# Technology Accessibility Playbook
*How to build an effective Section 508 Program*

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# Introduction

## Intended audience

US Federal Government CIO and CAO offices, and Agency Section 508 Program Managers.

## Our Challenge

The American people expect to interact with government through technology such as websites, mobile applications, kiosks and other electronic channels.  In order to ensure equal access to government policies and programs, government technology must be accessible to people with disabilities and conform to the Section 508 standards.   Today, too many of our digital services and technology solutions are not accessible to disabled members of the public or the disabled employees who support them.

## Purpose

The Technology Accessibility Playbook provides a framework for the integration of strategic, business and technology management to ensure US Federal Government technology is accessible for people with disabilities.   The Playbook contains twelve key "plays" drawn from successful practices in the government and private sector.   The plays are listed in the order they should be considered; however all the plays are interdependent.   Maturing a Section 508 Program requires an iterative approach to implementing the plays across an agency.

Numerous benefits will accrue from implementing this framework:
o  Education and awareness of what is needed to build and manage effective agency Section 508 Programs,
o  Strategic planning for increased agency Section 508 compliance and effective management of information technology,
o  Expanded access to Federal government digital services by disabled citizens,
o  Increased diversity of federal workforce enabled through inclusive technology.

This Playbook also provides guidance to ensure digital services informed by the US Digital Services Playbook, and the US Web Design Standards are accessible to disabled citizens, and technology acquisitions informed by the TechFAR Playbook include the necessary steps to ensure compliance with Section 508.

## What is Section 508?

Section 508 of the Rehabilitation Act (29 U.S.C. 794d), as amended in 1998, is a federal law that requires agencies to provide individuals with disabilities equal access to electronic information and data comparable to those who do not have disabilities, unless an undue burden would be imposed on the agency.

The Section 508 standards are the technical requirements and criteria used to measure conformance within this law. More information on Section 508 and the technical standards can be found at Section508.gov.

The Section 508 law is broad in scope, applying to all technology the federal government buys, builds, maintains, and uses.  Non-compliance can result in time consuming and costly lawsuits, delayed implementation of key IT investment priorities, and damage to public missions or image.

## Technology Accessibility Plays

# Play 1:  Establish a Section 508 Program Manager to lead compliance efforts

Achieving Section 508 compliance requires a comprehensive, programmatic approach to managing compliance activities throughout an agency.  The scope of agency technology dependence is broad and continuously growing.   Agencies need a well-qualified Section 508 Program Manager[1] who has the ability, visibility, and authority to lead agency compliance activities to ensure digital services and technology solutions are accessible to disabled users.

## Key Questions

o   Does your Section 508 Program Manager have the necessary knowledge, skills and experience to lead an agency-wide accessibility compliance program? (see below for more details)

o   Have you assigned your Section 508 Program Manager to a position of authority sufficient to manage legal compliance risk on behalf of the agency?

o   Does your Section 508 Program Manager have the support of the Chief Information Officer and the Chief Acquisition Officer, and visibility within the agency, to serve as the principal authority on Section 508 compliance matters?

## Checklist

o   At a minimum, an effective Agency Section 508 Program Manager:
   - Has the program management expertise to lead a complex agency-wide initiative,
   - Understands how Section 508 and related accessibility laws, regulations, and standards apply to the procurement, development, maintenance and use of electronic and information technology,
   - Leads compliance management activities for all agency digital services and technology covered under the Section 508 law,
   - Assesses the maturity of the existing Section 508 program, develops goals and an action plan, and obtains support to improve the program's maturity,
   - Leads efforts to establish Section 508 compliance policies and processes,
   - Leads efforts to address compliance requirements in design, acquisition, development, and maintenance life cycles and processes,
   - Leads efforts to address compliance requirements and into the agency's enterprise architecture,
   - Ensures Section 508 conformance claims are validated using expert review and testing,
   - Leads program governance and oversight,
   - Measures and reports on the effectiveness of compliance program activities, and

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[1] *This role has previously been referred to as a 508 coordinator, although the program manager title more accurately reflects the role's scope and the level of responsibility.*

- Coordinates training and outreach to inform and build support with program stakeholders.

o Section 508 Program Managers cannot implement accessibility strategies alone. They need partners across the agency to assist them. An effective Agency Section 508 Program Manager is a strategic partner who collaborates with:
   - Technology providers and development teams,
   - Operations and service delivery components,
   - Acquisition teams,
   - Civil rights and reasonable accommodation officials,
   - Human resource staff,
   - Communications and training groups,
   - Legal staff, and
   - Other federal Section 508 Program Managers.

o While inclusive access to federal digital services and technology is a Federal law and a government-wide priority, key decision makers may not understand the business case for supporting universal access. To be effective, an Agency Section 508 Program Manager also needs to be a champion who:
   - Understands the needs of disabled individuals,
   - Can effectively communicate the needs of disabled individuals,
   - Actively promotes the benefits of accessible technology,
   - Advocates and negotiates for improving accessibility, and
   - Encourages professional development and recognition of accessibility professionals.

o Section 508 compliance activities will likely affect a broad range of existing processes and work habits. To be effective at introducing activities to ensure technology is accessible, an Agency Section 508 Program Manager must help individuals transition to new ways of delivering technology. Therefore, a Section 508 Program Manager must be a change agent who:
   - Understands how to manage change for an agency-wide initiative, and
   - Supports agency components through the change process in order to achieve widespread adoption and effective compliance implementation.

## Resources

Section 508 Leadership Core Competencies recommended by the CIO Council Accessibility Committee

Strategic Plan: Improving Management of Section 508 of the Rehabilitation Act

# Play 2: Assess your Section 508 program maturity

Some agencies have not established a formal Section 508 compliance program.  Other agencies are just beginning to establish a Section 508 program, and they need to establish policies, procedures, training and communications to build awareness of what is required and who is responsible for addressing compliance needs.  Agencies further along may have dedicated resources to perform testing to validate Section 508 conformance claims, but do not have a systematic approach to perform testing.  Mature agencies demonstrate the ability to measure and monitor conformance to policies and actual compliance levels, and they use data to drive decision making to improve the effectiveness of their overall Section 508 program.  Section 508 activities appropriate for mature organizations may not be appropriate for less mature organizations that do not have an adequate foundation to build upon.  Therefore, an assessment of your agency's Section 508 program maturity is essential to gauge where you are, and to determine what steps are necessary to improve your program.

## Key Questions

o   What is the current maturity of your agency's Section 508 compliance program?

o   How is your program's maturity enabling or inhibiting your agency's ability to provide accessible digital services and technology solutions?

## Section 508 Program Maturity Levels

In the Government-wide Section 508 Strategic Plan, OMB requires agencies to assess their Section 508 program maturity using the following criteria:

o   Ad Hoc: No formal policies, processes, or procedures defined.

> Your agency has not established a framework for the consistent management of Section 508 compliance requirements for the technology it buys, builds maintains and uses.

o   Planned: Policies, processes, and procedures defined and communicated.

> Your agency's approach to ensuring technology is Section 508 compliant is defined and integrated into its policies and procedures.   Section 508 policies and procedures sufficiently address all technology your agency buys, builds maintains and uses, as scoped by the Section 508 standards.

o   Resourced: Resources committed and/or staff trained to implement policies, processes, and procedures.

> Your agency's leadership and staff understand and support the Section 508 policies and procedures, and know how to implement them.   Your agency has dedicated sufficient resources to implement your Section 508 policies and procedures.

o   Measured: Validation is performed; results are measured and tracked.

> Your agency tests and validates agency digital services and technology solutions to ensure they conform to the Section 508 standards.  You are able to determine whether your policies and procedures are actually being followed.  You measure the effectiveness of your Section 508

policies and procedures, and are able to use your measures to manage risk and prioritize opportunities for improving your compliance program.

## Section 508 Program Maturity Domains

In the Government-wide Section 508 Strategic Plan, OMB requires agencies to assess their Section 508 program maturity in each of the following domains:

o   Acquisition:  Conduct validation of procurement solicitations to ensure incorporation of Section 508 contract language into Statements of Work and Performance Work Statements.

   When purchasing technology, you must ensure the acquisition process addresses section 508 requirements.  Solicitation language must clearly state what standards apply to the digital service or technology solution, and require potential vendors to demonstrate they can meet the requirements.

o   Agency technology life cycles:  Conduct validation of Section 508 requirements to ensure incorporation into agency life cycle activities, including enterprise architecture, design, development, testing, deployment, and ongoing maintenance activities.

   Enterprise life cycles are used to define the end-to-end approach to approving, building, deploying, and supporting agency technology.  The least effective and most expensive approach to supporting compliance is to treat Section 508 requirements as an afterthought in response to test results, or worse in response to complaints from people with disabilities.  The most effective and least expensive approach is to consider Section 508 requirements at all stages of the enterprise life cycle.  This is analogous to the saying "it's cheaper and easier to use an eraser to modify an architectural drawing than a sledgehammer to tear down a wall."

o   Testing and Validation:  Testing and validation of Section 508 conformance claims.

   While a review of Voluntary Product Accessibility Templates (VPAT) provided by a vendor or contractor is a starting point, sometimes testing may be required to validate assertions of Section 508 compliance, to inform remediation planning, and to monitor agency progress with achieving Section 508 compliance.  In addition, testing may be required on an ongoing basis to validate the technology developed, maintained, and used by an agency is compliant with the applicable 508 standards as components are updated or replaced.

o   Complaint Management:  Track and resolve incoming Section 508 complaints.

   A clear process for addressing and tracking Section 508 complaints is necessary to provide for effective communication with complainants, to validate Section 508 non-compliance claims, to support an appropriate agency response aimed at minimizing legal exposure, costs, and loss of administrative time, and to serve as input into decisions related to resource and work planning.

o   Training:  Training for stakeholders on roles and responsibilities related to Section 508 compliance.

   Successful Section 508 programs rely on personnel with skills and expertise.  Relevant resources need to be identified and trained.  Mandatory training needs to be established and tracked.  This includes, but is not limited to, training for web and software developers, acquisition professionals, human resource employees and communications specialists.

## Basic Checklist

o   Evaluate how existing agency policies, practices, and procedures support each maturity area.
- Technology Processes: Technology Domains, Processes, Activities,
- Technology Resources: Applications, Information, Infrastructure, People, and
- Business Requirements: Effectiveness, Efficiency, Confidentiality, Integrity, Availability, Compliance, Reliability.

o   Identify strengths and weaknesses of the organization's current accessibility processes.

o   Review Section 508 compliance challenges raised in previous complaints.

o   Determine overall maturity level ratings using the OMB Agency Section 508 Reporting Template and instructions.

o   Use data from maturity assessments to inform the agency's response to the biennial Department of Justice Section 508 Survey.

## Advanced Checklist

o   Identify how the maturity of the current Section 508 program prepares you to transition to the new 508 standards.

o   Assess the maturity of the Section 508 Program Team's collaboration with offices that support:
- Internal technology design, development, configuration, deployment, and maintenance,
- Accommodations (Section 504 and 501),
- Equal Opportunity Office,
- Enterprise Architecture,
- Investment Management,
- Acquisition Management,
- Enterprise Life Cycle Governance,
- User Experience Design,
- Help Desk and Customer Support,
- Communications, Public Affairs, and Advocacy Group Outreach,
- Security & Privacy, and
- Legal.

## Resources

Strategic Plan: Improving Management of Section 508 of the Rehabilitation Act

Training - How to Measure Your Agency's 508 Program Training

Section 508 OMB Dashboard/Reporting Template

Section 508 OMB Dashboard/Reporting Template Instructions

Digital Service Contracting Professional Training and Development Program

IT Dashboard.gov for E-gov act accessibility related comments

Agile Governance reality or dream in the US and UK Governments? (includes OMB participation link to GAO Schedule Assessment Guide):

# Play 3: Develop a Section 508 Accessibility Roadmap

An effective agency Section 508 program can identify and manage risks, gain management support, and implement corrective changes to agency policies, processes, and technologies to ensure Section 508 compliance.  After you gauge the maturity of your Section 508 program (see previous play), develop a Section 508 Accessibility Roadmap to identify key agency activities and a phased approach to reach the next level of maturity.  An Accessibility Roadmap will help set goals and priorities, and provide a framework for sustained improvement.

## Key Questions

o   What are your Section 508 Program goals?  What are the key challenges and opportunities that need attention to strengthen the effectiveness of your Section 508 Program?

o   Do you have a comprehensive plan that addresses how you will improve the maturity of your Section 508 program, and the overall accessibility of your digital services and technology portfolio?

o   Does your plan address human capital and funding needs for Section 508 compliance activities, and support needed from other groups within the agency?

## Basic Checklist

o   Define your Section 508 Program challenges and opportunities:
- Identify technology that is and is not compliant with Section 508.
- Identify organizational challenges (policy, processes, training, tools, staffing, etc.).
- Identify transition challenges associated with adopting the upcoming 508 standards.

o   Develop an iterative plan to address priorities and gaps in policy, processes, tools and resources:
- With input from your program maturity assessment, define goals and priorities. (see Play 2)
- Define Section 508 program goals and priorities.
- Develop/refine your agency accessibility policy to establish authorities, roles, responsibilities, and expectations. (see Play 4)
- Establish a Section 508 Program Team. (see Play 5)
- Ensure Section 508 requirements and disabled user needs are addressed in technology requirements and design activities (see Play 7),
- Ensure accessibility requirements are properly included solicitations, and vendor product accessibility claims are validated  (see Play 8),
- Ensure developers and electronic content authors design and develop technology that conforms to the Section 508 standards (see Play 9),
- Ensure digital services and technology solutions are validated for conformance to the Section 508 standards (see Play 10),
- Track, prioritize and resolve accessibility issues and complaints (see Play 11).
- Identify and meet training and communications needs (see Play 12)

o   Assess the organization's readiness to adopt planned changes and develop an approach to build adoption for the plan.

o   Estimate and prioritize budget requirements.   Budget for key expenses, including Section 508 Program Team staff, as well as compliance testing and tracking tools.

- o Identify target milestones.

- o Communicate your plan to key stakeholders to get approval and support.

## Advanced Checklist

- o Define agency controls for ensuring policy requirements are addressed.
  - Determine what metrics you will use to track and monitor conformance to standards, policies, and procedures for ensuring Section 508 compliance.  (note: OMB established minimum mandatory metrics in the Agency Section 508 Dashboard/Reporting Template)
  - Develop an audit plan to verify conformance.

- o Define approved methods within your agency for implementing the Section 508 standards (example: use of the DHS trusted tester methodology for web accessibility validation).

- o Develop policy requirements for defining, budgeting, and implementing an alternative means for non-compliant solutions.

- o Develop a risk management process (risk planning, assessment, and reporting) to inform ongoing discussions with executive management regarding accessibility priorities.

- o Review and revise accessibility policy and standards to keep pace with regulatory, organizational, agency process, and technology changes.

- o Review existing agency technology roadmaps to assess your existing Section 508 Program's ability to support agency adoption of new and emerging technology.

## Resources

Section 508 OMB Dashboard/Reporting Template

# Play 4: Establish a Section 508 Policy

The cornerstone of an accessibility program is an agency-wide Section 508 policy. The policy must identify how the agency will manage accessibility compliance through technology acquisition, development, authoring, configuration, deployment, and maintenance activities. The policy must define clear roles and responsibilities. The policy must clarify the authorities and shared responsibility with other agency stakeholders for implementing Section 508 across the agency.

## Key Questions

o Do you have a Section 508 policy (or policies) that establish roles, responsibilities, and expectations to support a <u>sustainable</u> agency-wide approach to managing Section 508 compliance risk?

o What steps does your agency take to inform and equip agency stakeholders to follow your Section 508 policy(s)?

o What governance mechanisms do you use to ensure conformance with your Section 508 policy(s)?

o How often do you review and revise your Section 508 Policy(s) to keep pace with regulatory, organizational, and technology changes?

## Basic Checklist

o An effective Section 508 Policy will:
  - State the policy's purpose and the agency's commitments to ensuring equal access to information for people with disabilities,
  - Identify associated laws and regulations,
  - Identify how the Section 508 policy relates to other policies at the agency and department level, including technology, acquisition, and other accessibility policies related to the Rehabilitation Act,
  - Define authorities, roles, and responsibilities for all program stakeholders and participants,
  - Define how Section 508 exceptions are adjudicated and tracked through resolution,
  - Define minimum expectations for how Section 508 compliance will be addressed in acquisition, development, authoring, configuration, deployment and maintenance activities,
  - Define minimum expectations for when and how Section 508 conformance testing will be performed,
  - Define where stakeholders should go for Section 508 technical assistance,
  - Define how issues and complaints will be reported, assessed, tracked, resolved, and reported,
  - Define how governance will be used to ensure the policy is being followed (for example, independent reviews, non-compliance approvals. stage gates, and process audits),
  - Define how conformance with policy will be assessed, tracked and monitored, and
  - Define terminology to reduce misunderstanding,

o A Section 508 Policy should make it clear that Section 508 conformance and accessibility is a responsibility for all employees. For example:

- Program Managers must ensure that Requests for Proposals and Statements of Works call for Section 508 conformance in all digital service and technology deliverables.
- Procurement Officials must ensure that all digital service and technology procurements are evaluated for Section 508 conformance.
- IT Project Managers must ensure all digital services and technology solutions are designed and tested for Section 508 conformance.
- Developers must design and develop digital services with accessible user interfaces.

## Resources

Strategic Plan: Improving Management of Section 508 of the Rehabilitation Act

Best Practices: Agency-Wide Section 508 Policy

Best Practices: Internet Accessibility Policy

Example:  Department of Homeland Security Section 508 Directive

Example:  Veterans Administration Accessibility Policy

Example:  HHS Policy for Section 508

Example:  SSA Internet Accessibility Policy

Example:  Department of Justice Model Section 508 Complaint Process

# Play 5: Develop a Section 508 Program Team

We need talented people working in government who have expertise creating and delivering accessible digital services and technology. This includes bringing in seasoned project managers, acquisition professionals, testing and validation experts, compliance analysts, Section 508 Program teams, as well as training and communication professionals.   When outside help is needed, teams should work with requiring officers to ensure agency teams are paired with contractors who are good at both assessing and supporting Section 508 compliance activities.  The makeup and experience requirements of a Section 508 Program Team will vary depending on the size of the agency, the maturity of the compliance program, and the agency's use of digital services and technology solutions.

## Key Questions

o   Beyond the Section 508 Program Manager, do you have a Section 508 Program Team focused on providing technical assistance, compliance testing, issue management, and governance support?

o   Is your Section 508 Program Team able to provide technical assistance for the different types of digitals services and technology solutions developed, purchased, maintained, and used by your agency?

o   Does your Section 508 Program Team have the bandwidth to lead initiatives to advance program maturity, or does under-resourcing force it to operate in a reactive mode?

o   Do agency technology teams engage your Section 508 Program Team to provide accessibility expertise?   How does the agency know this accessibility/508 resource exists and the services it provides?

## Checklist

o   Team members should have experience with:
   - Leading project initiatives,
   - Establishing policies and procedures,
   - Measuring, monitoring, and reporting on performance goals,
   - Risk assessment, planning, and management,
   - Evaluating technical architectures for accessibility impacts,
   - Assessing and defining development and procurement activities to support 508 compliance,
   - Performing Section 508 governance activities,
   - Supports technology acquisition activities (preferably Requiring Official experience),
   - Evaluating, testing, and validating technology for 508 conformance (preferably with trusted tester certification),
   - Configuring and using 508 testing tools,
   - Developing and delivering training,
   - Communications planning and delivery,
   - Help desk support and complaint management,
   - Technology research, and
   - How assistive technologies work.

- o Team members should have in-depth knowledge of:
  - The Section 508 law and technical standards and how to apply them,
  - Interdependencies between Sections 508, 504 and 501 of the Rehabilitation Act, and
  - The Federal Acquisition Regulations (FAR).

## Resources

Section 508 standards

Trusted Tester Training and certification program

# Play 6: Collaborate with the federal accessibility community

A successful 508 Section Program should not be established in isolation. Active collaboration with your federal partners not only provides an opportunity to more accurately baseline your own program, but also enables your agency to leverage existing best practices and resources. This collaboration can lead to a more mature and comprehensive program.

## Key Questions

o Do you participate in interagency technology accessibility forums?

o How do you collaborate with the Section 508 Program Managers of other federal agencies to learn about and contribute to best practices?

o How has collaboration accelerated your Section 508 program's maturity and lowered implementation costs?

## Checklist

o Actively participate in the Chief Information Officer Council Accessibility Community of Practice (ACOP) and its subcommittees:
  - Assign an agency primary and secondary representative to the ACOP. The primary member should be a senior-level government manager who has the ability to issue and modify your agency's 508 policies and processes.
  - Actively discuss issues or concerns your agency is facing during ACOP meetings, which provide an open forum for federal agency collaboration.
  - Assign representatives to each of the ACOP's subcommittees: Best Practices Subcommittee, Education Subcommittee, and Vendor/Acquisition Outreach Subcommittee.
  - Use your participation in the ACOP subcommittees to tailor resources being developed to meet the needs of your agency and share your own best practices and training materials for use by others.

o Share information and data collected by your 508 Program with other agencies:
  - Share your biannual OMB-mandated 508 Program Maturity and Compliance reports with other agencies to identify valuable areas for collaboration.
  - Review data of other agencies to identify potential partners for joint efforts and contact those agencies to begin the discussion.

o Participate in interagency pilot programs:
  - Be an early adopter of interagency 508 programs and provide the necessary resources to implement the programs and provide feedback to improve the offerings based on your experiences.
  - Utilize standardized testing methodologies such as the Interagency Trusted Tester Program and make testing results available to other federal agencies.
  - Use other agencies' testing results obtained through the Interagency Trusted Tester Program methodologies.

- o  Include your 508 Program Manager as a key reviewer of draft interagency technology related acquisition policies and directives:
  - Share incoming requests for review of draft interagency directives and policies from OMB or GSA on anything related to IT with your Section 508 Program Manager and incorporate their feedback in the official agency response.
  - Insist your Section 508 Program Manager is included as a required reviewer of any interagency draft directives or policies related to acquisitions.

## Resources

Federal CIO Council Accessibility Community of Practice

Government-wide Section 508 Best Practices

Strategic Plan: Improving Management of Section 508 of the Rehabilitation Act

# Play 7: Integrate accessibility needs into requirements and design processes

We must begin technology projects by identifying the needs of people with disabilities who use and support the technology, and account for the ways the technology will fit into their lives.  We must understand their preferences and expectations for using our technology to ensure it works for all, not just some users.   These factors should not only inform technical and design decisions, but also IT investment, acquisition, development, and deployment.

## Key Questions

o   At project inception, what steps do you take to determine whether a planned digital service or technology solution will support inclusive access?

o   What steps do you take to validate the accessibility of design proposals with potential disabled users?

o   How do you incorporate accessibility requirements into acquisition and development activities?

## Basic Checklist

Prior to beginning a technology project, work with usability professionals and requirements analysts to:

o   Use a range of research methods to determine potential disabled users' goals, needs, preferences, and expectations.

o   Identify what types of interactions could be difficult for disabled users, including individuals who may have:
   • Vision difficulties or impairments,
   • Hearing difficulties or impairments,
   • Speech difficulties or impairments,
   • Physical limitations or impairments, and
   • Cognitive impairments such as reading difficulties, learning challenges, or simply difficulty processing complex information.

o   Identify approaches that could lower or remove user interaction barriers.

o   Identify the applicable Section 508 standards for each component of a technology solution, including:
   • The device(s) used to access agency content,
   • The software used to run the device,
   • The electronic content provided through or produced by the solution,
   • The software used to view, interact and navigate through the electronic content, and
   • The training and documentation provided on how to configure and use the product.

- Factor Section 508 requirements, and any additional requirements necessary to address disabled user needs, into decisions regarding what technology approach will best meet agency needs (note – this is before the acquisition or development phase).

- When possible, create a proof-of-concepts or prototypes to validate potential technology approaches with representative disabled users (in the field if possible).   Utilize test findings to refine approaches and design alternatives.  Refine and retest with disabled users to verify improvements in user access as needed.

- Finalize the accessibility requirements for the chosen solution approach, including all applicable Section 508 requirements and additional requirements necessary to address disabled user needs).

- Incorporate the accessibility requirements into acquisition efforts (see Play 8).

- Incorporate the accessibility requirements into development efforts (see Play 9).

## Resources

Accessibility Basics

Measuring Accessibility In The User Experience (UX) And The Searcher Experience

Introduction to Screen Readers

# Play 8: Integrate accessibility needs into market research and acquisition processes

The following play identifies how to ensure accessibility needs are identified and addressed in the planning, requirements gathering, research, evaluation, and acceptance components of the acquisition process.

## Key Questions

o How does your agency ensure Section 508 legal compliance requirements are properly included in solicitation language?

o What steps does your agency take to validate Section 508 conformance claims?  Is the level of due diligence adequate to mitigate the potential compliance risk?

o How does your agency ensure it supports legal obligations to purchase digital services and technology solutions that "meet or best meets" the Section 508 requirements.

## Basic Checklist

### General Preparation:

o Study the FAR, particularly parts that specifically address 508 (Sections 10, 11, 12.2, and 39.2).

o Identify and understand your agency's acquisition policies and procedures used to acquire technology.

o Determine if adequate consideration of Section 508 Standards is already included in these policies and procedures – if not work with the appropriate stakeholders to change this.

o Develop criteria for when and how accessibility and Section 508 requirements, exceptions, terms and conditions, evaluation methods, acceptance criteria, and related proposal response requirements are included in solicitations.
- Ensure Contracting Officers know what to expect from the Requiring Officials related to Section 508 requirements.
- Ensure the Requiring Office includes the appropriate accessibility requirements in the solicitation language.
- Ensure Requiring Officials know when and who to contact for accessibility guidance.

o Establish a formal Section 508 compliance determination process.  Use the process to document compliance decisions. Support decisions with relevant Section 508 artifacts (Market Research, VPATs, Section 508 Exceptions, test results, and "best meets" determinations.)
- Provide for independent expert reviews of Section 508 exception and vendor accessibility claims prior to award.
- Use a risk based model to determine when independent testing is required to validate vendor conformance claims.
- Provide authority to the Section 508 Program Team to stop any contract or application that puts the agency at significant risk.

o   Create a governance process to ensure Section 508 conformance is an evaluation factor in award decisions.

o   Provide a process to track and monitor accessibility assurance activities and Section 508 compliance determinations for all agency technology procurements.

o   Develop a process for planning and implementing an "alternative means" when a fully accessible solution is not procured.

<u>For each technology procurement:</u>

o   Work with Program Managers or Requiring Officials to define, review, and approve determinations of applicable Section 508 standards and/or exceptions when they apply.

o   Consider accessibility needs in market research.

o   Draft Section 508 contract language and accessibility terms and conditions when needed.  Refer to Play 7 for information on defining applicable Section 508 standards and additional requirements needed to address access by individuals with disabilities).

o   Ensure contract evaluation plans include accessibility, and define the Section 508 subject matter expert role on the Technical Evaluation Panel.

o   Require vendors to provide detailed responses to accessibility requirements in the Statement of Work.

o   Validate Section 508 accessibility conformance claims in bid proposals through expert review or testing.

- If another agency claims a product is Section 508 conformant, ask if the agency used Section 508 test processes endorsed by the CIO Council Accessibility Community of Practice, and where applicable using testers certified through the DHS trusted tester program.  If these conditions are met, consider accepting the other agency's Section 508 determination to streamline the evaluation process.
- Validate vendor Section 508 conformance claims through expert analysis.  Example documentation for conformance claims includes Voluntary Product Accessibility Templates (VPATs) Government Product Accessibility Templates (GPATs) for conformance.
- When testing is warranted, perform testing prior to award for commercially available digital services and technology solutions, and prior to deployment for solutions that are developed, customized, and/or integrated with other technology components post award.  For more information on testing, see play 10.

o   Provide documentation of Section 508 conformance claims, expert analysis and test findings to the Contracting Official.

o   Ensure Section 508 requirements are addressed in award decisions.  If no product(s) fully meets the applicable Section 508 standards, document which product(s) "best meet" the applicable Section 508 standards[2].

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[2] According to the Section 508 standards, part 1194.2, "(b) When procuring a product, each agency shall procure products which comply with the provisions in this part when such products are available in the commercial marketplace or when such products are developed in response to a Government solicitation.  Agencies cannot claim a product as a whole is not commercially available because no product in the marketplace meets all the standards.

- Conduct an alternative means assessment when purchased products do not meet standards.

- Ensure post-award contract acceptance activities established in the solicitation are followed.

- Develop and track the provision of an alternative means or remediation/accommodation plan when a fully accessible solution is not procured.

## Advanced Checklist

- Provide contract language to ensure penalties are applied when accessibility standards are not met, or require remediation at contractor expense.

- Establish language and processes for Blanket Purchase agreements and other Task Order-based vehicles.

- Establish processes for assessing the maturity of vendor's accessibility program during market research and proposal evaluations.

- Conduct post procurement reviews and audits to validate conformance to accessibility procedures and use data to improve the procurement process for accessible products.

- Engage in vendor outreach through the CIO Council Accessibility Community of Practice.

- Engage peers in the Section 508 community regarding other agencies' experiences with the product or vendor.

## Resources

Section 508 Standards

Federal Government Section 508 Portal

OMB Government-wide Section 508 Strategic Plan

Section 508 and the Federal Acquisition Regulations (FAR)

GSA's Guidance on Creating Section 508 Compliant Solicitations

GSA's Guidance on Acquisition for Accessible EIT

Section 508 test processes recommended by the CIO Council Accessibility Best Practices Committee

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If products are commercially available that meet some but not all of the standards, the agency must procure the product that best meets the standards."

# Play 9: Integrate accessibility needs into development processes

Regardless of whether you use contractors or agency staff to develop digital services and technology, Section 508 compliance needs to be addressed.   Whether using waterfall, agile, or any other development approach, achievement of Section 508 compliance is dependent upon your ability to incorporate accessibility needs from the very beginning of the development effort (conceptualization and planning) and on through design, development, testing, deployment, continuous enhancements, and maintenance activities.  Failure to consider Section 508 compliance throughout development will likely relegate 508 conformance considerations to the end of the project, when it costs the most to fix accessibility problems.

## Key Questions

o   How does your agency incorporate Section 508 requirements into your development processes (life cycles) used to design, develop, deploy and maintain digital services and technology solutions?

o   When using agile processes, how do you ensure Section 508 compliance is addressed in each Sprint?

o   How do you train and equip developers to ensure Section 508 compliance?

## Checklist

o   Address accessibility needs in project planning:
   - Consider accessibility needs investment management and enterprise architecture decisions.
   - Determine if development platforms, tools, hosting environments, and electronic content viewers could potentially create accessibility barriers for disabled users.
   - Allocate funding to address accessibility assurance activities.
   - Allocate time in your project schedule to allow for Section 508 planning design, testing and remediation.

o   Address accessibility needs during requirements gathering and design (see Play 8 for more information):
   - Conduct user centered design activities to identify disabled user needs.
   - Identify applicable Section 508 standards for solution features and electronic content.
   - Factor accessibility needs into solution design and alternatives assessments.
   - Address disabled user needs and applicable Section 508 standards in initial design, pilot and proof of concept efforts.
   - Address pre-existing accessibility issues when prioritizing technology enhancements.
   - Validate solution designs and prototypes with disabled users.
   - When using agile methods, ensure Section 508 conformance requirements are included in the "definition of done" for user stories that support development of a user interface/feature.   If you do not factor a Section 508 conformance assessment into the determination of when each development sprint is complete, accessibility barriers may slip through and compound over time.

o   Address accessibility needs during development:

- Train developers to understand the rationale and importance of Section 508 standards conformance and inclusive access.
- Provide Section 508 compliance testing tools to assist developers with performing unit testing, and provide training on how to use these tools to generate accessible solutions.
- Encourage the use of accessible code libraries.
- When using open source development platforms ensure responsibility for fixing accessibility issues is clearly determined.

o Address accessibility needs during testing (see play 10 for more information):
- Determine what accessibility testing methods you will use (recommend using test processes endorsed by the Federal CIO Council Accessibility Community of Practice)
- When using agile methods, ensure accessibility requirements are validated in unit tests.
- Identify where accessibility issues are located, and troubleshoot potential root causes.
- Implement processes and tools to track accessibility bug fixes and their resolution status.

o During deployment and maintenance:
- Ensure configuration and integration activities do not introduce new accessibility barriers.
- Monitor and validate updates to the technology solution to ensure they will not negatively affect accessibility.
- Monitor and validate changes to the technology environment will not negatively affect accessibility (operating system, browser, hosting platform, etc.).

o Include IT accessibility subject matter experts as authoritative decision makers at critical development checkpoints.

## Resources

Section 508 Standards

Best Practice – Integrating Section 508 into the IT Development Life Cycle

# Play 10: Conduct Section 508 testing

While an expert review of Section 508 conformance claims may provide an indication of accessibility, rigorous testing is required to validate these claims. Section 508 conformance is complex.  Vendors and development teams may not fully understand what conformance requires.  Therefore, testing is needed to reduce the risk of unknowingly implementing inaccessible technology.   Testing needs to be performed regardless of the source, including commercial-off-the-shelf, open source, or custom built technology by your agency, a vendor, or another agency.  You can use automated testing tools to augment validation efforts; however, by themselves automated tools can only provide partial coverage of the Section 508 standards.  In order to validate full conformance, hands-on testing using a repeatable, systematic testing methodology is needed.  In addition, you can use informal reviews by Section 508 experts throughout the development process to identify potential issues before the technology is ready for full Section 508 conformance testing.

Many individuals who are interested in testing to validate the conformance of a given technology solution, and who are new to utilizing the Section 508 technical requirements, mistakenly believe that the use of assistive technology such as screen readers, voice input software, and screen magnification software, provide the best scenarios for determining conformance with the Section 508 technical standards.  This is not the case, as these technologies often provide special scripts, routines, and other hacks to compensate for non-conformant technologies, and they are not a true measure of actual conformance of code with the technical requirements of Section 508.  They are excellent tools for determining usability, but should not be used as the sole means of determining conformance of any digital service or technology solution under Section 508.

## Key Questions:

o   Prior to deployment, how do you incorporate the use of Section 508 testing tools to inspect, validate digital services and technology for Section 508 compliance?  After deployment, how do you monitor conformance when components change or are updated?

o   When using agile processes, how do you ensure user stories are validated for Section 508 compliance in each sprint?

o   How do you inform and equip developers and accessibility testers to conduct Section 508 compliance testing?

## Basic Checklist

o   Obtain management support to establish Section 508 compliance testing as a requirement prior to deployment.

o   Promote and use a consistent, repeatable, validated testing approach based on a well-defined set of Section 508 test standards, approved testing tools, and documentation processes. (see resources section).

o   Assess your agency's current approach(s) to:
   - Validate technology prior to deployment (electronic content, software, hardware, closed systems, hardware, telecomm),

- Conduct accessibility testing (when is it performed, by whom, and for what type(s) of technology), and
- Conduct accessibility audits using manual inspection and automated tools.

o Develop accessibility testing policy/procedures that define:
- When accessibility testing is required (recommend prior to deployment),
- Who is qualified to perform accessibility testing (recommend obtaining DHS trusted tester certification for web and software developers),
- The roles of responsibilities of project teams, testers, and the Section 508 Accessibility Program Team,
- How accessibility test planning will be conducted,
- How the testing environment will be configured,
- What accessibility testing tools will be approved for use,
- What accessibility testing methodologies/methods will be approved for use (example:  CIO Council Accessibility Community of Practice endorsed testing methodologies, such as the trusted tester methodology), and
- How testing results will be tracked and monitored.

o Determine approach to using tools to support testing, including:
- Section 508 testing tools to assist with unit testing,
- Audit tools capable of scanning large volumes of electronic content for Section 508 compliance,
- Tools to track, report, and monitor testing activities and results.

o Develop or obtain Section 508 testing expertise:
- Determine whether the testers will be centralized or decentralized.
- Identify training needs and, where warranted, certification procedures for individuals who will perform accessibility testing.
- Develop a cadre of vetted accessibility testers and technical support resources.

## Advanced Checklist

o Establish risk levels to determine the appropriate level of effort in 508 testing.

o Report Section 508 compliance results at the program, project, and organization level to your agency's senior leadership team.

o Audit test activities to ensure agency employees follow accessibility testing policy and procedures and to identify areas for improvement in the testing process.

o Incorporate Section 508 compliance testing and monitoring into continuous development environments.

## Resources

Section 508 Standards

Section 508 test processes recommended by the CIO Council Accessibility Best Practices Committee

Manifesto for Agile Software Development

ISTQB Software Testing Certification

# Play 11: Track and resolve accessibility issues

Play 10 describes how to test and validate Section 508 conformance. Testing will produce a list of issues that need to be tracked, prioritized, and resolved over the long term. End users may also report technology accessibility issues that need to be assessed, tracked, prioritized, and resolved. Regardless of the source of the problem, the resolution may pose a cost to the agency. If the issue is non-conformance with Section 508, the agency has to guard against perpetuating the error in future upgrades and procurements.

## Key Questions

o How does your agency identify and track technology accessibility issues from initial report through resolution?

o What process do you use to categorize, prioritize, troubleshoot, and identify root causes of accessibility issues?

o Do you have a well-defined policy to handle Section 508 complaints that supports the Department of Justice's Model Section 508 Complaint Policy?

## Basic Checklist

o Develop a process to track and monitor accessibility:
- For internal projects and software development, assess your bug tracking system for suitability in tracking accessibility issues.
- Assess your current Help Desk suitability for tracking and resolving accessibility issues reported by end-users.
- Train Help Desk staff to recognize accessibility issues and alert the Section 508 Team.

o Develop a process to assess and troubleshoot the issue:
- Is the problem caused by the technology product, third party components used by the product, the operating environment the product is deployed in, the assistive technology used to access the product, or some other source?
- Is the problem caused by a lack of training or communications?
- Is the problem caused by a usability issue?
- Is the problem caused by non-compliance with the Section 508 standards?

o Develop a process to categorize accessibility issues. For example:
- Issues resulting from legal complaints/actions: These items require formal, careful, expedited handling by the 508 Program Team, the IT department, general counsel, and possibly external Federal entities (DOJ, GSA, etc.).
- Technical compliance issues identified through testing or informal user reports: These items need to be addressed through risk mitigation processes.
- Deployment issues resulting from how, where and when IT services and technology are provided.

o Develop a process to prioritize issues. For example:
- Critical issues may prevent an end user from accessing or using the technology.

- Major issues may make it extremely difficult, but not impossible, for an end user to ensure access or use the technology.
- Minor issues do not materially affect the use of the product, but may represent a technical defect.

- o Develop an escalation process to address the need for correction action based on risk and impact on end users.

- o Develop a process to evaluate, select, and track corrective action plans.

- o Develop and implement a process for managing 508 complaints.
  - Utilize guidance provided by the Department of Justice to develop an agency Section 508 Complaint Policy based on your agency's 504 Complaint Policy.
  - Ensure easy means are in place for persons with disabilities to comment on accessibility without filing a formal complaint.
  - Review the current agency Section 504 complaint policy and procedures.  Note, accommodations may be appropriate even when ICT meets the 508 accessibility requirements.

## Advanced Checklist

- o Establish a help desk dedicated to addressing accessibility issues, staffed by individuals specially trained to troubleshoot accessibility issues.

- o Develop a reporting capability to aggregate and analyze accessibility issues.

- o Assure Section 508 complaint data is used to identify areas of improvement in the agency's use of technology, as well as its application of the agency Section 508 Policy.

## Resources

For Help Desk, Freedom Scientific popular screen reader

For Help Desk, Ai Squared popular screen magnification

# Play 12: Educate the workforce

An understanding of accessibility and Section 508 compliance should be an essential component of agency workforce development.   Increasing the awareness of the needs of people with disabilities, as well as agency legal requirements to address those needs, is an important step towards gaining the support and cooperation from agency staff to implement a mature Section 508 Program.

## Key Questions

o   What accessibility training is currently offered by your organization?

o   How effective is your training at informing the workforce of agency Section 508 policies and procedures, and how to make technology accessible?

o   What training is mandatory?  How do you track mandatory training participation?

## Basic Checklist

o   Assess current accessibility training offerings.

o   Identify and prioritize missing training offerings.   Consider the following:
  - Training for general staff on disability awareness, the Section 508 Standards and agency accessibility policy,
  - Training for designers and usability specialists on how to incorporate the needs of people with disabilities into information architecture,  visual design, and usability testing,
  - Training for developers and electronic content authors on how to develop accessible websites, applications, eLearning courses, recorded and live video, electronic forms and documents,
  - Training for project and product managers on how to address accessibility in development life cycles, agile processes, and product management,
  - Training for acquisition professionals on how to incorporate Section 508 requirements into acquisition activities,
  - Training for testers on how to test for Section 508 conformance, and
  - Training for help desk personnel on how to troubleshoot reported accessibility issues.

o   Develop/obtain/provide accessibility training to address core needs.  Ensure your accessibility training conforms to the Section 508 standards.  Utilize the training resources provided through the CIO Council Accessibility Community of Practice, Section 508.gov, and other government agencies to fill gaps where possible.

o   Develop an Accessibility Training Plan to define who should receive training and when training must be mandatory.  Identify when and how you will make new training available and how you will track and enforce participation.

o   Develop and publish a training calendar and communicate training offerings to agency management and employees.

o   Pursue "train the trainer" options to increase scalability where instructor led training is required.

o   Track employees who take training.

o   Request employee feedback on training to gauge effectiveness.

## Advanced Checklist

o   Provide advanced training to Section 508 Program Team members.

o   Certify 508 web and software testers as knowledgeable, through documented methodologies such as the DHS Trusted Tester Certification program.

o   Use metrics to review training activities, gauge acquisition of topics supported by learning activities, analyze for trends, and systematically use the data to determine how to improve accessibility training.

## Resources

Government-wide Section 508 Training

For Developers, Microsoft Active Accessibility

For Developers, Apple Accessibility Programming Guide for OSX X

For Developers, Dragon Naturally Speaking Application Programming Guide

For Developers, Dragon Naturally Speaking HTML Programming Guide