



2022

21st Century IDEA Report

Prepared for the Office of Management and Budget per the requirements of Section 3(d) of Public Law 115-336, "21st Century Integrated Digital Experience Act"

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Homeland
Security

Executive Summary

The [21st Century Integrated Digital Experience Act](#) (21st Century IDEA) (P.L. 115-336) requires the heads of all federal executive branch agencies to report to the Director of the Office of Management and Budget on the agency's progress towards the modernization of new or redesigned websites and digital services.

The Department of Homeland Security (DHS) has made this modernization of its websites and digital services a high priority. DHS aims to provide our customers with an easy and efficient online experience and has taken multiple steps to further this goal and comply with the requirements of 21st Century IDEA.

Building on the work that was accomplished in 2021, DHS has focused on five main goals related to 21st Century IDEA in 2022:

- Website and Digital Service Modernization
- Digitization of Government Services and Forms
- Electronic Signatures
- Digital Service Delivery
- Standardization and Coordination



2022 DHS 21st Century IDEA Report

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I. Legislative Language

This document has been compiled pursuant to the reporting requirements in the 21st Century Integrated Digital Experience Act (21st Century IDEA) (P.L. 115-336).

21st Century IDEA states in section 3(b)(2):

(2) submit to Congress a report that includes—

(A) a list of the websites and digital services maintained by the executive agency that are most viewed or utilized by the public or are otherwise important for public engagement;

(B) from among the websites and digital services listed under subparagraph (A), a prioritization of websites and digital services that require modernization to meet the requirements under subsection (a); and

(C) an estimation of the cost and schedule of modernizing the websites and digital services prioritized under subparagraph (B).

21st Century IDEA states in section 3(d):

(d) PUBLIC REPORTING.—Not later than 1 year after the date of enactment of this Act and every year thereafter for 4 years, the head of each executive agency shall—

(1) report annually to the Director on the progress of the executive agency in implementing the requirements described in this section for the previous year; and

(2) include the information described in paragraph (1) in a publicly available report that is required under another provision of law.

21st Century IDEA states in section 5:

Not later than 180 days after the date of the enactment of this Act, the head of each executive agency shall submit to the Director and the appropriate congressional committees a plan to accelerate the use of electronic signatures standards established under the Electronic Signatures in Global and National Commerce Act (15 U.S.C. 7001 et seq.).

II. Background

The [21st Century Integrated Digital Experience Act](#) (21st Century IDEA) (P.L. 115-336) requires the heads of all federal executive branch agencies to report annually (through 2023) to the Director of the Office of Management and Budget on the agency's progress towards the modernization of new or redesigned websites and digital services.

Sections 3(a) and 3(b) of the law define this modernization as requiring new or redesigned websites and digital services to:

- be accessible to individuals with disabilities in accordance with Section 508 of the Rehabilitation Act of 1973 (commonly called being “Section 508 compliant” or “Section 508 conformant”);
- have a consistent appearance;
- not overlap with or duplicate another agency website;
- contain an easily usable search function;
- provide an industry standard secure connection;
- be designed based on user needs determined by data-driven analysis;
- provide the option of a more customized digital experience; and
- be fully functional and usable on common mobile devices (commonly called being “mobile responsive”).

Section 3(e) requires that any website or digital service that is made available to the public after the date of enactment be in compliance with the website standards developed by the General Service Administration's (GSA's) Technology Transformation Services (TTS).

Section 3(b)(2) also requires a review of all existing agency websites or digital services and a prioritized list of websites or digital services to be modernized, along with a cost estimate for said modernization. This information was provided in the Department of Homeland Security's 2019 21st Century IDEA report and is [available on DHS.gov](#).

In addition to the website and digital service modernization requirements found in Section 3, Section 4 requires the identification and digitization of paper-based or in-person Government services, along with a regular review of public-facing applications and services to ensure that they are made available to the public in a digital format to the greatest extent practicable.

Section 5 requires a plan to accelerate the use of electronic signatures and Section 6 requires the alignment and coordination of internal and external customer experience programs. Finally, Section 7 requires that, to the extent practicable, all of this is done with an eye towards standardization, commonality, and coordination with other executive agencies to best enable future transitions to centralized shared services.

The information below details the efforts of the U.S. Department of Homeland Security (DHS) to modernize the agency's websites and digital services in 2022.

III. Website and Digital Service Modernization

Building on 2021 efforts, DHS continued the process of modernizing high-priority DHS public websites per the requirements of 21st Century IDEA in 2021. A large portion of this was aligning the Website Standards developed by the General Service Administration's (GSA's) Technology Transformation Services (TTS) with the existing DHS website standards, and then providing guidance and ensuring that public DHS websites followed the U.S. Web Design System (USWDS) maturity model. Many public DHS websites were already in compliance with Level 1 of the USWDS maturity model (Integrate Design Principles) since they followed the existing DHS website standards.

Efforts in 2022 continued to focus on the implementation of Level 2 (Follow User Experience Guidance) and Level 3 (use USWDS Code) of the maturity model, and since we were already on a development path to upgrade the content management system for the majority of our Tier 1 DHS public websites, we began working with our site owners to incorporate USWDS design elements as part of the continued Drupal Technical Rebuild from Drupal 8 to 9.

All in all, the following websites were launched or modernized/redeployed in 2022:

- <https://www.dhs.gov>*
U.S. Department of Homeland Security Headquarters
- <https://www.cbp.gov>*
U.S. Customs and Border Protection

* Indicates a primary / Tier 1 DHS public website

A. Accessibility

The 2015 DHS Public Web Strategic Plan required that all DHS public websites and digital services must meet [DHS Accessibility standards](#) prior to launch to the public. These standards are considerably more stringent than most other agencies as DHS continues to lead the US government in accessibility conformance. The DHS Accessibility standards also require Section 508 testing by a DHS Trusted Tester for every new or updated public-facing interface component prior to launch of a code update on a public website or digital service.

During 2022, DHS continued to work with Federal Chief Information Officers Council (CIOC) Accessibility Community of Practice (ACOP) to refine and expand standardized Section 508 conformance testing processes, including the recently updated Section 508 ICT Baseline for Web Accessibility Version 3.0.1.

DHS also continued to use a combination of manual and automated testing methods to monitor conformance to the Section 508 standards for websites and digital services. Accessibility improvements remained a focal point for the Department, evidenced by SiteImprove analytics enhancements, broken link reviews, and efforts concluding SiteImprove categories above the 80 percentiles. As an example:

- USCIS E-Verify: 4.7% improvement (from 79.3 to 84) in Site Accessibility (as scored by SiteImprove)
- FEMA launched a full redesign of the FEMA App in June to improve accessibility, look and feel, and services for disaster survivors. This was the biggest update to the app since it was first published in 2011.
- FLETC.gov made accessibility improvements surpassed 80 percentile benchmarks, including SiteImprove enhancements.

DHS also continued to refine the DHS Trusted Tester Conformance Test Process and provided training, examination, and Trusted Tester certification to promote consistent use.

B. Authoritative

The DHS Office of Public Affairs requires that all public-facing DHS public websites and digital services follow the requirements outlined in the Information Quality Act and OMB's M-19-15, ensuring that information found on DHS public websites and digital services follows guidelines that ensure the quality, utility, objectivity, and integrity of information provided.

The DHS Office of Public Affairs also developed a comprehensive site review checklist to ensure that a new or redesigned website or digital service meets all known DHS and US government requirements before launch, including those in 21st Century IDEA. This checklist is also provided to the office/component before the start of development so all requirements are known before work begins.

DHS has also undertaken several initiatives over the past 15 years to ensure that DHS websites do not overlap or duplicate existing websites, including a process for evaluating and consolidating websites, maintaining a list of all active and retired DHS domains, and requiring that all content on a public-facing website be proactively published by a US government employee.

C. Searchable

All DHS public websites provide search functionality, either using GSA's USA Search program or other commercially available solutions. The DHS Office of the Chief Information Officer (OCIO) is also continuously evaluating additional service offerings as further options for public-facing websites and digital services.

Public-facing DHS digital services use search functionality when appropriate and if it would be beneficial for the overall customer experience of the service.

D. Secure

All DHS websites and digital services meet OMB's requirements for the use of secure connections (HTTPS), automatic redirection from HTTP to HTTPS, and use of HTTP Strict Transport Security (HSTS), including preloading. DHS also uses an edge content delivery

network (CDN) to ensure security and availability of our public-facing websites and digital services.

E. User-Centered

The DHS Public Web Strategic Plan, first issued in 2015, identifies a “customer-first” approach that has been the cornerstone of DHS public websites and digital services for the past 8 years, focusing on improved content, usability, reliability, presentation, and services that better meet the public’s need as measured by metrics and direct customer feedback. Content is selected and organized to help the public accomplish their tasks (by topic vs. organizational structure) and aims to ensure that the content the public is looking for is easy to find, easy to read/digest, and easy for them to act upon.

DHS also requires that all public-facing websites and digital services be evaluated against the US Web Design System maturity model as outlined in the Website Standards provided by GSA’s Technology Transformation Services.

2022 had a surge in concurrent efforts to improve the user experience of entire sites or a high-traffic section of a site by High Impact Service Providers, like USCIS, invested substantially in user research and began a redesign of the main USCIS website. Efforts were made across the Department to make sites mobile-responsive or improve mobile performance.

In March 2022, DHS.gov underwent a usability study with Mercer University; evaluating the new DHS.gov on three fronts: overall usability, mobile usability, and specific experience of the top 10 pages. The results of their usability testing showed significant and demonstrable improvement for all test criteria with the new site over the old site.

F. Mobile-Friendly

The 2015 DHS Public Web Strategic Plan required that all DHS public websites and digital services be mobile-friendly/responsive and all are tested on multiple platforms and resolutions before launch to the public (and on an ongoing basis per development cycle). The following public websites or digital services also made marked improvements to their mobile responsiveness in 2022:

- <https://www.dhs.gov>
Tier 1 | U.S. Department of Homeland Security Headquarters
- <https://www.cisa.gov>
Tier 1 | Cybersecurity and Infrastructure Security Agency (CISA)
- <https://www.uscis.gov>
Tier 1 | U.S. Citizenship and Immigration Services (USCIS)
- <https://www.cbp.gov>
Tier 1 | U.S. Customs and Border Protection (CBP)
- <https://help.cbp.gov>
Tier 2 | U.S. Customs and Border Protection (CBP)

IV. Digitization of Government Services and Forms

As required in Section 3(a) and 4(b), DHS and its components regularly review their public facing websites and digital services to ensure that those applications that include forms are made available to the public in digital format to the greatest extent practicable.

In 2022, USCIS spent considerable effort to transform existing paper (or basic PDF) forms into digital services:

- I-134A | Online Request to be a Supporter and Declaration of Financial Support
Supporting Ukrainians or their immediate family members; Cuban, Haitian, Nicaraguan, or Venezuelans or their immediate family members; and/or Columbian, Cuban, Ecuadorian, Guatemalan, Haitian, Honduran, or Salvadorans or their immediate family members as part of the family reunification process
- I-765 | Application for Employment Authorization
Certain noncitizens who are in the United States may file Form I-765 to request an Employment Authorization Document (EAD). Other noncitizens whose immigration status authorizes them to work in the United States without restrictions may also use Form I-765 to apply for an EAD that shows such authorization.

In 2021, DHS began deploying public-facing Customer Relationship Management (CRM) software to accelerate the digitization of forms and also provide automated workflows within the department to speed processing. In 2022, the following DHS components implemented CRM solutions:

- U.S. Department of Homeland Security Headquarters
- U.S. Citizenship and Immigration Services
- U.S. Customs and Border Protection

V. Accelerating the Use of Electronic Signatures

As required in Section 5, DHS developed a plan and subsequent guidance to accelerate the use of electronic signatures established under the Electronic Signatures in Global and National Commerce Act (15 U.S.C. 7001 et seq.). Released on March 21, 2022 as part of [DHS Policy Directive 4300A](#) (Information Technology System Security Program, Sensitive Systems), the [Electronic Signature Use, Acceptance, and Implementation Guidance](#) requires that DHS and its components use electronic signature collection methods whenever it is practicable, except where handwritten signatures are required by law, regulation, Executive Order, or other requirement.

The guidance also dictates that, where applicable, an electronic signature should also contain a means for a signer to indicate they are using a translator to understand the content.

VI. Customer Experience and Digital Service Delivery

A. Identifying Customer Needs and Expectations

On DHS public websites and digital services, DHS currently uses a mix of qualitative and quantitative metrics to evaluate the customer satisfaction and identify customer needs/expectations of any given website or digital services. For public websites, site-wide and page-level survey tools are used to evaluate customer satisfaction over time, and quality assurance tools are used to ensure usability, readability, and information quality.

DHS also uses focused usability studies to evaluate customer needs and expectations on high impact/traffic websites and digital services. Beginning in 2016, DHS has partnered with Mercer University's School of Engineering, Department of Technical Communication to perform small audience, in-person usability studies on focused areas of DHS websites and digital services. In addition, programs often do their own user research and usability testing of products and services.

In March 2022, DHS.gov underwent a usability study with Mercer University; evaluating the new DHS.gov on three fronts: overall usability, mobile usability, and specific experience of the top 10 pages. The results of their usability testing showed significant and demonstrable improvement for all test criteria with the new site over the old site.

B. Digital Service Delivery and Shared Services

Established in 2012, DHS Web Content Management as-a-Service (WCMAaaS) is a shared services platform which hosts 22 websites built on a FedRAMP-compliant cloud hosting platform.

The DHS Enterprise Content Delivery as-a-Service (ECDaaS), which leverages a content delivery network (CDN), provides website security and delivery services to the sites hosted on the WCMAaaS platform and over 450 other DHS websites and digital services hosted outside the WCM hosting platform. 55 websites/digital services were integrated in 2021 and 69 were integrated in 2022.

In 2021, DHS began deploying public-facing Customer Relationship Management (CRM) software to accelerate the digitization of forms and provide automated workflows within the department to speed processing. DHS is currently using CRM solutions provided and centrally hosted by several companies.

VII. Standardization and Coordination

DHS coordinates both internally (between DHS headquarters and operational components) and externally with other federal agencies to encourage standardization with an eye towards use of shared services.

C. Internal Coordination

The DHS Public Web Council, established in 2011, coordinates department-wide policy and governance for all DHS public-facing websites and digital services. The Council is chaired by the Director of Web Communications in the DHS Office of Public Affairs and has both Public Affairs and Information Technology representation from all operational DHS components. The goals of the Council generally align with the goals of 21st Century IDEA, and are to:

- Unify and simplify web systems at DHS by consolidating component sites, integrating stove-piped programmatic sites, and eliminating duplicative sites.
- Identify and promote best practices for effective, customer-focused content management throughout the Department.
- Identify and research new technology and propose pilot tests to evaluate their possible adoption by the department.
- Provide a forum for web and digital managers to share skills, knowledge, best practices, ideas and solutions.
- Provide DHS leadership with an accurate accounting of the scope of all component public-facing websites and extranets and the technology and resources supporting them, along with financial and operational transparencies, including usage metrics.
- Provide DHS with a cross-component forum to address high-level web policy issues that affect all DHS components.
- Promote cross-agency collaboration through information and resource sharing.
- Communicate our successes and challenges with stakeholders, to bring greater recognition and support for our work and the DHS web community.

The DHS Director of Web Communications, working with DHS Public Web Council, sets the requirements and policy for DHS public websites and digital services (including those related to modernization and others found in 21st Century IDEA) and then uses the DHS Public Web Council to coordinate implementation across all public DHS websites and digital services – both at headquarters and DHS components.

D. External Collaboration

DHS frequently consults, coordinates, and collaborates with other federal agencies to share best practices and establish as much standardization and commonality as possible in implementing the requirements of 21st Century IDEA.

At a staff and executive level, DHS participates in all [Digital.gov Communities of Practice](#) coordinated by GSA's Technology Transformation Services, including (but not limited to) the Web Content Managers Forum, Plain Language, Social Media, User Experience, Web Analytics, Open Data, and Artificial Intelligence.

The DHS Director of Web Communications has also been the co-chair of the [Federal Web Council](#) since 2016 and, in the absence of implementation guidance provided by OMB, has been instrumental in the government-wide coordination of 21st Century IDEA requirements. The DHS

Director of Web Communications worked directly with GSA's Technology Transformation Services (TTS) to establish and maintain the website standards found on [USWDS: The United States Web Design System](#) as well as the [checklist of requirements for federal websites and digital services](#) found on Digital.gov, and then helped lead the government-wide implementation of these standards and requirements.

VIII. Conclusion

Over the past four years, considerable progress has been made at DHS towards modernizing its websites and digital services. The DHS Enterprise Web Council, made up of representatives from the Office of Public Affairs and the Office of the Chief Information Officer for both headquarters and each DHS operational component, will continue to spearhead this effort.

Leveraging the latest technology and customer experience guidance, DHS will continue to execute the requirements of 21st Century IDEA for years to come to provide the public with an ever improving and exemplary digital experience.