

Successfully introducing new technology into a workplace requires extensive planning, coordination, and buy-in. Added complexity comes from the presence of multiple organizations developing policy and providing technical services. The result is a myriad of interdependent factors ultimately affecting the overall results. Such is the case with this pilot test.

The large number of participants involved in coordinating and implementing mobile technology in child protective service work make it very difficult to pinpoint any **one** factor or even **one** entity that shapes the entire laptop experience. Thus, the major results of the assessment, in terms of mobility, productivity, and user satisfaction, cannot be attributed to any single cause, but are the result of a mixture of user, organizational, technology, policy, and managerial factors.

This combination of factors is represented in Figure 3, which shows the complexity of the CPS environment and the influencing factors on the overall caseworker laptop experience.

Figure 3 – Influencing Entities and Factors on the Overall Laptop Experience

Technology

Technology factors strongly influence the laptop experience. In this pilot project, the delivery of the technology experience is distributed across four organizations: ACS MIS, DOITT, Verizon Wireless, and OCFS. ACS MIS is responsible for delivering the overall technology service but does not control all the necessary pieces. This can be shown in the network path that was set forth for caseworkers to connect from the laptops to the CONNECTIONS application. NYC DOITT requires that all external access to city agency systems come through DOITT servers. As shown in Figure 2, caseworkers logon first to the laptop, then DOITT's server, then to ACS' Terminal Server, and then to the CONNECTIONS Citrix servers. To gain access to local ACS applications, which caseworkers also need, the path must channel through ACS servers. But this path of getting to the CONNECTIONS application negatively impacts performance by requiring an additional logon and using a Citrix session thus slowing overall system response.

While in the field, connectivity is a very large contributor to the overall experience. Access to wireless networks is critical to mobility when out in the field or working from home. Wireless signal strength varies from place to place, affecting performance. The NYS Office of Court Administration (OCA) also influences connectivity in the City's courts. Since caseworkers spend a considerable amount of time waiting for court appearances, court connectivity is important. Applications and network technology are also influenced by the NY State agency with overall responsibility for CPS work: OCFS. OCFS in turn must follow technical and security guidelines set by two other NY state agencies: the Office for Technology (OFT) and Office of Cyber Security and Critical Infrastructure Coordination (CSCIC).

To add to the complexity, within ACS MIS, there are separate divisions for technology procurement, support, deployment training, and infrastructure maintenance. ACS MIS drew on these resources for developing the deployment handbook and providing technical support for mobile caseworkers. ACS MIS also relies on other departments for maintenance of servers that affect laptop performance.

Finally, device and accessory characteristics play an important role in the experience. Devices that are light, yet durable, with a long battery life usually improve the experience. Smaller laptops that fit in work bags may be used more. Not every caseworker will like all the characteristics of the laptops, but the number positive features increases the quality of the overall experience.

Policy and Management

Policy and management influences on the laptop experience were also important, and involve similar complexity. Figure 3 shows how ACS DCP must develop and carry out policies that originate in or are shaped by several organizations: NY State OCFS, NY City Department of Citywide Administrative Services (DCAS), and the contract and relationships with Social Services Employee Union Local 371 (SSEU).

Three policy areas that are most pressing on the laptop experience:

1. Working at Home Policy. The NYC DCAS maintains a strict no-working from home policy for all NYC employees. This policy is for both regular work hours and after-hours work, meaning no NYC employee can work from home at any time. This policy restricts the full potential of using the laptop for CPS work. Working from home

on the laptop during regular work hours could potentially alleviate having to travel to the office before making field visits, cutting down on commute time and time between field visits. After regular work hours, it allows caseworkers to catch up on documentation in the evening or weekends. Although ACS may want to encourage caseworkers to work from home, they cannot because they do not oversee the prevailing policies.

2. Field/Office Scheduling. ACS DCP currently has policies that prescribe the days the caseworker is in the field and the days they are in the office. This work model was developed so that caseworkers can leave the office for family visits and court appointments and return to the office for supervision and documentation. The laptop offers a new model for how caseworkers and supervisors can interact. While in the field, caseworkers currently communicate with the office primarily by cell phone. The laptop offers new possibilities of receiving case information in the field and communicating via email. In order to experience the laptop's full potential, management and supervisory practices may need to change so that office time and field time is not prescribed.

3. Overtime and Compensatory Time. The policies for overtime and compensatory time present a couple of concerns including the daily cap for overtime and the inconsistent implementation of approvals. Since there is a cap on time, caseworkers are sometimes faced with the fact they will not get compensated for the amount of work they have done using the laptop. In some cases establishing a connection, maintaining a connection and completing the work takes longer than the time they are allowed for overtime. Subsequently, they risk not getting paid for the full amount of time they worked which can impact the overall laptop experience. Additionally, field offices do not uniformly implement the policy. Some offices require preapproval and others do not, and the inconsistency leads to confusion about using the laptop after work hours.

Finally, other policy and management factors shaped how the laptops were used in the pilot: existing caseload, consistency in management practices across field offices, and training. Overtime and compensatory time policies for work completed in the field or at home were particularly important. Although ACS may develop much of its own policies and management practices, it is still subject to NYSOCFS policies and oversight by NYC's DCAS.

Individual

Caseworkers bring a range of attitudes and skills toward technology and change to laptop use. How to get information into a digital format can be the caseworker's personal work style choice. Many caseworkers prefer typing notes into a word processing document, while others may prefer hand writing all their notes first. Some caseworkers may prefer dictating to writing or typing, or using software to convert spoken language into digital text. These preferences and general attitudes towards technology can be significant in determining the laptop experience. Some people are naturally curious and willing to try new tools, while others resist change.

Personal circumstances and home life also play a role in shaping laptop use. Factors such as where the caseworker lives and modes of available transportation affect the laptop experience. Caseworkers who use public transportation to commute may find opportunities to work then, while caseworkers who drive will miss those opportunities. In addition, caseworkers who live farther away from cell service may experience a harder time staying connected.

Nature of Casework

One of the most direct influence on the laptop experience is the nature of casework itself. Within this profession, there are a host of responsibilities and competing priorities. While it is necessary to investigate child protective cases by being physically present with the family, it is just as important to document all findings in CONNECTIONS. This creates a tension between spending time working with families versus documenting. Caseworkers must also devote time to court appearances, follow ups, and removals. Introducing a tool that changes where work can be done, can impact the overall experience.
