

New Hampshire Housing Finance Authority

Remote automated inspections

Management Innovation: Technology

EXECUTIVE SUMMARY

2008 NCSHA Annual Awards for Program Excellence

THE CHALLENGE

With HUD mandated reductions on fees to cover costs of administering the Section 8 Housing Choice Voucher program, New Hampshire Housing was faced with the challenge of finding creative ways to further cut administrative time and costs associated with operating the program. One of the most inefficient aspects to administering the program was that of preparing for, performing and recording the results of the housing quality inspections of rental units across the state of New Hampshire.

Management believed the unit inspection process performed by New Hampshire Housing's staff was a prime target for technological innovation, with ample room for re-engineering to achieve significant cost and time savings. The manual inspection process involved preparing lists of units to inspect, gathering addresses and planning courses of travel while en route to perform a day of inspections. Paper inspection forms were filled out by hand on site. Upon their return to the main office, staff would manually enter the inspection results by hand from the paper forms filled out during the day into the New Hampshire Housing computer database, so that letters could then be generated to the corresponding landlords. On average, preparation would take one day, inspections a second, and data entry and letter generation a third day.

Since New Hampshire Housing's computer databases and applications systems are custom developed in-house by the Information Technology division, management approached IT in the spring of 2005 with a proposal to re-engineer the inspection process through technological innovation. IT staff was directed to seek out portable tablet computer and software solutions to complement internal systems technology, which would be used to integrate the external remote inspections process with internal back office systems and processes into a newly re-engineered process to simplify and integrate many of the tasks involved.

THE SOLUTION

After rigorous analysis and product evaluation against stringent criteria aligned with user needs, New Hampshire Housing's IT staff proposed a combination of commercial hardware and software that would support the custom development of an innovative inspection application. In less than one year, the new remote automated inspections process was developed and deployed. The new hardware and software tools and custom programming integrated much of the upfront planning and preparation with the actual performance and recording of the inspections. It ultimately allowed inspectors to perform the upfront planning and back-end recording of inspections in a more efficient manner.

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Staff no longer carry binders, clipboards and paper forms on remote inspections, and instead carry a lightweight durable portable tablet PC from Motion Computing. Instead of filling out paper inspection forms, New Hampshire Housing automated the HUD 52580 inspection form using the new portable PC applications development software tools from Jargon Software. Jargon is compatible with various database technologies, thus New Hampshire Housing was able to connect and synchronize the inspection information with their in-house database of assisted housing clients.

On the front end of the process, an automated electronic inspection form is prepared and filled out on the tablet PC by the click of a mouse, which automatically downloads much of the basic assisted housing client information from the internal database application. During the on-site remote inspection, room-by-room results are recorded directly into the previously prepared electronic form on the tablet PC from drop-down lists within the custom designed form, which are pre-filled with text describing common compliance conditions. Finally, at the end of the process, the inspection results are automatically recorded into the home office in-house database application, again with a simple click of the mouse.

New Hampshire Housing applied more unique innovation to the remote inspection process by developing a graphical mapping application that integrates the in-house assisted housing client's information database with Google's internet mapping utility. As units are selected from the database for inspections and the electronic inspection form is prepared, this mapping application plots the inspection sites on a map allowing staff to arrange the sites in the most direct and economical travel route.

WHY IS IT NOTEWORTHY?

In summary, staff now plan their inspections in an efficient and consistent manner. It's a point-and-click process on the tablet PC to fill out the inspection results on site, instead of the former manual process. Best of all, by placing the tablet PC in a docking cradle the inspection results are uploaded to the home office in minutes instead of hours. Typically, it now takes 1.5 days per week to prepare, perform and record inspections that previously required three days of a full-time staff member. New Hampshire Housing has *saved approximately 425 days* of data entry hours since implementing the process. Though an official report has not been completed, it is clear the immense amount of time saved has translated into monetary savings in salaries. In general, going virtual has saved in paper and office supplies, and the mapping application has created further savings in gas and mileage reimbursements. It has also increased job satisfaction and productivity.

One previously frustrated staff member reported that the newly engineered process is much simpler and faster, because it eliminates the need to deal with the intricacies of home office database applications, to fumble with paperwork, to perform cumbersome data entry and to carry out other manual aspects of the process.

HOW THE TECHNOLOGY IS REPLICABLE

Theoretically, this process could be implemented by any housing agency administering housing inspections. The tablet technology can be shared as is; however, the back-end system New Hampshire Housing developed that works with the technology is tailored to the organization's needs. Other housing authorities would need to adopt a system that is compatible with the tablets, which may be well worth the effort considering potential time and cost savings.

New Hampshire Housing is now investigating the possibility of expanding the tablet technology to its multi-family asset management inspection process.