

What are Automated Decision Systems - and why should you care?

September 29, 2022

Presenter Introductions



Katy Ruckle
Washington State Chief Privacy Officer



Jon Pincus
Researcher, Software Engineer &
ADS Workgroup Member

Overview of Material to Cover Today

- What is an “automated decision-making system”?
- What are the concerns?
- What are the regulation approaches?
- What are we doing in Washington?
- What is the federal government doing?
- What are external recommendations?
- Additional resources
- Connection to Privacy

What is an Automated Decision-Making System (ADS)?

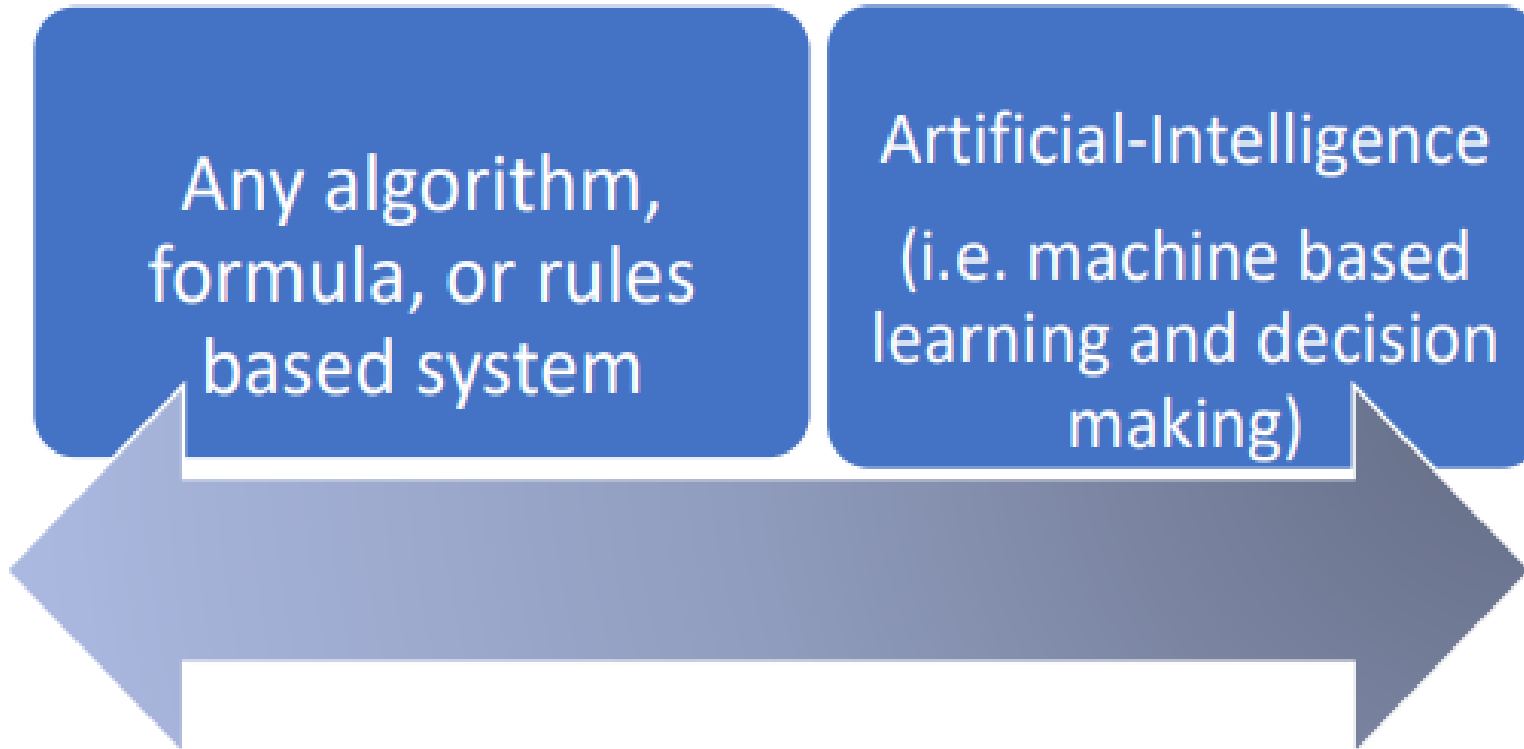
Many definitions but at a high level:

Automated decision-making is **the process of making a decision by automated means**. These decisions can be based on factual data, as well as on digitally created profiles or inferred data.

Examples of this include:

- an online decision to award a loan
- an aptitude test used for recruitment which uses pre-programmed algorithms and criteria.

Challenges – Definition of an ADS System



Why is there concern?

Meta Hit With 8 Suits Claiming Its Algorithms Hook Youth and Ruin Their Lives

Amazon's Recruiting Engine biased against women

Algorithms can decide your marks, your work prospects and your financial security. How do you know they're fair?

Google Photos Algorithm biased against black people

Music recommendation algorithms are unfair to female artists, but we can change that

Legal Aid sues DHS again over algorithm denial of benefits to disabled:

EPIC v. DOJ (Criminal Justice Algorithms)

Another Arrest, and Jail Time, Due to a Bad Facial Recognition Match

How Algorithmic Bias Hurts People With Disabilities

SEVEN INDIVIDUALS WITH DISABILITIES CONTINUE THE LEGAL FIGHT AGAINST SECRETIVE MEDICAID HOME CARE CUTS

What happens when an algorithm cuts your health care

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Approaches to ADS regulation

- Principles and guidelines
- Prohibitions and moratoria
- Public transparency requirements
- Algorithmic Impact Assessments
- Audits and regulatory inspections
- External oversight
- Rights to explanation, hearings, appeal
- Procurement conditions

Ada Lovelace Group’s “[Algorithmic Accountability for the Public Sector](#)”

Algorithmic accountability for the public sector

Learning from the first wave of policy implementation

Preferred Citation: Ada Lovelace Institute, AI Now Institute and Open Government Partnership. (2021). *Algorithmic Accountability for the Public Sector*. Available at: <https://www.opengovpartnership.org/documents/algorithmic-accountability-public-sector/>

ADS & Artificial Intelligence Regulation in Washington

SSB 5116 (2021) - Establishing guidelines for government procurement and use of automated decision systems in order to protect consumers, improve transparency, and create more market predictability.

SB 5527/HB 1655 (2019) - Guidelines for government procurement and use of automated decision systems — one of the first ADS bills in the country

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POLICY

Lawmakers Move to Ban Discriminatory Tech in Washington State

In response to reports detailing AI tech's disproportionate impact on communities of color, Washington State Sen. Bob Hasegawa introduced a bill to ban AI tech and regulate automated decision systems.

February 23, 2021 • Katya Maruri

SB 5116 did not pass but resulted in proviso which created the ADS workgroup:

Ch 334 Laws of 2021 Sec 151(14)

28 (14) \$12,000 of the general fund—state appropriation for fiscal
29 year 2022 is provided solely for the office of the chief information
30 officer who must convene a work group to examine how automated
31 decision making systems can best be reviewed before adoption and
32 while in operation and be periodically audited to ensure that such
33 systems are fair, transparent, accountable and do not improperly
34 advantage or disadvantage Washington residents.

The purpose of the work group - to develop recommendations for changes in state law and policy regarding the development, procurement, and use of automated decision systems by public agencies.



**Automated
Decision-making
Systems Workgroup**

ADS Workgroup Membership-

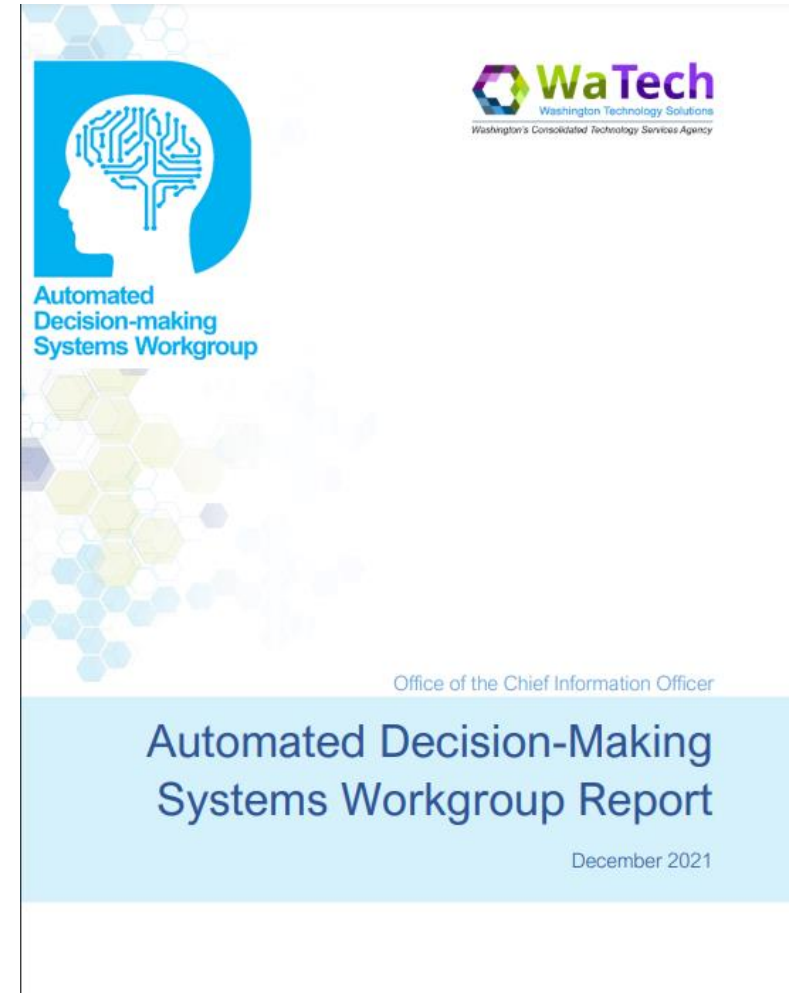
Required by Proviso	Additional Members
<ul style="list-style-type: none"> • DCYF (3) • DOC (3) • DSHS (3) • DES (2) • WaTech (2) 	<ul style="list-style-type: none"> • DVA (2) • LNI (1) • HCA (2) • ESD (1)
<ul style="list-style-type: none"> • Two representatives from universities or research institutions who are experts in the design and effect of an algorithmic system (2) • At least five representatives from advocacy organizations that represent communities that are disproportionately vulnerable to being harmed by algorithmic bias (7) 	
<p>Total = 28 Members</p>	

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2021 Report: Key Research Findings

- Automated decision systems are a way to reduce costs, improve delivery of public services, and make decisions more efficient, reliable, and accurate.... However, a growing body of evidence indicates that ADS can be discriminatory, inaccurate and lack transparency and accountability
- In recent years, there has been a rapid evolution in the understanding of how algorithmically-driven automated decision systems operate as well as the risks posed by their use
- Washington can be a leader in ensuring that government use of automated decision systems does not cause discrimination and other types of harm.

[2021 ADS Workgroup Report](#)



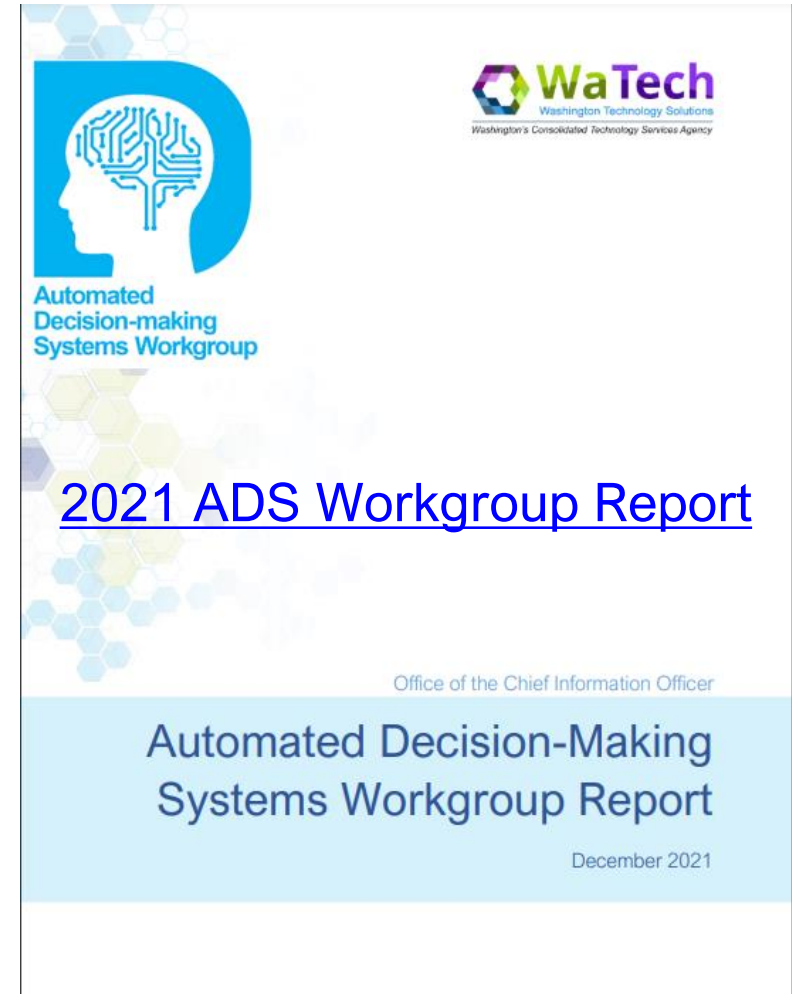
2021 Report & Recommendations

#1 Prioritization of Resources

- The state should develop a prioritization framework for allocating resources to address existing and future ADS.

#2 Procurement

- As a part of the procurement process, assess new ADS procured by the state.



ADS Report Recommendations cont..

#3 Evaluation of Existing Systems

- ADS currently in use by the state that produce legal effects on [people] should be assessed if they are processing data on a large scale or have substantial effects on the rights or freedoms of natural persons.

#4 Transparency

- Require transparency of use, procurement, and development of ADS including monitoring or testing for accuracy and bias, that produce legal effects on identified or identifiable natural persons.

ADS Report Recommendations cont..

#5 Determination on Whether to Use System

- The state should adopt a framework to evaluate whether use of ADS or AI-enabled profiling should be prohibited

#6 Ongoing Monitoring or Auditing

- Ongoing monitoring or auditing should be performed on ADS systems that have legal effects on people to ensure they do not have differential effects on subpopulations that result over time...

ADS Report Recommendations cont..

#7 Training in Risk of Automation Bias

- Require training of state employees who develop, procure, operate or use automatic decision-making systems as to risk of automation bias.

Sample Prioritization Matrix

	Low impact	Medium impact	High impact
Low likelihood	5	4	4
Medium likelihood	4	3	3
High likelihood	4	2	1

Effect on natural people -

- **Low**: Decision does not impact legal rights or the provision of services or scrutiny that could lead to an impact on legal rights or services.
- **Medium**: Decision impacts processing, relatively minor services or legal rights or financial impacts on individuals. Small number of impacted clients.
- **High**: Decision can have a significant impact on the provision of services, financial impact, or legal rights. Large number of impacted clients.

Likelihood of bias -

- **Low**: Decision directly follows federal or state regulations or follows adopted policy or rule.
- **Medium**: Developed with disclosure of information used and the algorithm has been tested for bias and inaccuracy.
- **High**: Developed without disclosure of information used or the algorithm created and has not been tested for bias or accuracy.

Complexity -

- **Low**: simple decision rule.
- **Medium**: simple calculation of existing data elements (i.e., a weighted average).
- **High**: complex algorithm, estimation, machine learning, etc.

Where are we now?

SB 5116 (2021) Committee hearing in W&M Pulled from Exec Session 2/7; New Proviso in last budget bill

8 (20) \$100,000 of the general fund—state appropriation for fiscal
9 year 2023 is provided solely for the office of the chief information
10 officer, who must:

11 (a) Prepare with the cooperation of state agencies and make
12 publicly available on its website, by January 1, 2023, an initial
13 inventory of all automated decision systems that are currently being
14 used by state agencies; and

15 (b) Adopt guidance, by June 30, 2022, for state agencies
16 regarding minimum standards that should be used for automated
17 decision systems the agency plans to develop or procure during the
18 2023 fiscal year.

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VETO

Next steps

WaTech is directed to:

- Develop guidance for agencies' procurement and use of ADS;
and
- Conduct preliminary inventory of the automated decision systems currently in use

by November 30, 2023

- [Governor Veto Message](#)

When should a system or application be included in the Automated Decision-Making System (ADS) inventory:

If a system makes automated decisions based on algorithms that include an interpretation of specific criteria not set by state or federal law to make a decision, judgment, conclusion, or determine eligibility for a service that affects individuals it should be included in the ADS inventory.

Examples:

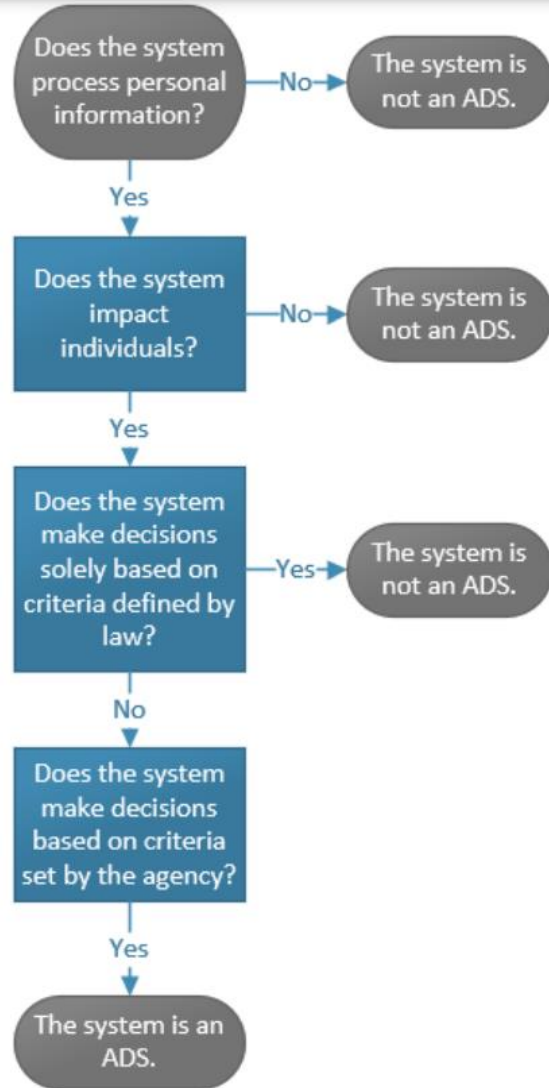
- Who is likely to recidivate based on subjective risk criteria
- Which households should receive services based on risk of becoming homeless
- Assessment of penalties or loss of benefits not based on rules defined in law

What systems or applications that should not be included in the Automated Decision-Making System (ADS) inventory:

If a system is making decisions based on state or federal law that specifies the criteria that should be used in determining eligibility, judgments, and conclusions. In this case automated decisions are based on rules defined by law and there is no discretionary judgment that is performed by the ADS.

Examples:

- Eligibility to title a vehicle or vessel
- When a driver's license can be renewed
- Issuance of a business or professional license
- Issues of a fishing license
- When fees should be charged for a specific transaction



Personal information is any information that could be used to identify a specific individual.

A **system impacts individuals** if it makes decisions that cause a person to be treated different in the nature or amount of governmental interaction with that person.

A decision is **solely based on criteria defined by law** when the law does not leave room for agency discretion or interpretation in implementing the definition.

An **agency sets its own criteria** when it (1) develops criteria without guidance from a state or federal law, or (2) exercises discretion or interpretation in implementing a state or federal law.

Definitional struggles: what is an ADS? Proviso language





For purposes of this subsection, "automated decision system" or "system" means any algorithm, including one incorporating machine learning or other artificial intelligence techniques, that

- uses data-based analysis or calculations to make or support
 - government decisions,
 - judgments, or
 - conclusions
 - that cause a Washington resident to be treated differently than another Washington resident in the nature or amount of governmental interaction with that individual including, without limitation:
 - benefits,
 - protections,
 - required payments,
 - penalties,
 - regulations,
 - timing,
 - application, or
 - process requirements.

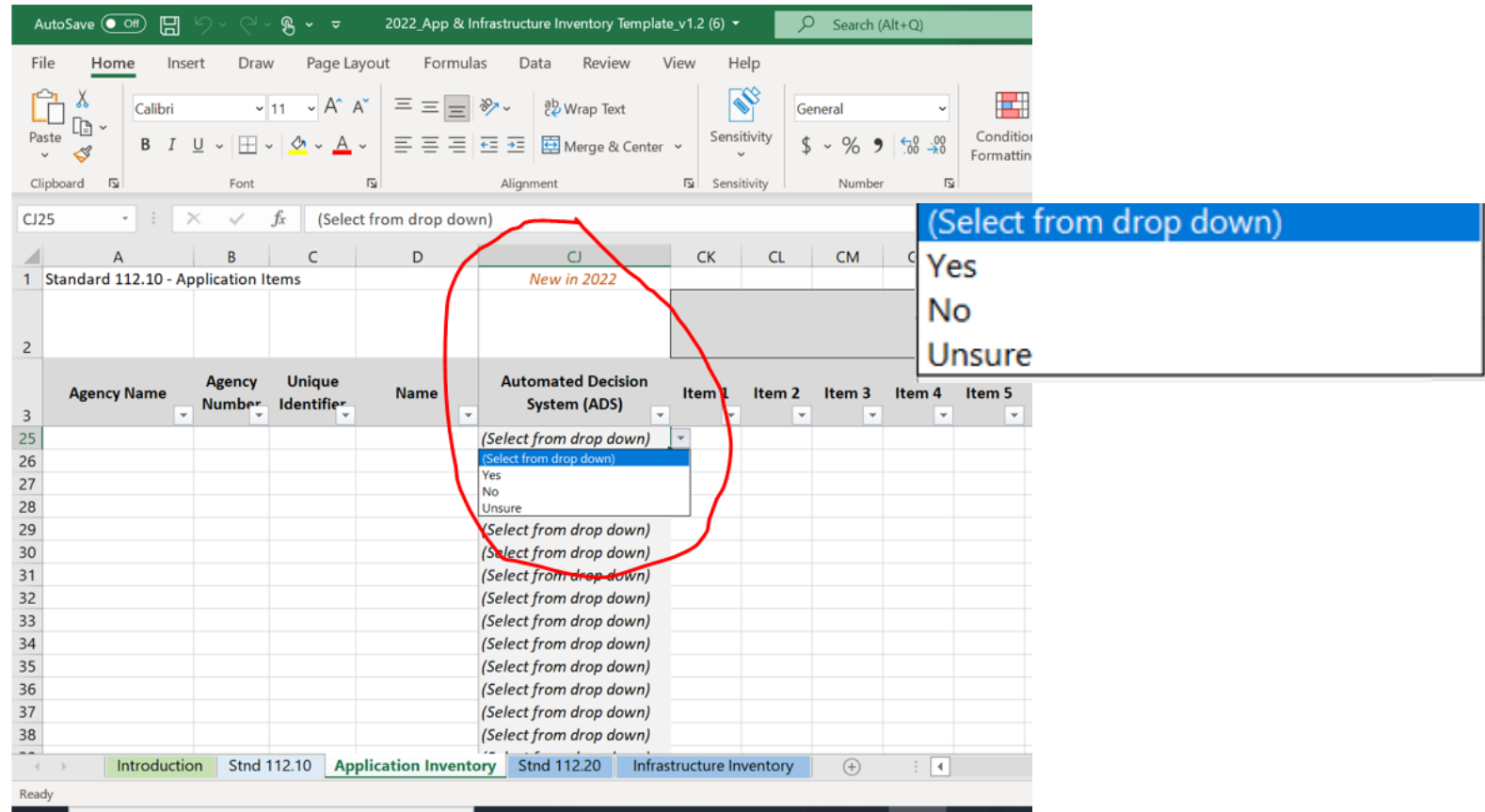
2022 Annual Certification Process

www.ocio.wa.gov/communications

2022 Annual Certification

- 2022 Annual Certification Memo
- Part 1- Application Inventory
 - Application Inventory Template and Instructions
 - Automating Decision-Making System (ADS) Definition Guidance
- Part 2 – Infrastructure Inventory
 - Infrastructure Inventory Template and Instructions
- Part 3 – Technology Policy Certification
 - Technology Policy Certification Form 
 - PDF version of Technology Policy Certification (For reference only, not to be used for submittal to OCIO)
- Part 4 – PDF version of Privacy Assessment Memo (8/3/2022)
 - Privacy Assessment Survey  (8/3/2022)
 - PDF version of 2022 Privacy Assessment Survey Guidance Document
 - Privacy Assessment Survey Walkthrough 
- Part 5 Security Assessment
 - Agencies must complete the Nationwide Cybersecurity Review (NCSR)  by no later than December 31, 2022. If you are unable to access the NCSR, your agency CISO should contact Stevens Fox at Stevens.Fox@watech.wa.gov for information on how to register.
- Part 6 - Annual Certification Attestation
 - Attestation Form
- 2022 Certification Schedule
- 2022 Annual Certification FAQs

New Question in Application Inventory



The screenshot shows an Excel spreadsheet titled "2022_App & Infrastructure Inventory Template_v1.2 (6)". The spreadsheet has columns for Agency Name, Agency Number, Unique Identifier, Name, Automated Decision System (ADS), and five Item columns. A red circle highlights the "Automated Decision System (ADS)" column, which contains a dropdown menu with the following options: "(Select from drop down)", "(Select from drop down)", "Yes", "No", "Unsure", "(Select from drop down)", "(Select from drop down)", "(Select from drop down)", "(Select from drop down)", "(Select from drop down)", "(Select from drop down)", "(Select from drop down)", "(Select from drop down)", "(Select from drop down)", "(Select from drop down)". A blue callout box to the right of the dropdown menu contains the text "(Select from drop down)" and "Yes", "No", "Unsure".

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Facial Recognition Services reminder

Facial Recognition Accountability

[\(Chapter 43.386 RCW: Facial Recognition\)](#)

In the next year does your agency plan to develop, procure, or use a facial recognition service as defined by Chapter 43.386 RCW: FACIAL RECOGNITION?*

Yes No Agency or use is exempt

Have you followed, or do you have a plan to follow, the requirements of Chapter 43.386 RCW?*

Yes No N/A

What date did you submit, or do you plan to submit, your required Notice of Intent to the Washington Technology Services Board as required by RCW 43.386.020?*

We don't know the date yet

If you don't know the date, explain in the comment box below

Facial Recognition (optional comment)

1000/1000

Other ADS Regulation in Washington state

- Washington's Facial Recognition law ([RCW 43.386](#)):
 - Accountability reports
 - Testing and training requirements
 - Some restrictions on use for surveillance
 - One of the first statewide laws on facial recognition — supported by industry as an alternative to a moratorium
- King County: prohibition on Government use of facial recognition
- Bellingham: prohibition of Government use of facial recognition and predictive policing
- Seattle Surveillance Ordinance requires “surveillance impact reports”

ADS Regulation elsewhere in the US

- New York City: 2018 [ADS Task Force](#), 2021 [AI Hiring law](#)
- State and local prohibitions on government use of facial recognition in Maine, Vermont, about 20 other cities around the country
 - Portland Oregon also prohibits some private use
- California's and Colorado's privacy laws give people the right to opt out of profiling
- California's new Age-Appropriate Design Code prohibits profiling minors, some algorithmic transparency and risk mitigation requirements
- California's pending AB 13 is similar to Washington's SB 5116

Federal ADS regulation on the horizon?

Some efforts focused on federal government systems

- Proposed facial recognition moratorium
- Just announced: Reps. Ted Lieu and Yvette Clarke introduced the Facial Recognition Act, limiting law enforcement's use of facial recognition

More of a focus on commercial use of ADS systems

- Algorithmic Accountability Act of 2022
- Algorithmic Impact Assessment requirements in American Data Privacy and Protection Act (ADPPA)
- FTC Advanced Notice of Proposed Rulemaking

White House Office of Science and Technology Policy's AI Bill of Rights?

- Announced last October with a lot of fanfare but no recent updates

<https://thehill.com/opinion/technology/3566180-time-to-act-now-on-ai-bill-of-rights/>

International perspectives

- Canada's 2019 [Directive on Automated Decision-Making](#) requires algorithmic impact assessments
- EU's draft AI Act takes a tiered approach
 - “Unacceptable risk” systems: prohibited (social scoring, manipulative systems, some public uses of facial recognition)
 - “High risk” systems: significant requirements (employment, law enforcement, essential services and benefits, migration, critical infrastructure ...)
 - “Minimal risk” systems: voluntary codes of conduct are encouraged
 - Final version is [still being negotiated](#)

Algorithmic Justice League's Policy Recommendations

POLICY RECOMMENDATION

#1 REQUIRE THE OWNERS AND OPERATORS OF AI SYSTEMS TO ENGAGE IN INDEPENDENT ALGORITHMIC AUDITS AGAINST CLEARLY DEFINED STANDARDS

POLICY RECOMMENDATION

#2 NOTIFY INDIVIDUALS WHEN THEY ARE SUBJECT TO ALGORITHMIC DECISION-MAKING SYSTEMS

POLICY RECOMMENDATION

#3 MANDATE DISCLOSURE OF KEY COMPONENTS OF AUDIT FINDINGS FOR PEER REVIEW

POLICY RECOMMENDATION

#4 CONSIDER REAL-WORLD HARM IN THE AUDIT PROCESS, INCLUDING THROUGH STANDARDIZED HARM INCIDENT REPORTING AND RESPONSE MECHANISMS

POLICY RECOMMENDATION

#5 DIRECTLY INVOLVE THE STAKEHOLDERS MOST LIKELY TO BE HARMED BY AI SYSTEMS IN THE ALGORITHMIC AUDIT PROCESS

POLICY RECOMMENDATION

#6 FORMALIZE EVALUATION AND, POTENTIALLY, ACCREDITATION OF ALGORITHMIC AUDITORS

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From Algorithmic Justice League's Who Audits the Auditors - <https://www.ajl.org/auditors>

Additional Resources

- [GAO-21-519SP, ARTIFICIAL INTELLIGENCE: An Accountability Framework for Federal Agencies and Other Entities\(link is external\)](#)
- [NIST Proposal Aims to Reduce Bias in Artificial Intelligence \(govtech.com\)\(link is external\)](#)
- [A Proposal for Identifying and Managing Bias in Artificial Intelligence \(nist.gov\)\(link is external\)](#)
- [FTC: Using Artificial Intelligence and Algorithms\(link is external\)](#)
- [NIST Proposal Aims to Reduce Bias in Artificial Intelligence \(govtech.com\)](#)

Keep perspective

- Use of ADS and AI are not “inherently bad”
- Across many sectors, ADS and AI offers advantages of new and innovative services, and the potential to improve scale, speed and accuracy.

Examples:

- Apps that help people that are blind or visually impaired
- Scientist ability to analyze of large data sets for climate impacts
- Analysis and scanning for cybersecurity purposes
- Monitoring of road conditions and traffic patterns

And its not going away...

Headline from this month

Miami Dade College opens AI Center to boost local workforce

Miami Dade College on Tuesday opened an Artificial Intelligence Center that university and community leaders hope will position the region for the future of technology. Motivated by a U.S. Bureau of Labor Statistics **projection of more than 500,000 new AI jobs by 2029**, the college and its foundation invested \$6.5 million to construct the facility. The 13,000 square-foot center, housed on the second floor of a campus building, is the first of two planned facilities to support the region's AI education and workforce efforts.

Privacy Connection

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Privacy Principles

- ❖ Lawful, fair, & responsible use
- ❖ Data minimization
- ❖ Purpose Limitation
- ❖ Transparency & accountability
- ❖ Due diligence
- ❖ Individual participation
- ❖ Security



Online Training for State Employees

▣ Launched 40-minute Online Training in the DES Learning Center

➤ **Intro to Privacy**

- Personal Information
- Data Categorization
- Privacy Harms & Violations

➤ **Privacy in the State of Washington**

- Privacy Laws & Policies
- State Agency Privacy Principles

➤ **Privacy in Practice**

- Agency & Employee Responsibilities
- Privacy Best Practices

➤ **Conclusion**



Now available online at <https://watech.wa.gov/privacy/gov-agency-resources>

Thank you!