

**SPECIAL INFORMATION  
TECHNOLOGY ISSUE**

**E-Government:  
Talk of the Town**

**Five Essentials for  
E-Learning Success**

**Secure Collaboration  
in Low Bandwidth  
Settings**

**Coordinated IT  
Functions Support  
Homeland Security  
Needs**

**Insights:**

GIS: One Picture is Worth  
a Thousand Words

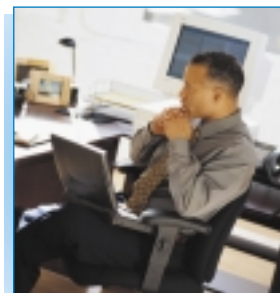
Customer Relationship  
Management: Much  
More than Technology



## Talk of the Town

**E-Government is the talk of the towns...  
and the states...and the federal government.**

High priorities for most public sector organizations include such subjects as customer relationship management, enterprise architecture, security and e-authentication, paperwork reduction and elimination, and citizen-centric services. Employees across all levels of government are faced with the enormous challenge of delivering services in a Web environment to citizens who have become very Web-savvy and who have developed high expectations.



It is safe to say that the impacts of a Web-enabled government are already significant and are compounding at an exciting rate. E-Government is part of the fabric of the business of government. It will continue to provide

continued on page 3

## Five Essentials for E-Learning Success

Many organizations have moved to e-learning, but too few are realizing significant, sustainable returns from their e-learning investments. E-learning offers something powerful and enduring. It is a catalyst that inspires organizations to manage learning in all its forms. Organizations that understand the role of learning in the achievement of business goals and that integrate e-learning strategically with other critical learning interventions will win the ultimate prize: improved performance across the extended enterprise.

ICF Consulting's experience reveals five essentials organizations should remember on their way to e-learning success.

### 1. Make E-Learning Part of a Broader Learning Framework

To be successful, e-learning needs to be grounded in a larger organizational learning strategy tied to business objectives. Before implementing e-learning programs, organizations should consider the following questions:

- What is our learning philosophy? What is our approach to adult learning? How does it fit into our mission and strategy?
- How much are we currently investing in learning and what benefits are we realizing?

continued on page 7

# Secure Collaboration in Low Bandwidth Settings

Modern organizations are both widely distributed and highly interdependent. Often decision-makers are geographically distant from those providing the information upon which their decisions are made. These decisions are also often mission-critical and confidential. The confluence of these factors necessitates a means of secure, real-time interaction. Low bandwidth situations—common in military, public safety, and homeland security settings—are areas where collaboration tools can add significant value, both in terms of return-on-investment and, more importantly, in lives saved.



## Secure Collaboration Tools

Collaborative tools should use a full range of communications technologies and include a wide variety of communication modes to enable the most appropriate system for any given situation and to provide redundancy. Collaboration tools include the following:

- Background information sharing—Web pages, client-server databases, published reports, threaded discussions, and document management
- Planning information—short-term and long-range plans, resource management and scheduling tools, and logistical information
- Real-time and near-real-time information sharing—e-mail, secure instant messaging, voice communications, and video conferencing

There are numerous tools on the market that ICF Consulting has used to develop collaborative computing environments. Our implementations focus on rapid setup and execution and, consequently, center on product suites by Microsoft and IBM/Lotus.

ICF Consulting recently developed a prototype system for the U.S. Navy Sea Systems Command's (NAVSEA's) Distance Support Portal demonstrating the use of a SharePoint Portal Server (SPS), a Content Management Server (CMS), and a Commerce Server (CS) to deliver highly tailored content to shipboard sailors in a low bandwidth environment. The Distance Support Portal provides engineering and other support to shipboard sailors to minimize the amount of routine ship-to-shore

communications, and free critical satellite bandwidth for mission critical issues.

The NAVSEA prototype is predicated on maintaining local copies of the system on each ship and shore-based installation. The content consistency of the various copies of the system is maintained using periodic database replication that merges all of the changes

without the need to copy redundant information. A high level of content personalization is achieved through the personalization features inherent to CMS and CS. Document management and search functions are handled using the document management, workflow, and search features of SPS.

ICF Consulting has led the Web development team for Collaboration at Sea (CaS), a full-featured intranet for the U.S. Navy's Atlantic Fleet, which also operates within a low-bandwidth environment. The system is used for reporting battle group activities across the fleet and for providing a secure method for direct communication, particularly during crisis situations.

The system allows for shipboard and shore-side content management using a custom-built, IBM/Lotus-based content management system. Secure, real-time collaboration is achieved using the Lotus Sametime product. These functions occur over highly secure, satellite-based networks using IBM/Lotus Domino technology.

Secure collaboration in low bandwidth settings relies heavily on the use of database replication to minimize the flow of redundant bytes of information. The U.S. Navy recognizes the value of this approach and has worked with ICF Consulting to integrate it into CaS, their primary tool for coordinating the activities of the various battle groups within the Atlantic Fleet. Based on the experience of the Atlantic Fleet, other groups within the U.S. Navy (most notably NAVSEA) have recognized the value of the approach. Regardless of the particular tools used, or even the particular low-bandwidth setting to which the tools are applied, the lessons learned as part of these projects can provide valuable insight for any secure, low-bandwidth collaborative solution. ■

## Talk of the Town (cont. from page 1)

easier access to services, improve the efficiency and effectiveness of government operations, reduce transaction costs, and improve the ability to respond to citizens in a timely and meaningful manner.

For more than a decade, ICF Consulting has provided information management and business solutions to customers in the United States at the state, local, and national levels, as well as internationally. Our consultants, software architects and developers, and change management professionals have learned several key lessons that will help managers as they visualize, plan, and execute their next e-Government initiative or project.

**Listen to the customer.** Make sure you fully understand the stakeholder environment, the audience, and their needs. Let them influence your application or Web site navigation and content. Build time and resources into the project schedule to focus on this early and at check points along the way. Make judicious use of focus groups and structured usability testing to guide you.

### Keys to E-Government Success:

- **Listen to the customer.**
- **Be accessible.**
- **Start small . . . and grow. But start now.**
- **Realize that perfection is not an option.**
- **Start with the end in mind.**

**Be accessible.** Make it easy for customers to get to you by any means. Your Web site might be great—but it does not satisfy every customer, every time. The Web is only one channel for customers to access your services; ensure you are accessible by more traditional means, such as face-to-face meetings, or by phone, fax, or letter. Plenty of integrated/unified messaging products are available to make innovative use of these more traditional channels.

**Start small...and grow. But start now.** Don't wait for the next innovation in technology. If you have a good business case and can line up funding, get started

now. If you only have “seed” funding, then focus on your requirements documentation and perhaps a rapid prototype while exploring funding opportunities. Spend time surveying the landscape in the organization or across gov-



ernment boundaries to leverage someone else's good work. The sooner you start learning from on-the-ground experience, the sooner the project will morph into a meaningful and rational endeavor.

**Perfection is not an option.** Do not allow the prospect of imperfection to paralyze you. Focusing on the 80 percent solution may help influence key resource decisions in a direction that will ensure a robust product.

**Start with the end in mind.** A successful application that improves workforce productivity or customer satisfaction with online services will consider deployment and change management issues long before the first line of code was written. Successful e-Government project managers spend more than half of the total effort preparing for and providing assistance in adopting the technology into the culture of the organization. Ignoring this aspect of any information technology project spells disaster. Rarely do projects fail because the technology was not available or adequate.

ICF Consulting takes a balanced approach to e-Government projects by focusing on four key areas: understanding the **mission** of the organization, the **business processes** that support that mission, the technology and capital **investments** required to support those business processes, and the **culture** of the organization and its people. Keeping these four dimensions on the radar helps deliver high-quality projects that thrill customers and end-users.

For more information about ICF Consulting's information technology capabilities, visit [www.icfconsulting.com/it](http://www.icfconsulting.com/it).

# Calendar of Events

## June

### June 19-21, 2002

Vienna, Austria. At the **E-Learn Expo Vienna 2002 Conference**, ICF Consulting's Theo Mantzanas will give the keynote address at the IDC e-Learning Breakfast as well as participate in a panel on "e-Learning Strategy for Success in Hard Times." Dr. Mantzanas will also moderate a panel of CEOs from leading e-learning companies on the future of the industry. *For more information, please contact Theo Mantzanas at 1.703.934.3193.*

### June 23-26, 2002

Goteberg, Sweden. Elaine Blatt of ICF Consulting will present a paper entitled "Building a Corporate Culture of Sustainability through Worked Participation Programs: Two Case Studies from the Cleaner Production for Industrial Efficiency Program in Thailand" at the **10th Annual International Conference of the Greening of Industry Network**. *For more information, please contact Elaine Blatt at 1.662.744.3045.*

### June 23-26, 2002

Dearborn, Michigan. ICF Consulting will exhibit and feature the CommentWorks<sup>SM</sup> program at the **National Association of Environmental Professionals (NAEP) Annual Meeting**. *For more information, please contact Mike Berg at 1.703.934.3334.*

### June 24-26, 2002

Houston, Texas. Leonard Crook of ICF Consulting will speak on "Assessing the Need for High Deliverability Storage Located Near Market Centers" at the **Gas Storage Strategies 2002 Conference**. *For more information, please contact Sheila Hudson at 1.703.934.3181.*

### June 24-27, 2002

Washington, D.C. At the **E-Gov 2002 Annual Conference**, ICF Consulting will host an exhibit booth and specialized kiosk on scalable content management. Tim Herbst of ICF Consulting will participate in a panel on "Government-Industry Partnerships: Innovations Abroad." *For more information, please contact Glenn Chambers at 1.703.934.3853.*

### June 26-28, 2002

Big Fork, Montana. Elliot Roseman of ICF Consulting will speak on "Renewable Portfolio Standards: Wave of the Future?" at the **5th Annual Mansfield Center Retreat**. The theme is "Melting Mountains: Climate Change in the Asia Pacific Region." *For more information, please contact Sheila Hudson at 1.703.934.3181.*

### June 26-28, 2002

Charlottesville, Virginia. Steve Nichols of ICF Consulting will participate in round-table discussions at the **Creating a Learning Culture: Strategy, Technology and Practice Symposium** sponsored by the Darden Graduate Business School's Batten Institute at the University of Virginia. *For more information, please contact Steve Nichols at 1.703.934.3295.*

### June 29-30, 2002

Washington, D.C. ICF Consulting's Igor Linkov will speak on "Dealing with Uncertainty in Risk Assessment: Quantification of Sources and Analytical Methods" at the **American Geophysical Union Annual Meeting**. *For more information, please contact Igor Linkov at 1.800.478.6585.*

## July

### July 23-27, 2002

Denver, Colorado. ICF Consulting will exhibit and feature the CommentWorks<sup>SM</sup> program at the **National Conference of State Legislatures (NCSL) Summit for America Annual Meeting**. *For more information, please contact Mike Berg at 1.703.934.3334.*

## August

### August 7, 2002

Rio Grande, Puerto Rico. Marian Long of ICF Consulting will speak on "Risk Management in the Post 9/11 Era" at the **Puerto Rico Federal Safety and Health Conference**. *For more information, please contact Mariah Long at 1.800.478.6585.*

## August 18-23, 2002

Pacific Grove, California. Several individuals from ICF Consulting will participate in the **American Council for an Energy Efficient Economy (ACEEE) Summer Study on Energy Efficiency in Buildings**. Speakers include Phil Mihlmeister, David Kathan, Jeanne Townend, Jay Hall, and others on topics such as Demand Response; RTO Policies; Energy Efficient Labeling in China; ENERGY STAR Programs and Specifications; and Emissions Forecasting. *For more information, please contact Pat Alexander at 1.703.934.3157.*

## August 25-28, 2002

Philadelphia, Pennsylvania. ICF Consulting will exhibit at the **Association for Commuter Transportation's International Conference**. *For more information, please contact Michael Grant at 1.703.218.2692.*

## September

### September 11-14, 2002

Baltimore, Maryland. ICF Consulting's Lonnie Lee will be speaking on "Maximum Performance HVAC Sales Organizations" at the **Comfortech 2002 Annual Meeting**. *For more information, please contact Lonnie Lee at 1.818.325.3145.*

## September 23-24, 2002

London, United Kingdom. ICF Consulting's Abyd Karmali and Neil Cornelius will be speaking on "Valuing Your Green Assets in Deregulating Electricity Markets" at **Euromoney's 4th Annual Renewable Energy Finance Conference**. *For more information, please contact Sue Demmon at +44.20.7554.8730.*

## October

### October 21-24, 2002

Amherst, Massachusetts. ICF Consulting's Henry Camp will present a paper entitled "Approaches for Fingerprinting PCBs at Contaminated Waste Sites" at the **18th Annual Conference on Contaminated Soils, Sediment, and Water**. *For more information, please contact Henry Camp at 1.800.478.6585.*

## November

### November 3-6, 2002

Toronto, Ontario. ICF Consulting's Francois Cote will present a paper entitled "Thinking Outside the Atmosphere" at the **Canadian Society of Safety Engineering (CSSE) Professional Development Conference**. *For more information, please contact Francois Cote at 1.416.341.0387.*

## November 16-20, 2002

Salt Lake City, Utah. Igor Linkov of ICF Consulting will lecture on the "Use of Risk Assessment in the Mining Industry" at the **Society of Environmental Toxicology and Chemistry (SETAC) Annual Meeting**. *For more information, please contact Igor Linkov at 1.800.478.6585.*

## December

### December 8-11, 2002

New Orleans, Louisiana. Igor Linkov of ICF Consulting will speak on the "Use of Bayesian Techniques in Risk Assessment" and chair the Ecological Risk Assessment Specialty Group Business Meeting at the **Society for Risk Analysis Annual Meeting**. *For more information, please contact Igor Linkov at 1.800.478.6585.*



powered by perspective

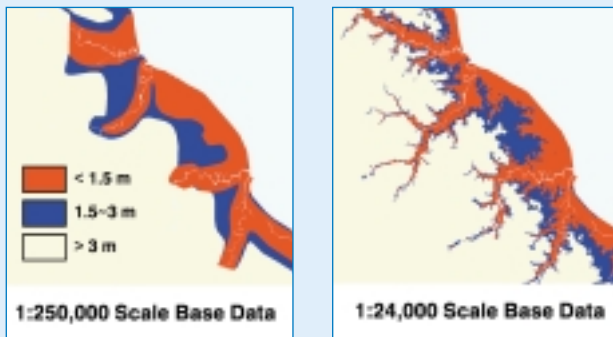
## One Picture is Worth a Thousand Words

### How Many Do You Need to Make a Decision?

A geospatial map can reveal the past, present, and future in a glance, and also presents issues easily overlooked if only a narrative explanation were used. Adding geospatial mapping to current information systems provides a more complete picture of the challenge, leading to a more complete solution. Geographic Information Systems (GIS) help managers identify hot spots, gaps, trends, and progress, make informed decisions, and manage resources.

One example of how GIS can be used to clarify a situation is with the measurement of rising sea levels. ICF Consulting helped the U.S. Environmental Protection Agency (EPA) communicate the gravity of the potential rise in sea level predicted to accompany global warming. EPA can now better identify impact areas, target limited resources to vulnerable areas, prepare adaptation plans, raise awareness, and communicate the need to adapt in a clear manner to the public. Part of the GIS solution includes

### Potential Sea Level Rise



*The 1:250,000 scale maps are available for the entire Eastern seaboard and show a regional view of sea level rise. The 1:24,000 scale maps are valuable in depicting sea level rise detail for more specific areas.*

statistics detailing the number of people, urban areas, and land use types affected by different sea level rise scenarios. These maps and data richly illustrate rising sea levels and their effects on communities, businesses, and natural areas.

For more information on ICF Consulting's GIS capabilities, please visit our Web site at [www.icfconsulting.com/maps](http://www.icfconsulting.com/maps).

## Customer Relationship Management

### Much More than Technology

Mention the phrase Customer Relationship Management (CRM) to commercial or government managers and you will likely engage in a discussion about call centers, customer management software, voice recognition, routing systems, or any number of other technology solutions. These technologies are important; however, too often organizations overlook the other dimensions of CRM that are essential to the ultimate goal—to deliver a satisfying customer experience at a reasonable cost. Although this goal takes many forms (such as maximizing customer profitability or providing equitable, convenient, and cost-efficient service to citizens), the principles for success remain the same.

ICF Consulting has developed a framework to evaluate the overall health of your CRM approach and capabilities. This framework (below) reflects the philosophy that successful CRM begins with a solid strategy supported by operational and technological excellence and a customer-driven organization and culture. Our CRM framework covers a range of activities from identifying behavior-based customer segments to training and incenting front-line employees to provide customers with a pleasing and consistent experience. By prioritizing areas where your organization is CRM challenged, this approach enables you to quickly improve and align all of the elements key to your organization's ability to manage customer relationships successfully.

### CRM Framework

**Customer insight.** Segment customers based on their differentiated wants and needs.

**Customer offer.** Leverage customer segment insights to develop tailored value propositions, brands, products and services, and most appropriate service channels.

**Customer interaction.** Manage and personalize each interaction during entire cycle, irrespective of channels used.

**Customer-focused processes and technology.** Seamlessly integrate processes and technology to enable superior delivery and minimize cost.

**Customer-focused organization and culture.** Manage front-line employees at all touch-points, and motivate back-end support staff to deliver on the promise.

To learn more about ICF Consulting's CRM capabilities, please visit our Web site at [www.icfconsulting.com](http://www.icfconsulting.com).

## Five Essentials for E-Learning Success (cont. from page 1)

- How do we manage all learning (training, education, performance support, communication, coaching/feed-back, knowledge management) to achieve business goals?
- How do we leverage learning across the extended enterprise to suppliers, channel partners, and customers?
- How do we measure success?

Organizations that actively address such strategic issues and implement structures to support learning as a core business process will realize the benefits of e-learning the fastest.

### 2. Technology: Get Practical

The quickest way to realize the full potential of e-learning is to simply get started, even if that means making do with existing technology infrastructure. Before chasing an ambitious broadband, multimedia learning environment, organizations can gain valuable e-learning experience by resolving just a few key issues, such as how to deliver e-learning through a company firewall and how to reconcile bandwidth-intensive e-learning traffic with already over-taxed datastreams.

An important consideration is whether to implement a Learning Management System (LMS). This suite of software products can deploy courses, inventory competencies, track achievement, evaluate satisfaction, and assess how learning is applied in the workplace. However, even a powerful LMS will not support all learning applications and may require significant customization. Given that industry standards are not yet firmly established, the LMS purchased today may need replacement sooner than planned.

### 3. Success Demands Organizational Change

While a robust technology infrastructure can facilitate successful e-learning, technology alone is not enough. Changes in budgeting, organizational relationships, policy, procedures, and culture must be introduced for e-learning to be effective.

For example, the business model of an e-learning project is different from that of a traditional classroom course. With a traditional course, the costs remain fairly constant. In contrast, an e-learning project pushes most costs up front, with dramatically lower ongoing implementation and maintenance costs. Although e-learning promises significant cost savings over time, the early stages of an e-learning project may be more expensive than stakeholders expect.

These differences must be communicated in advance to enable better planning and appropriate funding.

Organizational relationships are also affected by the introduction of e-learning. While human resources, training, and information technology functions bring their own strengths to an e-learning project, each has the ability to derail the project. Gaining the participation and support of each group from the start and continuing that involvement throughout the project will help ensure its success.

### 4. Align Content and Delivery Mode With Learner Needs

Even the best planned e-learning implementation can fail if the content is not engaging and relevant. Organizations can enliven their e-learning programs and increase effectiveness by diversifying the form (off-the-shelf or customized), provider (e-learning vendor, higher education institution, in-house), and delivery mode (Web, satellite, CD-ROM, etc.).

Increasingly, e-learning content is being developed as reusable learning modules that allow for greater customization to individual learner needs. Still, many organizations mistakenly believe that all learning content must be converted to electronic format.

In fact, for applications such as executive development, a more effective learning experience can be achieved by blending online formats with traditional classroom-based learning. While there are some common-sense guidelines for deciding when e-learning is best, most organizations develop their own criteria based on their systems, culture, preferred modes of communication, and learning preferences.

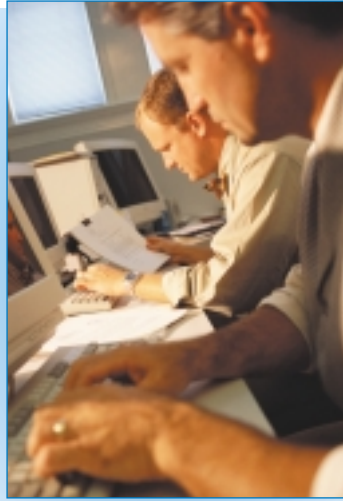
### 5. Make the Move to Performance-Based Metrics

As organizations increasingly link learning to business outcomes, success metrics are evolving from passive measures, such as “numbers trained,” to performance-based indicators, such as “speed to competency.” By its very nature, e-learning is redefining the metrics of success. For example, course completion as an indicator of training success is less relevant when e-learning encourages participants to access only those learning segments they need to perform their jobs better.

For more information on ICF Consulting’s e-learning capabilities, visit [www.icfconsulting.com](http://www.icfconsulting.com).

# Coordinated IT Functions Support Homeland Security Needs

Improvement of communications capabilities for emergency responders has become a top priority for officials at the federal, state, and local levels. For a number of years, various organizations and individuals have advocated using the Internet and other information technology functions as a way to expedite communications and provide greater redundancy should more traditional methods fail or are inaccessible.



The issue of coordinated communication is referred to as one of “interoperability;” the ultimate goal is interoperable communications across departmental and jurisdictional boundaries. At the same time, the increased emphasis on terrorism preparedness requires secured communications that are comprehensive in scope and accelerated in delivery.

Several efforts are currently underway to experiment with coordinated communications that would address the “interoperability” concerns. Among those efforts is the Domestic Emergency Response Information Service (DERIS), a project piloted by the U.S. Department of Defense (DOD).

ICF Consulting has been engaged by DOD and the firm of Adroit Systems, Incorporated, to design and develop the DERIS Portal—a secure, Web-based information service that provides a common operational picture to support a coordinated domestic emergency response. A demonstration was recently conducted simultaneously in Chicago, Los Angeles, and San Diego to illustrate how current technology could be integrated to design quickly a coordinated communications capability that enhances, rather than replaces, local and state capabilities.

During the demonstration, DERIS users encountered many of the same communications functions and procedures currently used during response to a catastrophic event. However, those activities are most often accomplished through

separate and traditional (rather than Web-based and integrated) technologies. The DERIS Portal allowed the user to maintain regularly updated incident management reports, send secure messages and conduct secure group chats, convey secure photographic and video imagery, establish multiple-user alerts, maintain a secure information library, and simultaneously track weather and news feeds. Functions that would traditionally require multiple workstations and extra equipment have been consolidated into a single user interface.

Out of this effort, observers learned existing government programs and public efforts can be leveraged to reduce overall implementation costs and increase functionality, without compromising the integrity of individual efforts. They also learned sensitive information could be passed through existing mediums without compromising security or data integrity.

For more information about ICF Consulting’s emergency management capabilities, please visit [www.icfconsulting.com/em](http://www.icfconsulting.com/em).



powered by perspective

About ICF Consulting

ICF Consulting is a leading management, technology, and policy consulting firm. Drawing upon its extensive industry knowledge, credentialed professionals, and innovative analytics, it develops solutions to complex energy, environment, emergency management, community development, and transportation issues. ICF Consulting’s approach to these issues is strengthened by its expertise in information technology, organizational improvement, and communications. Since 1969, ICF Consulting’s 1000 employees have served major corporations, government at all levels, and multinational institutions from key business centers in North America, Europe, and Asia.

ICF Consulting recently acquired two major consulting divisions of Arthur D. Little, Inc. (ADL). These divisions center on environment, risk, and public sector program management and add important new dimensions to ICF Consulting’s existing competencies.

For more information on ICF Consulting’s services, please visit our Web site at [www.icfconsulting.com](http://www.icfconsulting.com).

We welcome your comments and suggestions. Please contact us at 1.703.934.3659 or by e-mail at [perspectives@icfconsulting.com](mailto:perspectives@icfconsulting.com).