Crossing the generative AI tipping point

From quick wins
to sustained growth in
the public sector

Google Cloud

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About this guide

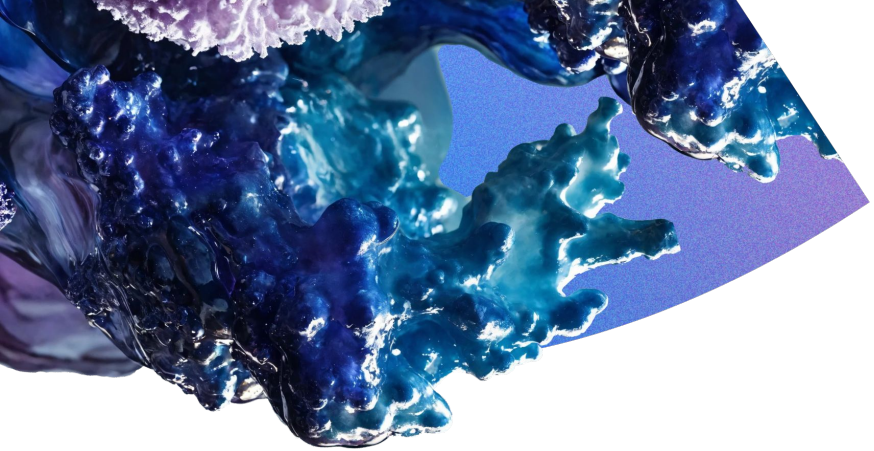
Drawing on Google's generative AI best practices — built on over 20 years of internal R&D across search, databases, hardware, and AI — the guide pulls together advice from our leading AI experts, the latest Google-led customer insights, and third party research to help leaders understand the value levers of common gen AI use cases over the short, medium, and long term.

The first section outlines a simple framework to assess the risk vs. reward of gen AI use cases. Government leaders can use it to select the right mix of use cases, with expected time to value realization ranging from 6 months to 3+ years.

The second section contains a shortlist of the top gen AI use cases driving value today, and includes insights frommission leaders of organizations — including Uniformed Services University, USPS, the City of Dearborn, MI, and Hawaii Dept. of Human Services, — who are seeing tangible outcomes from these use cases.

The last section includes four best practices on how to get started.

Visit the Google AI for Public Sector thought leadership hub (goo.gle/PS-AI) for the latest customer stories, news and insights.



Executive foreword

Leigh Palmer — VP, Delivery and Operations, Google Public Sector

As leaders in this era of generative AI, we face a tricky task. We must navigate organizations through the hype cycle to begin realizing the value of gen AI.

Already, we're seeing many of our customers achieve incredible things with gen AI, particularly in three key areas.

First, there's the increase in productivity among employees and developers. Second, the ability to deliver more personalized, interactive constituent experiences. And third, the automation of many processes to free up time to focus on higher value work.

On the productivity front, for example, the Uniformed Services University is using Gemini for Google Workspace to to improve efficiencies across the university and create the next generation of military medical personnel.

To better serve a diverse community of over 100,000 people, Dearborn, Michigan is leveraging AI/ML tools from Google Cloud to have a 24/7 multilingual virtual agent and translated information.

Hawaii DHS created a virtual agent support desk, and in doing so reduced wait times with uninterrupted service and a 300% increase in resolved cases.

As these examples show, early adopters are starting to see value — and you can, too.

The challenge is to invest for both now and what comes next. While potential moonshots may seem tantalizing — and their time will come — it's important to focus on quick wins and demonstrated value first.

The question is, where do you get started?

73%

of federal departments and agencies are on track to hire a CAIO[1]

Chapter 01

The value framework:

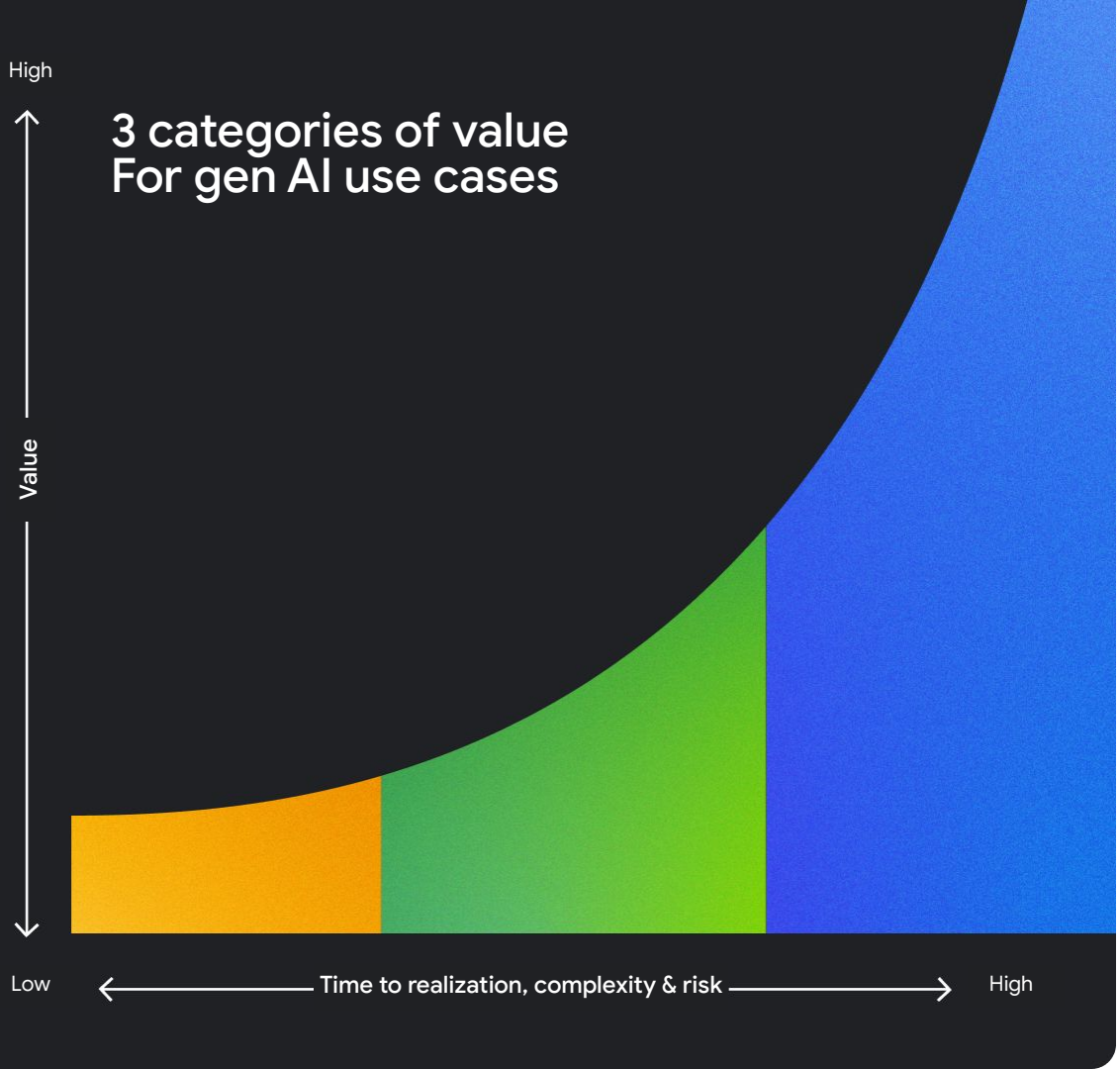
How to optimize your gen AI portfolio

This framework is the starting point to help leaders and management teams understand how to think critically about the near-term and long-term payoffs and complexities of gen AI use cases.

To build the optimal portfolio for their organization's generative AI investments, leaders should give careful consideration to the risk-return trade-off, as well as discrete milestones with measurable goals to define success in both the near-term and future state.

Investing in organization-wide gen AI transformation initiatives is critical to long-term success. These transformative innovations can offer the highest rewards, such as enabling new models of service and establishing entirely new ways of working. But they take time to reach universal adoption at organization scale, when the impact can go from incremental to transformative. Transformation at a agency-wide scale can take up to three or more years.

In the meantime, quick wins that deliver incremental gains are achievable in the short term, and may help to offset larger investments by delivering value within the first year of implementation.



This simple framework can help leaders build the optimal generative AI roadmap for their organization, by categorizing use cases based on potential value vs. risk of deployment:

Quick wins
(6-12 months)

Organizational intelligence
(1-2 years)

Transformative innovation
(3+ years)

4x

Federal agencies that have high levels of AI maturity, are **four times** as likely to explore multiple GenAI use case pilots, compared with those that are at the beginning of the AI journey[1]

Quick wins

To get started, organizations can invest in common generative AI use cases that can minimize risk and help facilitate fast and measurable outcomes. The focus here is on existing employee workflows that can be made more productive, internal processes that reduce operational overhead, time, and cost, or existing user flows that may benefit from self-service or deepened personalization.

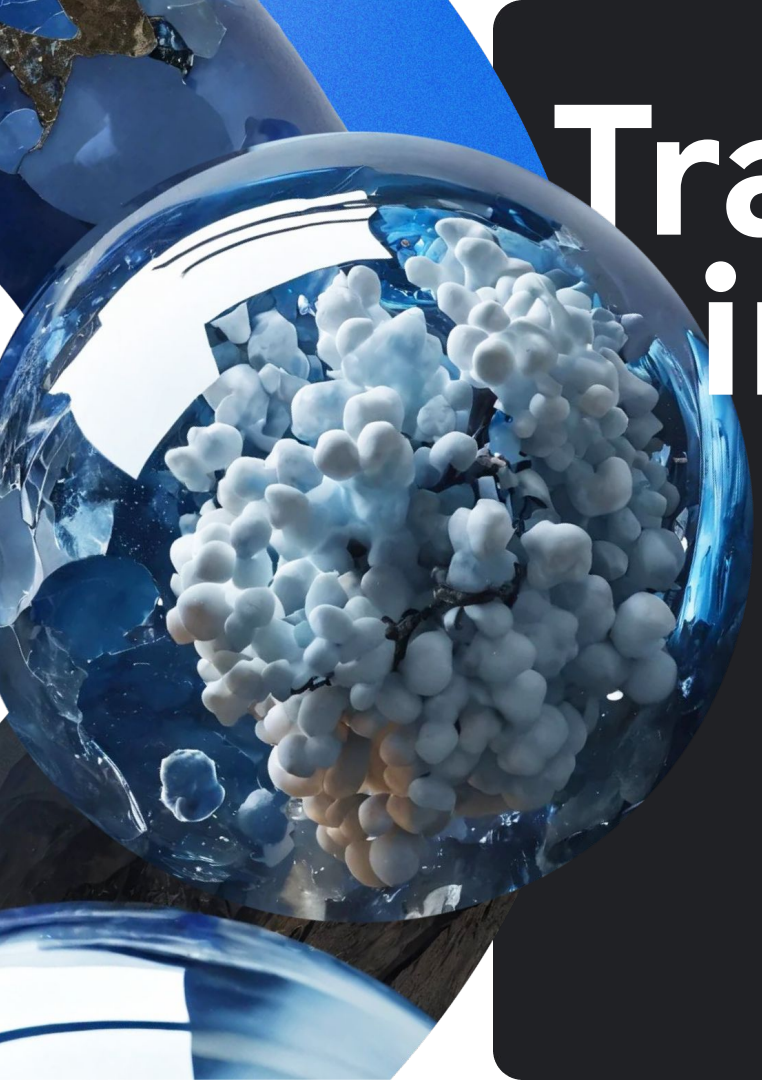
Typically, quick wins demonstrate immediate value by accelerating productivity or output of current functions. They can serve as a "proof of concept" for generative AI solutions that deliver targeted improvements to mission outcomes, without introducing sizable risk to mission critical operations.

Timeframe	6-12 months
Risk level	Low
Objectives	Increased employee productivity; improve operational efficiency of processes, assets, and staff

Organizational intelligence

In the medium term, quick wins that have increased value across all teams and processes can then be scaled internally. Leaders can begin to test generative AI use cases for external-facing applications in risk-contained focus groups to garner user feedback, and lay the groundwork for even bigger initiatives that may take time to deliver concrete mission outcomes.

Timeframe	1-2 years
Risk level	Low-to-Medium
Objectives	Productivity gains; improved decision making, improved constituent experience



Transformative innovation

Building on the capital and expertise accrued over the first two stages, organization leaders can then accelerate investment in differentiating and innovating use cases that may not exist today. Many of these will define the next generation of human-computer interaction, such as generative AI experiences across new form factorsand emerging use cases.

Leaders can direct their organization's efforts and resources, along with the internal capital gained from early successes (such as cost savings, productivity gains, and skill development), toward a strategy that expands generative AI use cases. Prioritize those with the greatest potential to benefit citizens and communities.

Timeframe	3+ years
Risk level	Medium-to-High
Objectives	Enable innovation to meet more missions and free up time to focus on higher value work

50%

of federal agencies believe Gen AI will have a significant impact on transforming their organization in the next 24 months[1]

Chapter 02

Quick wins

Driving organizational value today

57%

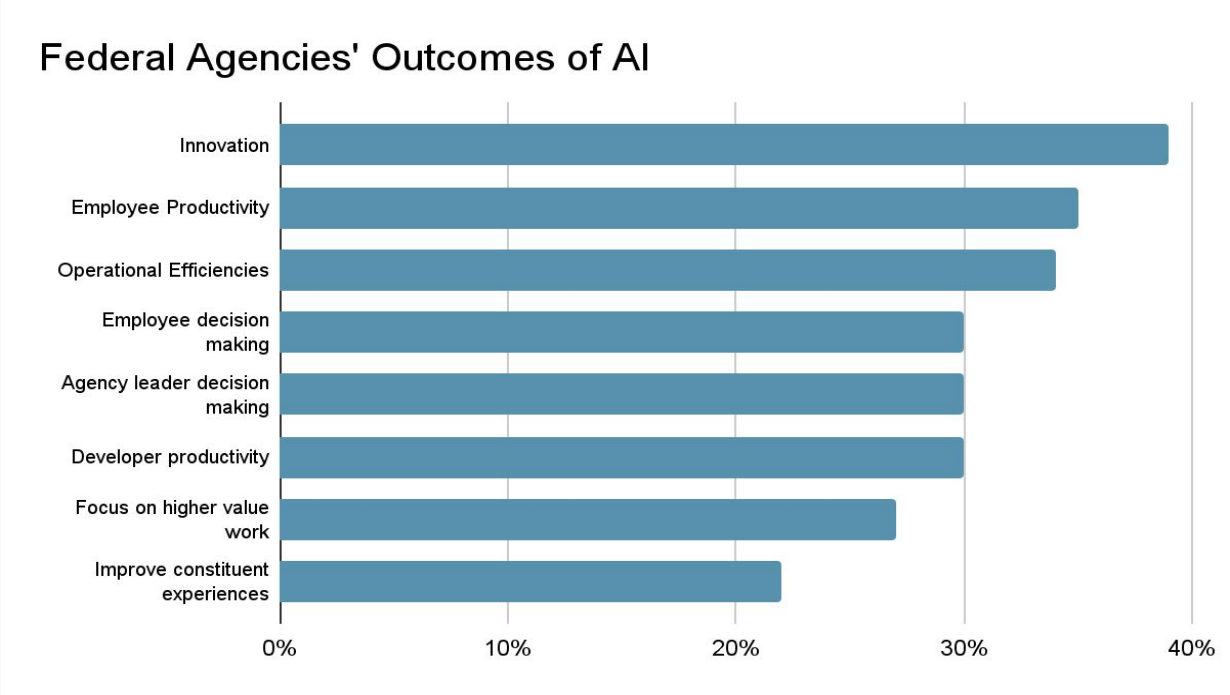
of federal government leaders surveyed are identifying “low-hanging fruit” generative AI projects with high mission impact[1]

Today’s best generative AI investments are commonly not headline grabbing. Instead, they focus on making existing processes better, on reducing toil and drudgery, and on empowering developersto experiment.

Quick wins — the low-risk use cases with the shortest time to value — are critical to realize tangible benefits in the immediate term.

The value of “quick wins”

Agencies are realizing AI benefits in terms of innovation, operational efficiency and employee productivity. They also expect to free up employees’ time to focus on higher value of work in the future.



Source: IDC Signature White Paper, The Chief Artificial Intelligence Officer (CAIO) Playbook: A Practical Guide for Advancing AI Innovation in Government, sponsored by Google Public Sector, Doc# US52616824, October 2024

To drive value with quick wins, organizations can start in three key areas.

01 Increased productivity among employees and developers

02 Personalized constituent experiences to improve interactions

03 Automated back office processes and workflows to enable focus on higher value work

01

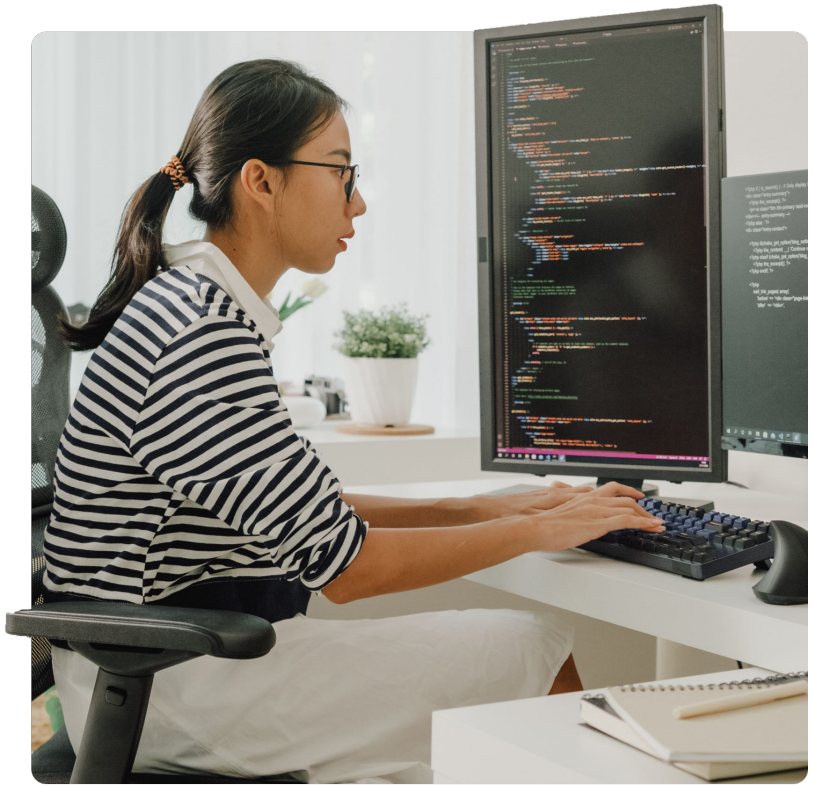
Increased productivity among employees and developers

Quick win 1

Developer productivity

Generative AI can help improve developer productivity by assisting code development, simplifying DevOps,and automating non-coding processes.

> Generative AI can help software engineers develop code **35-45% faster**[2]



→ Learn more about generative AI for developer productivity

Generative AI can have immediate impact on developer productivity.

01 Improve and accelerate code development

Use cases

- Automate routine developer tasks
- Explain code in natural language
- Suggest test plan and detect errors
- Provide code license attribution

Value

- Improve code quality
- Free up time for strategic work

02 Simplify DevOps

Use cases

- Monitor software performance and investigate issues
- Summarize and help remediate security findings

Value

- Improve developer velocity
- Expedite onboarding

03 Automate non-coding processes

Use cases

- Improve code discoverability with organization search
- Streamline compliance with developer chatbots that provide regulatory and business context

Value

- Speed of execution
- Reduce development costs
- Improve developer efficiency

Uniformed Services University

This institution is planning for a digital medical workforce with generative AI, ensuring success for the next generation of military medical personnel in a digital medical workforce

The Uniformed Services University (USU) piloted Gemini for Google Workspace to improve efficiency across the university. This tool helped with tasks like writing policies, creating syllabi, and summarizing documents, leading to increased focus on more meaningful work, faster task completion, and improved productivity. Overall, 88% of participants reported feeling more effective at their jobs.

It's about teaching the next generation of medical providers to interact with generative AI... what the tools are capable of will be critical if we want to be delivering modern digital medicine to American service members and their families.

Sean Baker —
USU Chief Technology and Senior Information Security

02

Improve constituent experiences

Quick win 2

Improve constituent experience

Generative AI holds enormous potential to improve the constituent experience while driving operational and cost efficiencies. Across a range of engagement models, it can enhance everything from agent and employee productivity, to self-service and deflection rates.

30-45% increase in productivity with generative AI in customer service functions[4]

84% of federal agencies take a **people first approach** to developing AI[1]

Up to 50% reduction in the volume of human-serviced tasks with gen AI[3]

Generative AI can have immediate impact on constituent-centric services

01 Boost agent and employee productivity

Use cases

- Knowledge Assist based on internal data
- Summarize call transcripts or emails
- Connect constituent experience cross-channel
- Live transcription with multi-lingual translation
- Smart reply and coach agents
- Build internal customer service (e.g., internal helpdesk)

Value

- 28% increase in calls handled per agent with Google Cloud Contact Center AI's Agent Assist[5]

02 Improve self-service and deflection rates

Use cases

- Enable constituents to get answers faster via self-service with AI-powered virtual agents that seamlessly switch between topics, handle supplemental questions, and operate 24/7
- Generative steering based on user intent
- Multi-modality (text and voice)to enhance conversations

Value

- Up to 50% reduction in abandon rate with Google Cloud Contact Center AI's Dialogflow[4]

03 Modernize chat and voice infrastructure

Use cases

- Intelligent lissue routing
- Empower human agents to resolve customer issues faster and with high-quality responses by automating the handoff from self-service channels to live agents

Value

- 143% increase in conversion rate via intelligent lead routing with Google Cloud Contact Center AI[4]

04 Enhance insights and decision making

Use cases

- Measure customer service responses and quality metrics
- Constituent segmentation to enable escalations
- Constituent 360 to provide more personalized responses
- Suggest answer based on centralized knowledge base and insights gleaned from high-performing agent interactions

Value

- $5.5M total savings within the first year of CCAI Insights implementation for a largeglobal telco company. Cost savings driven by increased digital self-serve and reductionin repeat calls.

City of Dearborn, MI

This diverse urban area is improving website access for residents with data, analytics, and AI/ML. More than half the people in Dearborn speak a language other than English at home.

Dearborn modernized its website and document translation practices by leveraging the data and analytics platform and AI/ML tools from Google Cloud. The website now features a 24/7 multilingual virtual agent and translated information to improve access to services for residents who speak a language other than English.

How do we keep up the pace with our residents? When you have a partner like Google Public Sector who can take something complex and simplify it, you produce a win-win for all entities.

Abdullah Hammoud —
Mayor, City of Dearborn

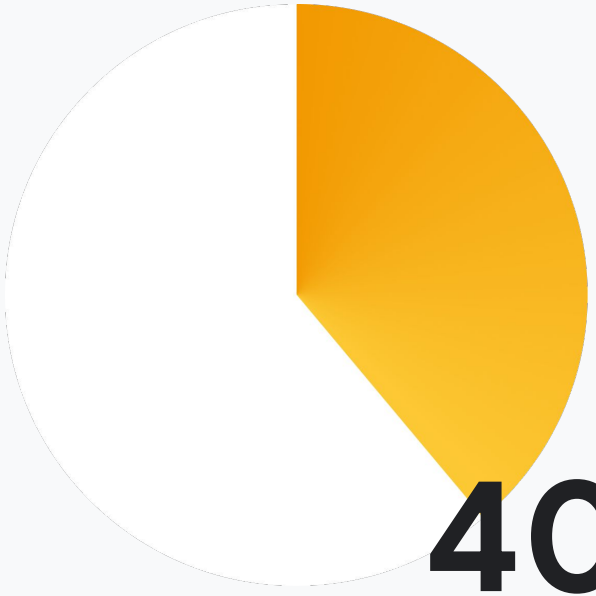
03

Automated processes and workflows

Quick win 3

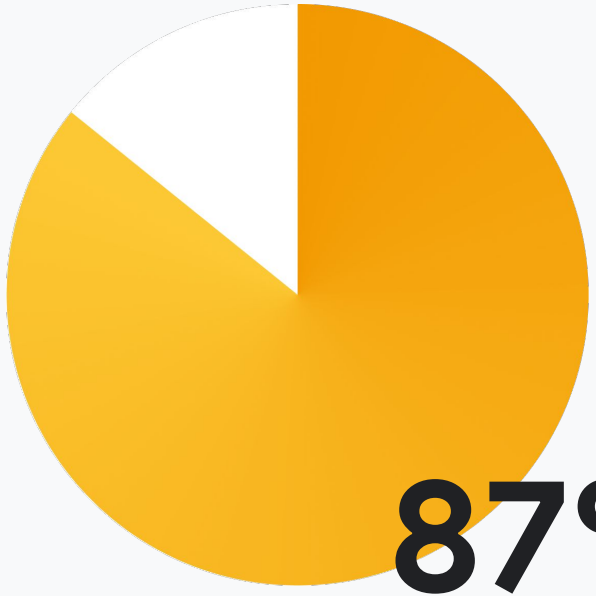
Government of the future

Generative AI has the potential to create a revolutionary shift in jobs across public sector by augmenting and/or automating complex tasks to free up employees to focus on higher value work.



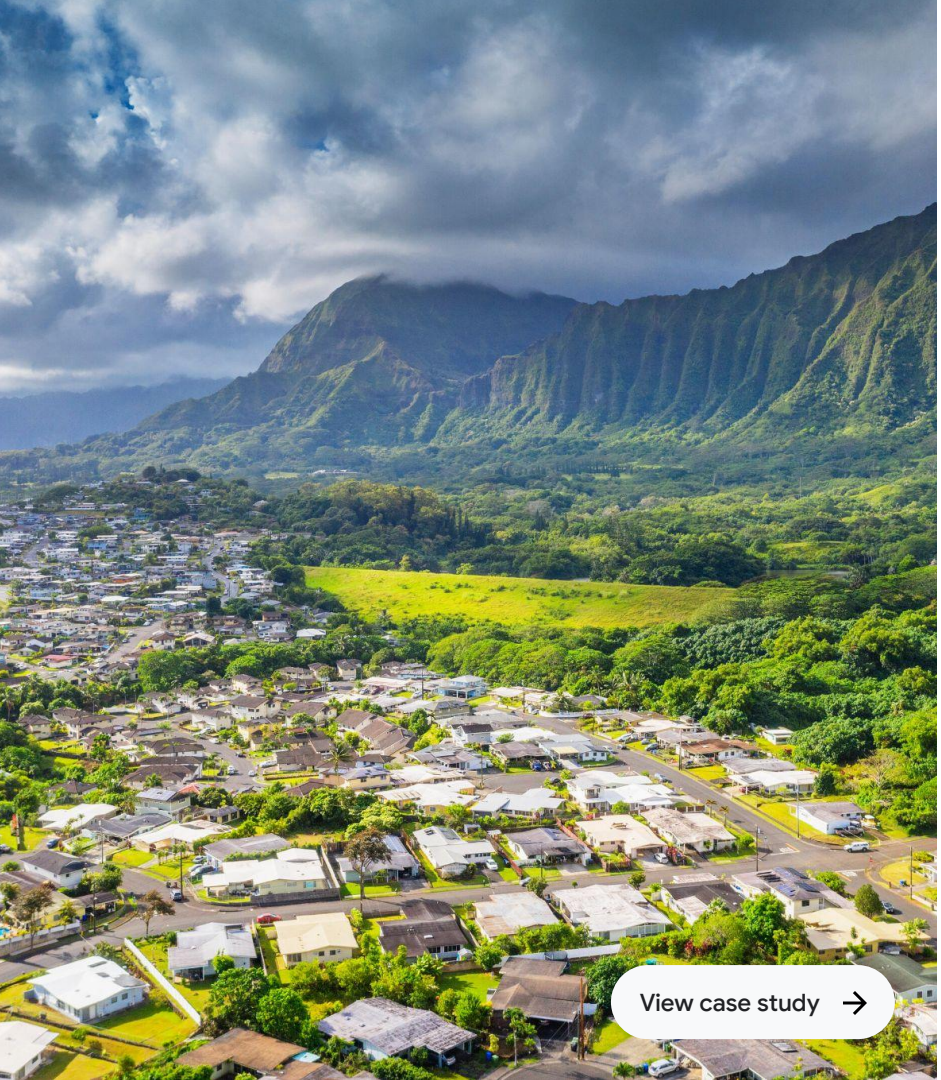
40%

of working hours across industries can be impacted by LLMs[6]



87%

of executives anticipate job roles being augmented, rather than replaced, by gen AI[7]



Hawaii Dept. of Human Services

Hawaii Department of Human Services (DHS) supports Hawaii residents by modernizing call center operations with CCAI

With help from Google Cloud, Hawaii DHS updated the its statewide support desk by automating benefit information with Contact Center AI (CCAI). Now, the system can provide Hawaii residents with 24/7 access to virtual agents, servicing an average of 1,200 callers a day — leading to reduced wait times with uninterrupted service and a 300% increase in resolved cases.

Stanford School of Medicine

Stanford Medicine Accelerates Medical Research with AI-Powered Data Warehouse

A pioneer in AI for medicine since the 1970s, Stanford School of Medicine's launch of STARR-OMOP, (Stanford Research data Repository in an Observational Medical Outcomes Partnership) marked the next generation analytical clinical data warehouse to push the frontiers of artificial intelligence in medicine. By standardizing this huge archive and making it secure, private, and easier to access, the data warehouse enables faster and better data science.

Cohort queries run ten to one hundred times faster on BigQuery when compared to an on-premise database—and it's cost efficient.

Somalee Datta —
Director of Research IT,
Stanford School of Medicine

Chapter 03

Best practices for sustained growth

78%

of federal AI leaders enlist the support of functional leaders and elicit feedback to operationalize use cases[1]

Best practice 01

Assess your AI innovation maturity

Evaluate your agency's current AI capabilities, culture, and readiness to identify strengths, weaknesses, and areas for improvement.

This assessment will provide you a baseline for developing a targeted AI strategy and roadmap, ensuring alignment with agency goals and priorities.

Government leaders must move beyond mere experimentation and embrace a strategic, comprehensive approach to AI. Agencies at higher levels of AI maturity demonstrate significantly better performance in adhering to mandates, piloting use cases, and achieving mission impact. By embracing the transformative power of AI, governments can unlock unprecedented opportunities to enhance efficiency, optimize service delivery, and ultimately, better serve their constituents."

Elizabeth Moon - Managing Director, Customer Engineering, Google Public Sector

Best practice 02

Assess risk, governance and compliance

Establish a robust AI governance framework that includes risk management, ethical guidelines, and compliance with regulations and policies.

This framework ensures responsible and ethical AI development and deployment, mitigating potential risks and fostering public trust.

"The power of AI to transform government and improve the lives of citizens is a gamechanger. At Google, we believe in the opportunity, and likewise recognize the importance of mitigating AI risks. We are committed to partnering with government leaders to support AI for citizen services. By prioritizing responsible AI, we can harness the full potential of this transformative technology to build a more equitable and prosperous future for all."

Adelina Cooke - Global Cloud AI Public Policy Lead, Google

Best practice 03

Develop an AI ready workforce

Build internal AI expertise and skills through training, upskilling, and strategic partnerships to support AI initiatives effectively.

Equip your agency with the necessary talent to develop, implement, and manage AI solutions, maximizing their potential for mission impact.

"To really make AI work for government, we need people comfortable using it every day. And the best way to do that is to let them actually use it. Hackathons, workshops, hands-on labs - those are what get teams excited and show them what AI can really do. We must be committed to continuous enablement with the pace of technology. We need a talent plan that includes building skills, hiring the right people and strategic partnering. That's how government will have a AI ready workforce."

Katharyn White, Director, Google Public Sector

Best practice 04

Invest in innovation to scale AI use cases

Identify and prioritize high-impact AI use cases, invest in appropriate infrastructure and platforms, and foster collaboration to scale AI innovation across the agency.

This will enable your agency to leverage AI's full potential for mission outcomes, improve efficiency and effectiveness, and deliver better citizen services.

"The potential of generative AI in government lies in its ability to supercharge human judgment. This is best achieved by identifying bottlenecks in current processes. Employing design thinking and human-centered design techniques helps establish empathy and understand the pain points within these processes. Generative AI techniques can then be applied to reimagine these processes and ultimately improve human judgment. The key is to rapidly prototype use cases, experiment, and demonstrate the art of the possible to garner support for transformation."

Cameron Groves - Director, Rapid Innovation, Google Public Sector

Why Google AI for Public Sector

Discover how you can unlock new possibilities and deliver exceptional services to the missions and communities you serve.

For over a decade, we've been applying AI to make our products and services radically more helpful. Our in-house AI research has been at the forefront of the AI field, helping develop generative AI and numerous AI technologies powering core products that help billions of people every day.

Thanks to this strong AI foundation — along with Google's advances in hardware, models, and safety — Google is uniquely positioned to help make AI accessible and useful for everyone.

With our unified AI stack, it is easier for organizations to easily train and serve models on AI-optimized infrastructure, access and customize some ofthe best foundation models from both Google and the industry, build advanced AI agents with an integrated developer platform, and increase productivity with an AI collaborator.

Google can also help customers boost productivity, gain competitive advantages, work more securely, and ultimately improve their bottom line with Gemini for Google Cloud and Gemini for Google Workspace. Gemini provides users with AI-powered assistance where and when they need it in Google Workspace and Google Cloud, including development and operations, security management, data analytics, databases, and collaboration.

Doing AI efficiently at Google-scale is a feat few other companies in the world are capable of. Google brings that experienceand infrastructure to Google Cloud AI infrastructure.

FORRESTER

The Forrester Wave™: AI Infrastructure Solutions Q1 2024, Forrester Research, Inc.

How organizations benefit from our AI partner ecosystem

To maximize customer innovation and solution choice, gen AI requires an open ecosystem of partners to deliver a breadth of solutions. Our trusted community of partners provides expert guidance and support for a wide range of AI initiatives — helping organizations move from experimentation, to acceleration, to scale.

We have close to 500 authorized Google Cloud partners actively supporting agency missions today, with more getting added every quarter, and a fast-growing pool of new gen AI partners, customers can engage infrastructure partners, model builders, business application providers, data providers, and services partners. Today, our global systems integrators have committed to train more than 150,000 consultants on Google Cloud's generative AI ecosystem and are ready to help you accelerate your AI deployment.

Google Cloud

Hit the ground running with generative AI.

Learn

Read the success stories of how Google AI helped Public Sector organizations

Connect

Download our 10-step guide to getting started or talk to a sales rep

Co-Create

Get AI training on demand through Google Cloud Days sessions

See

Watch the keynote from the Public Sector GenAI Live & Labs in NYC

Resources

1 IDC Signature White Paper, The Chief Artificial Intelligence Officer (CAIO) Playbook: A Practical Guide for Advancing AI Innovation in Government, sponsored by Google Public Sector, Doc# US52616824, October 2024

2 McKinsey, A CIO and CTO technology guide to generative AI, July 2023

3 McKinsey, The Economic Potential of Generative AI (as % of total marketing spending), June 2023

4 Google Cloud, How Google Cloud improved customer support with Contact Center AI, August 2023

5 Google Cloud, Agent Assist

6 Accenture, A new era of generative AI for everyone, May 2023

7 IBM, Augmented work for an automated AI-driven world, August 2023