By Jodi Ross and Mike Wells

WESTFORD

TAKES SERVICE-FIRST APPROACH TO TECHNOLOGY INVESTMENTS

Westford may appear to be a quiet, suburban bedroom community, but there is nothing sleepy about the town—it's abuzz with technological activity! Located in an area commonly referred to as the I-495 Technology Corridor, Westford is fortunate to be the chosen location of many high-tech companies, including Red Hat, Juniper Networks, Sonus and Netscout Systems—all of whom employ some of our residents. Perhaps because of this, our nearly 22,000 residents tend to be tech-savvy and recognize the importance of technology in the smooth operation of our town. We have a history of investing in our Technology Department, and we employ a talented group of IT professionals who are engaged in every level of our organization. With that investment of taxpayer dollars comes the expectation of reliable systems that support and promote the efficient delivery of services.

Our management philosophy in Westford is participatory. Our employees are high-caliber, talented and highly motivated to work as a team with town officials, volunteers and the public at large—to discuss and identify challenges and opportunities facing our town and, in consultation with each other, to determine where to focus our energies and resources. Our residents are actively engaged and vitally important to our success. Creativity, efficiency, productivity and continual improvement are paramount goals for all municipal employees.

In Westford, we look at technology as a tool to solve problems and help us streamline activities. We aren't interested in following the next technology wave; we want to find the next technology that is likely to be in demand by our departments or the public we serve, or new technology that can solve problems that otherwise might obstruct or degrade service delivery. We don't want to be guilty of purchasing new equipment or software only to learn that these tools are not being used to their full potential. Our

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The town of Westford uses its GIS system as a backbone for its real-time damage assessment data. Town employees can view problems on their smartphones.

strategy is to purchase only the technology required to address the needs of our organization. For example, using mobile data devices such as tablets in the field is not an objective for us; data-enabled work crews, however, is a goal, and we will probably achieve that by using tablets.

At the top levels of our local government, we discussed what our town's needs were. We agreed that projects starting with a purely technical objective rather than a service objective rarely provide sufficient value to our residents. These projects typically offer high risk and low reward to users, and they jeopardize services without an offsetting benefit. The determining factor for technology, we decided, should be "appropriateness" above all else. And if our technology base is appropriate, then the only reason to change it is to increase its appropriateness, whether that means to increase performance, to ensure stability or to add functionality. In short, ours is a "service first" approach.

We determined that the town's technology-related needs include information security, data storage redundancy, engaging with social media, extending the reach of our GIS, and linking systems together to provide more interactive and integrated government services. In addition, we are continually looking for ways to simplify operations, reduce waste, and increase transparency—all critical to our functioning, especially in an increasingly Web-based world.

The Town Website

In January, Westford was honored with the Massachusetts Municipal Association's best website award in the population category of 15,000–49,999. When we learned of the award, we had already embarked on a program to "refresh" our site (www.westfordma.gov) and overhaul its navigation. While lively debates about graphic design occurred internally, we used Google Analytics to understand the way users interacted with our site. We compiled lists of most-frequently visited

pages, but also used the "in-page" analytics to relate the most popular items on the site to their location on our main pages. We used "visitor flow" diagrams to understand how visitors got to those pages. Based on all this information, we tried to put together a navigation/menu system that made sense. Our site uses the FirstClass system, which may not be leading the technology mainstream but is very well integrated into our organization. Since staff and board members use FirstClass for email and calendars, they are also comfortable using it to make updates to our website themselves. About 600 updates are made to the town website every month. (The schools maintain their own site.) The updates include a mixture of page renewals, notices or events, and new documents. Currency of information and timeliness of updates is not a function of technology alone but also of accessibility and engagement. Using a tool that town personnel are comfortable with certainly helps.

The new town website went live at the beginning of June and so far seems to have been well received. In both its old and new forms, a key feature of our site is the way it links into various other online systems that residents may be interested in.

Online Systems

The town offers a range of these online services. One of the most popular is a "parcel lookup" tool that allows users to search by address or map/lot and then provides links directly to GIS maps for the parcel as well as assessor data, documents in the town's document management system (DMS), and permits in the town's permit/licensing application.

Westford's IT staff developed online permitting software, which enables contractors and residents to fill out their building, Board of Health or Fire Department permit applications online, thereby avoiding a visit to town hall. The process allows the submittal of electronic copies of applications, plans and supporting materials, which are then available in our DMS. We were quite successful in marketing this software to other municipalities—the attorney general's office had never seen

a town doing this sort of thing—but after acquiring about thirteen communities, we determined that it was too great a drain on our own resources so we discontinued providing the service to other communities. We still use our software ourselves, however.

> # By providing online access to the information being deliberated, we are improving local government transparency as well as convenience.

Online bid registration has reduced work for town personnel and has been well received by vendors. Interested companies may register and download the entire bid and then will automatically receive notices of addenda.

Other services include online bill inquiry and payment, downloadable applications to register to vote or apply for absentee ballots, and a boards and committees database that allows residents to volunteer to fill vacancies.

Board Meeting Packets

In keeping with our theme of maximizing communication with residents and the general public, we developed a board meeting packet interface for our online DMS. All materials, with the exception of executive sessions, are uploaded to the DMS and tagged with information about the relevant committee and meeting date. Through a specially constructed Web page, a user may download all materials for a given meeting—a "virtual" packet.

This process eliminates the need to spend hours copying documents and compiling paper notebooks with agenda

materials for town boards. In addition, the public may review and download the same packet materials that board members receive. By providing online access to the information being deliberated, we are improving local government transparency as well as convenience. As an added benefit, we have saved valuable resources by eliminating the printing of masses of paper copies that are usually discarded after meetings. These same documents are now being saved electronically in our DMS for future reference.

Many offices—including the town manager, finance, school superintendent and others—use the same interface to load the packets onto iPads for their board members to use. This project meets the requirements of our boards and has created a streamlined, transparent, largely paperless meeting environment.

Geographic Information Systems

Westford has invested resources in GIS since 2000, and therefore we have a well-developed foundation of data covering our public infrastructure, utility networks, and land and environmental resources, as well as specialty data sets including precincts, zoning, economic development, and emergency planning and response information. We are able to conduct analyses and produce materials for presentations to improve both in-house and public understanding of decision-making.

We have used GIS to great effect in standalone applications such as our emergency mapping solution, which provides real-time damage assessment data to our Local Emergency Planning Committee during storms and emergencies. Through the arcgis.com website, we produce online maps that can be dynamically updated by authorized users either in the office or in the field. As incidents are added by our emergency responders, the updates appear immediately on our smartphones or tablets. Having rapid access to the latest information allows us to react appropriately and to direct utility companies to the most serious problems and track their performance.

Written Information Security Policy

Ensuring security for data in local government is a huge task, made more complicated by the fact that the data is distributed across so many different departments and organizations. Each of these entities has its own established procedures and habits, and they may not be aware of their responsibilities beyond the scope of their daily activities. This reality led us to embark upon a program to establish some basic security practices across the entire municipal operation. We created a Written Information Security Policy that was adopted by the Board of Selectmen and the School Committee.

Many sample WISPs on the Internet are essentially security procedure manuals that describe workplace habits and define procedures that must be followed. With an organization as diverse and complex as ours, and with so many different kinds of data being held, implementing such a plan would have been a huge undertaking. It would have required timely and definitive input from many people and would have required constant updating, which would necessitate ongoing approvals by town boards. Instead, we followed an approach that was used in the Princeton University WISP, which contains some definitions of terms, a description of the scope of responsibilities for staff at various levels, and a mechanism that will be used to create a catalog of sensitive information. In that catalog, which is available to all staff, each collection has handling guidelines associated with it. Individual department managers use these guidelines to establish appropriate departmental procedures. We set up an Information Security Team, comprising a number of department heads, which is tasked with completing and maintaining the catalog.

In an attempt to achieve consistency in the handling guidelines, we created an information security matrix, which links a notional security level to a set of guidelines for different areas. The guidelines cover issues such as how data should be stored, when and how it can be emailed or faxed, how paper copies should be disposed of, and who is permitted to see the data.
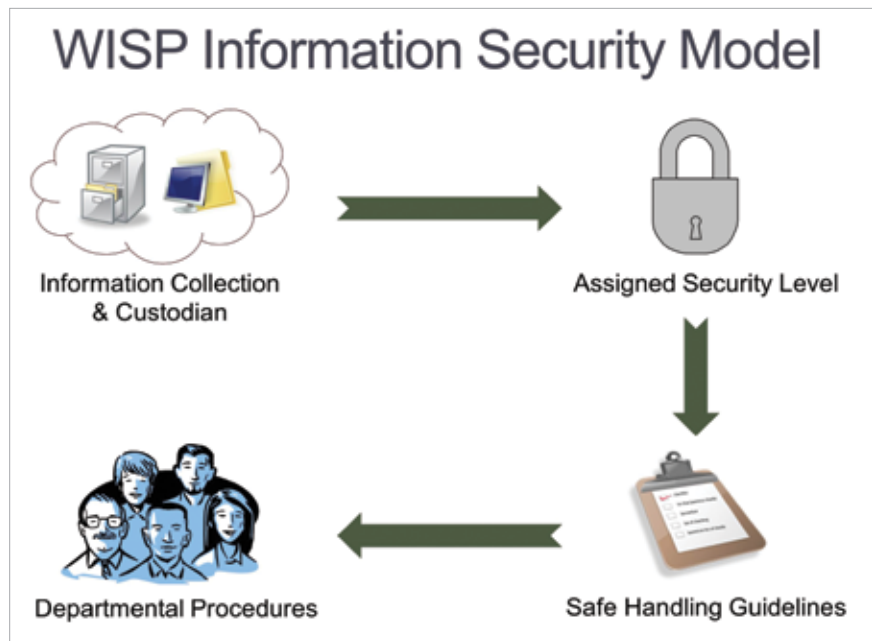
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The security levels we used run from 0 through 3:

0: "Public"—public record and readily available

1: "Managed"—public record available when requested

2: "Confidential"—personal or financial data, not to be made public

3: "Restricted"—medical data and criminal records (e.g., HIPAA, CORI, etc.)

The town's IT staff wrote an online application to compile the catalog, which implements the matrix to provide default answers for the handling guidelines. This same application may be used by staff to query the status of data in their departments and see the prescribed guidelines.

The work to populate the catalog has begun, and we have had many valuable discussions with department managers about the data they hold. In some cases, we have found liabilities that had not been recognized and procedures that were not appropriate for the sensitivity of the data.

Some department heads were anxious about embarking on this process, but we reassured them that this is not an audit of their procedures. We clarified that there are no new rules in the WISP. All rules that require us to manage data in particular ways are external to the municipality and already exist as state or federal laws. The WISP provides a mechanism to help us be organized about observing and complying with these laws.

We gave ourselves two years from the approval of the WISP by the Board of Selectmen and School Committee to come into compliance with it. Many departments were fearful that this would immediately unleash a tidal wave of paperwork and procedure writing on them. Setting a reasonable timeframe and limited scope has eased this apprehension. Our commitment is that by the end of 2014, the catalog will be complete and all staff will be in compliance.

Westford will continue to strive to successfully balance our residents' demands for efficiency and convenience with our mutual needs for security and privacy. We remain committed to thoughtfully producing high-quality, effective technology services so that we are ready to meet our town's growing needs. In doing this, our objective must always be to harness technology to produce real results and thereby to demonstrate that investing in technology is a fiscally responsible strategy for a forward-looking municipal government. ✦