

THE COMPUTERWORLD HONORS PROGRAM

CASE STUDY

LOCATION:
Austin, Texas, United States

YEAR:
2006

STATUS:
Laureate

CATEGORY:
*Government and Non-Profit
Organizations*

NOMINATING COMPANY:
Accenture

ORGANIZATION:

Texas Department of Family and Protective Services

PROJECT NAME:

Adult Protective Services

Summary

When reports surfaced of serious fundamental problems in Adult Protective Services (APS), the Texas agency charged with serving the state's elderly and disabled population, Governor Rick Perry issued an Executive Order demanding changes. He directed the Health and Human Services Commission (HHSC) to make substantial reforms in how reports of abuse, neglect or exploitation are investigated and addressed. A critical element of the reform: the nation's most sophisticated deployment of technology to allow caseworkers to remotely synchronize client data with their online State-Wide Automated Child Welfare Information System (SACWIS), access past reports and Department of Family and Protective Services (DFPS) resources, file reports and arrange for protective services--all remotely from a client's location.

A typical day in the life of an APS caseworker prior to the mobile implementation required caseworkers to come in to the office every morning, print out intake reports from their online system, look up and print driving directions using mapping software, then go to their client's homes and perform a risk assessment using paper and pen and write down conditions of the home or of the victims. Next they would return to the office with their hand-written notes and enter them into the online system from their office. Since the implementation of the new mobile capability, a day in the life of a case worker has changed significantly. Case worker can now download information to their new Tablet PC using the Mobile Protective Services (MPS) application from their home or office or any other location through a broadband wireless connection. They can review the intake case reports generated by the online system which are downloaded to their Tablet PCs. Caseworkers also have the capability to perform their risk assessment documentation in their client homes directly into the MPS off-line application. After they leave their clients' homes, from any location they can connect wirelessly through a broadband connection and upload their information to the online system. This removes the duplication of data entry and provides them the convenience of updating case data without having to return to the office. Additionally, caseworkers can email their supervisors while in the field with questions to assist them to properly assess their cases. Caseworkers can also use the mapping software loaded on their tablets to provide the flexibility of getting directions to their next client's home anytime from anywhere.



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Finally, caseworkers no longer need to try to describe the conditions in a home or of their clients as they are now equipped with digital cameras. They can take pictures of the conditions and make them part of the case record. These new capabilities provide caseworkers the flexibility to perform their jobs more effectively and efficiently. The technology solution has boosted the accuracy of client data, ensured real-time sharing of information among supervisory staff, and speeded the investigations of maltreatment and the delivery of services to elderly and disabled adults in need. Critically, it allows caseworkers more time to work with clients face-to-face and to increase the numbers of clients they help and protect. It is the first program of its type in the nation.

APS serves Texans who are elderly or have disabilities, a group that represents about a quarter of the state's population.

Introductory Overview

Within the Texas Department of Family and Protective Services (DFPS) are hundreds of Adult Protective Services (APS) caseworkers visiting elderly and disabled adults who are the victims of abuse, neglect and exploitation. Elderly or disabled Texans represent about a quarter of the state's population. In 2004 APS completed 60,998 investigations of which 44,034 were confirmed cases of maltreatment.

When the department receives a report of abuse, neglect or exploitation, caseworkers are required to initiate an investigation within 24 hours. Caseworkers complete a comprehensive assessment of the alleged victim's situation to identify and address root causes and provide or arrange for services to alleviate or prevent future maltreatment. Services are provided directly by caseworkers, through arrangements with other community resources, or purchased by APS on a short-term, emergency basis. Services provided include financial assistance for rent and utility restoration, social services, health services, guardianship and referrals to other community services. Caseworkers arrange for everything from delivered meals to in-home care to ongoing medical treatment to direct deposit of a client's social security check.

Caseworkers typically carry huge workloads and, as required by their jobs, file reports on their home visits to clients. Traditionally, caseworkers took notes in clients' homes, then upon returning to their office, manually typed reports into the online Statewide Automated Child Welfare System (SACWIS) application. This procedure was time consuming and cost ineffective. It limited the time caseworkers had available to spend with clients and the number of clients they could help. It also slowed down the sharing of client information with supervisors and others within the DFPS system--hampering the coordination of services and creating delays in treatment. Meanwhile, caseworkers had no way to access DFPS information and resources from the field. In order to provide resource information to a client, caseworkers had to return to their office and look up the information there.

As determined by a major statewide report, DFPS needed to leverage leading-edge technology to enable caseworkers to file their reports more quickly from clients' homes, to access resources and case documentation remotely, and to create a network for quickly sharing information within FPS. All of these improvements would help APS speed and better coordinate treatment, and allow caseworkers to provide help to more clients. The situation became all the more important as Texas experienced a rise in reports of adult abuse, neglect and exploitation.



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To achieve these goals DFPS developed Mobile Protective Services (MPS), an application running on a Tablet PC device that allows caseworkers to file reports on the spot, using handwriting and voice recognition as data entry tools. MPS is a mobile version and extension of the online Information Management Protecting Adults and Children of Texas (IMPACT) application, to which the data is synchronized.

A digital pen, which functions as a mouse, expedites the process of filling out forms. The information is electronically transported to a database and is immediately available to supervisors, who can act more quickly to serve the critical needs of clients. The application allows caseworkers to send e-mail, including digital images for supervisory consultation. By using HP digital cameras provided to each caseworker, connecting via USB cable to the Tablet PC, caseworkers transmitting a digital image of an injured adult could speed treatment. The solution also provides caseworkers with wireless access to their existing case data. Caseworkers can receive and view a new case referral while in the field and perform necessary background research remotely. Mapping capabilities reduce the time caseworkers spend searching for client locations.

MPS is the first of its kind, the only mobile solution that allows state caseworkers to upload and download data wirelessly in real-time.

Benefits

The ultimate beneficiaries of MPS are the neglected, abused and exploited adults in Texas. The innovative technology is enabling Adult Protective Services caseworkers to more quickly protect these clients and serve their critical needs. Because it is streamlining the process of filing reports and distributing information, it frees up caseworkers to increase the amount of time spent with clients and also increases the number of clients served. It also allows for the creation of more accurate client information and shared access.

When the Department of Family and Protective Services surveyed users of MPS, it was determined that:

- 52 percent spend more time in the field as a result of using the Tablet PC.
- 78 percent synchronized the data collected in the field with IMPACT at least once a day, showing that they were reducing duplicate documentation of case data.
- 85 percent found the mapping software very beneficial for getting directions while lost or in the field, preventing them from having to return to the office.
- 81 percent used the handwriting recognition, which allowed them to capture case information in real-time while in a client's home and may result in more accurate and complete case documentation.

This application is one of the first of its kind in state government, and its success provides positive proof to other states or agencies that the technology is mature and can be implemented today. Mobile applications are becoming more necessary and MPS is a testament that such systems can be implemented successfully and provide great benefits to other states, specifically for agencies where remote workforces exist. Examples beyond Adult Protective Services include: Child Protective Services, Investigations, and Tax Collection. The Child Protective Services program in Texas has adopted the idea and there are plans to implement the technology to all of its caseworkers (nearly 4000 total).



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The Importance of Technology

The solution was developed leveraging mobile technologies and a Java (J2EE) architecture. The solution includes:

The Tablet PC, is a lightweight (3.3 pounds) computer, smaller than a traditional laptop, with full Windows functionality and extended features such as voice and handwriting recognition, making it convenient for caseworkers to take notes or make comments. The Tablet PC is well suited for use as a mobile device in the field. Caseworkers can use it while standing up. There is no need to find a flat space to rest the Tablet PC, which is about the size of a legal pad. Also, users rely on a digital pen to interact directly with the PC's screen, without the need for mouse or keyboard. As a security measure, the device has biometric recognition using a finger print scanner.

The Mobile Protective Services Application is a web-based Java application that uses JBOSS and the Tablet PC serving web pages similar to those presented in IMPACT.

The web pages allow caseworkers to enter their information directly into the mobile application. The information is stored on a SQL Anywhere database located on the Tablet PC.

Synchronization between the Tablet PC database and the IMPACT application can occur over a wireless connection or the office network. Synchronization Architecture iAnywhere, which was selected following a thorough assessment of the options, provides the capability to synchronize data from the Tablet PC and IMPACT. The synchronization process moves the data from the Tablet PC to the IMPACT database, and then refreshes case information residing on the Tablet PC. The data is encrypted on the Tablet PC device as it is transported to the IMPACT database.

HP digital cameras were provided to caseworkers, who now routinely transmit digital images to their supervisors via USB cables and Tablet PC. The images are used to help quickly determine the criticality of clients' needs.

Microsoft Streets & Trips mapping software was installed in the application to enable users to quickly and remotely obtain directions to clients' homes. The software also calculates mileage, which caseworkers must report to be reimbursed for transportation expenses.

A new risk assessment tool known as CARE - Client Assessment and Risk Evaluation was pre-loaded on the Tablet PCs. It serves as a checklist to help caseworkers ensure complete information about each client is gathered in the field.

Now caseworkers can complete a CARE Risk Assessment in the field, record contacts, and view the Intake Report that started the investigation. They can search for resource providers/services while in the field. They have access to updated policy to help them make the right decisions when working with a client.

Originality

The Texas Department of Family and Protective Services is unaware of any other state department or agency anywhere in the United States with a mobile solution at the level of MPS. While various state entities provide cell phones, personal digital assistants or Tablet PCs to caseworkers or other field employees, none has created a mobile application that allows caseworkers to operate remotely at this level.



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While other state operations provide the capabilities for static information to be downloaded, and some allow for information to be uploaded or downloaded in a batch process or nightly routine, the Texas Department of Family and Protective Services MPS application is the only one providing for real-time wireless uploads and downloads wherever the caseworker happens to be located. Also, because the MPS application was created to resemble its online version, IMPACT, there was minimal need to retrain users in the new mobile application.

Success

The project has helped many caseworkers perform their jobs more efficiently allowing them to provide better services to adults who may be at risk of abuse or neglect. Below are quotes from a recent survey to caseworkers on the new MPS solution:

“I am satisfied with the Tablet PC in every function that it has to offer. It is compact and has all the tools you need to conduct your work effectively”

“I am most satisfied with the mobility of being able to do my work where ever I am.”

“I am most satisfied with being able to access my caseload at anytime from anywhere. I like the fact that I can work from home, too.”

“I love the fact that when I am in the field and get assigned a new intake, I can locate in on Impact and not have to return to the office to read it.”

“I like the fact that you can check out the cases and work on them out of the office.”

“The whole system is an exceptional tool.”

“I like the mobility of the tablet. I like the fact I can access my work load and new cases while in the field.”

“The ability to enter documentation while conducting an interview and doing a monthly status contact. Also the ability to be mobile.”

“Access to workload and important work related information and tools in the field. I don't have to call someone in an office for client phone numbers, other info...Ability to send info & photos so easily.”

“I find it is useful when you are out in the field and get assigned a new intake, you can look at that intake where you are at instead of having to wait to come back to the office. Especially in imminent situations, you can tend to them quicker and have the information you need. I also like the fact that when you are on-call, you can look up the intake while at home instead of having to go to the office...”

“It is portable and user friendly. Saves time on office documentation.”

“I am most satisfied with being able to have immediate access to everything that I need in order to help my clients. Right now it's to the point that the only reason you have to be in your office is to answer the phone and use the fax machine.”

“The tablet provides a great mapping system which has made case planning more effective. During out of town investigations, when waiting time between interviews is long, it's helpful to be able to document at that time.”



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“Mobility to carry into the field, helps with timely documentation.”

Our targeted audience embraced the new technology at different rates. We expected that younger case workers would quickly take advantage of the new solution, while elder caseworkers would require more time to adjust to the change. Depending on the individual, some caseworkers adjusted to the change immediately, while others took a few months to fully understand how to best use the new technology.

As a testament to the application’s success with the state’s 430 APS caseworkers, it now will be expanded to include all of Texas’s Child Protective Services caseworkers, as well. The application was rolled out to those 430 APS caseworkers in October 2005. By the end of 2006, MPS will be used by approximately 4000 DFPS caseworkers.

Difficulty

Mobile Protective Services was one component of the mandated reform of the APS program. To properly implement the new reform it needed to be integrated with new policy, new risk assessment tools and new technology, all of which had to be in place within six months.

As this was one of the first--if not the first--technology implementation of its kind in a state agency, there were many technical and human change challenges to overcome. The technical challenges were addressed through an assessment of different solutions and determining the cost benefits of each solution. The selected solution provided the ability to highly leverage the existing online application code and its graphical user interface. These two factors provided the best solution to both application developer to maintain the code and the caseworkers. Application developers only have to maintain one baseline code base while caseworkers have a look and feel identical to that of the online system.

There were other challenges in the deployment of the solution. The staff required to support the challenge of deploying the new application to users who were unfamiliar with Tablet PC technology was underestimated. This required an increase in the number of employees providing technology support in the days immediately following the application’s introduction. Meanwhile, even though the MPS application was built based on the existing IMPACT application, it effectively changed the day-to-day work process for caseworkers, who now typically spend their entire day in the field. Caseworkers needed to be trained to work in a new daily routine--and to use the new application effectively in that context. To address this challenge, post-implementation initiatives were put in place to continue to support how the caseworkers manage the new way of doing their jobs.

Additionally, order fulfillment of the Tablet PC devices was a challenge as new supply chain vendors were put in place to support the Tablet PC deployment. That challenge was made all the more difficult because it needed to be completed by the end of the fiscal year so state and federal funding could be leveraged before they expired.

Finally there were many technical challenges of synchronizing a complex Statewide Automated Child Welfare Information System (SACWIS) application with hundreds of mobile devices containing application data on each device. For instance, as data is downloaded onto a caseworker’s Tablet PC device, the data cannot be modified on the online system until the caseworker “checks in” the data. Data integrity between the Tablet PC and the online system was essential. Another technical challenge was properly securing the data while on the device and while it is



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synchronized with the online system. Security of the data while on the device was important as it contained highly confidential information. The transport of the data to the backend online system was also critical. All of these technical challenges were successfully addressed during this implementation.

APS was a legislative mandate.