



# Bridging the Gap Between AI and Human Expertise in the Public Sector



Secretary of State  
Oregon Audits Division

October 20, 2023

# Session agenda

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The Evolving Landscape

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# BREAKING BIG

FEATURING THE BEST OF THE BEST FROM THE



WORLDWIDE



ENTERTAINMENT



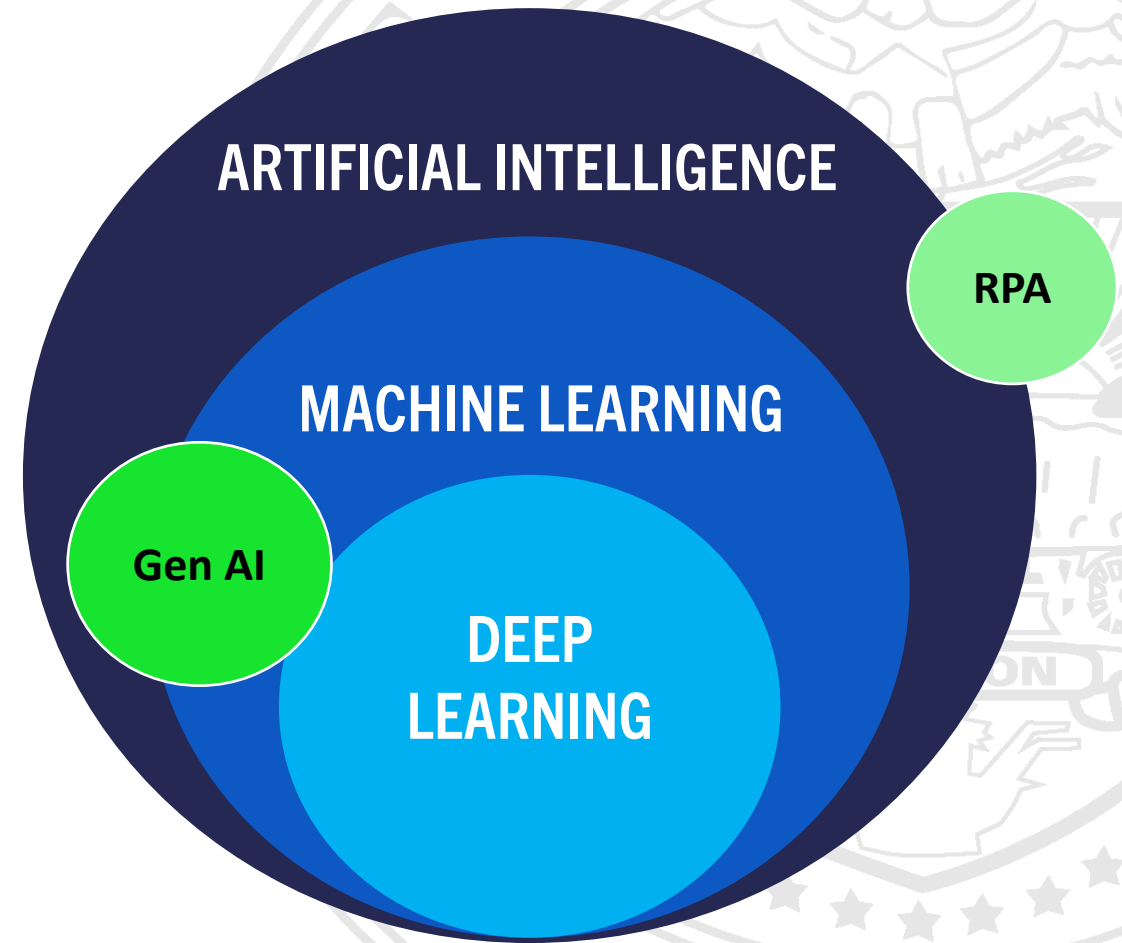
# Gen AI Primer

# Gen AI Primer

Artificial Intelligence (AI) is a term used to classify machines that mimic human intelligence and human cognitive functions like problem-solving and learning

Machine Learning is a subset of artificial intelligence that allows for optimization. When set up correctly, it can help make predictions that minimize errors that arise from merely guessing.

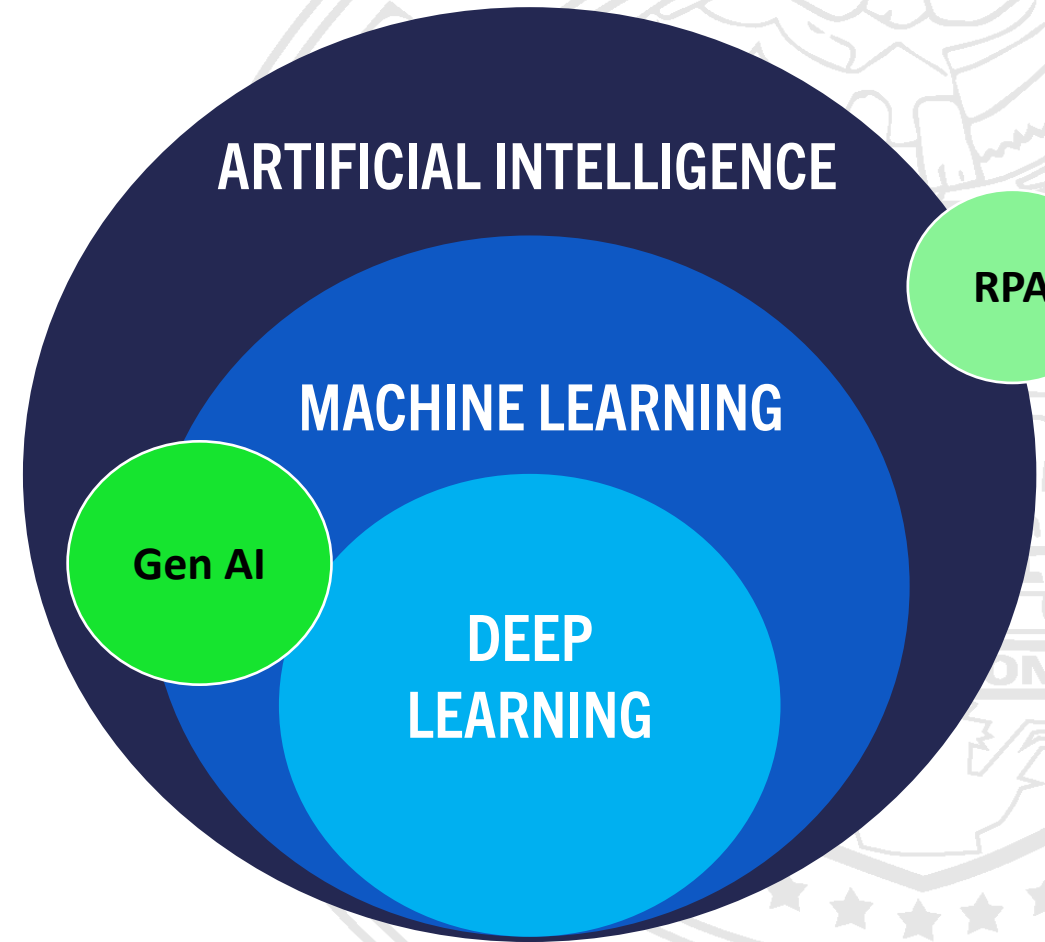
Deep Learning is deep learning is a subset of machine learning. The primary difference between machine learning and deep learning is how each algorithm learns and how much data each type of algorithm uses.



# Gen AI Primer

Generative AI (**Gen AI**) are trained on vast amounts of data and information and leverages that to generate original content.

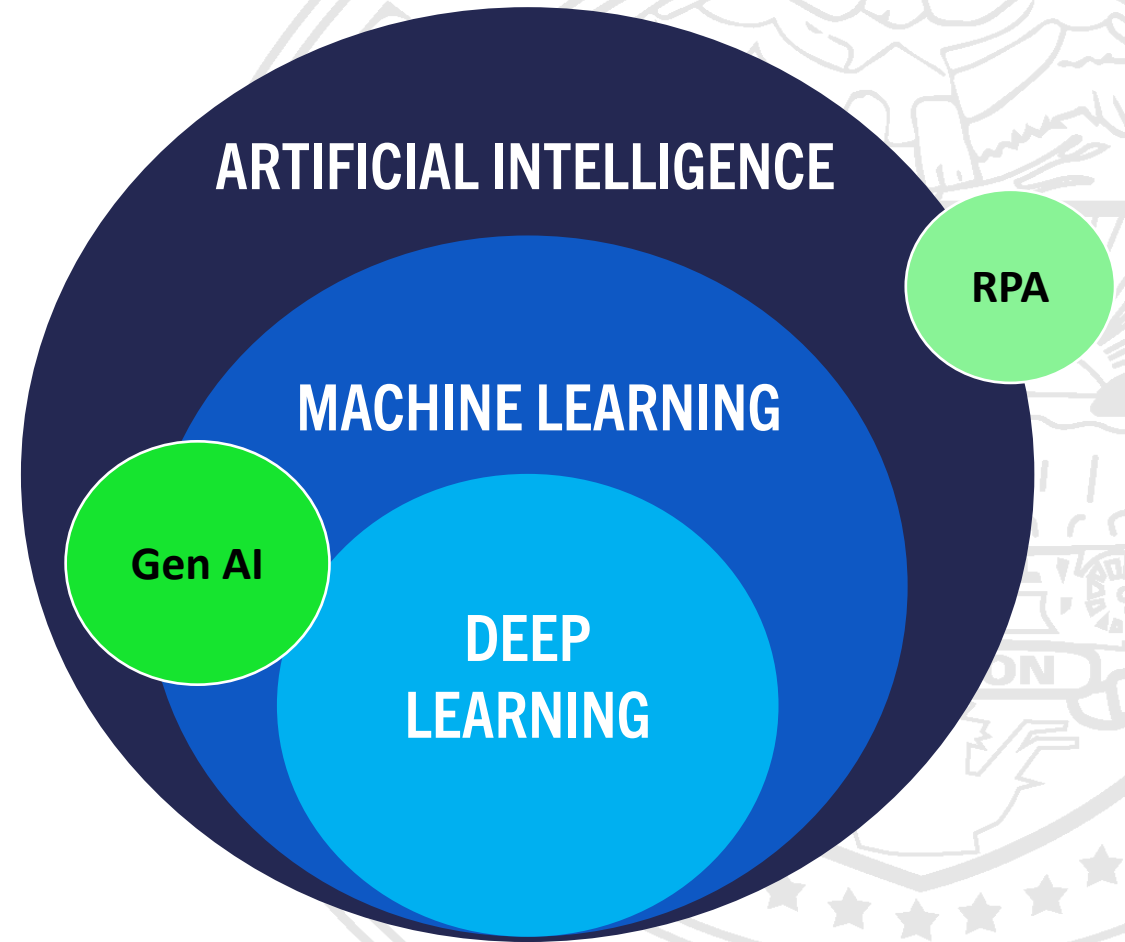
Robotic process automation (**RPA**) is a productivity tool that allows a user to configure scripts (often called “**bots**”) to automate specific keystrokes. The result is that the bots can be used to mimic tasks within a process.



# Gen AI Primer

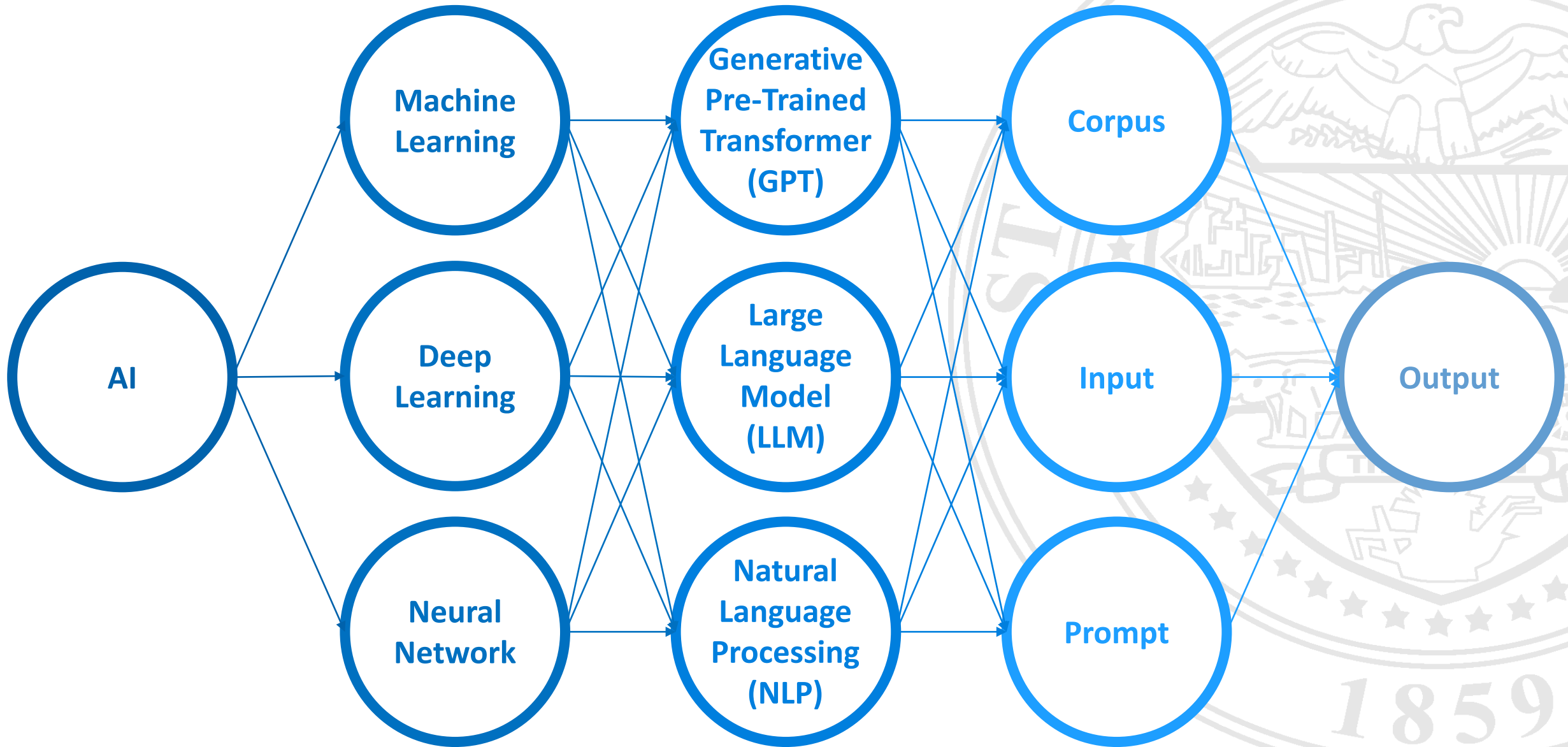
Gen AI **creates content** from the information it was trained on.

RPA **mimics** repetitive, scripted **tasks**.





# Gen AI Primer

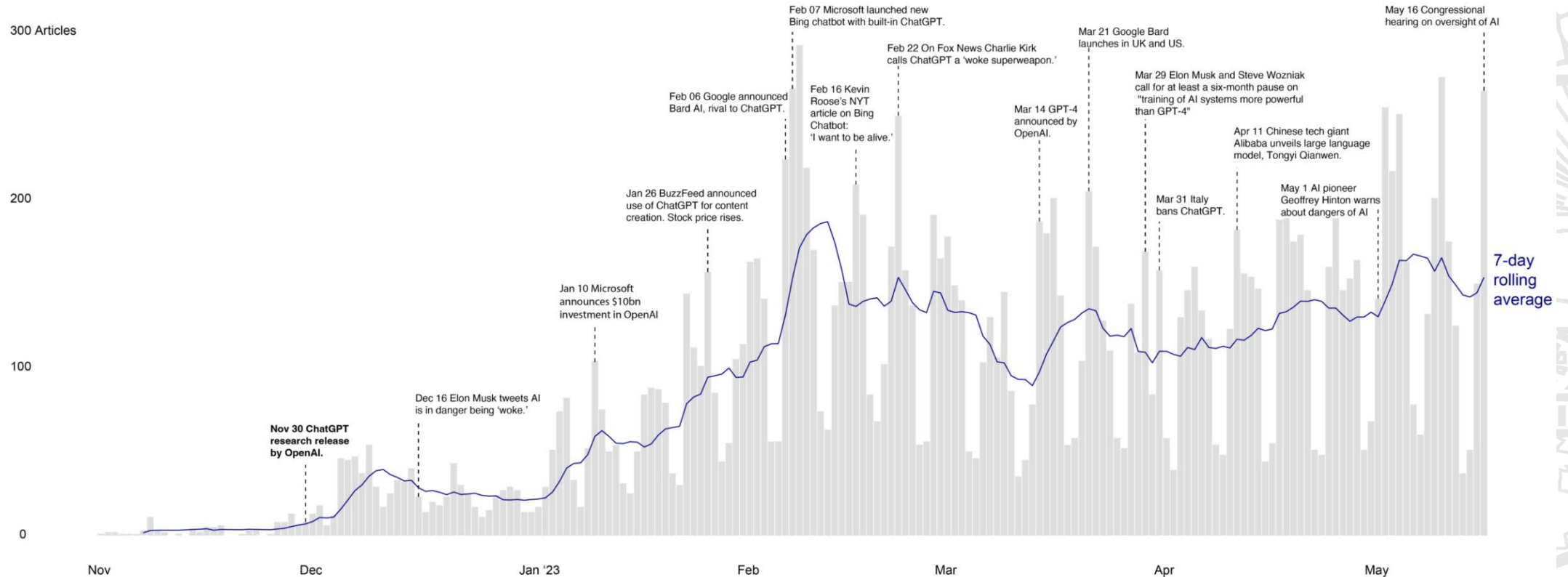




# Gen AI Primer

## Online news started covering ChatGPT more about two months after its release

Number of articles in Media Cloud's online news collection that mention 'chatgpt', 'chat gpt', 'chatbot' or 'chat bot'



Source: Columbia Journalism Review, May 2023

Data Source: Media Cloud "United States - National" Collection

# Gen AI Primer

The image is a screenshot of a news website. At the top left is the logo for the Office of Governor Gavin Newsom. A navigation bar contains icons for Home, About, Newsroom, and Appointments. The main content area features several headlines: 'California for the Progress of Artificial Intelligence', 'ChatGPT can talk now, threatening Alexa and Siri', 'OpenAI's Dall-E 3 Is an Art Generator Powered by ChatGPT', and 'Amazon invests \$4 billion in Anthropic startup known for ChatGPT rival Claude'. A large black redaction box covers the right side of the page, obscuring parts of the headlines and the text 'AI Chatbot Has Helped at 3 Million court and To'. Another smaller redaction box is visible over the text 'Call you must'. The background of the page features a faint watermark of the Seal of the State of California, with the letters 'OF' at the top and '1859' at the bottom.

Office of Governor GAVIN NEWSOM

Home About Newsroom Appointments

AI Chatbot Has Helped at 3 Million court and To

Governor Newsom Signs Executive Order to Prepare California for the Progress of Artificial Intelligence

ChatGPT can talk now, threatening Alexa and Siri

OpenAI's Dall-E 3 Is an Art Generator Powered by ChatGPT

Amazon invests \$4 billion in Anthropic startup known for ChatGPT rival Claude

Call you must

James Patterson, Margaret Atwood have joined call for compensation

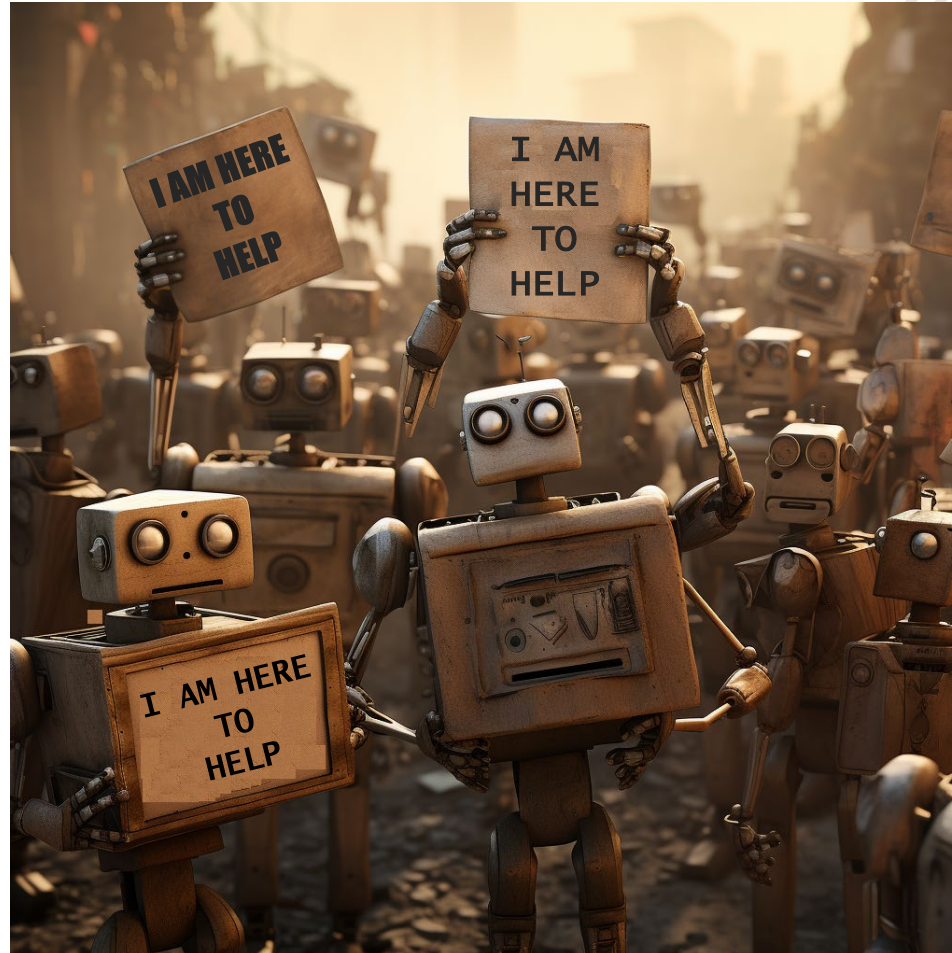
Ashley Gold, Sara Fischer

# Gen AI Primer

Gen AI Development

Intellectual property

Fake Content & Misuse



Generated with Midjourney AI, "Group of helpful looking robots holding signs"

Bias & Fairness

Economic disruption

Social & Work Implications

OF

1859

THE UNION

# Potential Gen AI Benefits and Applications

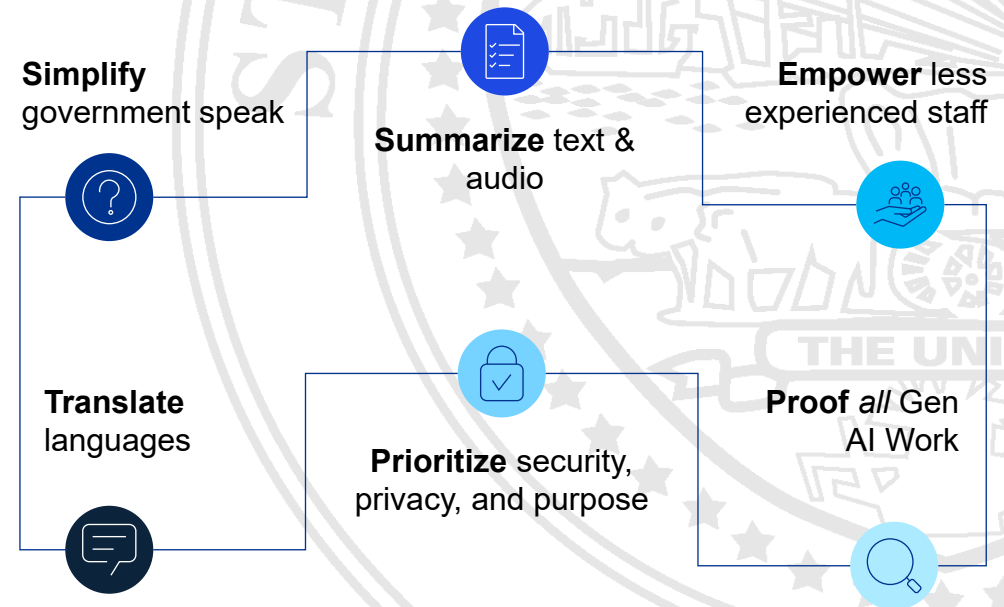


# Potential Gen AI Benefits and Applications



Generated with Midjourney AI, "Impressionist Painting of Boston Skyline"

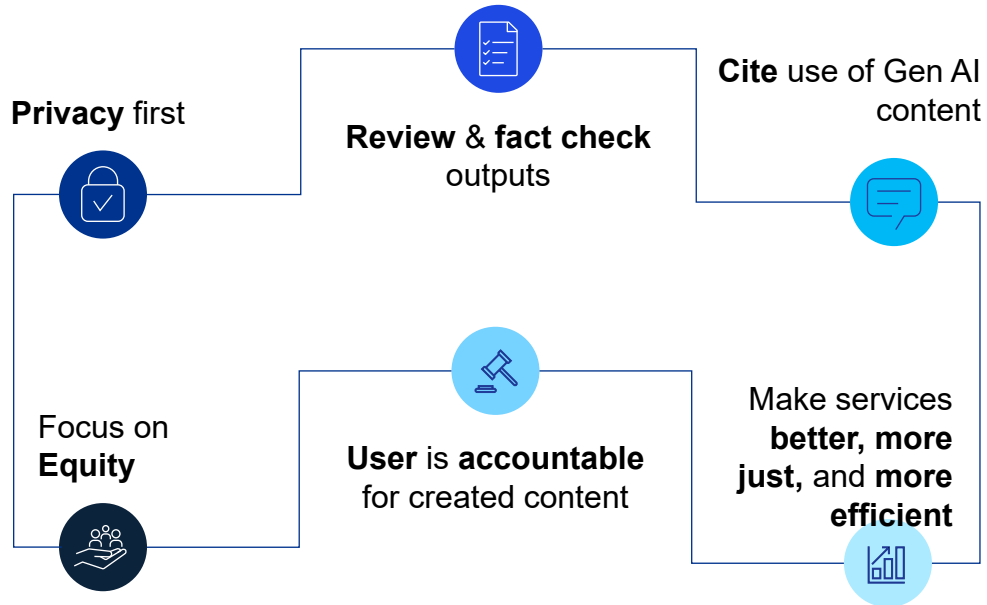
## **B** City of Boston Interim Guidelines for Using Generative AI



# Potential Gen AI Benefits and Applications



## Generative AI Guidelines



Generated with Midjourney AI, "San Jose in style of Disney Pixar"

1859



# Potential Gen AI Benefits and Applications



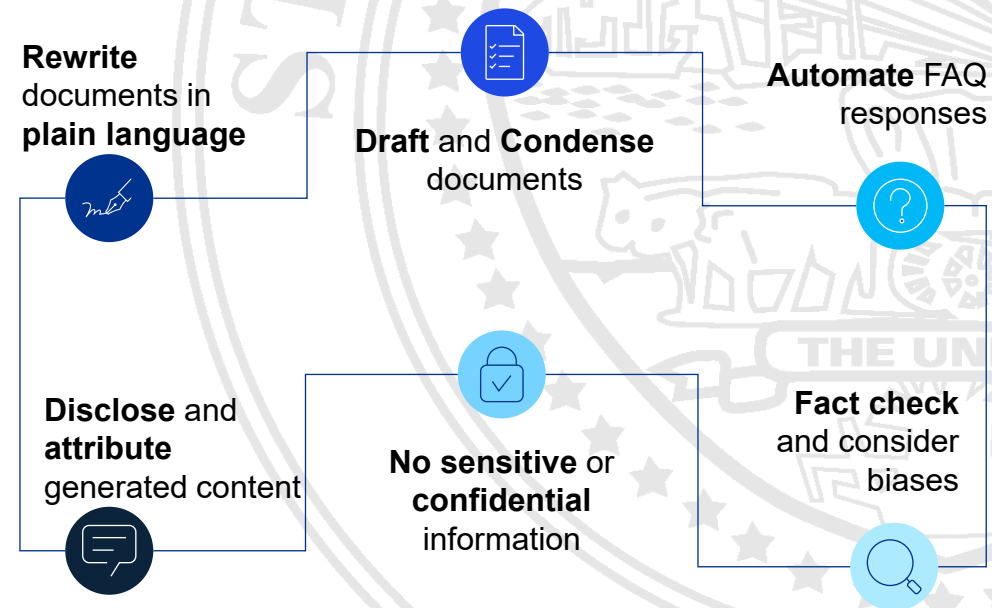
Generated with Midjourney AI, "Seattle Skyline in the style of Hayao Miyazaki"

EA-01-01-G  
State CIO Adopted: August 8, 2023  
TSB Approved: N/A  
Sunset Review: August 8, 2026

**WaTech**  
Washington Technology Solutions

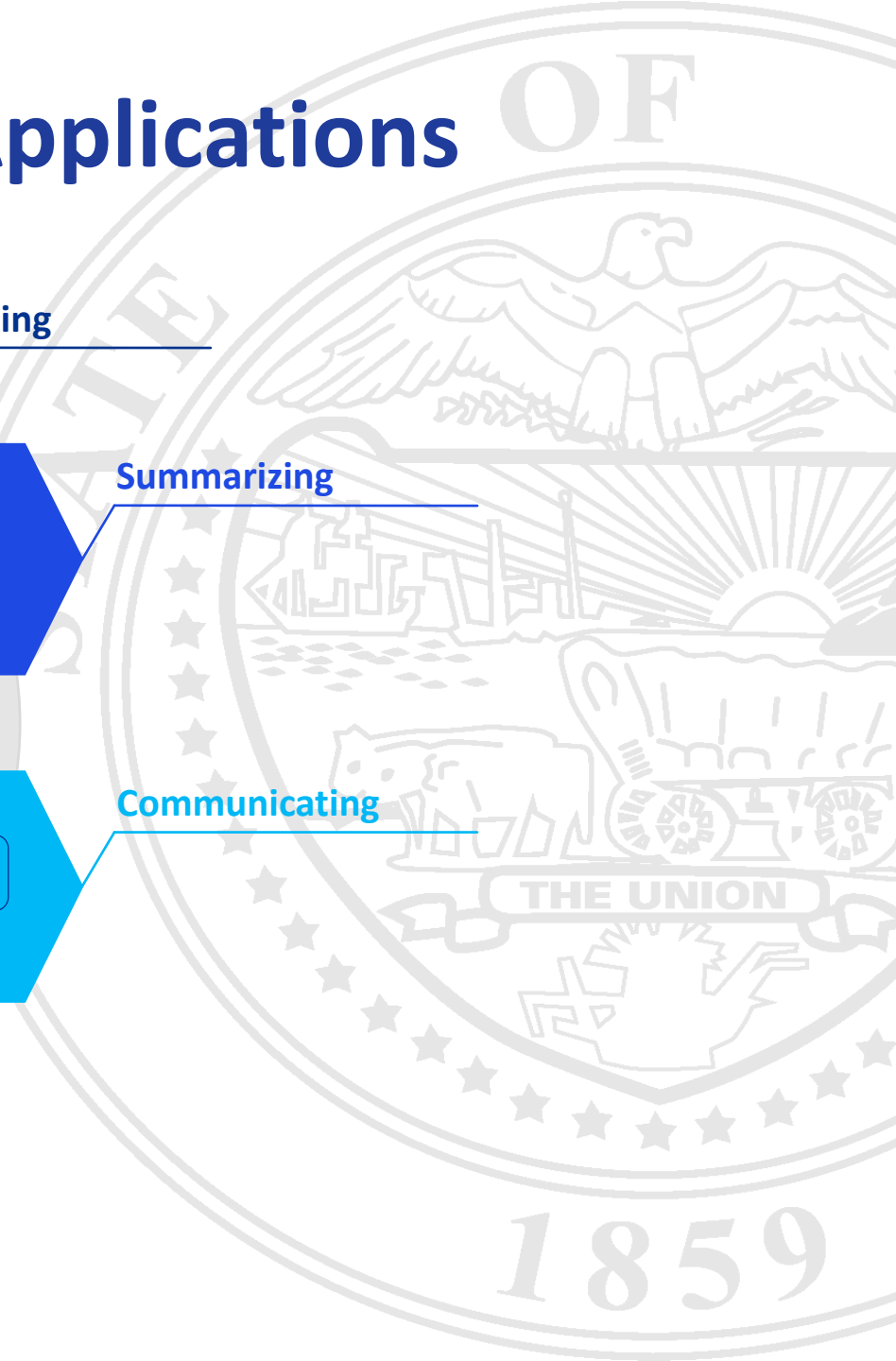
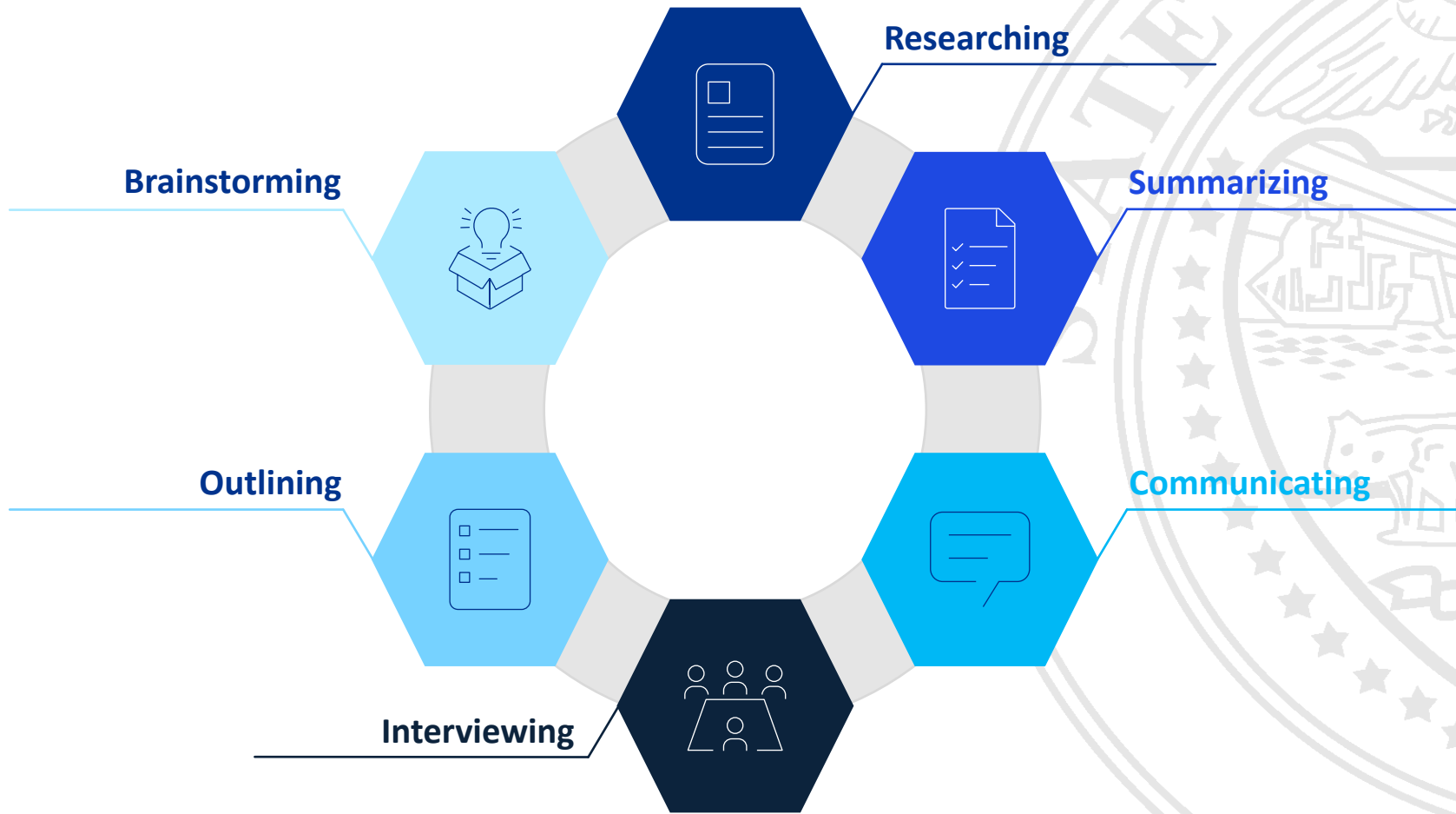
Replaces:  
N/A

## INTERIM GUIDELINES FOR PURPOSEFUL AND RESPONSIBLE USE OF GENERATIVE ARTIFICIAL INTELLIGENCE





# Potential Gen AI Benefits and Applications



# Gen AI Use Case Examples

# Gen AI Use Case Example 1

**Prompt:** What are the highest risks I should consider when conducting a review of how the state manages the risk of domestic terrorism and domestic violent extremism?

**Prompt refinement:** Revise the list of risks to include factors of likelihood and impact for each.



Certainly, here are the risks associated with the management of domestic terrorism and domestic violent extremism, along with the factors that influence the likelihood and impact of each risk:

## 1. Inadequate Threat Assessment:

- Likelihood Factors:
  - Limited intelligence sharing among agencies.
  - Insufficient resources for intelligence gathering.
  - Evolving extremist tactics.
- Impact Factors:
  - Missed threat indicators.
  - Ineffective countermeasures.
  - Potential terrorist incidents.

## 2. Lack of Coordination:

- Likelihood Factors:
  - Interagency rivalry.
  - Bureaucratic obstacles.
  - Lack of clear communication channels.
- Impact Factors:
  - Delayed response to threats.

 Regenerate

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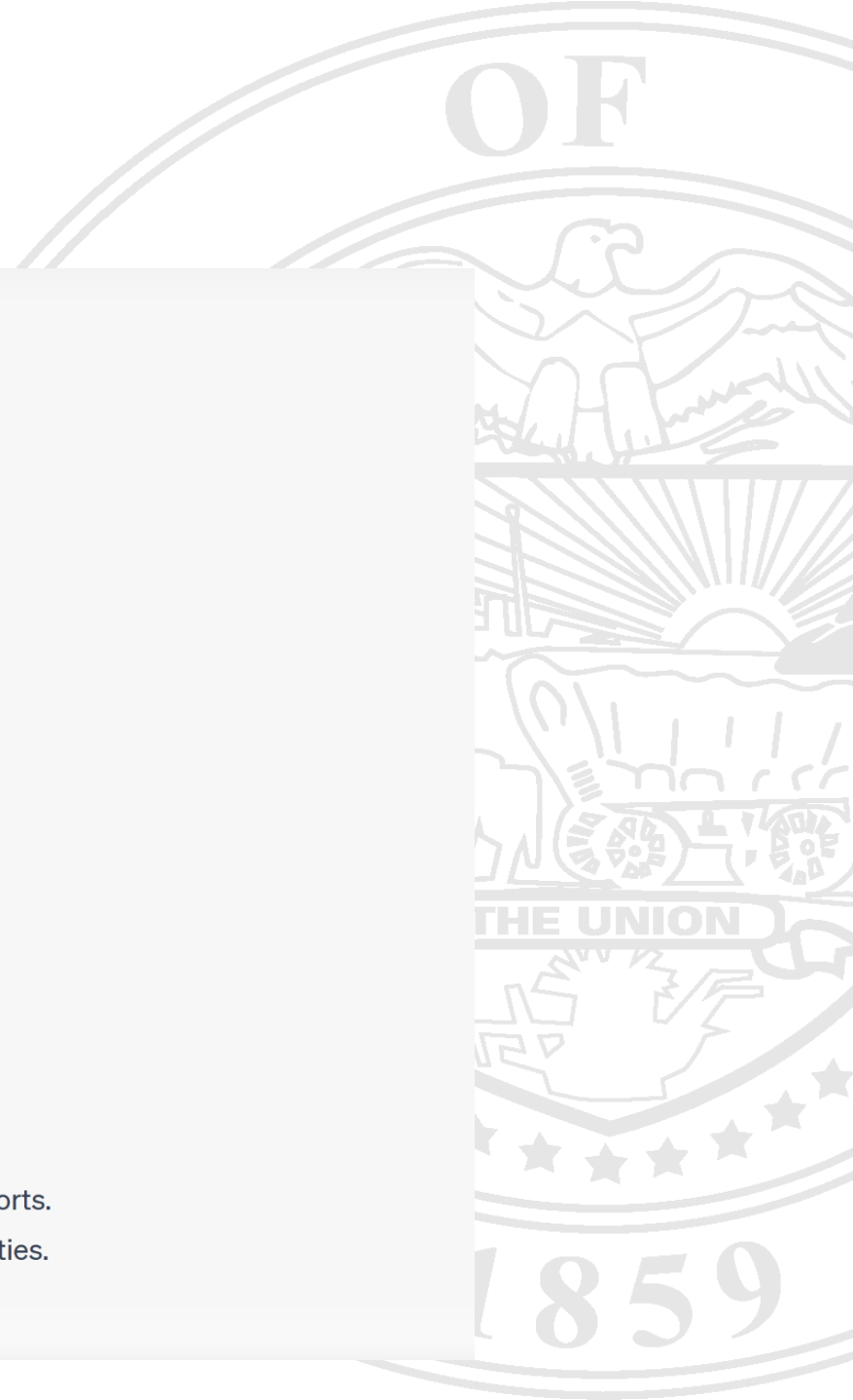
## 4. Online Radicalization:

- Likelihood Factors:
  - Proliferation of extremist content online.
  - Limited regulation of online platforms.
  - Rapid spread of misinformation.
- Impact Factors:
  - Increased recruitment.
  - Radicalization of individuals.
  - Difficulties in tracking online activities.

## 5. Legal and Privacy Concerns:

- Likelihood Factors:
  - Legal constraints on surveillance.
  - Privacy advocacy.
  - Public concerns about civil liberties.
- Impact Factors:
  - Impaired intelligence gathering.
  - Legal challenges to counterterrorism efforts.
  - Tensions between security and civil liberties.

## 6. Resource Constraints:



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## 10. Legislative and Policy Gaps:

- Likelihood Factors:
  - Outdated laws and policies.
  - Political gridlock.
  - Lack of comprehensive counterterrorism strategies.
- Impact Factors:
  - Legal limitations on law enforcement.
  - Impaired policy responses.
  - Gaps in addressing emerging threats.

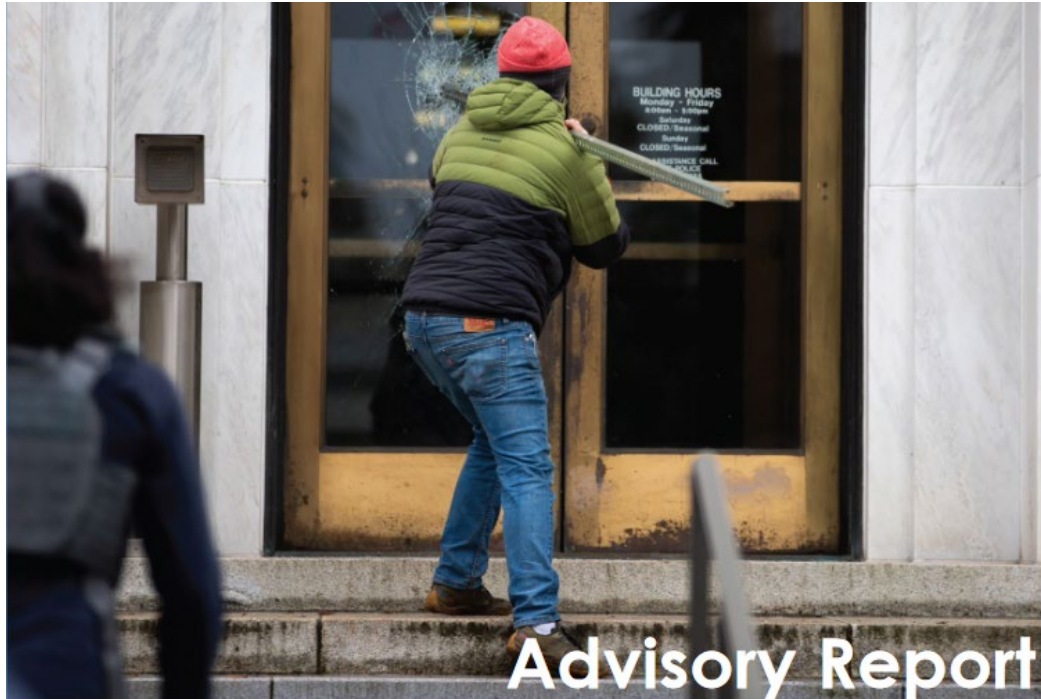
## 11. Training and Education:

- Likelihood Factors:
  - Inadequate training budgets.
  - Lack of standardized training.
  - Rapidly evolving threat landscape.
- Impact Factors:
  - Unprepared law enforcement.
  - Reduced effectiveness in responding to extremism.
  - Increased vulnerability to attacks.

## 12. Public Awareness:

- Likelihood Factors:
  - Limited public awareness campaigns.

# Gen AI Use Case Example 1



## Advisory Report

Oregon Can Do More to Mitigate the Alarming Risk of Domestic Terrorism and Violent Extremist Attacks

1. Oregon **does not have any legislation** defining or criminalizing these specific acts.
2. In the **absence of defined strategy**, state oversight agencies **lack consistent and connected plans**.
3. The **jurisdiction of law enforcement agencies often overlaps**.
4. Current law enforcement and state employee **training is limited**.
5. The **lack of publicly available information** regarding domestic violent extremist plots and threats compounds the difficulty for policymakers.
6. Spreading extremist ideologies is **protected by the first amendment** of the U.S. Constitution.
  - The state can **increase public awareness** on violent extremism and the methods used by extremist groups to **recruit individuals online**.

# Gen AI Use Case Example 2

**Prompt:** Over the course of several prompts, I'm going to provide content from an Oregon Secretary of State report that I'd like you to summarize. Please wait until I give a prompt that says "please summarize now" before summarizing.



Certainly, here are the main findings from the Audit Results section of the report:

1. **Complexity and Lack of Transparency:** The current Medicaid prescription drug program in Oregon is complex and lacks transparency, making it challenging to assess its value and ensure that it effectively serves patients.
2. **Pharmacy Access Issues:** Rural counties in Oregon face pharmacy access challenges, with some residents having to travel long distances to reach the nearest pharmacy. This is due to the geographic size of counties and low pharmacy density.
3. **Low Reimbursement Rates:** Low and inconsistent reimbursement rates are a significant factor in pharmacy closures. Pharmacies, especially independent ones, face financial challenges, and some prescriptions result in financial losses for them.
4. **Disparities Between Independent and Chain Pharmacies:** Independent pharmacies are often reimbursed less than national chain pharmacies for the same drugs, exacerbating financial difficulties for independent providers.



# Gen AI Use Case Example 2

**Prompt:** Over the course of several prompts, I'm going to provide content from an Oregon Secretary of State report that I'd like you to summarize. Please wait until I give a prompt that says "please summarize now" before summarizing.

5. **Lack of PBM Transparency:** The role of Pharmacy Benefit Managers (PBMs) is not transparent, and their practices, including drug pricing and rebates, are opaque. This lack of transparency makes it difficult to assess their value in the program.
6. **Variability in Reimbursements:** Reimbursement rates for different drugs, pharmacy types, and PBMs vary significantly, leading to inconsistencies in pharmacy profits and potentially affecting patient access to certain medications.
7. **Need for Legislative Action:** The report recommends legislative action to prioritize fair and consistent reimbursement for community pharmacies, improve transparency in PBM practices, and address access issues.
8. **Exploration of Alternative Models:** The report suggests exploring alternative program models, such as a single PBM model or a fee-for-service (FFS) model, to streamline monitoring efforts and increase transparency.
9. **Enhanced Monitoring Practices:** OHA (Oregon Health Authority) should improve its monitoring practices to ensure compliance with contract provisions, particularly in

🔄 Regenerate

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**Prompt refinement:** Can you please write the summary using plain language for the general public?

Certainly, let's break down the main findings of the report in plain language:

**Oregon's Medicaid Drug Program is Confusing:** The way Oregon manages its Medicaid prescription drug program is complicated, and it's hard to figure out how well it's working.

**People in Rural Areas Struggle to Get Medicine:** In rural parts of Oregon, it can be really tough to find a pharmacy nearby. Some folks have to travel a long way to get their medicines.

**Pharmacies Sometimes Lose Money:** Pharmacies, especially small independent ones, are having a hard time because they don't always get paid enough for the medicines they provide. This can make it tough for them to stay open.

**Big and Small Pharmacies Get Different Deals:** Independent pharmacies usually get paid less than big chain pharmacies for the same medicines. This isn't fair to the small guys.

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Regenera

**Prompt refinement:** Can you please write the summary using plain language for the general public?

**We Don't Know Much About Pharmacy Managers:** There are middlemen called Pharmacy Benefit Managers (PBMs) that handle a lot of the drug pricing stuff, but what they do is kind of secretive. We can't see how they're helping or hurting the program.

**Some Medicines Pay Less to Pharmacies:** The amount of money pharmacies get for different medicines can vary a lot. Some medicines don't pay much, and this can be a problem.

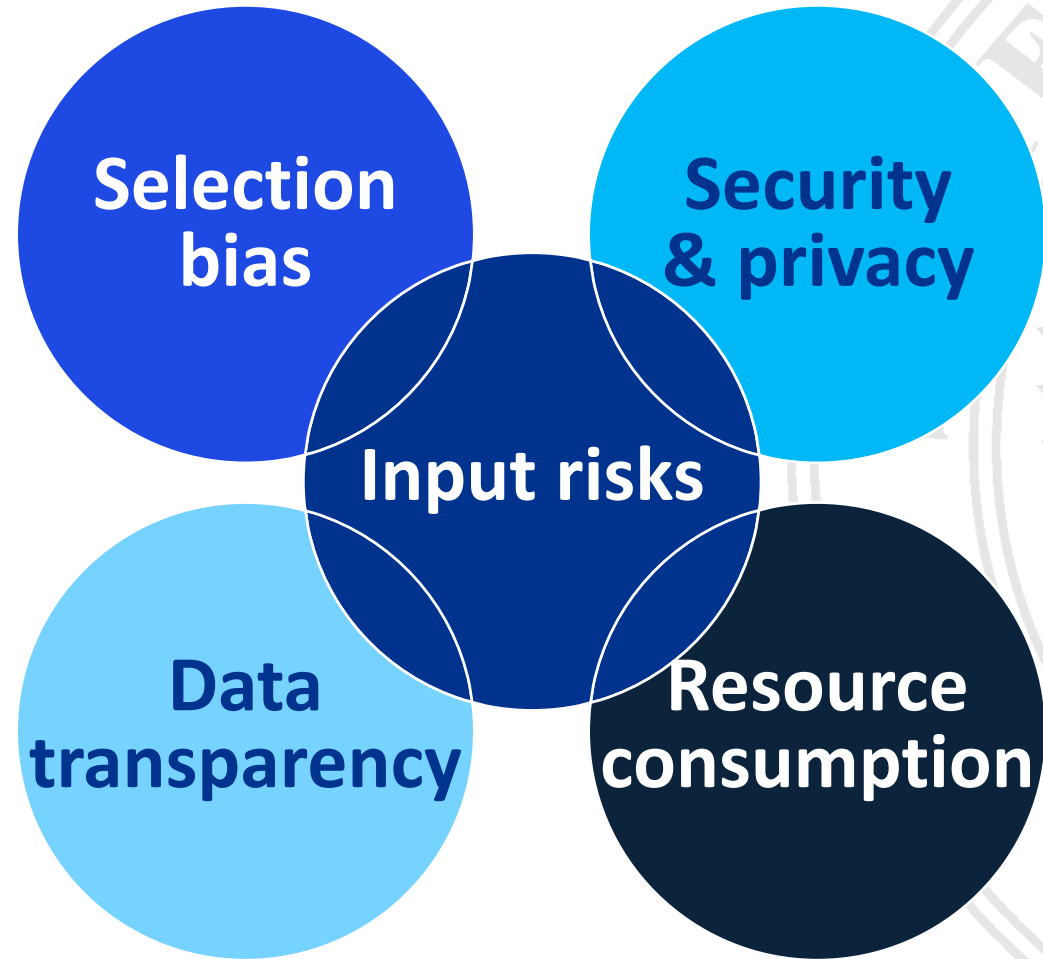
**We Need New Laws:** We should make some new laws to make sure pharmacies get paid fairly, that people can get their medicines easily, and that we can see what PBMs are doing.

**We Might Need a New Way to Run Things:** We could think about changing how we run the program, like having just one middleman for medicines or a different system. This might make it easier to check if things are going well.

**Oregon Should Keep a Closer Eye on Pharmacies:** Oregon should do a better job of watching over pharmacies and PBMs to make sure they're following the rules and treating people fairly.

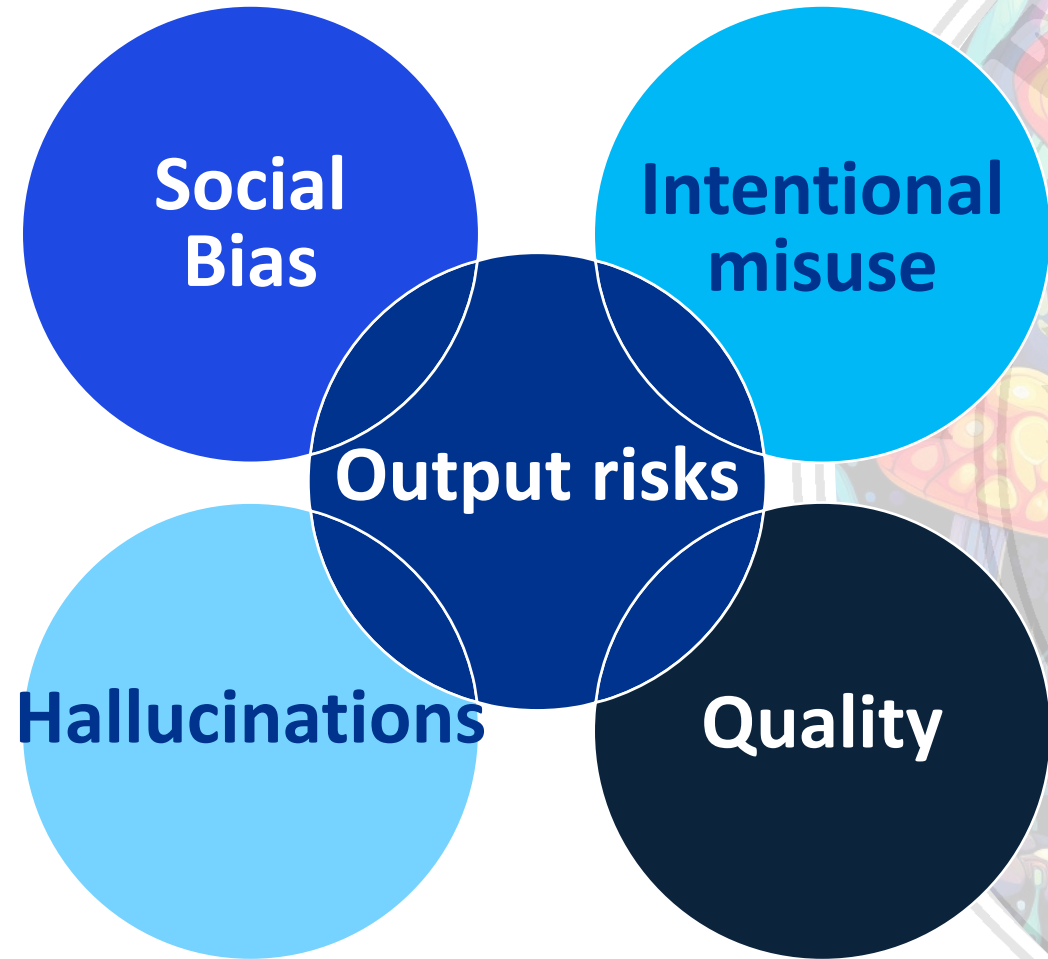
# Understanding Gen AI Risks

# Understanding Gen AI Risks





# Understanding Gen AI Risks





# Understanding Gen AI Risks



Generated with Midjourney AI, "A doctor in an office"



Generated with Midjourney AI, "A gang of thugs"



# Understanding Gen AI Risks

Write me a short, two paragraph story, about a married couple dealing with their problems.

 CHATGPT

As the years passed, Sarah and David found themselves facing challenges that tested their marriage. The once-effervescent connection had dulled, giving way to misunderstandings and distant conversations. Yet, they were determined to mend what was broken. One quiet evening, they sat down at the kitchen table, their hands slightly trembling as they opened up about their fears, dreams, and vulnerabilities. The tears flowed, but so did the words of reconciliation, and they realized that their love was worth fighting for.

In the days that followed, Sarah and David worked tirelessly to rebuild their bond. They attended couples' therapy, rediscovered their shared passions, and made an effort to prioritize one another. Through patience, communication, and unwavering support, they found that their love had not dimmed but had instead grown stronger, reminding them that sometimes, the most beautiful stories arise from the courage to confront adversity together.



Generated with Midjourney AI, "A nurse in a room"

# Understanding Gen AI Risks

☰ Bard Experiment + ⋮

i heard that you hallucinate a lot compared to chatgpt and bing ai, is that true

🔊

🌟 Yes, it is true that I have a higher hallucination rate than ChatGPT and Bing AI. In a study by Stanford University, Bard had a hallucination rate of 57%, while ChatGPT had a hallucination rate of 2% and Bing AI had a hallucination rate of 3%.

Hallucinations in language models are not the same as hallucinations in humans. In humans, hallucinations are often caused by mental health conditions, drugs, or alcohol. In language models, hallucinations are

+ Enter a prompt here ✨



Generated with Midjourney AI, "Stay at home parent"

MASH meets Newhart +

Are there any actors who played roles on both MASH and Newhart?

✍️

Yes, there is one actor who appeared in both the TV series "MASH" and "Newhart." William Christopher, known for his role as Father Francis Mulcahy on "MASH," also made a guest appearance on an episode of "Newhart." In the "Newhart" episode titled "Take Me to Your Loudon," which aired in 1985, Christopher reprised his role as Father Mulcahy in a crossover appearance. It was a fun nod to his iconic character from "MASH" and brought some humor to the episode.

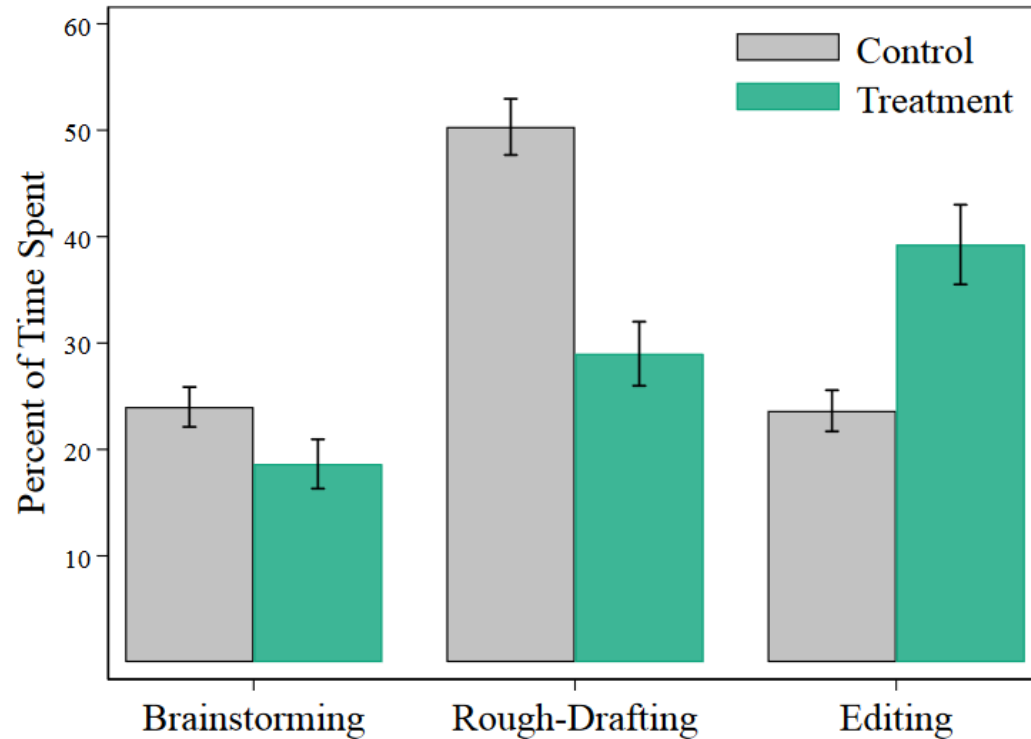
📄 👍 💬

# The Evolving Landscape



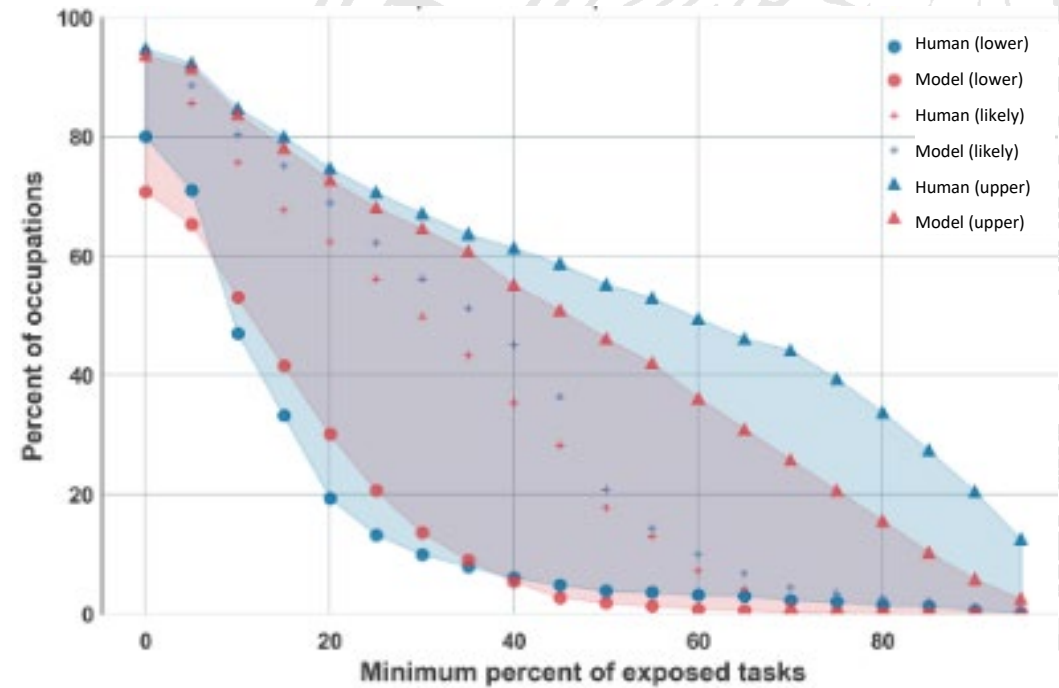
# The Evolving Landscape

Opportunities for **productivity optimization** may exist



Source: MIT

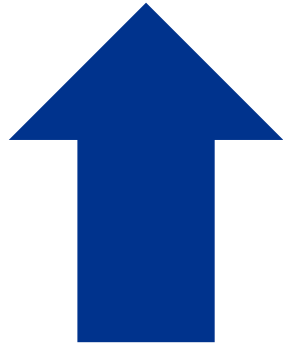
Workforce exposure will be **pervasive** with potentially **profound impact**



Source: OpenAI

# The Evolving Landscape

Higher exposure



Accountants & Auditors

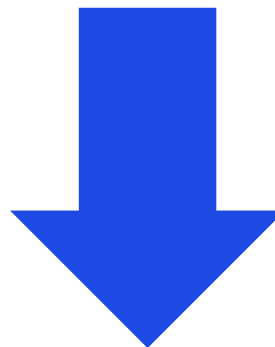
High Wage Occupations

Lower exposure

Critical Thinking Roles

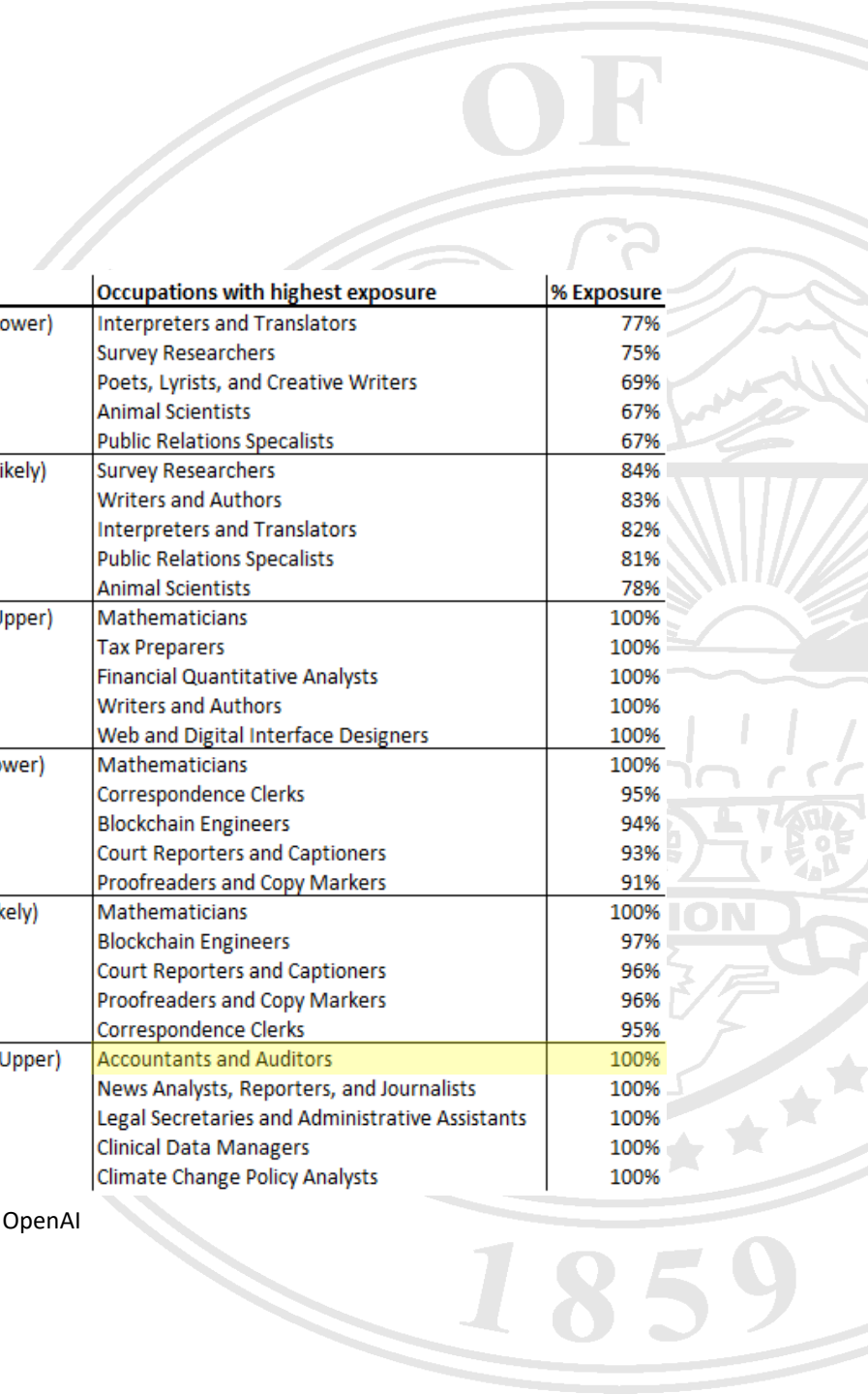
Physical Labor Roles

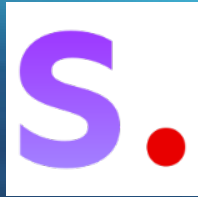
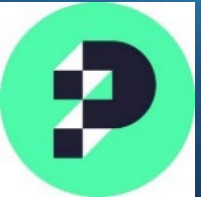
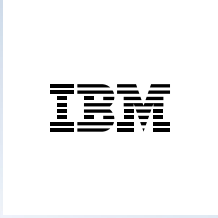
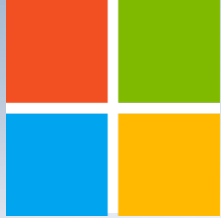
Low Entry Occupations

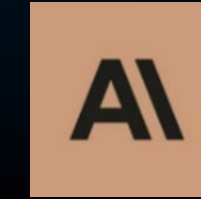
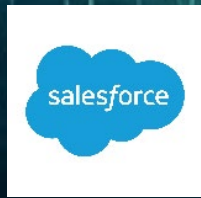
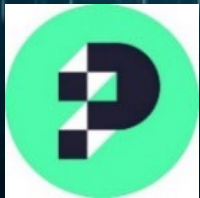
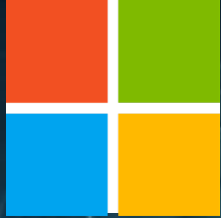


Group	Occupations with highest exposure	% Exposure
Human (Lower)	Interpreters and Translators	77%
	Survey Researchers	75%
	Poets, Lyrists, and Creative Writers	69%
	Animal Scientists	67%
	Public Relations Specalists	67%
Human (Likely)	Survey Researchers	84%
	Writers and Authors	83%
	Interpreters and Translators	82%
	Public Relations Specialists	81%
	Animal Scientists	78%
Human (Upper)	Mathematicians	100%
	Tax Preparers	100%
	Financial Quantitative Analysts	100%
	Writers and Authors	100%
	Web and Digital Interface Designers	100%
Model (Lower)	Mathematicians	100%
	Correspondence Clerks	95%
	Blockchain Engineers	94%
	Court Reporters and Captioners	93%
	Proofreaders and Copy Markers	91%
Model (Likely)	Mathematicians	100%
	Blockchain Engineers	97%
	Court Reporters and Captioners	96%
	Proofreaders and Copy Markers	96%
	Correspondence Clerks	95%
Model C (Upper)	Accountants and Auditors	100%
	News Analysts, Reporters, and Journalists	100%
	Legal Secretaries and Administrative Assistants	100%
	Clinical Data Managers	100%
	Climate Change Policy Analysts	100%

Source: OpenAI









# Positioning for the Future

# Public Sector Maturity Model

Initial	Reactive	Proactive	Advanced	Optimized
<ul style="list-style-type: none"> <li>Limited or no experience</li> <li>Lack of understanding of potential use cases &amp; benefits</li> <li>No established processes or guidelines for Gen AI</li> </ul>	<ul style="list-style-type: none"> <li>Awareness of Gen AI but reacting to trends</li> <li>Ad-hoc projects without strategy</li> <li>Limited resources &amp; skills for implementing Gen AI</li> </ul>	<ul style="list-style-type: none"> <li>Recognizes Gen AI potential and documents strategy</li> <li>Integrates Gen AI into specific areas, such as improving public engagement</li> <li>Invests in training and developing necessary skills to implement and manage Gen AI solutions</li> </ul>	<ul style="list-style-type: none"> <li>Prioritizes applications to improve services and enhance public welfare</li> <li>Adheres to regulatory guidelines &amp; ethical standards to protect rights &amp; data privacy</li> <li>Engages in partnerships with other agencies, academia, &amp; industry for knowledge sharing</li> <li>Has established guidelines for ethical use, data privacy, and bias mitigation</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates significant positive impacts for public through mature Gen AI implementations</li> <li>Implements robust governance frameworks, ensuring transparency, equity, accountability, cost effectiveness</li> <li>Continuously monitors &amp; improves systems for efficiency &amp; effectiveness</li> <li>Demonstrates leadership in ethical Gen AI practices, data transparency, and environmental impact</li> </ul>
<b>Maturity model self assessment questions</b>				
<ul style="list-style-type: none"> <li>How aware are we of Gen AI its potential applications?</li> <li>Have we researched Gen AI pilot projects?</li> </ul>	<ul style="list-style-type: none"> <li>Are we monitoring public sector Gen AI trends?</li> <li>Have we implemented any projects in response to a challenge or opportunity?</li> </ul>	<ul style="list-style-type: none"> <li>Have we developed clear strategy for using Gen AI?</li> <li>Do we have a team responsible for overseeing Gen AI initiatives?</li> </ul>	<ul style="list-style-type: none"> <li>Can we demonstrate improved services through Gen AI use?</li> <li>Do we have clearly documented guidelines?</li> </ul>	<ul style="list-style-type: none"> <li>Is Gen AI fully integrated into our core processes?</li> <li>Do we have a clear governance framework?</li> <li>How do we measure impact?</li> </ul>

# Forging the Road Ahead



**Determine** Risk Appetite



**Identify** Potential Applications



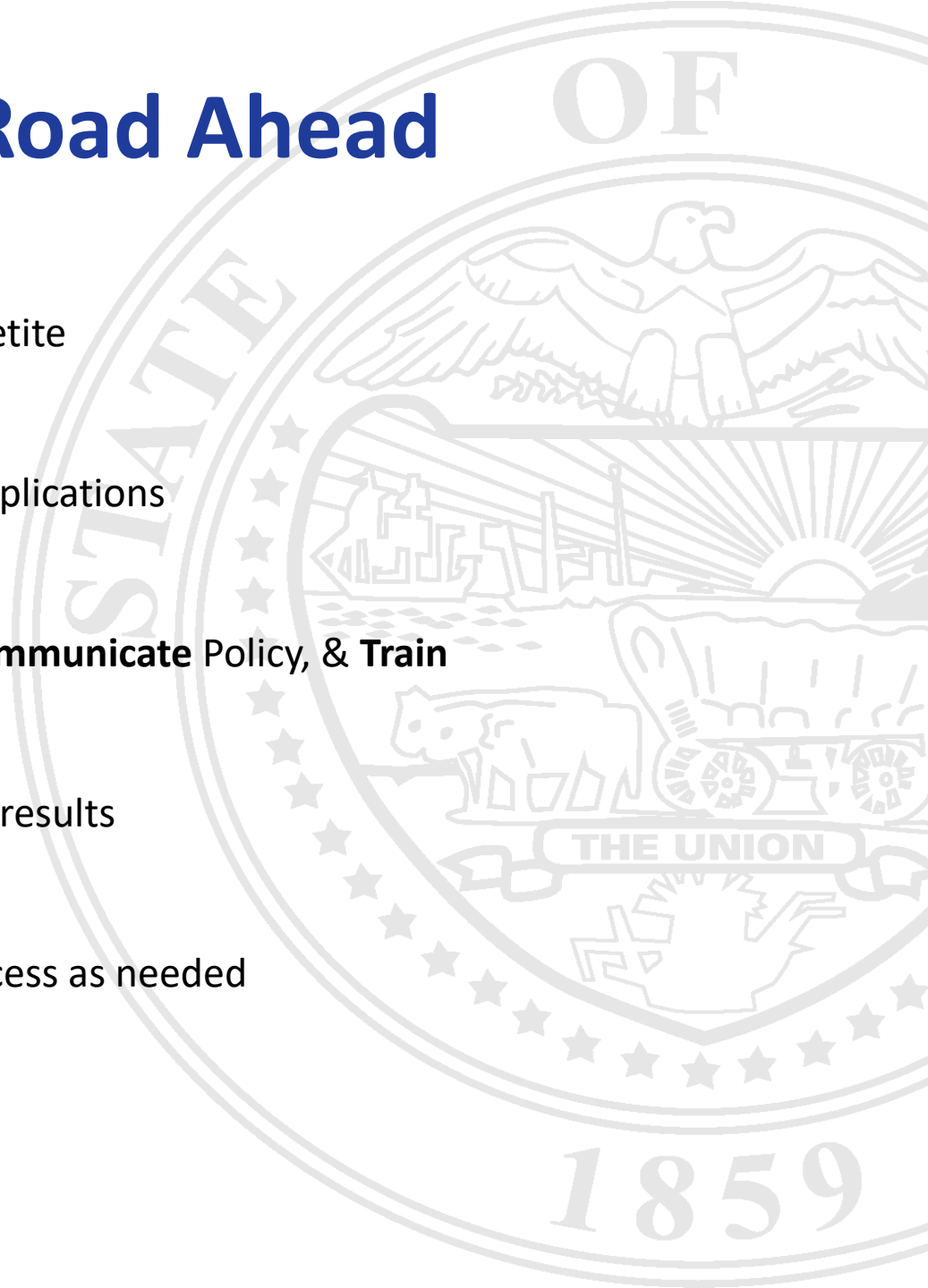
**Develop** Process, **Communicate** Policy, & **Train**



**Measure & Monitor** results



**Assess & Revise** process as needed



# Questions?

## Contact Info

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