiatives or highlighted in policy discussions. A project can be elevated to a national level just by being featured or by being part of a larger program policy; and if the right connections are made, they could result in additional benefits associated with these policies (e.g., technical support, communications, partnerships, resources, and more).

> *"It's essential to involve people from different functions, locations and ranks, not only for their unique perspectives, but also to ensure buy-in throughout the company afterward."*
>
> ***—The Wall Street Journal***

FIGURE 5: CONNECTS TO KEY PROGRAMS



CASE STUDIES

CATALYZING COMPOSTING IN URBAN COMMUNITIES

Challenge: Urban composting offers communities an opportunity to address challenges associated with increasing food supply to underserved populations and materials diversion from landfills. However, most local communities were unaware of the potential factors involved in determining the ideal composting technology.
Opportunity: Project partners compiled background information on existing composting technologies and engaged stakeholders in Bridgeport, Connecticut and Providence, Rhode Island to identify specific needs and concerns for assessing and establishing urban composting facilities in each community.
Results:

- Developed a primer to provide municipal officials, non-profits, and community stakeholders the tools and information necessary to begin the decision making process for selecting the composting technology that best meets the needs of their municipality. The primer provides an overview of three composting technologies—windrow aerobic digestion, in-vessel aerobic digestion, and anaerobic digesters—and highlights key considerations for municipalities interested in implementing large-scale food scrap recovery in their communities.

DRUM-TOP CRUSHING (DTC) DEVICE STUDY

Challenge: While fluorescent lamp usage and recycling of spent fluorescent lamps are a tremendous benefit to the environment and consumers, these items also contain mercury, which when broken can release mercury vapor.
Opportunity: Project partners collected data to help frame policy discussions, develop awareness, and create educational tools on the safe use of DTC devices for recycling mercury-containing lamps. The data were evaluated to determine the ability of three DTC devices to contain mercury released when lamps are crushed and to reduce worker exposure to adverse levels of airborne mercury.
Results:

- Demonstrated that the mercury released during DTC device use would inevitably create new mercury exposure situations, primarily for DTC device operators and anyone else handling lamps or working directly with the DTC device.
- Helped EPA develop educational tools on improving the safe use of DTC devices for recycling mercury-containing lamps. Led to the creation of an EPA website to enhance awareness.

MEASURING THE ENVIRONMENTAL BENEFITS OF FEDERAL ELECTRONIC EQUIPMENT MANAGEMENT PRACTICES

Challenge: Region 4 Innovation pilot partners aimed to evaluate the Federal Electronic Challenge (FEC) and identify a tool to calculate the environmental benefits of various approaches to purchasing, using, and managing electronic equipment.
Opportunity: Pilot partners leveraged existing calculator tools including EPA's Waste Reduction Model (WARM) to develop a tool to calculate the environmental impacts of purchasing, using, and managing electronic equipment.
Results:

- Worked with approximately 20 federal facilities to develop the FEC assessment tool, resulting in the development of the Electronics Environmental Benefits Calculator (EEBC).
- Released the EEBC in 2007, which is used by FEC agency and federal facility partners to calculate the environmental benefits of the activities reported by FEC agency and federal facility partners.

KEY #5: WILDLY PERSISTENT STAFF LEVEL CHAMPION

> *"Innovation has nothing to do with how many R&D dollars you have. When Apple came up with the Mac, IBM was spending at least 100 times more on R&D. It's not about money. It's about the people you have, how you're led, and how much you get it."*
>
> **—Steve Jobs**

When implementing an innovative idea, a government innovator has different pressures and needs than an innovator in the private sector. The good news is that government does not apply as much pressure for revenue and profit. The bad news is that government can be, like any large organization, cumbersome and bureaucratic. Government innovators must stay focused on the project as they and their partners experience funding, paperwork, and review delays. The innovator must be a champion, capable of cheerleading to keep partners motivated and of turning around requests for information quickly. Managers have the role of supporting innovators through difficult times. After all, the project idea should represent a big win for the organization, if it proves successful. At the same time, managers have the unenviable task of alerting the innovator if a project will not be funded to continue. In that case, it is important to capture lessons learned and to reenergize this champion for the next big idea.

STAFF TIME TO DEVELOP IDEA/IMPLEMENT THE PROJECT

On any given work day at EPA, management and staff are juggling multiple projects, leaving little or no time for more creative outlets such as formulating or implementing new ideas. In the worst case, idea development and implementation is treated as a "collateral duty." This impedes a creative culture and can disengage innovators. Innovative staffers may look for other offices or programs where creativity is more than a slogan or, worse yet, leave the Agency altogether. Developing a culture that supports innovation entails a strategy that includes setting aside dedicated staff time where those closest to a problem can contribute ideas to help generate breakthrough ideas.

CREATE "BUZZ" FOR PROJECT

For an innovative project to gain exposure and recognition, it needs to be appropriately "marketed" and communicated to the right stakeholders. Marketing can involve internal and external outreach, including websites, social media, webinars, and training. Management is often actively engaged in key internal and external networks and know the relevant players that should be involved in the project. These networks may include cross-Agency workgroups or external organizations (e.g., nonprofits, professional societies, and industry) that have members with the resources and interest to support a particular aspect of a project. In a perfect innovation world, managers should be champions for innovative projects as much as the staffer. Managers can elevate the visibility of a project to the right people and programs and help form partnerships that are critical to the project's success.

OFFER FREQUENT FEEDBACK AND ENCOURAGEMENT

The best innovative projects are often complex and difficult. If they were easy, they would already have been done and would not be innovative. Project officers will have as many bad days as good days; partners may not be cooperating, the contractor (or grantee) may need additional directions and guidance, there

might be multiple requests for administrative paperwork, and other projects and priorities might be getting in the way. Managers need to be mentors and give frequent advice to move past the hurdles. In some cases, a manager will need to be a sounding board. More likely, managers will need to provide some guidance on possible directions and next steps. The goal is to keep the project moving and prevent extended down times.

ENSURE PROJECT RETAINS HIGH PRIORITY

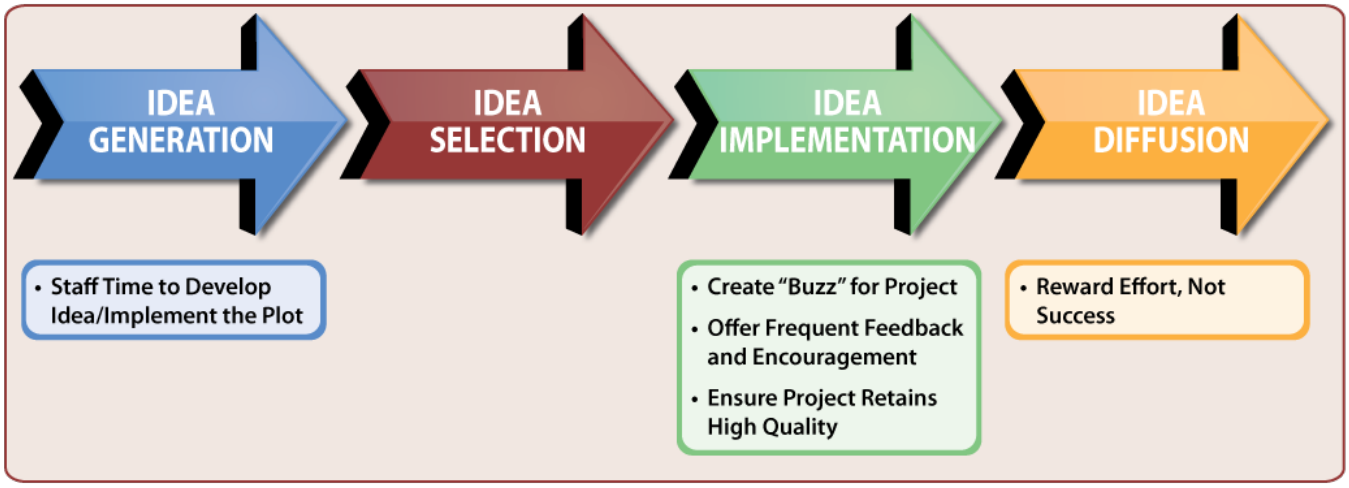
One of the hardest challenges for projects is that staff may take on a project in addition to a full workload and obligations. Management can support staff level champions as they embrace projects as their own and make them a higher priority. The right project lead understands the need and importance of accepting and effectively managing the additional burden to their time and workload. One may think that staff level champions equate to people who are passionate about the subject at hand; however, passion alone is not enough. If they do not have time to devote to the project, the project may miss important milestones. These projects require a significant investment of time and effort, and managers need to provide the right person with the ability to commit to the success of the project.

> *"Never tell people how to do things. Tell them what to do and they will surprise you with their ingenuity."*
>
> **—General George S. Patton**

REWARD EFFORT, NOT SUCCESS

By the end of a project, the best staffers will have put their heart and soul into making it successful. However, a project may not take the next steps for many reasons, some of which may be out of the control of the innovator. That is why effort must be recognized and rewarded to sustain a creative culture. Public servants are usually motivated by, and committed to, making a difference by way of better policies and programs; therefore, recognition and rewards do not need to necessarily involve money. There are many forms of non-monetary recognition and rewards such as an informal recognition, celebratory events, days off, program or Agency-wide acknowledgment, or possibly even an educational sabbatical. A reputation for rewarding idea development and implementation can be an important factor in attracting and retaining high performing staff, creating a virtual circle of innovation.

FIGURE 6: WILDLY PERSISTENT STAFF LEVEL Cchampion



SUPERFUND NPL LANDFILL METHANE-TO-ENERGY PROJECT

Challenge: An estimated 17 percent of total human-related methane emissions in the United States come from the decomposition of landfill waste. EPA had some success in working with active landfills to recover methane through the Landfill Methane Outreach Program. However, EPA had not explored recovering methane from legacy Superfund landfills. EPA staff recognized this as an opportunity to recover landfill methane and to use the energy to fuel ground water remediation.
Opportunity: This ambitious Green Remediation project needed a systematic way of evaluating the potential from existing Superfund landfill projects and a way of working with responsible parties to implement recovery where it made sense.
Results:

- Developed the Landfill Gas Energy Project Assessment Tool.
- Identified two of the six evaluated superfund landfills as viable candidates for methane capture for electricity.

AUTOMOBILES AND PARTS STEWARDSHIP

Challenge: EPA staff worked aggressively with industry, non-profits, states, and other EPA offices to develop an assessment of waste generated by vehicle manufacturing, transport, use, and end-of-life processing. Environmental policy on automobiles tends to focus on emissions and fuel efficiency rather than considering the impacts and issues across the entire automobile lifecycle.
Opportunity: EPA collaborated with government partners (federal, state, and local) and stakeholders to identify opportunities in design, manufacturing, purchasing, use, repair, and end-of-life.
Results:

- Held 20 listening sessions with nearly 100 stakeholders to identify issues and opportunities to reduce material and toxicity impacts of the automobile lifecycle.
- EPA organized information and feedback into five priority action areas that address specific areas of concern, and developed standards that promote environmentally responsible purchasing of automobiles. The priority areas are outlined in the *Roadmap for Change*.
- EPA Region 10 and the Washington Department of Ecology are collaborating on phase two of the project to consider the implementation of identified incentives that could help address the end-of-life management of automobiles.

CREATING AN INTEGRATED "GREEN" PARKING LOT AND URBAN WETLANDS ON A FORMER COMMERCIAL SITE

Challenge: Stormwater runoff is a major cause of water pollution in urban areas. When rain falls in undeveloped areas, soil and plants absorb and filter the water. However, when rain falls in urban areas—typically on roofs, streets, and parking lots—those surfaces cannot absorb water. At the time, "green" infrastructure, which uses vegetation, soils, and natural processes to manage water and ultimately create healthier urban environments, was an unfamiliar concept. Barriers such as the perception of higher cost and unknown performance were hindering the implementation of green infrastructure.
Opportunity: EPA collaborated with state and local government partners, non-profits, and private industry to expand the use of green infrastructure by demonstrating proof of concept.

Heifer International's World Headquarters: A Green Building Parking Lot

Results:

- EPA helped design and construct an urban wetlands ecosystem with a parking plaza that encompasses numerous green design elements, including the use of more sustainable materials to minimize impervious surfaces, reduce runoff, reduce water use, and incorporate recycled content.
- The green parking plaza served as a central component for the promotion of alternative transportation and commuting—and successfully influenced a route change in the local bus system to provide employees with better access to public transportation.
- Provided the foundation for the development of the *Green Parking Lot Resource Guide*, an EPA resource document on green parking lot construction, in February 2008.

KEY #6: TAKE DECISIVE NEXT STEPS

Once a pilot or project is completed, there are often a myriad of options for moving forward. At this critical juncture, managers must be decisive in taking next steps. Move too slowly and the project will lose steam, partners will move on, and funding outlets will start looking for other options. Moving too quickly risks funding a project that is not ready for expansion. This is the time to evaluate whether the vision put forth by the project is being achieved, and whether the results of the project are valuable enough to push forward into the next phase and potentially into a full-fledged program. The decision should not be taken lightly; staffers have put their heart, time, and effort into an innovative idea (see *Persistent Staff Level Champion*). However, if the project is not showing promise and addressing important program priorities, the best decision may be to shut down the project and move on to the next big idea.

> *"Innovation is the entire process through which an invention is successfully put into practice and widely diffused…"*
>
> **—Excerpt from *A Strategy for American Innovation: Securing Our Economic Growth and Prosperity***

ENSURE RESULTS DOCUMENTED AND LESSONS LEARNED

Almost all innovation projects result in valuable lessons learned, regardless of whether they were successful. And yet, if those results and lessons learned are improperly documented and shared, the effort will be lost. It is incumbent on managers to reinforce the need for documentation. Documented results speak volumes—this is where managers can leverage information to sell the next steps in the overall vision.

The results of a project can be shared in many ways, utilizing a variety of tools including social media, websites, fact sheets, webinars, and brownbag sessions. Another resource available to OSWER managers are cross-program internal workgroups, such as the Innovations Work Group. Communicating results allows project officers to maximize the project's impact by leveraging their stakeholders and ultimately reaching a broader targeted audience. Once the idea is disseminated to other EPA Regions or Program Offices that are able to successfully implement it, additional best practices and results can help form a stronger case for potentially changing or creating new EPA policy.

OBJECTIVELY EVALUATE SUCCESS OF PROJECT

A project can meet all its objectives and yet, it may not be the right time or place to continue with next steps. Conversely, an ambitious project that did not meet all of its objectives can be advanced to next steps if there is sufficient momentum with partners, funding, and management interest. The key is to objectively determine how success should be defined for a project. This is the time for managers and project leads to really face the facts and determine if there is enough interest and momentum to take the next steps in the project. The right project lead will be a "wildly persistent champion," and will not want to let go of the project. Managers will be tempted to support their innovators, who are normally some of the most productive staffers at the Agency. However, an innovation topic that is not advancing at a sufficient rate can be a drag on resources and a waste of a productive staffer's time.

IF SUCCESSFUL, SELL VALUE TO UPPER MANAGEMENT

The individual success of a project is a huge accomplishment, but promoting the project may help it rise to a national stage, such as inclusion in a policy strategy or management initiative. Management should facilitate the staff person to ensure that all opportunities are explored, to seek out opportunities for future collaboration, and to continue to engage all stakeholders involved in the pilot. The champion can work with his/her workgroup to promote the project at all levels of communication (e.g., individual, regional, national), and to solicit additional partnerships and project advocates. Managers can also encourage the use of non-EPA resources (e.g., standards organizations) to promote the opportunities and outcomes associated with the project.

IF SUCCESSFUL, HELP LEVERAGE FUNDING/SUPPORT FOR NEXT STEPS

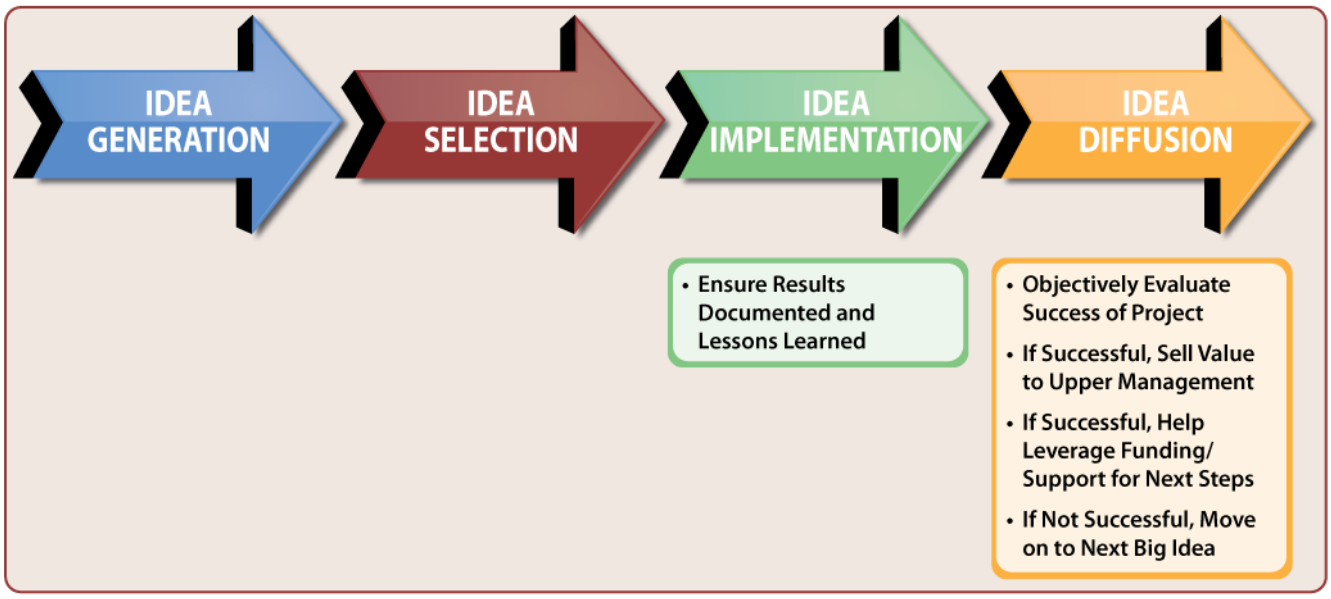
Managers play a critical role in taking an idea beyond the project level. The influence, networks, and resources managers bring to the table can make the difference between an idea being piloted as a one-time event and an idea making a genuine policy difference. Managers can elevate a project idea by using their role within the Agency, and internal and external connections, to promote the success of a project idea and solicit additional support. Utilizing networks and tapping into the partnerships formed during the project phase, managers can use documented results to promote benefits and potential areas for expansion and tie them to areas of significance for stakeholders.

Managers can also elevate a project idea by selecting one that has already been piloted successfully and providing the necessary resources to connect it to other Agency initiatives or evolve it into a larger project involving new stakeholder groups. Management has a responsibility to ensure the time and effort invested in the project is not wasted but is leveraged to have a larger impact on a programmatic or policy level. By supporting the expansion of a project idea and engaging the right players, management can help further success and translate new ideas into lasting innovative solutions.

IF NOT SUCCESSFUL, MOVE ON TO NEXT BIG IDEA

After an objective evaluation of a project, there are many reasons to walk away from the idea. There may be higher priorities, no momentum or interest from external and/or internal partners, or no interest from upper management. Perhaps the project did not prove what a manager was hoping it would. In these situations, it may be tempting to provide a small amount of funding to keep the project running. However, from an innovations standpoint, it is better to move on to the next big idea. The risk is that the next idea will not have the return on investment; but on the other hand, it could have a massive return. The key is to keep trying until a project works with massive success.

FIGURE 7: TAKE DECISIVE NEXT STEPS



CASE STUDIES

GREEN CLEANUP STANDARD

Challenge: The cleanup of contaminated properties using common practices can consume significant energy, water, and natural resources. Efforts had been made to minimize greenhouse gases and resource use during cleanup, but often they were only applicable to one site, and not consistent or easily scalable/applicable to all federal and state cleanup programs.
Opportunity: EPA convened a federal and state cross-program workgroup to develop the framework for a voluntary standard guide that could be used to increase the use of greener site assessment and cleanup approaches by regulatory agencies, responsible parties, developers, and communities. The workgroup then partnered with ASTM International, a globally recognized leader in the development and delivery of international voluntary consensus standards, to develop a greener cleanup standard.
Results:

- The final guide is currently under development by ASTM International and is expected to be published in 2013. It is designed to maximize the short and long-term environmental, economic, and social goals considered under various federal and state cleanup programs, while continuing to protect human health and the environment.

GREENING INDUSTRIAL DESIGN

Challenge: In 2003, ecological design was still in its infancy. EPA needed to take strong steps to help shape the meaning of ecological design and promote it for the future. Given that most of the environmental impacts associated with products over their entire lifecycle can be traced back to the design stage, making industrial designers aware of sustainable approaches is an innovative, cost-effective, and practical approach to reducing a product's environmental impacts.
Opportunity: EPA awarded a grant to the Design Foundation, a non-profit entity of the Industrial Designers Society of America (IDSA), to educate industrial designers and educators/students in design schools about the principles of ecological design and innovation. The project was intended to increase awareness of and educate the product design community about the opportunities to redesign existing products, as well as opportunities to conceive and create new systems that are cost-effective and meet consumer needs with significantly reduced environmental impacts.
Results:

- In spring 2004, *Design: Green* workshops were held in New York City, Minneapolis, Chicago, and Pasadena. These groundbreaking workshops demonstrated how a proactive approach to "eco-design" can be a catalyst for innovation, sustainable profits, and a competitive advantage.
- EPA and the Design Foundation developed an eco-design education curriculum called *Design: Green—A Fresh Approach to Better Business and Design* to identify opportunities to sustainably design products to reduce environmental impacts during their lifecycle.
- The year after this project ended, the EcoDesign category was added to the IDSA International Design Excellence Awards program. This awards program has become the premier international competition honoring design excellence in products, eco-design, packaging, strategy, research, and concepts.

SUSTAINABLE PRODUCTS MOVEMENT: OPPORTUNITY TO ADVANCE MATERIALS MANAGEMENT PRINCIPLES FOR RESOURCE CONSERVATION AND GHG BENEFITS

Challenge: The concepts of "green" and "socially responsible" are subject to varied interpretations in the marketplace, which has caused growing concern about which environmental claims related to standards and labels can be trusted.
Opportunity: Project partners built the framework for developing the nation's first product sustainability standards and eco-labels through nationally coordinated sustainable products collaboration.
Results:

- Established the Green Products Roundtable (GPR)—comprised of more than 40 members representing different perspectives of the green products marketplace, including manufacturers, retailers, purchasers, distributers, certifiers, and other experts and thought leaders—to construct the framework for the development of market-based product sustainability standards and labels.
- EPA partnered with the American National Standards Institute (ANSI) to create the GPR framework including criteria to help establish uniform technical requirements, methods, processes, and practices for the future development of national sustainable product standards and eco-labels.

CONCLUSION

Innovation is more than trying new ideas. It is about finding the best ideas to meet a challenge and investing the time, resources, and influence needed to make it work. This is where an innovative workplace is essential, but making a workplace more innovative need not be a significant effort. A manager's role is to facilitate staff involvement by drawing out ideas and making them come alive. An innovative workplace is about:

- Creating a workplace where new ideas are welcome;
- Helping to shape the project by starting small to prove the point, and then working aggressively to scale up;
- Ensuring that the project constantly challenges and engages external and internal partners;
- Supporting people working on the project; and
- Actively involving all levels of the management chain.

COMPETITION NOT REQUIRED: INNOVATION IN OSWER

EPA launched the RE-Powering America's Land Initiative in 2008 to target potentially contaminated lands for renewable energy development. EPA saw the potential to couple the renewable energy movement with environmental remediation and open-space preservation, which fundamentally changed how Americans approach renewable energy. These projects advance cleaner and more cost effective energy technologies while reducing the environmental impacts of energy systems.

An innovative workplace does not necessarily involve creating a competition, but a successful manager funds the best ideas that meet a challenge. The RE-Powering America's Land Initiative is a great example. The challenge was that large renewable projects required installations with significant open space. The idea was that potentially contaminated properties represent an opportunity for inexpensive and environmentally friendly installations. The office started small by mapping an overlay of ideal wind and solar locations with potentially contaminated sites and demonstrated the enormous opportunity. The project expanded by including more renewable energy technologies, involving EPA Regions in strategic planning and demonstration projects, partnering with renewable energy developers and site owners, and creating guides for ideal conditions. The program has thrived on a good idea implemented well.

In an ideal government world, managers view an innovative workplace as the norm rather than a special circumstance—a world where leadership and cooperation produce innovative projects that solve our toughest challenges. Even in tough budget circumstances, innovation is viewed as an important resource for meeting goals with thin resources. Hopefully this report will provide inspiration for moving toward continuous innovation.