

Improving Customer Service in Health and Human Services Through Technology



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Over the past decade, most state and local agencies that administer programs supporting low-income families — such as Medicaid, the Supplemental Nutrition Assistance Program (SNAP, formerly food stamps), and Temporary Assistance for Needy Families (TANF) — have taken steps to streamline eligibility determinations. Spurred by new requirements and funding connected with the Affordable Care Act, states have deployed new eligibility and enrollment systems, online applications, and electronic case files. These modernizations have, in most cases, simplified processes for families and improved accuracy and efficiency.

As agencies continue the modernization process, this paper looks at the next phase in efforts to improve government's interactions with those it serves through technology. Improved client-facing processes — systems that applicants and recipients use directly for actions like applying, submitting documents, or getting information about their case — allow clients to better obtain information and receive benefits more quickly. They also can help agencies get the information they need to conduct eligibility determinations and improve performance and outcomes.

The first section of this paper, **Technology in Action**, outlines common challenges agencies face while administering these benefits and gives examples of how the technologies profiled in this paper can streamline processes. The technologies discussed here are not theoretical; rather, they are applicable to real-world issues clients and agencies face each day.

The second section, **Best Practices by Technology**, provides a brief overview of each technology, how it can be used in the public benefits arena, and best practices for implementing it. It covers:

- Web-based tools – including advances in online web portals and electronic notices;
- Mobile-based technology – including texting, mobile apps, and instant messaging; and
- Call center tools – including interactive voice response and telephonic signatures.

The next section, **Considerations When Implementing Technology**, discusses the importance of user-centered design, explains why technology is just one piece of the puzzle and must be considered in conjunction with policy and operations, and outlines the role of advocates.

The final section discusses what is **On the Horizon in** this field and developing technology that may eventually play a role in public benefits administration.

For technology to be effective, it must focus on the user — both clients seeking critical benefits to support their families and eligibility workers handling overwhelming caseloads with inadequate resources. Technology must also be considered as part of the broader eligibility and enrollment process, in conjunction with policies and operations. Technology alone isn't the solution to the

challenges outlined in this report, but can be a critical part of a solution when combined with changes to other parts of the process.

Further, technology like online portals, texting, and electronic notices must be an addition, not a replacement. Health and human services programs serve a wide variety of clients with varying levels of Internet access, computer literacy, and comfort with technology. These tools can provide convenient and efficient ways for some clients to conduct business, but more traditional access points like phone and in-person assistance should remain available for those who need them.

This work isn't easy. It often requires wrestling with funding, staffing, procurements, vendors, and a wide variety of state and federal rules about what can and can't be done. But the solutions profiled in this paper can significantly enhance the experience of clients and staff. Many of these technologies are commonly used across various other industries; users in government should also have access to these ways of conducting business.

Information and examples in this paper are based on the latest research and interviews with a wide range of local and state agencies that have implemented new client-facing technology. This paper provides practical, hands-on advice to make client interactions more understandable, workable, and successful for all stakeholders. Government agencies and advocates can use this paper to learn about implementing client-facing technology to improve the application, renewal, and case management processes for Medicaid, SNAP, TANF, and other human service programs. Local and state agencies may be able to use these innovations to improve customer service, increase participation, and achieve administrative efficiencies.

Part 2 Technology in Action

Agencies face a myriad of challenges in assisting clients in the eligibility and enrollment process. No one technology product can fix all problems, but once the underlying problems are identified, agencies can use a combination of the technologies discussed in the following sections to address common obstacles and improve customer service, as the examples below show.

Problem #1: An agency has a low completion rate for SNAP interviews at initial application and renewal. Clients are missing their interview appointments, leading to calls to reschedule missed interviews, denials and cancellations, and re-applications.

Underlying Issues:

- Clients don't receive timely notice of the scheduled interview.
- Clients are unable to complete the interview at the scheduled time due to transportation issues and work or school schedules.
- Clients are unable to reach agency staff to reschedule their appointment.

Potential Technology Solutions:

- Accept *telephonic signatures* for applications and renewals completed over the phone. Conduct the interview in conjunction with the application or renewal or allow clients to call in to complete the interview.
- Allow clients to use a *mobile app* or *online portal* to select an interview time that works with their schedule.
- Send clients an *e-notice* with interview appointment information.
- *Text* clients a reminder before the scheduled interview.

Problem #2: An agency has long application processing times because clients don't provide required verification documents with the application and must send them through the mail. Frequently, the documents are never submitted or are lost and applications are denied.

Underlying Issues:

- Clients don't know what documents are required.
- Clients can't electronically submit documents, or must have access to a scanner to do so.
- The agency loses documents that are mailed in or has a backlog in processing mailed documents.

Potential Technology Solutions:

- Send clients an *e-notice* to inform them of what documents are required.
- *Text* clients a reminder that documents are due.
- Allow clients to submit documents through an *online portal*.
- Allow clients to take a picture of documents with their phone and upload it to their case file through an *online portal* or *mobile app*.

Problem #3: An agency has a low rate of completion at renewal. Clients fail to complete the renewal form properly or fail to submit the form and their benefits are terminated. They must reapply to reinstate their benefits.

Underlying Issues:

- Clients are unaware their renewal form is due.
- Clients don't receive the paper renewal form.
- Clients don't provide information on the renewal form they had previously provided the agency and don't realize they are sending in an incomplete form.
- The agency frequently loses paper renewal forms or has a backlog in processing mailed documents.

Potential Technology Solutions:

- Send clients an *e-notice* notifying them that their renewal is due and listing the steps they must take to renew their benefits.
- *Text* clients a reminder that their renewal is due and provide links to the *online portal* and a phone number to call to complete the renewal.
- Use a *telephonic signature* to accept renewals by phone.
- Allow clients to complete their renewal and submit it electronically through the *online portal* or *mobile app*.
- *Pre-fill* client information that the agency has on file on the paper renewal form and through the online renewal application.
- Send a reminder *text* if the renewal hasn't been completed by the due date.

Problem #4: An agency's call center volume is high, leading to long wait times, dropped calls, and customer complaints. Clients frequently must go to offices in person to ask questions and address basic issues, leaving less time for staff to process cases. This further increases call volume as clients call in to find the status of their cases.

Underlying Issues:

- The only way for clients to get information is to talk to someone in the call center.
- The increased volume of callers requires the agency to adjust staffing, which affects other work.
- Wait times are increasing due to the volume of callers and types of questions asked.

Potential Technology Solutions:

- Provide an *instant messaging (IM)* tool for simple questions.
- Use an online *chatbot* that can help answer frequently asked questions.
- Notify callers of expected wait times and offer a callback through the *IVR phone system*.
- Expand functionality of the *online portal* so clients can report changes and check benefit status themselves, freeing up eligibility workers to process cases.

Part 3 Best Practices by Technology

This section summarizes specific types of technology that agencies are using to help clients receive and provide information during the application and renewal processes. Each profile includes details on how the technology generally functions, key features, and considerations to keep in mind based on interviews with agency staff who have implemented the technology.

In the profiles that follow, certain features, functions, or technology may be referred to as Version 1.0 or Version 2.0. For purposes of this guide, Version 1.0 includes client-facing technologies that were commonly used prior to and during implementation of the Affordable Care Act in 2013-2014, such as online applications. Version 2.0 includes newer technologies as well as enhancements to prior technologies.

Checklist of Basic Technology Functions

Individuals use technology for an increasing number of functions and expect it to work in certain ways. Consider how you use technology to shop, send e-mails, text, use social media, or check your bank account balance. Keep these user expectations and industry standards in mind when designing new client-facing technology.

- Don't make clients reset their password every month.
- Any online service should work on all available browsers — Chrome, Firefox, Safari, and Internet Explorer.
- After an action is completed (e.g., document uploaded), provide the client with a confirmation on screen and/or by e-mail.
- Collect email addresses and mobile phone numbers for texting as part of the normal demographic and contact information process rather than asking for that information separately.
- Set appropriate client expectations about new features or tools. Framing a tool as in “beta” (still being tested) and thanking clients for their patience will help until the tool is fully functional.
- Make it easy for a user to find the agency's contact information. Use commonly used icons — such as a picture of a phone to call the agency — to provide visual clues. Create an online form for users to submit questions or comments.
- Allow your solution to use the native (built-in) features of a computer, tablet, or phone, such as using its calendar feature to schedule an appointment or using its camera to upload a document or picture.
- Use navigation signals and progress bars to move through multiple screens.

Section A: Web-Based Tools

Online Portals 2.0

Online portals allow clients to create an account and apply for benefits or perform other case maintenance functions. Most agency websites include an online portal that allows clients to apply for benefits. Many agencies have expanded the services offered through the online portal to provide additional functionality, including a way to report changes, complete and submit a renewal form, or track the status of an application after submission. Investing in a more user-friendly and robust web portal can improve customer service.

Below is a summary of the functions, features, and technical capabilities of the next generation of online portals as compared to the first generation.

Original Functionality		Today's Functionality
Clients may be able to download a blank change report form and submit in person, by mail, or by fax.	Change Reporting	Clients can electronically report changes through the online portal.
Clients may be able to download a blank renewal form and submit in person, by mail, or by fax.	Renewal	Clients can access a pre-populated renewal form that they can electronically sign and submit through the online portal.
Clients must wait for a mailed notice or must call or visit the agency in person to find out their case status.	Case Status	Clients can view case status and updates 24/7 via the online account.
Agency mails paper notices.	Notices	Agency uploads electronic notices to clients' online account and sends clients an email when a new notice is available.
Clients have limited ability to directly upload verification documents with an application or must submit in person, by mail, or by fax.	Documentation	Clients can upload verification documents in a range of file formats from a computer, cloud, or mobile device through the online portal.
Portal can only send application data to the eligibility system.	Back-End Interface	Portal can display case information (e.g., benefit amount) and interface with multiple systems (e.g., can display EBT account balances and transaction data).
Portal's layout, graphics, and font are designed only for viewing from a desktop computer.	Design and Display	Portal's display and features can adapt to multiple devices and screen sizes.
Portal can't work with native features on clients' devices.	Additional Tools and Features	Portal can work with native features on clients' devices, such as calendar and auto-dial.

Key Features of an Online Portal

Today, online portals can do more than simply allow clients to apply for benefits or find basic information. Below is a list of features that could be included in a social services agency's online portal or mobile app. The most commonly asked questions from clients could help identify which of these features would be most useful to clients and best reduce demand on agency staff.

All programs

- Multi-benefit application
- Case status, including upcoming deadlines
- Report changes
- Upload/Manage/View documents
- Renew benefits
- Secure messages
- Preferences to opt in to alerts
- Contact agency
- Office locator and phone numbers
- Schedule or view scheduled appointments
- Frequently asked questions (FAQs)
- Register to vote
- Screening/referrals for other benefits (school lunch, child care, WIC, etc.)

Medicaid Specific

- Display Medicaid card
- Healthcare provider directory
- Select/Change health plan
- List of covered benefits

SNAP Specific

- EBT SNAP balance
- Transaction history
- Retail store locator and map
- Farmers' market locator

Other Programs

- TANF cash balance
- Free ATM locator (TANF)
- Summer meals site finder

Don't forget:

- Agencies can accept electronic signatures for applications, renewals, and other forms.
- Online applications or renewal forms should use dynamic questioning or skip logic to eliminate unnecessary or irrelevant questions (for example, they should only ask applicants who indicate they are female if they are pregnant).

Electronic Notices

Electronic notices (e-notices) are notices of case actions and other notices that are uploaded to a client's online account. E-notices allow clients to quickly access important notices online even if they have difficulty accessing a secure mailbox, move frequently, or are homeless. E-notices also benefit states by increasing the likelihood that clients receive and act on notices to submit documents or complete a renewal. In addition, clients who receive timely information are less likely to call to inquire about case status. While sending both the paper notice and e-notices increases the likelihood of the information reaching clients, agencies may offer individuals the opportunity to “Go green” and receive only e-notices, reducing postage costs.

How it works: Clients who opt in to receive e-notices will receive an email notifying them that they have a new notice. They then must log in to their online account and view their notice.

Requirements: E-notices must be uploaded to clients' online account on the agency's web portal to ensure security and protect privacy. Clients then receive an email notifying them that a new notice is available to view in their online account. E-notices can't be sent directly to clients' email accounts. E-notices are mandatory for Medicaid and are now a state option for SNAP (a waiver was previously required).

Advice from the Ground

- Require clients to create an online account before opting in to e-notices. This will ensure that clients can view the e-notices.
- Ask clients to affirmatively opt in for e-notices. Clients may provide an e-mail address on the application for purposes of their contact information but may not want to receive e-notices.
- Clearly explain to clients what will happen if they opt in for e-notices. Inform them how they will be able to view their notices and if they will continue to get notices by mail.
- Ask clients to confirm, when they opt in for electronic communications, the e-mail address to which they want notices to be sent.
- Explain what other software/hardware may be needed to view e-notices (e.g., Acrobat Reader).
- Allow for opt out at any time and make it easy for clients to do so. For example, allow clients to change communication preferences via their online account.
- Resume mailing notices if electronic communication fails (e.g., undeliverable email address).
- Measure effectiveness by evaluating the percentage of e-notices that clients access via the online portal and the time between receiving an e-mail and accessing the notice.
- Resume mailing notices if clients don't open their e-notices after a set period of time.
- Ensure eligibility workers can see whether clients have opened their e-notices. If clients aren't accessing their e-notices, eligibility workers can remind clients how to access e-notices and how to opt out if they want to receive paper notices.
- Consider adding information to e-notices that paper notices can't provide, like hyperlinks to sites where clients can obtain further information or complete an action.

Readability and Accessibility Still Matter!

To make client-facing technology user-friendly, make the information provided to clients easy to understand and accessible. The literacy and readability standards with which agencies must comply for written and verbal client communications also apply to electronic communications — such as content on online portals or electronic notices. For example:

- Aim for a 6th grade reading level in written content.
- Use commonly used words in place of terms of art, acronyms, or legal language.
- Use less text and more white space.
- Break down complex instructions or processes into steps rather than presenting a long paragraph of text.
- Use simple graphics or icons with only a few different colors.

Client communication using technology must also comply with existing legal requirements to ensure information is accessible. For example, government agencies must ensure their website designs and features are ADA-compliant, such as compatibility with a screen reader for clients who are visually impaired.

Digital content should also be translated into commonly used languages for clients who are Limited English Proficient (LEP). For example, text messages should be sent in the client's preferred language as identified on the application.

Remember to seek user feedback specifically from persons with disabilities and LEP clients to help design, test, and improve the solution.

Section B: Mobile Tools

Text Messaging

Text messaging is a low-cost and effective means of communicating with clients by sending reminders and other information to a client's mobile phone. Text messaging has become the preferred way to communicate – especially for younger adults. While it's convenient for clients to receive messages via text, texting is a personal activity individuals primarily use to communicate with friends and family and shouldn't be overused.

How it works: Agencies may use a contracted service or capabilities within their own systems to send clients text messages at key points during their application or renewal process. Agencies might send a text message reminding clients that their interview date is approaching, that verification documents are due, or that it is time to complete a renewal.



Advice from the Ground

- Comply with opt-in requirements for text messaging.
- To avoid suspicion or being viewed as spam, the first text message an agency sends to a client should include the agency's name. It should also explain how the client can opt out of receiving any further messages.
- Make text messages concise. Messages exceeding 140 characters become more than one text.
- Use plain text instead of rich text or HTML text so clients without smartphones or those with limited data plans can receive texts.
- Where possible, include a telephone number or website for next steps when action is needed.
- Don't use text messaging to send information that isn't time-sensitive or doesn't require action.
- Be prepared to respond to any reply texts. If no staff are assigned to monitor and respond to text messages, reply texts should generate a standard, automatic response referring the client to a customer service number.
- Evaluate privacy and security considerations if collecting clients' personal information via two-way text messaging.

Opt-In Strategies

Clients must opt in, or affirmatively agree to receive electronic communications, before an agency can send electronic communications, but agencies can make it easier for them to do so. For example, the agency could ask individuals to provide their e-mail address or cell number in the first section of an application or renewal process – along with their name and other contact information – rather than in a separate section for electronic communications at the end of the form. A check box would enable them to opt in.

Email: xxxxxxx@xxx.com *I would like to receive information and notices at this email*
Cell number: XXX-XXX-XXXX *OK to receive text messages? (costs may apply)*

Additional tips to remember:

- Provide multiple opportunities to opt in (not just on the application).
- Create an electronic communications policy outlining when the agency will use electronic communications, specifying that clients must affirmatively opt in, and describing the opt-out process. It may also be helpful to explain the benefits to clients (e.g., “to get reminders so you won’t lose your benefits”).
- At the time clients opt in, explain the opt-out process for receiving electronic communications. For example, inform clients in the initial text message that they can opt out through their online account or by replying with a text saying “Stop.”
- Incorporate into existing language of clients’ rights and responsibilities short explanations of the electronics communication policy, how to opt out, and when to expect the first message (e.g., before or after the application has been processed).

Incorporating the “Nudge”

Behavioral economics studies the psychology of individuals to help identify how best to influence, persuade, or encourage individuals to act. When implementing client-facing technology, agencies can benefit from this growing research and design the product to help “nudge” clients to act on a request or to take action. Health and human service agencies can apply behavioral economics by:

- Encouraging action by reminding clients of what they might lose if they don’t act rather than just providing a due date. For example, a SNAP renewal form could include the actual benefit amount the client will lose if they fail to renew.
- Sending notices requiring action with sufficient time for clients to act. Send reminders/notices about completing a renewal before benefits are about to end. Clients may be overwhelmed and mentally unable to prioritize submitting paperwork at the deadline.

For more information, see the Resources page.

Adapting for Mobile Devices

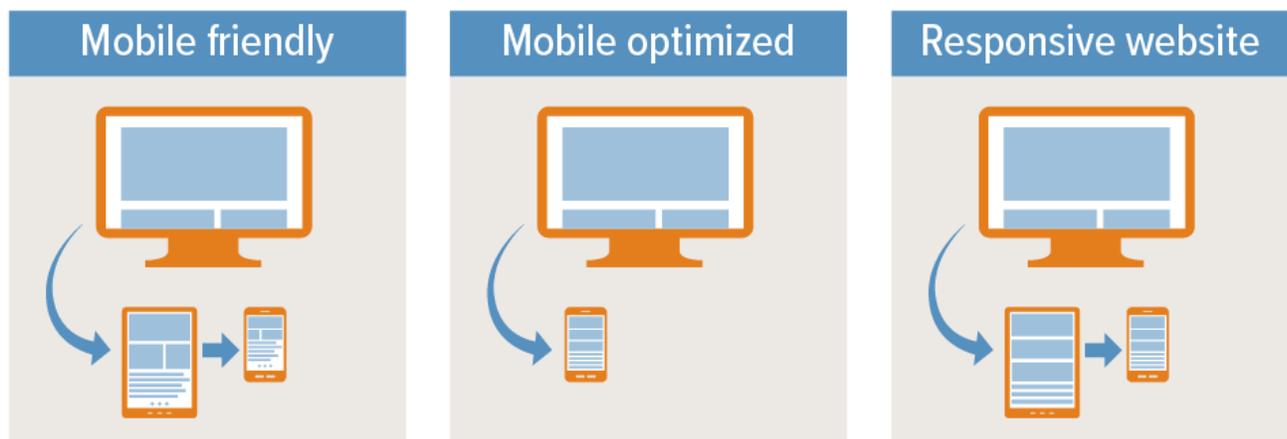
Agency websites can be adapted to make them function well on mobile devices while taking advantage of native features and Application Programming Interfaces (APIs). The next generation of websites must consider the growing number of electronic devices that individuals use to access the Internet. A website display and functionality must be flexible enough to adapt to many different devices – from netbooks to tablets with different screen sizes to a huge variety of smartphones. In addition, agencies can enhance the effectiveness of their systems by using native features of mobile devices and taking advantage of APIs.

Adapt Content and Design

Websites can be designed to be “mobile-friendly,” or easily viewable on the smaller screen common on mobile devices. Agencies must make an affirmative design decision to ensure their online portals are mobile friendly; it is not an automatic feature when creating a website.

A mobile app cannot substitute for a mobile-friendly website; not everyone will download an agency’s mobile app, but many will attempt to view the agency’s online portal using their mobile device. By making the existing web portal mobile friendly, an agency can lay the groundwork for developing a mobile app in the future.

As the use of mobile devices has proliferated, website developers have adopted multiple design approaches to adapting content and design to smaller screens. Three different approaches that agencies could consider adopting for their online portals are discussed below:



	Mobile Friendly	Mobile Optimized	Responsive Website
Description	Single design that considers size of screen for mobile devices. Baseline for mobile website development.	Two separate designs created — one for desktop and one for mobile devices (e.g., www.agency.gov and www.m.agency.gov).	Single design whose layout, content, and orientation can change based on the type of screen or device.
Design Process	Website layout design includes minor adjustments to enable viewing on a mobile device.	<ul style="list-style-type: none"> • Each design is influenced by the features and likely use of the website from different devices. • Mobile website design layout feels similar to a mobile app and includes icons to help navigate (e.g., menu icon vs. text indicating “menu”). Frequently used links and features are prominently displayed on home page. • Content on the desktop version is more robust than the mobile version. Mobile version provides a link to desktop version to access additional content or features. 	<ul style="list-style-type: none"> • Only one design is needed because the layout and content adapt to the size of the mobile device. • All the website information is available via mobile devices. • Links and icons are scaled to be more touch screen and finger friendly.
Cost	Lowest-cost option.	<ul style="list-style-type: none"> • Moderate upfront costs to build the additional website. • Maintenance costs are higher because content and any changes must be updated twice. 	<ul style="list-style-type: none"> • Highest upfront costs to design and develop. • Minimal maintenance costs because only one design needs to be changed or updated.
Limitations	<ul style="list-style-type: none"> • Design meets minimum usability standards. • Content and features may not be easily viewable or usable on mobile devices due to the need to scroll and zoom. • Links and icons are intended for a computer mouse and not easily selected via touch screen. 	<ul style="list-style-type: none"> • User may still need to visit the desktop site to find information or conduct activities. • Requires design and maintenance of two different websites. • Mobile version may still not be as user-friendly to clients as needed. 	Certain content, such as tables and lists, may still require scrolling and zooming to view.

Take Advantage of Native Features

Agencies should ensure the client-facing technology solution can use the built-in capabilities of a mobile device, or its native features. This capability must be affirmatively set out in the design phase.

Below are native features that could help make an agency's technology solution client friendly:

Native Feature	How to Use
Phone Click to Dial	Client can click on the number (or phone icon) to automatically dial.
Camera	Client can click a camera icon (when asked to upload documents) to directly photograph a document.
Media/Storage	Client can select documents from a photo library to upload.
GPS/Location	Client can click on an office address and view a map and/or directions.
Calendar	Client can schedule an appointment and click a calendar icon to automatically enter the date, time, and address in the device's calendar.
Voice Dictation	Client can fill out form fields by speaking.
Security/Biometrics	Client can quickly log in to an app using a fingerprint.

Note on security: Remind clients and assisters to either delete personal information used on a mobile device (including tablets) if it is a shared device or to enable the device's security features.

Take Advantage of APIs

Agencies can further improve mobile apps and online portals by directly providing clients information or services maintained by a different entity. Agencies can take advantage of external partners that have created an API to add more functionality and features to client-facing solutions without requiring the client to go to a different app or website.

For example, an agency's online portal can directly connect with the EBT vendor's database to display clients' current EBT card balance. Or, if another agency maintains a directory of SNAP retailers or Medicaid providers, the agency's system may have an API that an online portal or mobile app can connect to. This allows clients to find this information directly from the agency's product rather than having to search for that information on their own, adding value to the product with minimal additional development costs.

Mobile Apps

Mobile apps are programs that can be downloaded on a client's mobile device. They can include the same features as the online portal, such as reporting changes, renewing benefits, checking case status or benefit amount, or scheduling appointments. Mobile apps are uniquely suited to facilitating document submission by allowing clients to photograph verification documents with their smartphone and easily send them to the agency.



Advice from the Ground

- Create mobile apps that can provide more than one activity or service. Most clients only need to contact the agency a few times per year. More features give clients more reasons to regularly use the app and keep it on their phone.
- Remember the “real estate” for a mobile app is smaller than the online portal. Consider what information clients likely will need when using a mobile app; for all other information, make sure the existing online portal is accessible from a mobile device (see “Adapting for Mobile Devices” for more information). For example, rather than trying to create a duplicate online application that can fit on a mobile app, create a button on the mobile indicating “Apply Here” that can seamlessly link to the existing mobile-friendly application portal.
- Although content may differ slightly between a mobile app and online portal, functions that clients can use should not differ. For example, uploading images should be available via the app as well as the online portal. This allows clients to conduct activities using either the mobile app or the online portal rather than having to use both to complete certain actions.
- With the feature that allows clients to take a picture of verification documents and upload them to their account, integrate software that enhances the quality of the photo by squaring the edges of the picture and making sure there is sufficient light. Allow them to view the image and re-take the picture if needed prior to upload. This will ensure the document is legible and useable for the eligibility worker.
- Since apps use data and data is expensive, simplify where possible when designing the functionality.
- Develop an app re-engagement strategy, including notifications when new features and new program information become available.
- Monitor the reviews clients leave in the App Store or on Google Play for ongoing user feedback and to quickly identify technical problems.
 - Have a standard response for customer service complaints (unrelated to the mobile app) and provide a number for clients to call to address questions on their case.
 - Get email addresses for people struggling with the mobile app and follow up to help them resolve issues.
 - Invite people to rate the app after they used the system once or twice.
- Consider whether to join agencies that are moving away from mobile apps in favor of mobile-friendly online portals. They are generally more accessible (since a client doesn't have to download a separate app and they can be used on multiple devices) and they tend to be cheaper and easier to maintain. Agencies should consider which solution, or combination of solutions, best fits their needs.

Instant Messaging

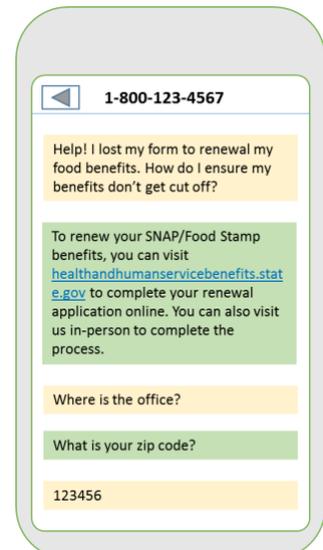
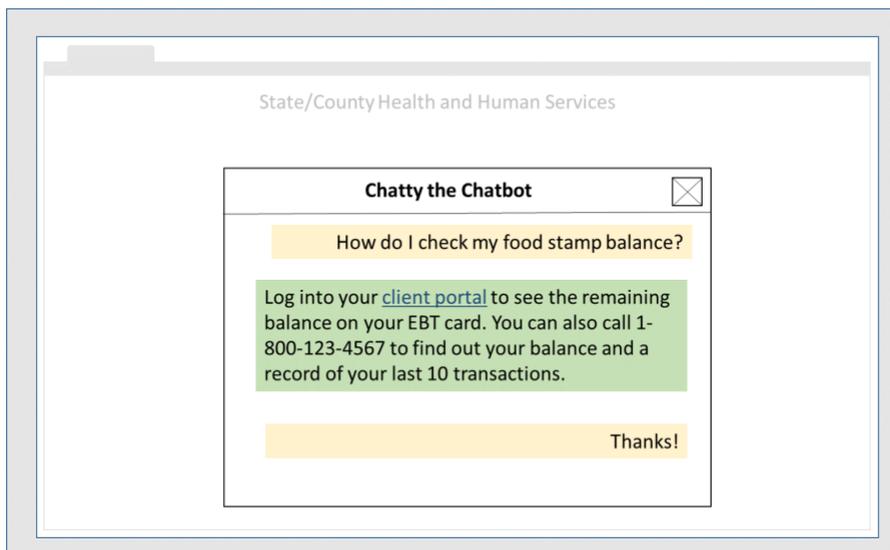
Instant messaging (IM) allows clients to quickly communicate with an agency when they have a simple question or need basic information. This technology should complement rather than replace existing communication platforms or interactive voice response systems.

How it works: Through a mobile app or the agency’s website, clients can click on a “chat now” icon to open a dialogue box where they can type their question. An agency can choose to have dedicated staff who respond in real time to the messages (“live chat”) or can create an automated response system to reply to common questions with pre-programmed responses (“chatbots”). Through either approach, agencies can use IM to provide basic case information (e.g., benefit amounts), answer commonly asked questions (e.g., hours of operation, where to mail an application), or resolve simple problems. For more complex problems, the agency can decide how to refer or hand off an individual to the appropriate contact.

Chatbots

Chatbots – a new form of automated instant messaging technology – can help agencies offer more client-friendly services without additional staffing. One key advantage of chatbots is that the technology is available 24/7, making it convenient for clients. Initial programming of chatbots may take staff time but can help reduce the number of repetitive questions or tasks that staff must handle on an ongoing basis. This helps staff focus on more complex questions.

Chatbots are gaining popularity because they can be used through various technology platforms including text, websites, and mobile instant messaging apps; users need not download a specific mobile app to use chatbots. If personal information is shared via chatbots, make sure the chatbot service provider complies with all security requirements.



Special Considerations for Chatbots

Start small, evaluate the language, and pivot as needed.

Evaluate the wording of the information or database that a chatbot uses to answer questions, including existing FAQ language, so that it includes keywords that clients use when asking a question. For example, clients don't use jargon or legal language to ask a question, but if the chatbot's database does, it will be harder for the chatbot to answer the question.

Take into account commonly misspelled words.

Unlike humans, chatbots rely on clear search queries and can't immediately handle misspelled or vague requests without "training" or "learning" over time. These need to be built into the system and continually expanded through implementation.

Plan for how to handle questions that need a human response.

Clients may ask detailed or complex questions that a chatbot can't answer and require individualized assistance from staff. When clients request detailed case information or ask questions not in the chatbot's database, the chatbot should provide a phone number and inform clients that they will need to speak to someone during business hours for assistance. Chatbots can also be programmed to capture the client's question in the chat and forward the information via email to a staff member. The staff member can research the client's question and call the client back with an answer.

Help the technology learn and improve.

It is important to have an internal process to continually add answers to the chatbot's database. This includes questions that staff initially had to address because the chatbot didn't know the answer. If the chatbot can answer that same question the next time, this frees staff to help clients with issues not easily resolvable by a chatbot.



Advice from the Ground

- Start using an IM platform for easy-to-answer questions or technology support rather than more complex, individualized questions.
- Use IM to help triage a problem and recommend clients call or visit the office to resolve more complex issues.
- Ensure that response times are much shorter for answering an instant message than answering a phone. Individuals are prepared to wait on hold when they reach a call center, but expect an immediate response to an instant message.
- Monitor the type of questions being asked via IM. Update the scripts and automatic responses to reflect new questions. To reduce wait times and frustration, direct individuals with specific types of questions early in the process to the website or call center or recommend that they schedule an appointment.

Section C: Call Center Tools

Interactive Voice Response (IVR) 2.0

Interactive Voice Response (IVR) systems provide automated information and route calls. While agencies have used IVR systems for years, they can upgrade their systems to better answer basic questions and more seamlessly assist clients. Effective IVR systems can save staff time by helping to identify a caller and using a phone tree to route the caller to the appropriate staff or unit.

Original Functionality



Today's Functionality

Able to provide callers basic information, such as hours of operation, where to apply, and an office locator.	Available Information	Able to provide individualized information based on the caller's response or prior interactions with the IVR system.
Limited triage of incoming calls that are routed to customer service staff, who may not have access to the client's case information.	Triage/Routing	Can triage incoming calls based on the caller providing a case number, client ID, or Social Security number and route calls to specialists who can best answer the questions and have access to the client's current information.
Can't contact callers or affirmatively provide individualized information.	Robocalls	Can autodial clients with individualized reminders based on the client's case, or call clients due for an interview and transfer them to workers if they are able to complete their interview.
Clients must wait on hold until an eligibility worker or triage specialist can assist them.	Callbacks	Clients are informed of the expected wait time and can choose to receive a callback instead of waiting.

Telephonic Signatures

Telephonic signatures allow clients to complete the application or renewal process over the phone by capturing their signature via a voice recording. Telephonic signatures allow clients to immediately complete their application or renewal without having to mail in a signed document or visit an office. Agencies must have the ability to record the client verbally affirming identifying information, and link that recording to the case file. Federal regulations require agencies to accept telephonic signatures for Medicaid applications, but agencies can expand the technology to serve SNAP clients applying for or renewing their benefits.

Telephone Interviews: Agencies can offer a telephone interview in conjunction with a SNAP application or renewal taken over the phone to streamline and expedite service. This is more convenient for the client and reduces future in-office and phone traffic related to rescheduling and missed interviews. Agencies can complete more applications and renewals with “one touch” if they also change policies and procedures to rely more on electronic verification or provide easy ways for clients to electronically submit documents. This may allow clients to complete the application, interview, and verification process in one phone call and have their case processed before hanging up.

Call-In Interview: Agencies can also leverage call center infrastructure to further streamline the SNAP interview process by allowing clients who have submitted an application or renewal to complete the interview by phone at a time convenient for them. Agencies may still send clients an appointment date and time but may also inform the client that they can call in for their interview any time before the scheduled appointment. This doesn’t require an On-Demand Interview waiver since the client still receives an appointment time. Allowing clients to call in at their convenience can increase interview completion rates and reduce procedural denials.



Advice from the Ground

- Call centers can be a single physical location or can be “virtual,” staffed by workers in offices throughout the state. Virtual call centers may make it easier to staff up and down depending on call volume allowing an agency to meet demand during peak times while allocating staff to other work during non-peak times.
- Where possible, staff call centers with eligibility workers who can act on requests coming in. Immediately conducting an interview, addressing a client’s change of information, or processing another request is more efficient than taking a message to pass on to an eligibility worker.
- When monitoring call center performance, focus on call resolution, not just wait times. Clients may be willing to wait a little longer if it means that their needs will be addressed.
- If making outbound calls to clients, work with phone companies to be sure your agency name appears on caller ID, rather than an unfamiliar number clients may not answer.
- Consider how call centers fit into the broader system. While expanded functionality (like allowing for on-demand interviews) may require reallocating staff to the call center, it will relieve pressure on local offices and reduce procedural denials for missed interviews.

Part 4 Considerations When Implementing Technology

Client-facing technology solutions have great potential to improve customer service and streamline processes for agency staff. Implementing these solutions is generally a smaller project than a large eligibility system overhaul, allowing for greater flexibility and freedom to try different approaches. Issues will always arise when making changes and using new technology and processes, but the following basic principles can make modernizing human services more successful.

Embrace innovation.

As technology continues to rapidly advance, it's important for agencies to embrace new options – to improve both efficiency and communication with clients. Change is hard, though, and agencies may be hesitant to take up the challenge of implementing or improving client-facing technologies due to perceived hurdles as well as naysayers. It's important to fight the impulse to keep the status quo and a culture of “this is how we have always done it.” Agencies need to challenge assumptions about what's allowable and encourage the testing of new approaches while working with legal and procurement officials to ensure compliance with federal and state laws. Leadership and external support are essential to overcoming obstacles, so be prepared to help staff understand the value the project brings to the organization.

Focus on the root causes of the problems you are seeking to solve.

The eligibility, enrollment, and retention process is complex; many barriers may hinder accurate and timely determinations and strong customer service. Before implementing any new technology, clearly identify what specific part of the process you are trying to fix and analyze the likely reasons clients or staff face challenges. Pinpointing the root causes – there are often more than one – of a barrier or challenge may take time in the planning process but will ultimately save resources and lead to faster resolution. Ask questions like:

- Where do clients most often drop off in the application or renewal process?
- What leads clients to come into eligibility offices or call eligibility workers?
- Which part of the process is the most time intensive for eligibility workers?

Look at the system as a whole, including current policies and work flows. Perhaps a policy change could resolve the problems faced by a portion of the clients or staff. For example, if cases are frequently terminated for failure to provide documentation, examine where policies could be revised to reduce the need for verifications or if electronic data sources could replace paper documentation from the client.

Upgrade the procurement process and approach to vendor management.

Most state procurement processes and vendor management strategies for creating and implementing technology products could be greatly improved to facilitate flexibility, nimbleness, and innovation. Some government agencies are attempting to make changes through open source code, hack-a-thons, and an agile development process.

Agile Development

Agile software development focuses heavily on iterative development and quick “sprints” of work to continuously improve and flexibly respond to feedback.

To improve the chances of successful implementation, agencies should consider the following questions prior to purchasing a solution:

- What other agencies have implemented a similar solution? What parts of their solution can be used for this project to avoid starting from scratch?
- How will the solution work with other systems inside and outside the agency? Vendors may use terms such as interfaces, modularity, or configurability to describe this important feature.
- Can the solution handle an increased volume of users? Is it scalable?
- Can the agency make required changes and maintain the solution in house once implemented? What level of expertise is needed to make changes?
- When new versions of online browsers, operating systems, or devices such as mobile phones are released, how will the vendor ensure the solution still works?
- How will the vendor provide continuous improvement to the solution once implemented?
- Will the solution be open source and available to share with other agencies to make it easier for them to implement a similar solution?

Seek user feedback before, during, and after implementation.

There are many opportunities to make a new technology solution “user-friendly” – for both clients and eligibility workers using the system. Including user testing before implementing new technology solutions is important for any government modernization efforts, but considering the user experience is not a one-time effort.

Creating a good user experience starts when you identify the need for a technology solution and while you’re designing the solution, before any coding begins. It’s often too late and very costly to change a technology solution based on user feedback after implementation.

The Human Centered Design approach provides a framework for creating a technology solution through initial understanding of the problem and context of when the solution would be used, as well as continual feedback and improvement. Through the development cycle, the primary driving factors of the design are end-users' ability to easily use the solution and to see how it adds value to their lives.

Obtaining user input doesn't require costly focus-group testing or detailed user surveys. Consider:

- Conducting “field work” by simply observing and interviewing users while they're interacting with the current systems. This can help identify users' pain points, barriers to using technology or understanding a process, and even ideas for solutions that users themselves provide.
- Conducting a survey of applicants and enrollees who are waiting in the lobby for their interview. Staff can informally show hand-written designs of a website or mobile app to a group of clients and ask them to walk through the pages to see if they could easily “use” the solution.
- Seeking user input during the design process on demos, storyboards, or prototypes.
- Asking clients directly for feedback rather than relying exclusively on proxies, such as staff at community-based organizations who do application assistance. These external partners can help identify pain points and offer helpful solutions. But they shouldn't substitute for feedback from actual clients, who may be less familiar with certain technologies and are less likely to understand agency jargon or the underlying process.
- Creating a testing environment — or “sandbox” — before and during implementation, where staff and clients try to use the solution without guidance. This can help identify areas of confusion and make it easier for agency staff to help clients by making them more familiar with how clients experience the solution.
- Building into the solution itself, or creating mechanisms outside the solution, to explicitly or implicitly seek users' feedback after deployment. For example, measure client satisfaction with the solution by providing a link to a short survey after an individual submits an application. Or provide a simple mechanism — by email or online — for clients and community partners to suggest improvements.

Inform and educate all stakeholders on the technology.

Engage all stakeholders, including clients, staff, and community partners, before implementing a new solution.

Inform clients of the intended benefits and uses of the new solution rather than assuming they will know. Create an easy-to-read “how-to guide” that agency staff can distribute or send to clients.

Agency staff also need to know how to use and speak about the solution because clients will seek their help if they have questions or problems. Staff should promote the new technology to clients and know where to send clients if they are having technical problems. Staff must also know how the solution fits into the agency's overall operations. For example, staff should know where documents uploaded from a mobile app are sent.

Community organizations are important partners when implementing new technology. They can provide valuable input about user pain points and client needs at all stages of design and implementation. Clearly communicating information about the new technology and issues that arise will help get buy-in from community partners and client communities.

Make improvements as part of implementation.

Technology isn't fool-proof; users expect initial versions of a new solution to have a few errors. Newer technology is often implemented in a "beta" phase to help signal users that the current version has undergone testing, but there may be issues that only a user can identify.

Consider implementing client-facing solutions initially through a pilot or as multiple versions rather than as a finished product that is difficult to change once implemented. Build the solution in bite-size phases so that adjustments can be made along the way, rather than at the end. Make it clear to all stakeholders, including clients, that tweaking, improving, and adjusting are part of the process.

Create an environment focused on continuous improvement. The critical component is to respond to users' reported issues with the solution and quickly address problems. For example, when developers release a new mobile app, they actively monitor the user comments in the App Store or on Google Play to identify issues and then notify users when something has been fixed. Individuals will expect the same from agencies that implement client-facing solutions: imperfection at the start, but clear efforts to seek user feedback and continual improvements as a normal part of the implementation process.

Consider the development and implementation of technology as a continuous circle rather than a straight line from conception to completion. If you aren't continually improving your technology solution based on user feedback, it could quickly become outdated and cause clients to stop using it altogether.

Identify from the start what success looks like and measure it.

A carefully crafted evaluation is essential to determine whether the technology solution successfully addresses the problem identified in the planning phase. Multiple data points and other factors can be measured to evaluate if the technology project was successful.

There are immediate outcomes of technology projects that can easily be measured, such as the number of clients using the technology, the number of problems reported or fixed, or the response

rate to text or mobile app reminders. The effects of a technology solution can also be measured by its impact on operations, such as call volume. In addition, agencies can measure the success of a technology solution based on actual outcomes for clients, for example, if a higher rate of interview completion leads to greater program participation.

Just as important as identifying the desired outcomes for a technology solution is building in, prior to implementation, the right mechanisms to measure progress. Create a plan for what data will be collected, at what intervals, and who will be responsible for analyzing the results. Make sure there is a baseline from which to measure progress.

A wide variety of data is automatically collected by some technology solutions and can be used to monitor performance and measure progress. For example, Google Analytics can be used to determine what parts of an online web portal are most visited to help identify what information users are searching. As part of the planning process, inquire what information is automatically captured by the technology solution as part of its built-in functionality and how non-technical agency staff will be able to collect and review it.

Collecting metrics and feedback is only useful if that information is fed back into the planning and design process to further tweak and improve the solution. Establish mechanisms to use the data to improve operations. For example, one state agency analyzed call center volume over several years to determine seasonal patterns and then applied that information to help create schedules for call center staff so they could handle the call volume. This not only reduced clients' wait times but also improved staff morale by enabling them to assist clients more quickly.

Tips for Advocates

As technology plays an increasingly important role in public benefit administration, it's essential that advocates get involved, early and often. Although advocates may not know the technical details of the systems, they can play a critical role in asking questions and providing input. In addition to the considerations outlined above, advocates can:

- Get a seat at the table. Use existing advisory groups, legislators, or other leverage points to have regular meetings with the state or local agency to identify issues, discuss solutions, get updates, and provide input.
- Ask questions! Don't be intimidated by technical jargon. Push agencies to explain the plan for rolling out new technology and make sure they've considered possible unintended consequences.
- Help make the case for a new technology product. The costs of implementing new technology may be less than the cost of keeping the status quo. Help agencies quantify the real cost of the status quo to clients who can't get the services they need. If the change requires approval or funding from the legislature, support the agency's request.
- Recommend that new technology projects include user-centered design and robust user testing early in the process. Ask agencies to include both as requirements for future procurements of technology projects.
- Engage with the state or county agency early on in developing technology. Work with the agency to address specific concerns about a technology solution at the planning and design phases rather than after implementation.
- Encourage and support the agency in piloting a solution for a subset of clients to improve the solution for others in the long run. Assist the agency in developing and committing to a plan for testing future iterations of the solution with different groups of clients in incremental phases.
- Advocate for the creation of a dedicated position in the agency that's responsible for ensuring technology projects prioritize the client and user experience.
- Research what other states are doing to improve customer service. Bring ideas of effective solutions and encourage the agency to connect with other counties or states.

Part 5 On the Horizon

Ongoing advances in technology may have innovative applications in health and human services. It's important for agencies to look forward and be aware of how these new solutions can improve administration and customer service. Below are four technology trends that may affect client-facing solutions and government services in the future.

Artificial Intelligence (AI)

Most people think of AI in terms of life-like robots that can think and act like a human. Yet AI is also part of the excitement around Big Data or machine learning, where vast amounts of data can be analyzed to improve understanding of changes in populations, traffic patterns, or humans' processing of information. Amazon's ability to provide product recommendations based on your and thousands of others' shopping activity is a simple example of AI in action today.

In the human services sphere, AI may reduce the need for staff to do routine tasks, freeing them for more complex tasks or innovating. AI can also help analyze unstructured data, such as eligibility workers' notes, to help identify patterns that can inform changes to policy or procedures.

Biometrics

Biometrics provides additional ways to use your identity to protect the security of your data through fingerprint imaging, facial recognition, and voice recognition. Smartphones use fingerprint imaging as an alternative to a pin code to unlock the phone. In addition, some mobile apps can integrate with the phone's security settings and allow the fingerprint image to be used to log in into the app. Facial recognition is also available on the latest version of the iPhone.

Voice Responsive Services

Voice responsive tools, such as Alexa and Siri, are gaining popularity and will likely become standard features of consumer-facing technology solutions soon. The data collected and algorithms being perfected by these tools can support users in multiple languages and will be able to account for regional accents and word choice variation. For example, rather than calling a call center to find out the status of an application, clients could ask their mobile device – in their primary language – to seek out this information and verbally respond with the answer, also in their primary language, even though the information maintained by the agency is in English.

Blockchain

Blockchain technology can help make data more secure by breaking data into multiple parts, encrypting each part, and physically storing the data across multiple computers informally connected in a network. Beyond Bitcoin, potential uses of Blockchain include storing health records or financial data so that the data isn't easy to change, delete, or gain access to. Illinois is piloting use of Blockchain to convert and store existing birth certificate records. While there's considerable hype about blockchain technology, its use in the public benefit arena remains uncertain.

Resources

Food and Nutrition Service (FNS) - SNAP

Program Access Toolkit (2013) - <https://fns-prod.azureedge.net/sites/default/files/2013-toolkit.pdf>.

Electronic Notice Waivers and Options (November 3, 2017) - <https://fns-prod.azureedge.net/sites/default/files/snap/Memo-Electronic-Notice-and-Other-Options-11317.pdf>.

Call Center/Contact Center Support for States – A Framework and Reference Guide (August 2011) - https://fns-prod.azureedge.net/sites/default/files/call_center.pdf.

SNAP Telephonic Signature Guidance (May 12, 2014) - <https://fns-prod.azureedge.net/sites/default/files/SNAP%20Telephonic%20Signatures%20Policy%20Memo.pdf>.

Accepting SNAP Applicant and Client Signatures Electronically (April 21, 2016) - https://fns-prod.azureedge.net/sites/default/files/snap/Electronic_Signatures_Memo.pdf.

Behavioral Economics

Ideas 42: Behavioral Science 101 - <http://www.ideas42.org/learn/>.

Administration for Children & Families – Behavioral Economics and Social Policy - <https://www.acf.hhs.gov/opre/resource/behavioral-economics-and-social-policy-designing-innovative-solutions-for-programs-supported-by-the-administration-for>.

Mathematica: Quick Steps to Improve Programs Using Behavioral Insights - <https://www.mathematica-mpr.com/our-publications-and-findings/publications/quick-steps-to-improve-programs-using-behavioral-insights>.

Governing: Getting Public Benefits to the People Who Need Them - <http://www.governing.com/gov-institute/voices/col-improving-low-take-up-rates-benefit-programs-earned-income-tax-credit.html>.

Design

IDEO: Human-Centered Design Kit - <http://www.designkit.org/human-centered-design>.

NYC Mayor's Office for Economic Opportunity: Civic Service Design Tools + Tactics - <https://www1.nyc.gov/assets/servicedesign/index.html>.

SNEAKPEEKIT: Printable Grids for Design Wireframing - <http://sneakpeekit.com/>.

Accessibility and Readability

Plain Language Action and Information Network - <https://www.plainlanguage.gov/>.

U.S. Department of Justice Civil Rights Division: Information and Technical Assistance on the Americans with Disabilities Act, Accessible Technology - <https://www.ada.gov/access-technology/index.html>.

U.S. Department of Health & Human Services: Website Requirements Checklist -
<https://www.hhs.gov/web/building-and-managing-websites/development-process-and-milestones/website-requirements-checklist/index.html>.

Texting

Northwest Center for Public Health Practice – Texting for Public Health -
<http://www.nwcphp.org/docs/sms-toolkit/overview/index.htm>.

TextPower – A Guide to Text Messaging Regulations -
<http://www.textpower.com/Docs/TextPower-GuideToRegulationsAndOptingIn.pdf>.