Collaborative Technology: Guidance for Federal Agencies

By: Beth Moore, U.S. DOE & Executive StEPPs Team
For: National Academy of Public Administration
Federal Remediation Technology Roundtable, May 20, 2009
What Is Collaborative Technology?

- Software designed to help people involved in a common task achieve their goals

Common examples

- Wikis
- Blogs
- Smashups
- Social networking
- Social voting
Wiki is a collaborative website whose content can be edited by anyone who has access to it, such as Wikipedia.
Social networking is a broad class of websites and services that support online communication for people who share interests and activities, such as Facebook.
Executive StEPPs Team

- Action learning team of nine federal employees working with the National Academy of Public Administration to analyze and document instances in which agencies used collaborative technologies to solve organizational challenges.
- Michael Clark, Citizenship and Immigration Services
- Julett Denton, Department of Agriculture, Forest Service
- Phil Golinski, Marine Corps
- Roy Greene, Department of State
- Craig Johnson, National Nuclear Security Administration
- Beth Moore, Department of Energy
- Dana Richey, Department of Agriculture
- Susan Senkeeto, Department of Education
- David Weingart, Federal Aviation Administration
Project Sponsor

- National Academy of Public Administration
- The Collaboration Project
  - Established by a forum of leaders to share ideas, examples, and the benefits of collaborative technology to solve complex challenges within government
  - [www.collaborationproject.org](http://www.collaborationproject.org)
Problem Statement

- When, and in what circumstances, should agencies use collaborative technology to solve organizational challenges?
Method of Analysis

- Analysis of case studies
  - Successful and less successful cases used
  - Cases from federal, state, local, international, nonprofit and private sectors
  - Facilitated interviews and web surveys used to create a project data base
  - Statistical analysis of the project data base performed on 4 elements: the business challenge, approach taken, results achieved, and lessons learned
Results Presented in Four Categories

- Organizational Culture
- Policy and Governance
- Science, Engineering, and Technology
- Business Case
Science, Engineering, & Technology

- Optimizes technical transfer, support, and education to connect experts and provide solutions to those in need.
- Promotes the formation of self-initiated groups around similar data or projects to undertake analysis and solve challenges.
- Catalyzes innovation and process improvement, for example, public peer review and input.
- Improves internal and external communication, as well as better delivery of services for stakeholders and clients.
March 03, 2009

Good Business = Green Business

There is a lot of talk out there about "going green" - and not only for individuals, but for businesses too. So, what does that mean exactly? Well, it doesn't have to be as complicated as some might think. In fact, the benefits and values that businesses gain from going green are often quite similar to those gained from running a good business. So, what do you have to lose?
Fresh “AIRE:” Arlington Initiative to Reduce Emissions

- Arlington County website and blog allows partnering with community and businesses to reduce air emissions and energy use, promote recycling, and use of innovative technologies
- Keeps community updated with progress toward emission goals on website
- Advertises free energy audits, best practices, incentives, initiatives, science tips, videos, and articles
- Promotes community feedback and innovation through blog and website updates
- “Think locally, think globally:” website model that other counties are using to design theirs
Technical Transfer, Support, & Education

**KEY ELEMENTS OF FRESH AIRe**

Reduce Arlington County government’s greenhouse gas emissions 10% from 2000 to 2012. Arlington is already a recognized leader on environmental issues, but realizes more must be done. Arlington set this ambitious target for emissions reduction with full understanding of the challenge it represents. We will build upon our current success (reducing emissions 2.6% from 2000 to 2005) and innovative programs with new initiatives, confident of achieving this emissions reduction goal. Here are the key elements of the AIRE program, in addition to the strategies the County will use to lower emissions from government activities:

- **Recognize, assist and encourage businesses** to reduce emissions and energy needs. Partner with the federal Energy Star™ program and other resources to help businesses cut energy use, and offering 5 free energy audits for small businesses.
- **Encourage residents** to reduce their energy usage, through a limited number of free residential energy audits, case studies on energy saving practices, free CFL light bulbs, and more.
- **Reduce Arlington County government’s** greenhouse gas emissions, through energy saving retrofits, addition of hybrid and clean fuel vehicles to the County fleet, installation of LED traffic lights, tree planting, and more.
- **Increase recycling in County facilities, homes, and businesses.** Making products from recycled materials use 50 - 90% less energy than using raw materials.
- **Work with other localities** around the region and nation.
Self-Initiated Groups for Analysis and Problem Solving

The Puget Sound Information Challenge is now over... thanks to your participation, contributions of ideas, data and applications, and over 18,000 pages were viewed.

What is the Challenge?

Former EPA Administrator Bill Ruckelshaus (now Chair of the Puget Sound Partnership Leadership Council) challenged the National Environmental Information Symposium participants to identify and collect the best information to support enhanced decision-making.

How Can...
EPA Puget Sound Information Challenge

- 36-hour demonstration of wiki technology to solve a regional environmental problem more quickly and efficiently
- IT professionals used Web 2.0 software to post environmental information, share data, and collaborate about techniques and methods to cleanup Puget Sound
- Teams formed in virtual space linking those in need to those with solutions
- Users can communicate anywhere, any time toward a common solution
- Procedures and regulations under development to accommodate CT for public comment on rule-making, enforcement cases, etc.
Catalyzes Innovation and Process Improvement
Peer-to-Patent Project: Community Patent Review

- Uses social software to allow the public to participate online in an open patent evaluation process
- Conceived by NYLS and paid for by corporate sponsors
- Reduced patent application backlog
- Uses USPTO labor resources more effectively
- Speeds up processing time for patents
- Patents more robust, reducing litigation burdens
Improves Communication & Delivery of Services
DOE Office of Science Blog

- Internal blog as an open portal for staff to share ideas for a new organizational structure
- Organizational improvement to reduce stove-piping, update management practices, and incentivize employees to improve service and advance science
- Self-organized teams formed to solve research barriers and improve workflow
- More productive supervisor to employee relationship due to spontaneous teaming
- Open and transparent communication incorporating all staff members and personality types
Summary of Recommendations

- Officially obtain senior leadership backing
- Find a champion, ideally outside of IT
- Define a clear vision of direction and purpose
- Be realistic about how collaborative technology fits into the organization
- Utilize sound project management practices
- Dedicate financial resources and staff
Summary of Recommendations

- Classify criteria for success and failure
- Measure return on investment (ROI)
- Create adequate, but not excessive, security
- Design the site to be simple to use
- Integrate into regular employee workload
- Include incentives to keep audience engaged
- Account for the culture of the stakeholders