

Artificial Intelligence in the Public Sector

Oregon's Joint Committee on Information Management and Technology

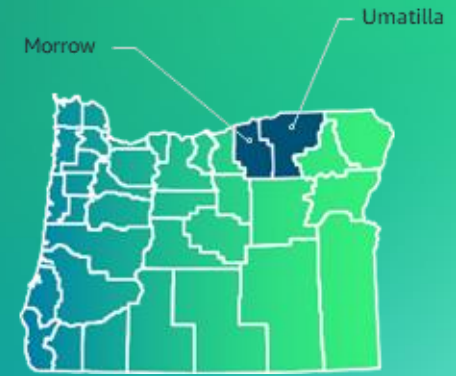
Morgan Reed, AWS Executive Government Advisor





AWS INVESTMENT

Eastern Oregon



**\$22.9
billion**

Total investment in eastern Oregon, including capital and operating expenditures



**\$6.4
billion**

Estimated total gross domestic product (GDP) contributed to eastern Oregon

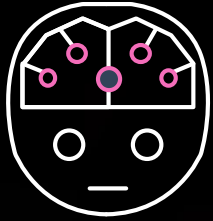


**5,700
jobs**

Estimated average full-time equivalent (FTE) jobs supported at local businesses annually in eastern Oregon.

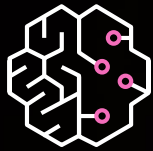


The AI Basics



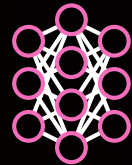
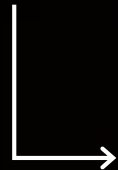
Artificial intelligence (AI)

Any technique that allows computers to mimic human intelligence using logic, if-then statements, and machine learning



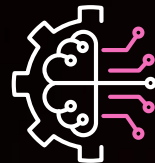
Machine learning (ML)

A subset of AI that uses machines to search for patterns in data to build logic models automatically



Large Language Models (LLM)

Extremely large sets of data used by artificial intelligence algorithms and deep learning techniques to summarize, generate, and predict new content



Generative AI

Powered by large models that are pretrained on vast corpora of data and commonly referred to as foundation models (FMs)

AI questions we are hearing from local government customers



How will the workforce be impacted from a job and skill standpoint



How will residents respond to receiving services digitally or through an AI application



Will AI use create biased, unfair, or inaccurate results



How will data privacy and information security be insured in AI applications



What policy, regulatory, and legal concerns will need to be addressed

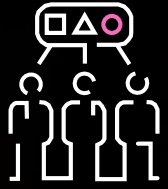


What will the technology, maintenance, and support costs be

AI Strategy and Policy is Key

OBJECTIVES TO CONSIDER WHEN DEVELOPING AN AI STRATEGY

Value alignment
Systems should be designed and used in ways that align with the organization mission, social norms, and legal regulations



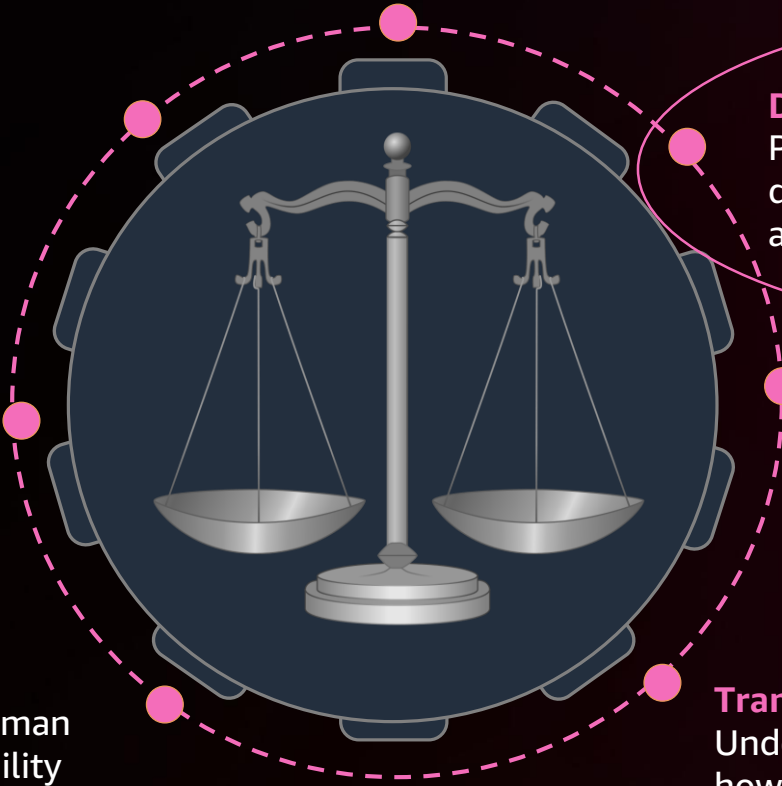
Inclusion
Inclusion of diverse and unique skills, experiences, perspectives, and cultural backgrounds



Training and education
Appropriate knowledge sharing and education to understand purpose, use, and impact



Accountability
Structured, maintaining human involvement and responsibility for design, development, decision processes, and outcomes



Data privacy and protection
Protects the quality and integrity of data used as well as its relevance, access, and processing



Fairness
Systems must be designed to minimize bias and promote inclusive representation



Transparency and explainability
Understanding how data is used and how decisions and outcomes are made understandable to a human



AI Policy Best Practices for State Government

The screenshot shows a web browser window with the URL `sanjoseca.gov/your-government/departments-offices/information-technology/ai-reviews-algorithm-register/govai-coalition`. The page header includes the City of San Jose logo and navigation links for Residents, Businesses, Jobs, Your Government, and News & Stories. A search bar is also present. The main content area features a breadcrumb trail: `Your Government » Departments & Offices » Information Technology » Artificial Intelligence & Algorithm Register »`. The title of the page is **GOVERNMENT AI COALITION**. Below the title, a sub-header reads: **Join over 140 government agencies in creating standards for responsible AI procurement and governance for public agencies.** The main text states:

The City of San José is collaborating with government agencies across the country to ensure that the AI systems we use serve all of our communities. We envision a future where public agencies are able to easily obtain critical information about AI systems from vendors (e.g., an AI FactSheet). We believe there is power in numbers, and are eager to work with other agencies to set an industry standard that promotes effective, equitable, trustworthy AI systems. The GovAI Coalition is committed to:

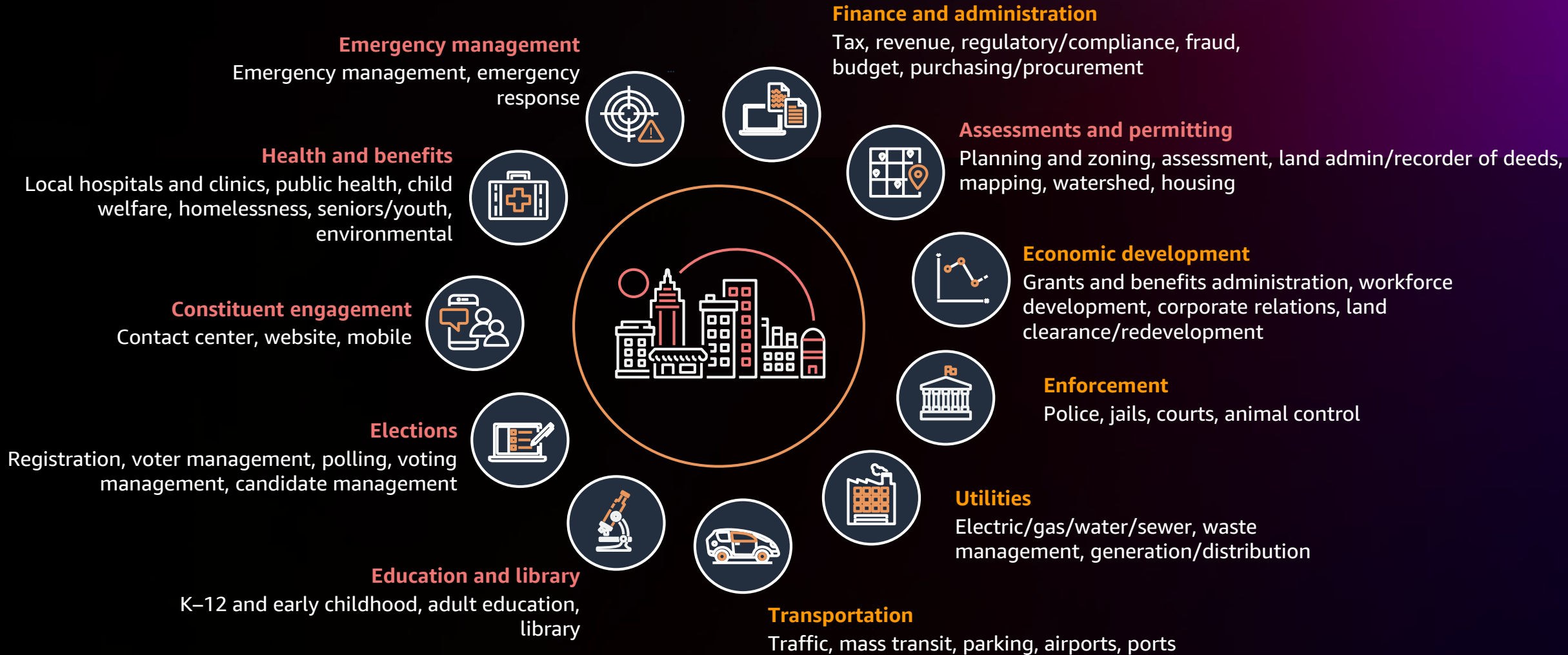
1. Using AI for social good,
2. Ensuring ethical and responsible AI governance,

In the bottom right corner, there is a yellow chat bubble icon and a text box that says "How may I help you?".



Artificial Intelligence Use Cases

ORGANIZATIONAL PROBLEMS BEING SOLVED



Using AI for Non-Emergency Call Diversion

- **9-1-1 staffing shortages**
 - Can range from 10% to over 30%
 - Non-emergency calls placed to 9-1-1 create extended wait times for actual emergencies
- **Non-emergency lines (10 digit lines)**
 - 2:1 ratio of 9-1-1 to non emergency calls
 - Call center wait times over 10 minutes
 - Call centers not answering 10 digit lines at all

If needed, Non-emergency calls (10 digit lines) can still be automatically routed to 9-1-1

Automate the answering of non-emergency calls placed to 10 digit lines

1.0 Deliver Personalized, Positive, and Trusted Customer Experience

2.0 Enable Beneficial Partnerships and Constituent Services

5.0 Proactively Detect and Resolve Risks

1.1 Manage Self-Service

2.6 Provide Public Safety Services

5.2 Ensure Safety

Jefferson County 911



Q&A



Text generation



Audio Analysis

Using AI to Improve Constituent Experience

1.0 Deliver Personalized, Positive, and Trusted Customer Experience

2.0 Enable Beneficial Partnerships and Constituent Services

1.1 Manage Self-Service

2.1 Provide Health & Human Services

1.2 Manage Call Centers

1.3 Manage Constituents & Relationships

“During peak hours, previously you’re 45-50 minutes on hold, and now that’s has been reduced to about three and a half minutes.

One of the other benefits we’ve gotten from Amazon Connect is sentiment analysis. On a call, we get real-time feedback on whether or not the customer was happy, frustrated, or angry...”

- **Benny Chacko**, Deputy General – LA County Internal Services Department



Q&A



Text generation



Audio Analysis

Using AI to Alert Citizens

- Establishing reliable communication mechanisms with citizens is critical during natural disasters and emergencies.

2.0 Enable Beneficial Partnerships and Constituent Services

5.0 Proactively Detect and Resolve Risks

1.4 Manage Outreach & Communication

2.1 Provide Health & Human Services

2.15 Provide Environment Services

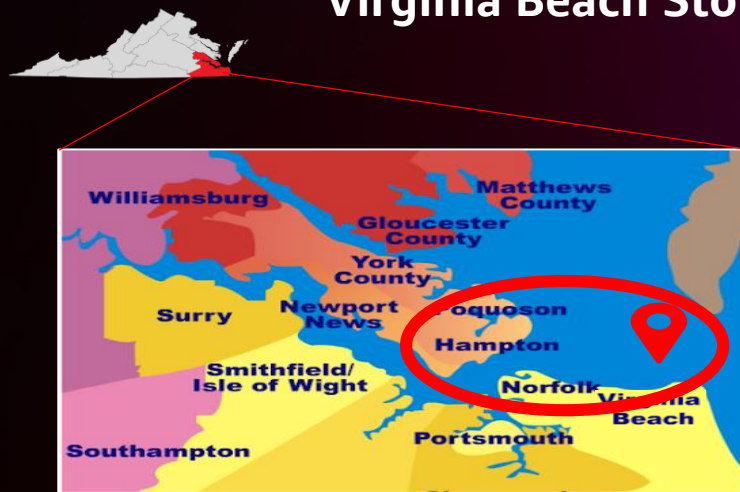
5.2 Ensure Safety

5.3 Ensure Environmental Health

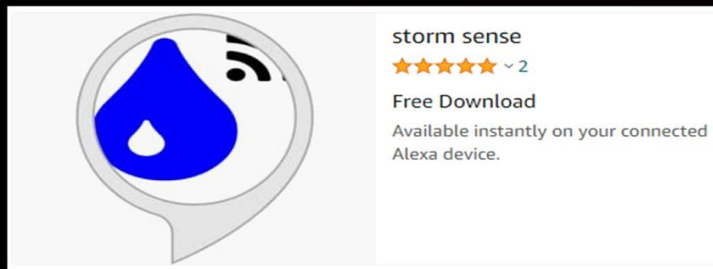
Virginia Beach StormSense

Stormsense uses **cloud, IoT and AI** to streamline and combines **data from multiple agencies** to **proactively** address impending flooding issues.

Uses autonomous water level sensors and **Alexa** to provide water levels in real-time to the community.



Text generation



Using AI to Improve Case Management

- The Los Angeles County Public Defender's office implemented an AI-powered client case management system.
- The AI tool helped reduce manual data entry from documents 85%. This eliminated the need for the public defender staff to manually scan in thousands of paper files received daily.
- 160 million records stored in 23 different legacy systems were consolidated in one cloud based application.
- The AWS AI/ML Lab developed a custom system that ingests scanned PDFs, classifies useful pages, extracts agency-specific information and allows the Public Defender's office staff to verify results.

2.0 Enable Beneficial Partnerships and Constituent Services

5.0 Proactively Detect and Resolve Risks

6.0 Promote Technology Enabled Business Performance

2.13 Provide Court & Legal Services

5.1 Ensure Compliance

6.1 Provide IT Services (i.e., Service Catalog)



Text generation



Text extraction



Text summarization

Using AI to Improve Cybersecurity

- The City of San Diego and their cybersecurity partners are implementing a new 'eCISO' cybersecurity chatbot that:
 - Interviews users to assess and grade an organizations cybersecurity posture per NIST and other frameworks.
 - Provides recommendations on how to improve their cybersecurity posture per framework of choice.

5.0 Proactively Detect and Resolve Risks

6.0 Promote Technology Enabled Business Performance

5.1 Ensure Compliance

6.4 Maintain Security, Privacy & Continuity

6.6 Manage Cyber Security Risk



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Paraphrase rephrase



Q&A



Text generation

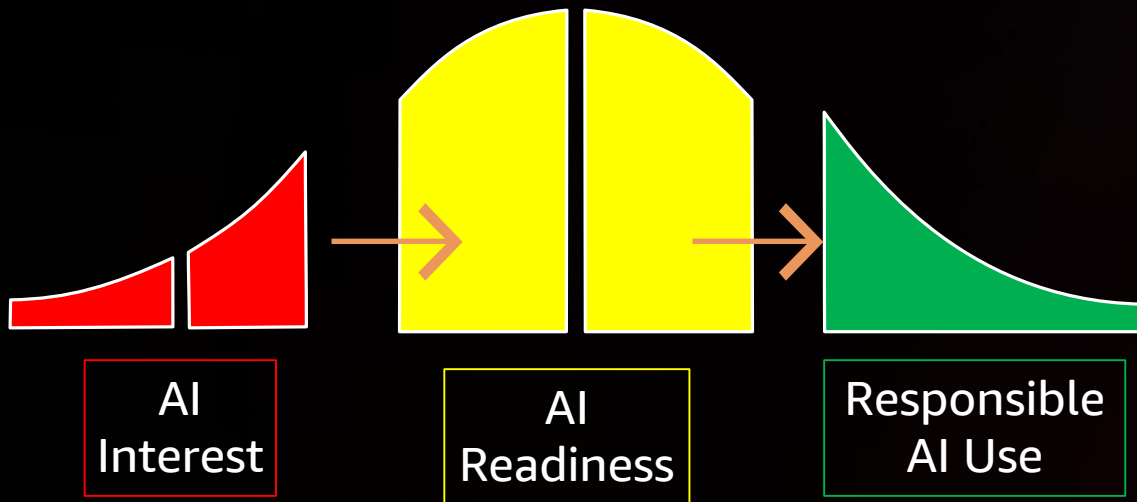


Search



Text summarization

Bridging the Gap



AI Readiness Gap

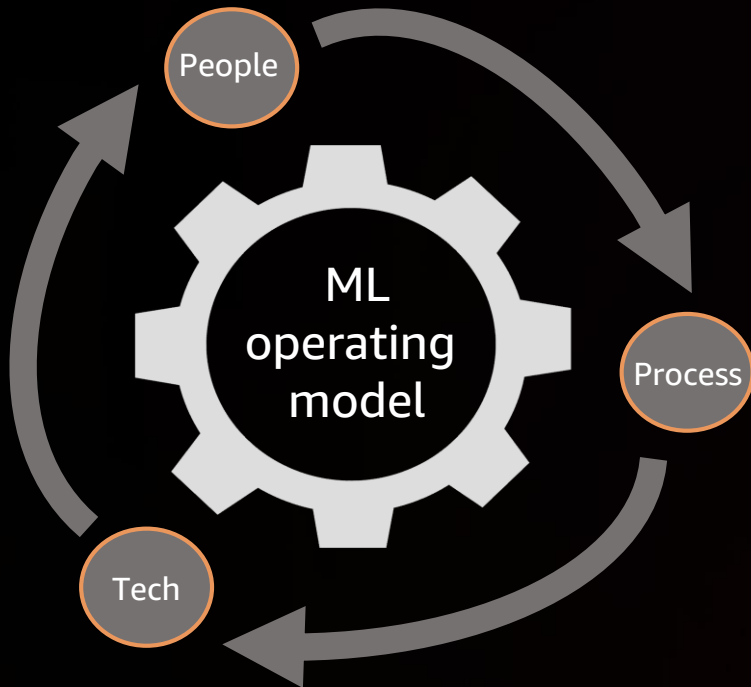
- Lack of understanding of the challenges
- Lack of clear and prescriptive guidance on how to move beyond any initial technical exploration
- Failure to actively manage risks

71%

of adopters expected to increase their investment in AI in the near term

Deloitte's State of AI in the Enterprise, 3rd Edition, 2020

Importance of building AI programs responsibly



Start with a specific problem AI can solve



Institute appropriate governance structure



Align AI risk management with broader risk efforts



Develop people resources and skills



Evaluate cost and ROI



Innovate inclusively and collaboratively



Value

Thank you!

Morgan Reed, AWS Executive Government Advisor

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