

Creating a unified, cross-department citizen experience

A simpler approach to realizing the vision of no-wrong-door

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For decades, realizing the vision of no-wrong-door has been top of mind for health and human services (HHS) leaders. It is, after all, a very worthwhile goal. But despite the best intentions and efforts, government has yet to fully realize this vision. For those citizens who are either receiving or who are in need of multiple services, the system can be daunting.

From the citizen's perspective, it's all one government. Citizens shouldn't have to know or care if services are provided by different departments or agencies. Regardless of the door they walk through or the website they initially visit, the citizen should be presented with a unified experience; an experience that connects them with the right service at the right time.

Fulfilling the no-wrong-door vision remains difficult

Challenges to fulfilling the vision occur at every level—people, process, and technology. Managing a case across programs requires that case-workers be trained to understand the services provided by those programs, for example who qualifies and how do they apply.

Process challenges involve data sharing. Valid concerns like ownership and privacy arise when information needs to be shared between programs and agencies.

From the technology perspective, a single digital notion of each person must exist. This may require a master person index, master data management, single sign-on, as well as integration across disparate back-end systems; all of which are difficult to implement.

Solving these challenges requires a change in perspective

This is not to say that we shouldn't continue to work on these things. If the goal is to manage the person and not the case, these things put us on the right track. There must be something, however, that we can do in the interim to improve the citizen experience; to make it appear as though they are interacting with a unified government that understands their needs and that is capable of recommending and providing beneficial services. To do this, leaders must first realize that creating a single "door" through which all government services can be accessed may not be realistic.

Within HHS alone, the services provided including, child welfare, child support, disability, medical, aging and transitional assistance, span organizational boundaries at local, state, and federal levels. Given the challenges of people, process, and technology, government will always require multiple doors, multiple websites, and multiple call centers through which citizens will make contact. While no-wrong-door is possible in parts of the larger HHS

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Based on what we know about the citizen, we recommend that next-best-door.



landscape—think integrated eligibility—leaders can’t realistically expect to create a one-stop-shop for all of HHS, much less for all of government.

Presenting the next-best-door approach

Adobe offers a unique and simple alternative to no-wrong-door. Using the combined technologies of Adobe Experience Cloud, government agencies can provide a unified experience to citizens, regardless of which “door” they happen to walk through. Based on what we know about the citizen and the context in which we are interacting with them, we can recommend the next-best-door. What is that next best service that we believe might benefit them.

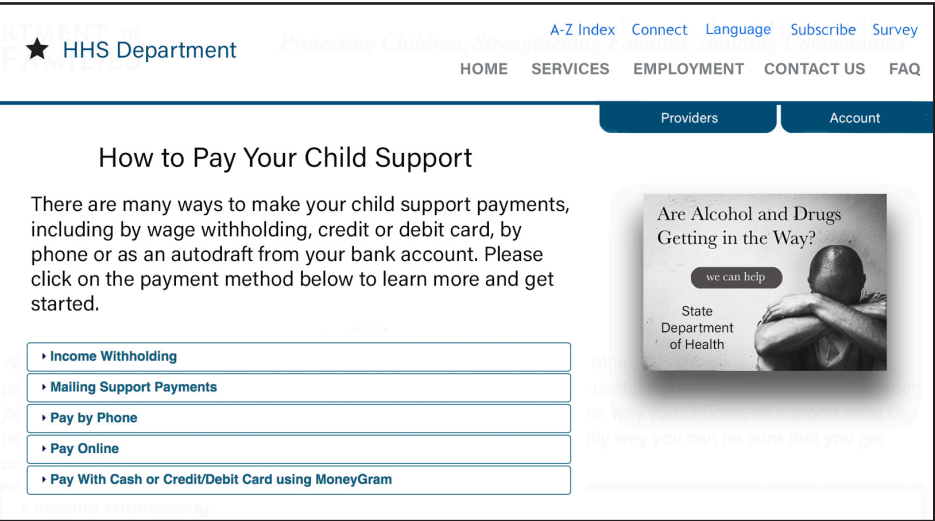


Figure 1. A service recommendation is made within a small, predefined area of a web page

As shown in Figure 3, the service recommendation is made in a small area of the web page, similar to an advertising box displayed on a commercial website. The recommendation is possible without requiring user login or back-end system integration. Additionally, as shown in Figure 4, citizens could opt in to receive recommendations that appear in a small area in email correspondence.

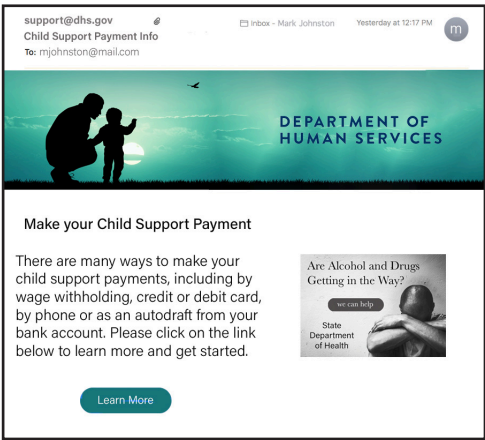


Figure 2. Citizens can opt in for service recommendations in email.



The next-best-door is presented to the citizen as a recommendation, with a link to additional information and access to a mobile-friendly, paperless application. While many government services are available to people with specific needs, they can't apply if they are unaware that the services exist. Each strategically placed recommendation provides the citizen with both awareness as well as access.

But if visitors to a website are not logged in, how can we know anything about them? The answer lies in an important capability of Adobe Experience Cloud—web analytics.

Leveraging a visitor's anonymous profile

Using Adobe Experience Cloud, government can access a wealth of captured web analytics data about anonymous visitors—those who haven't logged in to the website and cannot be identified. The collected analytics data contains no personally identifiable information (PII). In fact, the platform has built-in controls to prevent capturing information like name, address, phone number, or anything that might be used to identify a specific person.

As people visit websites, click through links in email, search the internet, or interact with mobile apps on their phones, data is collected in the form of cookies on their devices. This data can be combined in the Adobe platform to create an anonymous profile for each user.

This technology is used extensively in the commercial sector to make personalized product recommendations in the form of a next best offer to prospective customers. Recall that last pair of shoes you viewed online or the tennis racket you left in your shopping cart, both of which are still following you around on the internet? It's the same technology.

Using this technology, commercial brands can realize five to eight times the ROI on marketing spend, and lift sales by 10% or more.¹ The lesson learned from the commercial sector is that personalized recommendations can significantly improve the chances of a website visitor responding to an associated call to action like apply now or learn more.

Using social and behavioral traits to avoid negative health outcomes

A powerful aspect of a visitor's anonymous profile is that it can be used to identify social and behavioral traits. Social traits represent things including the neighborhood within which a person lives, their income, education, ethnicity, gender or profession. Behavioral traits represent things people do, such as live an active lifestyle, drink, or smoke.

Commercial brands can increase sales 10% or more by placing personalized product offers on websites.

¹ <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/personalizing-at-scale>



Why is this information important? Studies have shown that these traits can have an impact on health outcomes.² For example, a middle-aged white male who is unemployed and engages in risky behaviors—smoking, drinking, using prescription drugs—is at an increased risk for substance abuse. If HHS agencies know or can infer these things about a person, they can potentially predict and prevent a negative health outcome.

Making recommendations using a visitor's audience segment

Roughly 80% of health-related services, as measured by cost, are consumed by 20% of the population; it can be assumed that this ratio holds true for human-related services as well.³ To realize the biggest impact, agencies should focus on this segment of the population when using the next-best-door approach. Using the Adobe platform, audience segments can be defined by that divide the citizen population into different categories. This can be done using the geolocation from which a visitor is browsing to a site in addition to the social and behavioral traits contained within the visitor's anonymous profile. While the available traits are data-source dependent, a variety of data sources can be combined using Adobe Experience Cloud.⁴

For example, an agency might create a segment for low-income, expectant females who live in a specific county. Or a segment could be created for unemployed veterans. Because the segments are defined using web analytics data, no risk of subjective bias exists. The agency is simply mapping traits to a predefined segment. Qualification for an audience is determined in real time when a citizen visits a web page using the cookies on their device.



As shown in Figure 7, recommendations are made based on current context—for example, the web page being viewed—plus the visitor's anonymous profile and audience segment. Each recommendation will be different based on the audience segment for which the citizen qualifies. If a visitor to a web page doesn't qualify for an audience segment, a default recommendation will be shown.

HHS agencies can use social and behavioral traits to affect health outcomes.

Figure 3. The visitor's anonymous profile is examined in real-time to see if they qualify for a specific recommendation.

² <https://www.healthypeople.gov/2020/about/foundation-health-measures/Determinants-of-Health>

³ Kaiser Family Foundation analysis of Medical Expenditure, Agency for Healthcare Research and Quality, U.S.

⁴ <https://www.adobe.com/experience-platform.html>

Audience segmentation is used extensively in the commercial sector as the basis for making product recommendations. A shoe manufacturer may define an audience segment for each type of shoe it sells, for example young, male athlete or urban, female professional. Each segment is then matched to a specific shoe recommendation. The next-best-door approach uses the same technology, but it is used to recommend services rather than products.

Recommending the right service at the right time

When a citizen visits a web page and views specific content or takes a specific action, it implies something about their current situation. Leveraging this implied context allows agencies to make a recommendation at a specific time, relative to a person's HHS journey

Providing awareness at the right time, within the right context, improves the likelihood that the recommendation will be understood and appreciated—in the form of a click. To help visualize these concepts, see the following scenarios, each of which has an associated service recommendation.

Scenario 1

The screenshot shows the Department of Medicaid website. The header includes a search bar and navigation links: Home, About, Contact, and In crisis?. The main navigation bar lists: Home > Health Care Services > Your Benefits at a Glance. Below this, the page title is 'Your Benefits at a Glance'. The content area explains that participants in no-cost health coverage have many benefits, including preventative care like cancer screenings and treatment for diabetes and high blood pressure. It lists several services with links: Autism and Applied Behavioral Analysis therapy, Behavioral health and recovery, Breast, Cervical and Colon Health Program, Immunizations, Interpreter services, and Pregnancy services. To the right of the text is a promotional image for the WIC Program with the text 'Eat well, nourish your child and stay healthy.' and 'WIC Program Department Health Services'.

Figure 4. Parent with new baby visits Medicare website to check benefits.

1. Context

Parents visits Medicaid website to check benefits

2. Audience Segment

Medicaid recipients with new baby

3. Recommended Service

WIC nutrition program offered by DHS

Scenario 2

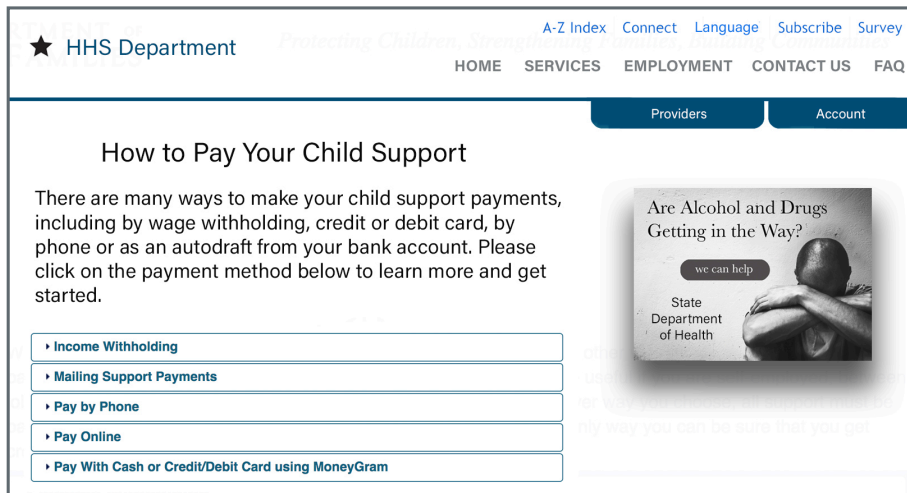


Figure 5. Parent visits HHS website to pay child support.

1. Context

Parents visit state HHS website to pay child support

2. Audience Segment

MeMiddle aged males living in counties with high incidence of opioid abuse

3. Recommended Service

Substance abuse prevention offered by DOH

Scenario 3

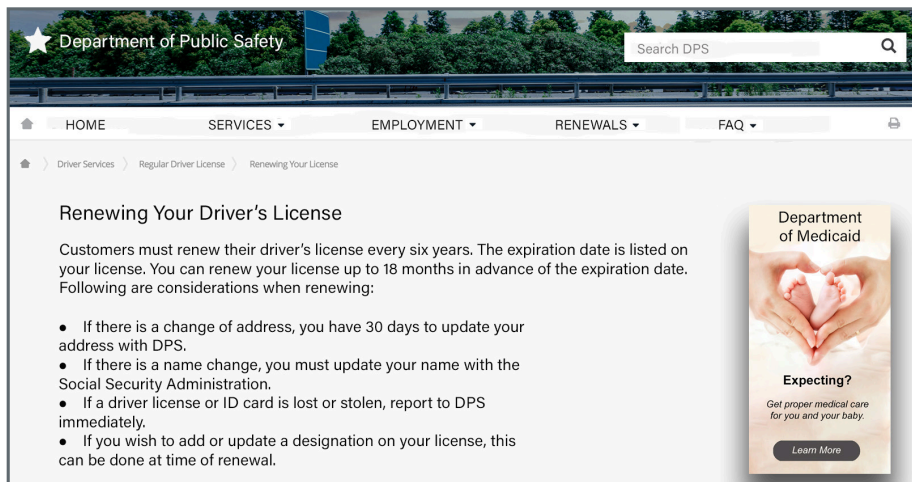


Figure 6. Pregnant Medicaid recipient visits DPS website to renew her driver's license.

1. Context

Female visits state DPS website to renew her driver's license

2. Audience Segment

Pregnant, low-income, unmarried females

3. Recommended Service

Free prenatal care offered by Department of Medicaid

Scenario 4

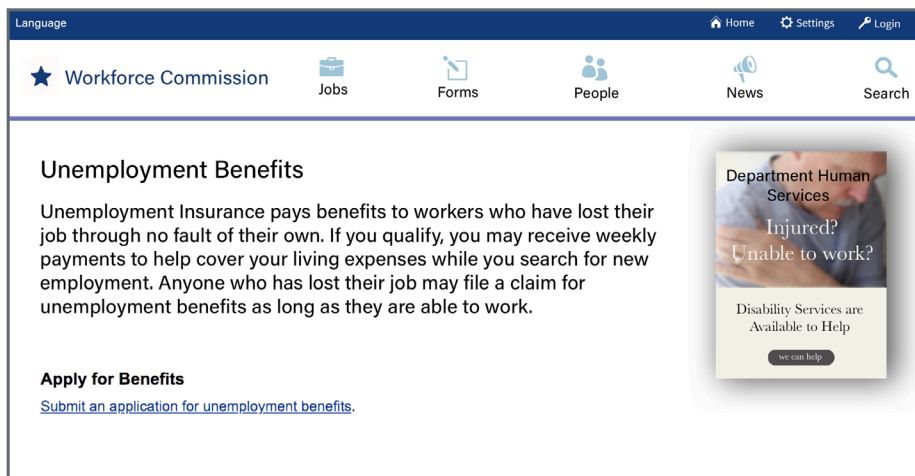


Figure 7. Person injured in an accident visits state unemployment benefits website.

1. Context

Person visits workforce commission unemployment insurance website

2. Audience Segment

Individuals injured in an accident, unable to work

3. Recommended Service

Disability determinations service offered by DHS

Scenario 5

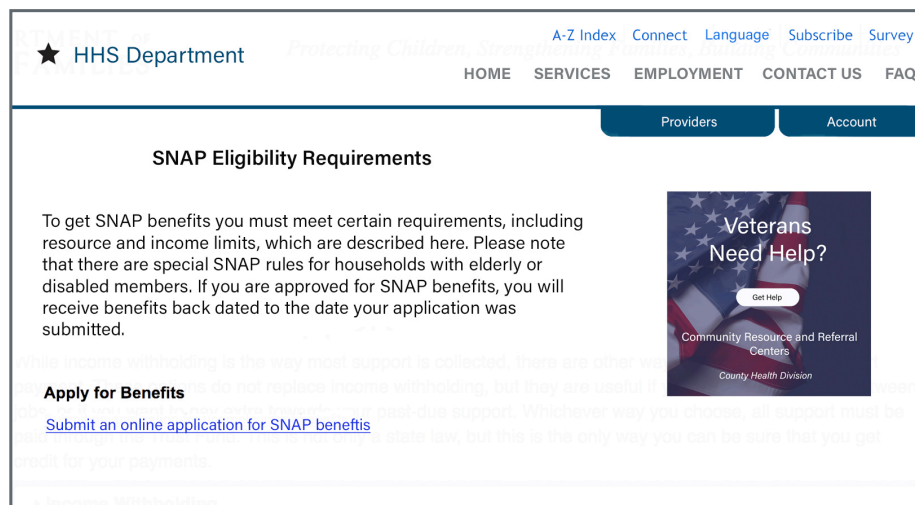


Figure 8. Unemployed veteran visits HHS website to see if she qualifies for food assistance.

1. Context

Veteran visits DHS website to see if she qualifies for SNAP benefits

2. Audience Segment

Unemployed veterans

3. Recommended Service

Community referral centers offered by County Health Division

Seeing the big picture

As shown in Figure 13, recommendations can be scoped to a single department for crossprogram coordination or expanded to serve a large agency with numerous departments.

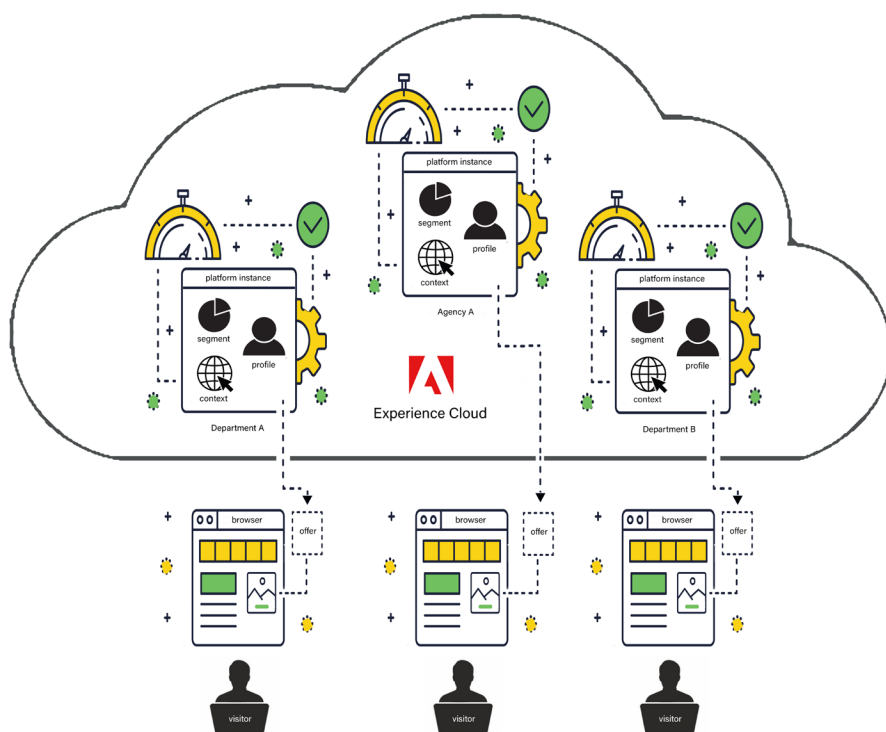


Figure 9. Recommendations are made from platform instances running in Adobe Experience Cloud.

The scope could also extend to state government as a whole. Every state has a website that's used as a portal for citizens to access services. The challenge is that these services are provided by many different departments, each with its own website and back-end system. The next-best-door approach would allow each department to recommend its services to specific audience segments within a predefined section on the portal's home page. The recommendations would be seen only by website visitors that fall within those specific segments. Using this approach every department's services could be featured, providing a unified customer experience.

Figure 13 also illustrates how the next-best-door approach enables the coordination of services across state, local, and federal government. An example of this is provided in Figure 12, where a Department of Veterans Affairs assistance program is recommended to unemployed veterans visiting a state SNAP eligibility website. There are many examples where creating a unified experience across the different levels of government makes sense.



Ensuring privacy

The next-best-door approach makes use of a citizen's anonymous profile to make in-context service recommendations. This naturally leads to questions regarding privacy. For example, what considerations have been made to safeguard a person's privacy? What happens if someone isn't willing to participate? And lastly, does this approach present a risk that recommendations will be viewed as intrusive or too Big Brother?

Adobe designs privacy into every solution. To safeguard a person's privacy, Adobe Experience Cloud provides built-in controls to help prevent the collection of PII within an anonymous profile. The term "anonymous" implies that the profile contains no PII. Without PII, a visitor's profile cannot be used to identify a specific individual.

Nevertheless, some citizens may not want to participate. In these cases, Adobe provides an easy way for users to opt out of the anonymous data collection process.⁵ If a citizen opts out, they will see the default recommendation shown to visitors to a page who fail to qualify for any segment. Adobe has enhanced Adobe Experience Cloud to support readiness for even the most stringent privacy regulations, including the European Union's GDPR.⁶

The next-best-door approach represents a closed-loop system, meaning that it's intended for government-to-government service recommendations, not commercial advertising. While government-to-commercial advertising has its place, for example public health, recruiting, lotteries and tourism, advertising on third-party websites or social media for other types of government services might be perceived as inappropriate. By limiting recommendations to government services placed only on other government websites, that concern can be minimized.

Whether a personal recommendations is intrusive or too Big Brother is a matter of perspective. In other words, it depends on the point of view of the citizen who is receiving and potentially benefiting from a recommended service. According to a recent Adobe survey, 67% of respondents indicated that they expect to receive personalized content when visiting branded websites.⁷ Yet paradoxically, 92% of people surveyed within the U.S. are concerned about online privacy.⁸ How much privacy is someone willing to give up to receive a potential benefit?

Enhancements to Adobe Experience Cloud support readiness for the most stringent privacy regulations, including the European Union's GDPR.

Recent Adobe survey shows the tradeoff between privacy and the benefits of personalization.

⁵ <https://www.adobe.com/privacy/opt-out.html>

⁶ <https://www.adobe.com/content/dam/acom/en/experience-platform-highlights/pdfs/adobe-experience-cloudand-gdpr.pdf>

⁷ <https://cmo.adobe.com/articles/2018/1/adobe-2018-consumer-content-survey.html#gs.zak5s7>



The trade-off between privacy and benefit represents a fine balance that should be taken into consideration when implementing the next-best-door approach. First, citizens need to be educated about the types of anonymous information being used to make recommendations, and that it cannot be used to identify them. Second, care should be taken to only offer recommendations that are perceived as relevant, timely and that hold value for the citizen. If this is done correctly, the perception that government isn't doing enough to help shifts to one where the government cares and is making a difference.

Taking a simpler approach to a unified customer experience

As outlined in this paper, many challenges face agencies attempting to implement a no-wrong-door approach to service delivery. Challenges at all levels—people, process, and technology—need to be addressed. Adobe's approach to providing a unified customer experience addresses these challenges.

The approach, for example, doesn't require cross training caseworkers or other front-line employees. Intelligence for making service recommendations is preprogrammed into the system. No cross-department, crossagency, back-end data sharing is required. Displaying service recommendations on another department's website uses only the anonymous visitor's profile to determine when and what to display. Since this approach is designed to work with anonymous visitors, no master person index, master data management, or integration across back-end systems is needed.

Getting started with the next-best-door approach

Through the network of Adobe-approved partners, HHS agencies can outsource all or part of the service recommendation process including the audience segmentation, creative design process for service offers, and the recommendation placement on existing agency web pages.

Because the next-best-door approach is 100% cloud-based, it requires very little development. HHS agencies can easily place ad boxes on an existing website to display and recommend service offers. The process requires only HTML and JavaScript. Most of the work is focused on defining user profiles and audience segments and mapping those segments to service offerings. Implementing this approach will also require working with other departments and agencies to identify opportunities for service coordination. As with anything, agencies can start small and gradually increase the scope of their implementation.

The next-best-door approach simplifies the alignment of people, process, and technology.

The next-best-door approach allows for full or partial outsourcing of the service recommendation process.



Adobe is excited about the potential the next-best-door approach holds for you and your citizens. The wait is over. Providing a unified customer experience across all levels of government is now a reality.

For more information on using this approach in your specific area of government, contact, Megan Atchley at meatchle@adobe.com.



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