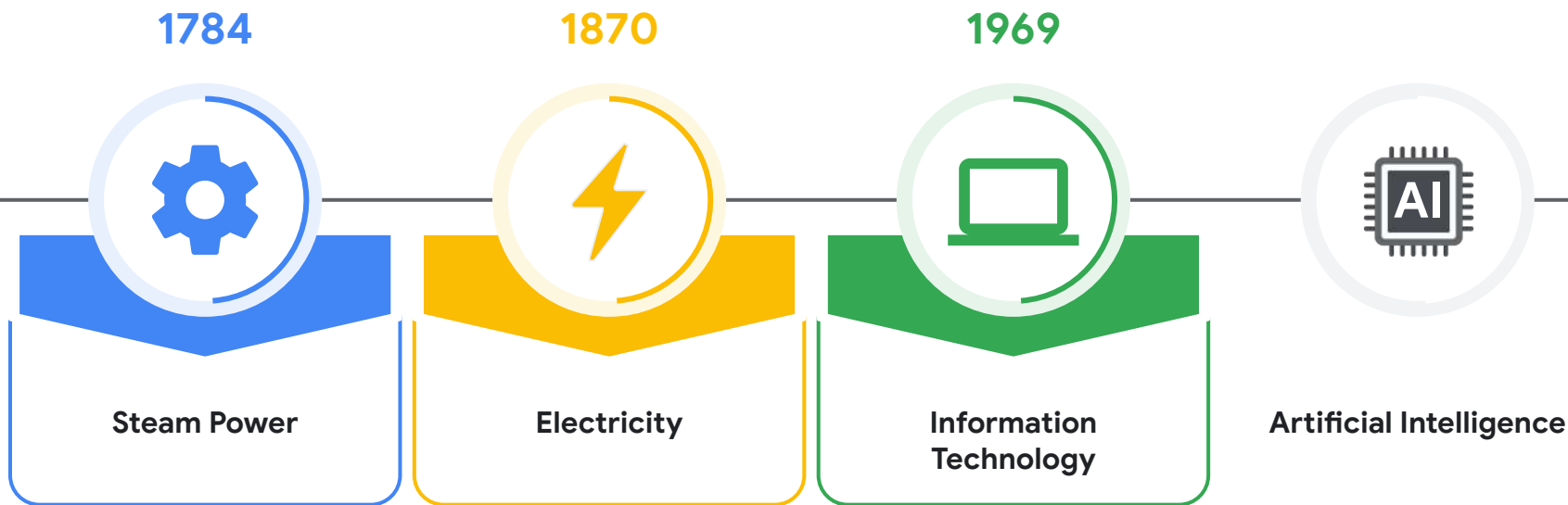


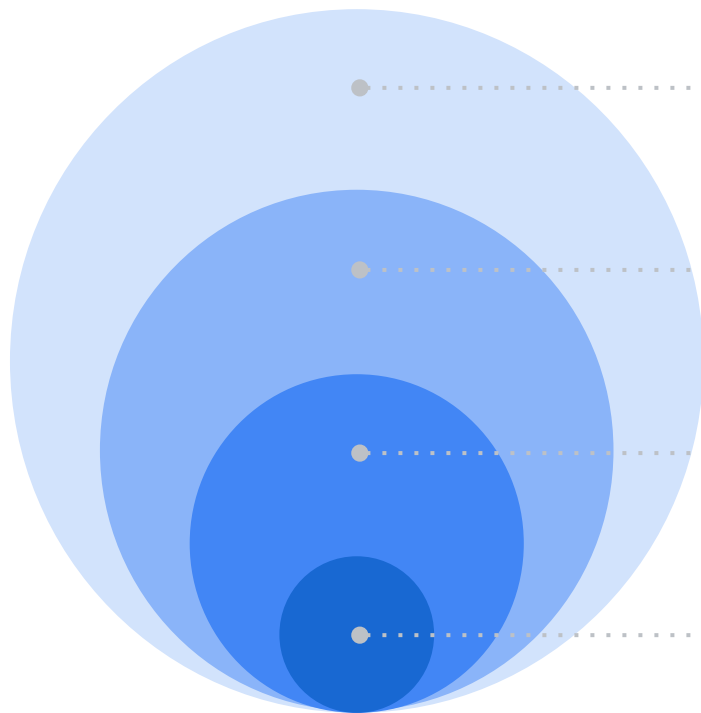


Introduction to Gemini

We're in an AI-driven revolution



“AI” is an umbrella term that has multiple meanings



Artificial Intelligence

Ability for a machine to **imitate human behavior**

Machine Learning

Subset of AI that allows a system to **automatically learn from data** and improve from experience

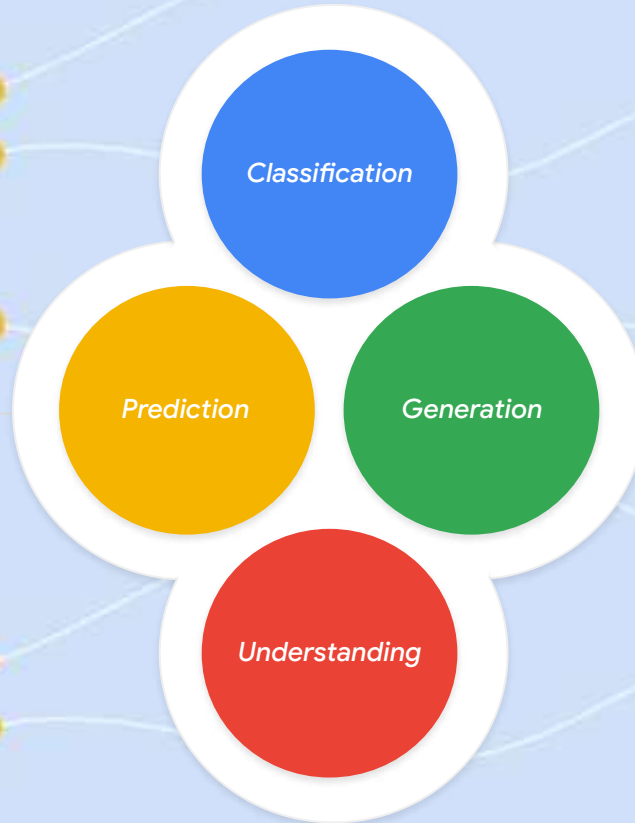
Deep Learning

Maps input to output so it's able to **correctly classify new samples of data**.

Generative AI

AI system capable of **generating text, code, images, audio, video** in response to prompts

AI is evolving from analysis to creation



Generative AI

**is transforming how we
interact with technology**

Five main areas of GenAI by use cases



CREATE

Bring your thoughts and visions to life

Use cases:

- Product descriptions from images
- Images from text
- Blog post from content
- Email from content
- Release notes from content
- Report from content
- Press releases from content
- Personalized ads*



SUMMARIZE

Condense and summarize your knowledge base into a simple format

Use cases:

- Content/video summarization
- Intra-knowledge Q&A
- Explanations of code content



DISCOVER

Help your customers and employees find what they need at the right time

Use cases:

- Search for a document
- Machine-generated event monitoring
- File organization based on content
- Exam questions from content



AUTOMATE

Automate your customer service across multiple channels

Use cases:

- Contract information extraction
- Feedback classification and ticket creation
- Sentiment analysis*
- Content translation
- Structured data extraction from file
- Media tagging
- Product tagging
- Content moderation *



CONVERSE

Create an AI-based virtual assistant

Use cases:

- Chat
- Search
- Virtual Agent

Gen AI will transform every **industry**



Retail and CPG

Creative Assistance

Conversational Commerce

Customer Service Automation

New Product Development

Improving Employee Productivity

Supply Chain Advisor



Financial Services

Financial Document Search & Synthesis

Enhanced Virtual Assistant

Capital Markets Research

Regulatory Code Change Consultant

Personalized Financial Recommendations



Healthcare & Life Sciences

Digital Patient Concierge

Public & Private Contextual Search

Expedite Prior Authorization Letter

Clinical Trial Report Generation

Customer Service Agent



Media & Entertainment

Media Content Discovery

Creative Assistance

Internal Document/ Media Search

Branded Consumer Interactions

Content Summarization and Metadata



Manufacturing

Machine Generated Events Monitoring

Customer Service Automation

Document Search & Synthesis

Product/Content Catalog Discovery

Supply Chain Advisor



Communications Service Providers

Customer/Employee Service Automation

Network Planning & Operations*

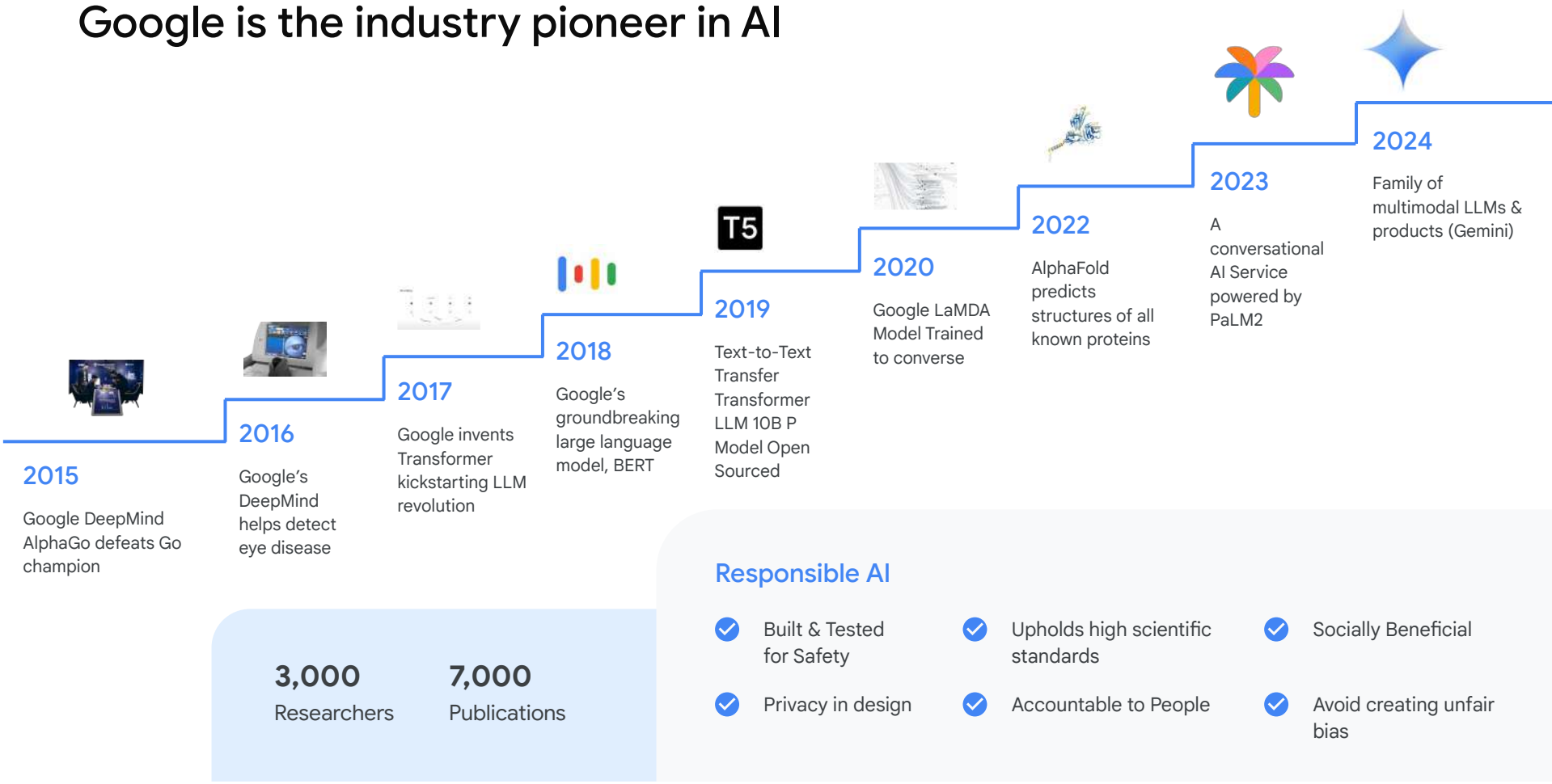
Advertising & Content/Creative Assistance

Employee Knowledge Search

Test/Code Script Generation

Contract Analysis & Negotiation

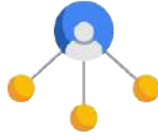
Google is the industry pioneer in AI



Google's AI Principles



1. Be socially beneficial.



2. Avoid creating or reinforcing unfair bias.



3. Be built and tested for safety.



4. Be accountable to people.



5. Incorporate privacy design principles.



6. Uphold high standards of scientific excellence.



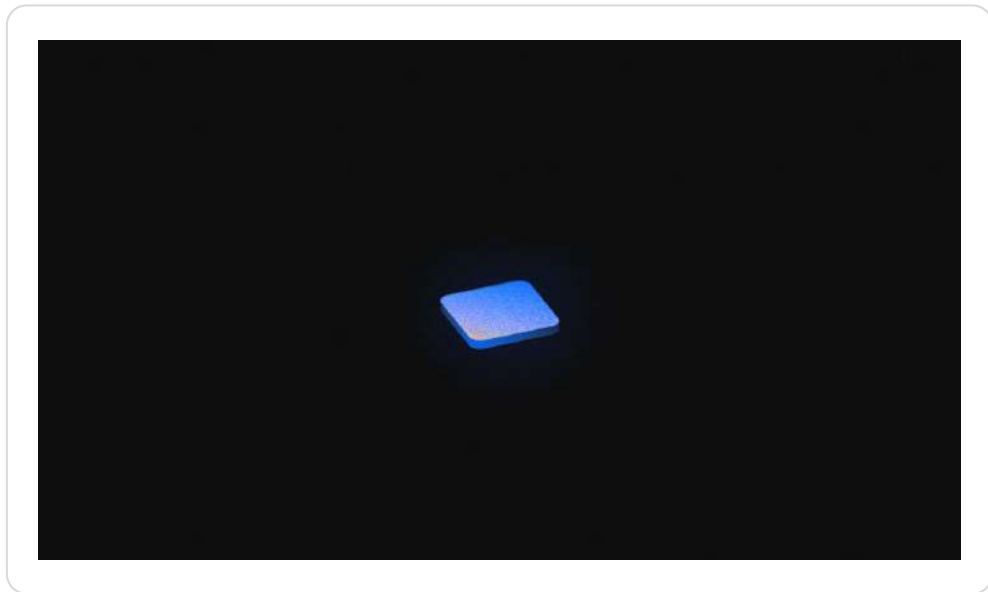
7. Be made available for uses that accord with these principles.

Welcome to
the Gemini era

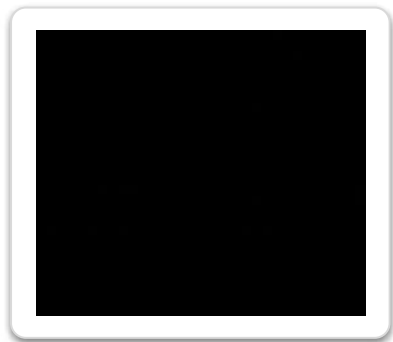
The next chapter of **Generative AI** innovation



Gemini is the most capable and general model we've ever built, and is the result of a large-scale collaborative effort by teams across Google, including Google DeepMind and Google Research.



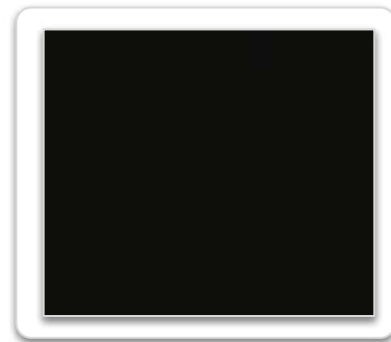
Gemini marks the next phase on our journey to making AI more helpful for everyone



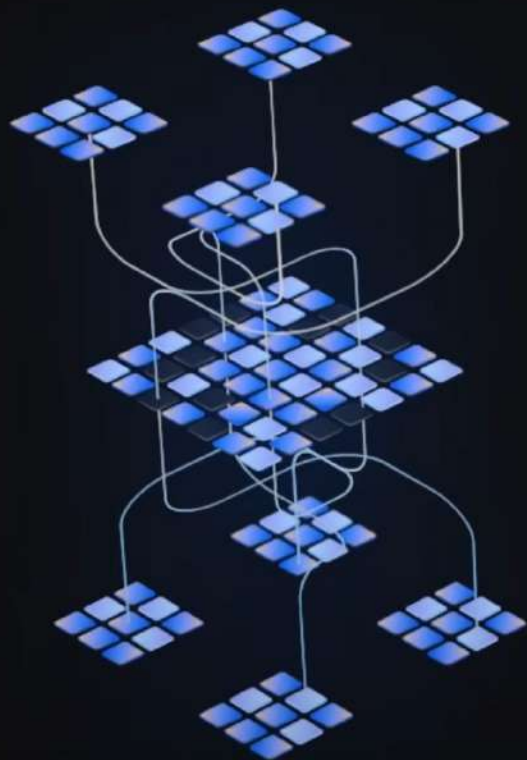
State-of-the-art, natively
multimodal reasoning
capabilities



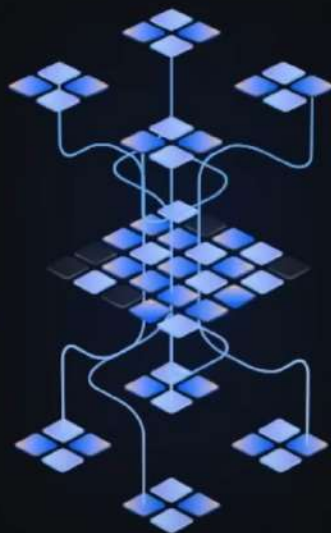
Highly optimized while
preserving choice



Built with responsibility
and safety at the core



Ultra



Pro

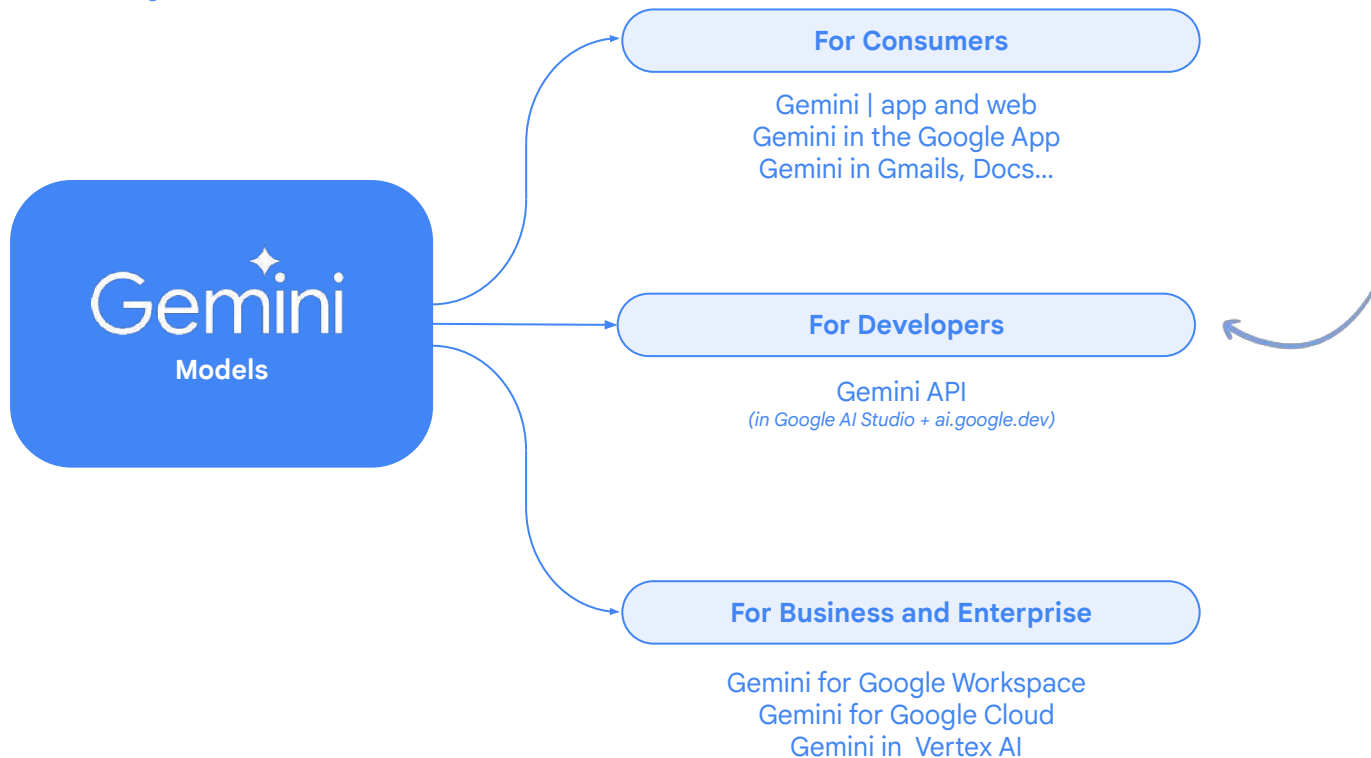
(Android AICore)



Nano

The Gemini Ecosystem

The most advanced AI from Google



Google's AI Ecosystem for Enterprises & Developers

Gemini for
GWS/GC



Google Cloud

Google Workspace



For users & builders

Vertex AI



CLI



Chat



HTTP



Browser
Extension



Custom IDE
Integration

For builders

Google's Foundation Models on Vertex AI

Across a variety of model sizes to address use cases



GA

Gemini 1.0 Pro

Multimodal reasoning across a wide range of tasks



NEW

Gemini 1.5 Pro

Multimodal reasoning for longer prompts, 1 million context window



Limited
Private GA

Gemini 1.0 Ultra

Largest and most capable model for highly complex tasks



NEW

Gemma 2B and 7B

Family of lightweight, state-of-the-art open models



PaLM for Text / Chat

Custom language tasks and multi-turn conversations



Imagen 2.0 for Text to Image

Create and edit images from simple prompts



Chirp for Speech to Text

Build voice enabled applications



Codey for Code Generation

Improve coding and debugging



Embeddings API for Text and Image

Extract semantic information from unstructured data



NEW

Claude on Vertex AI

Claude 2, Instant 1.2, and more



Open Models on Vertex AI

Mixtral 8x7B, Image Bind, DITO and more



NEW

Hugging Face Models

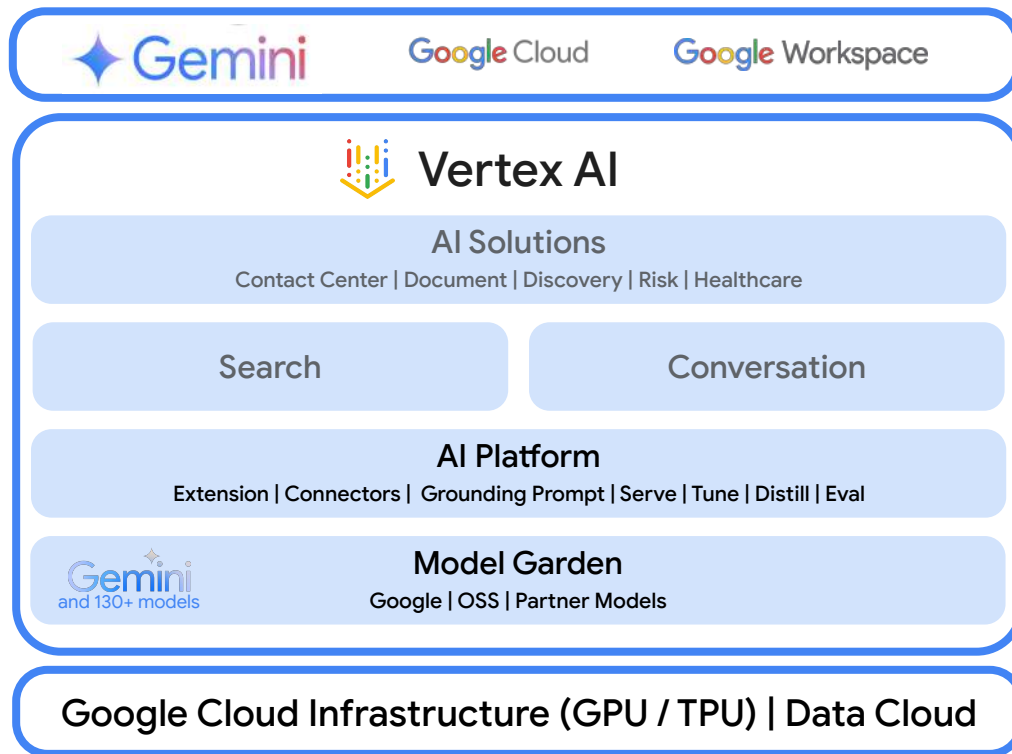
Few click deployment to Vertex AI

Google Cloud Generative AI

Empower enterprises to innovate faster with enterprise-ready generative AI



Broad Ecosystem
of Partners



Business Users

Developers

AI Practitioners

130+ enterprise-ready foundation models in Vertex AI Model Garden



Gemini Foundation Models	<div>Gemini 1.0 Pro</div> <div>Gemini 1.5 Pro</div> <div>Gemini 1.0 Ultra</div>				
Google Foundation Models	<div>PaLM 2</div>	<div>Imagen 2</div>	<div>Chirp</div>	<div>Codey</div>	<div>Embeddings</div>
Google Task Specific Models	<div>Speech-to-Text</div> <div>Text-to-Speech</div> <div>Natural Language</div> <div>Translation</div> <div>Doc AI OCR</div> <div>Occupancy analytics</div> <div>Vision</div> <div>Video Intelligence</div>				
Google Domain Specific Models	<div>MedLM</div> <div>Life Science and Healthcare</div> <div>Sec-PaLM</div> <div>Cybersecurity</div>				
Partner & Open Ecosystem	<div>Llama 2</div> <div>Code Llama</div> <div>Falcon</div> <div>Claude 2</div> <div>Pre-announce</div> <div>MISTRAL AI</div> <div>Gemma</div>				

- **One Stop Shop**
- **Choice and flexibility** with Google, open source, and third-party foundation models
- **Multiple modalities** to match every use case
- **Multiple model sizes** to match cost and efficacy needs
- **Domain-specific models** for specialized industries
- Enterprise ready with **safety, security, and responsibility**
- Decrease time to value with **fully integrated platform**

Try Gemini-powered Multimodal experiences on Vertex AI

Vertex AI

TOOLS

Dashboard

Model Garden

Pipelines

NOTEBOOKS

AI STUDIO

Overview

Multimodal **NEW**

Language

Vision

Speech

BUILD WITH GEN AI

DATA

MODEL DEVELOPMENT

DEPLOY AND USE

MANAGE

Migrate to Vertex AI

Marketplace

Multimodal

GET STARTED

MY PROMPTS


Sample prompts

Try a sample prompt to test Gemini's capabilities. See [Introduction to prompt design](#) to learn more.

Multimodal

Extract text from images

Transcribe text from a handwritten note.




OPEN

Multimodal

Few shot image to JSON

Use world knowledge and the provided examples to answer questions.




OPEN

Multimodal

Image mock up to HTML

Write HTML to render a webpage based on an image mock up of that page.




OPEN

Multimodal

Image question answering

Show the model an image of Brazil nuts and have its price from another image.




OPEN

Multimodal

Image text to JSON

Extract the items and prices from a fish market photo and output them in JSON.




OPEN

Multimodal

Write story from image

Write a create story based on the image of a dog in the snow wearing ski goggles.




OPEN

Multimodal

Identify items from videos

Given a panorama video, tell me where a specific item is located.




OPEN

Multimodal

Write story from video

Generate a bedtime story for the kids based on the family video footage




OPEN

Multimodal

Travel guide for video

Describe what's around and what direction to walk in to see interesting things




OPEN

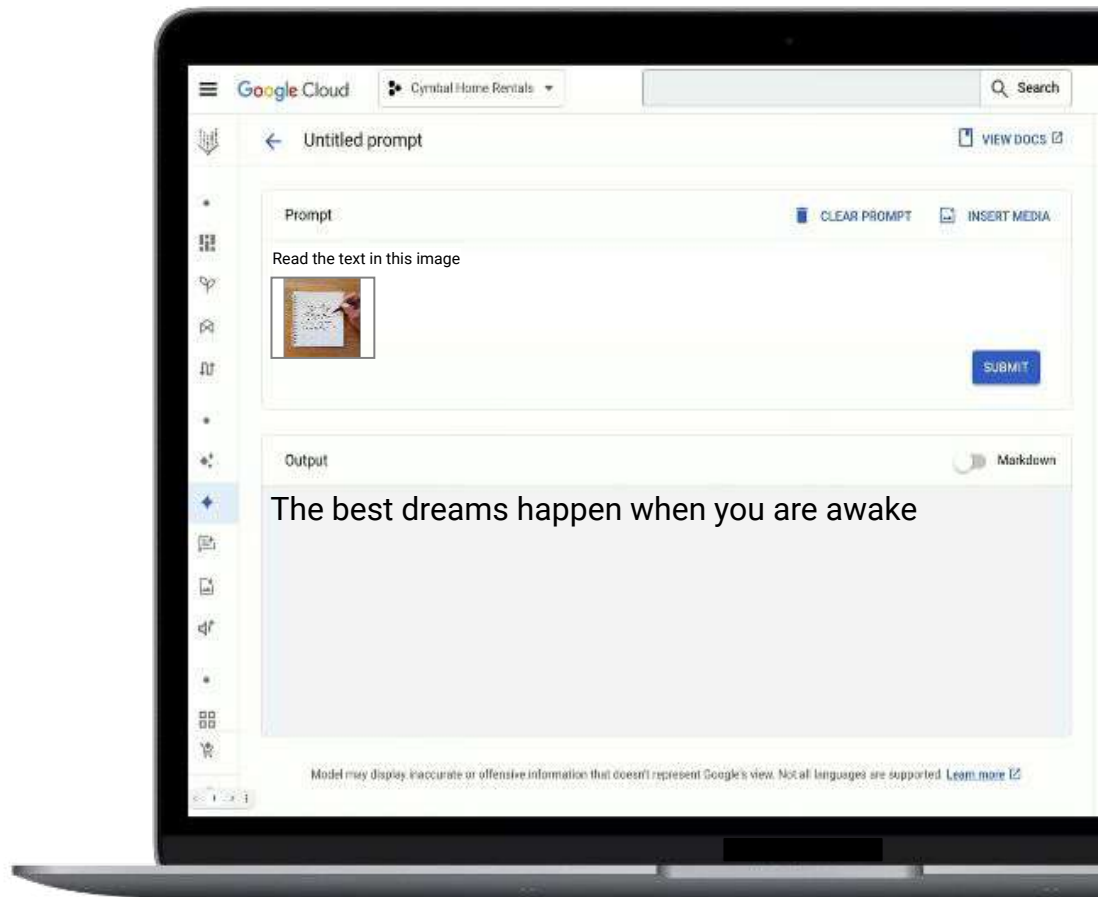
Multimodal

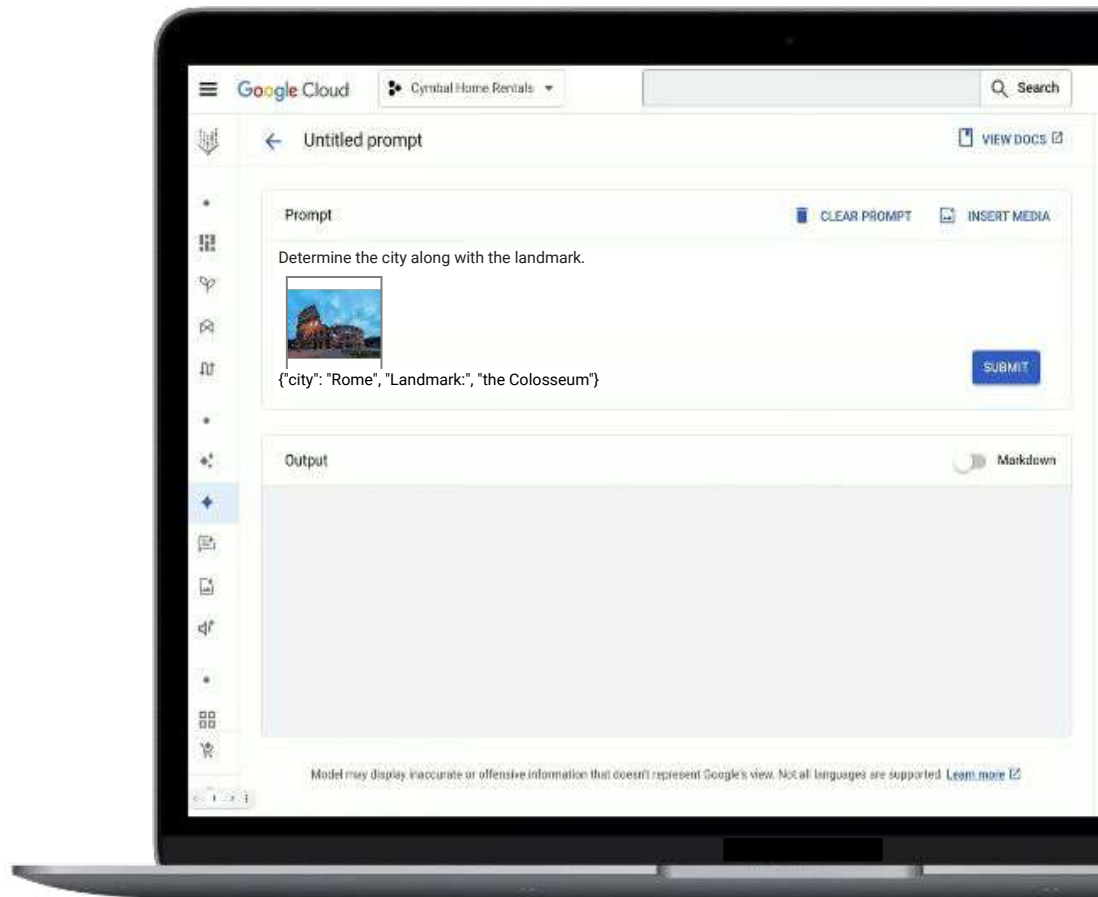
Video shorts creation as...

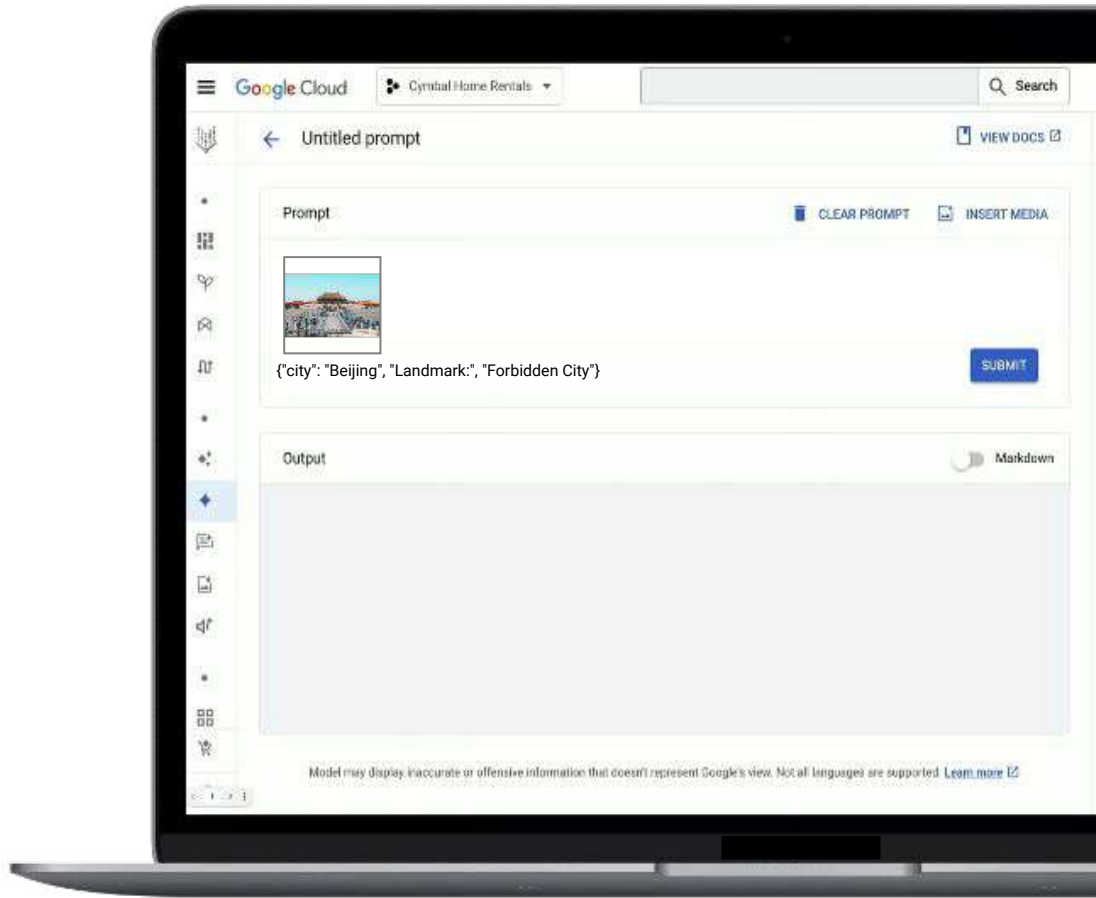
Give suggestions on how to improve video shorts

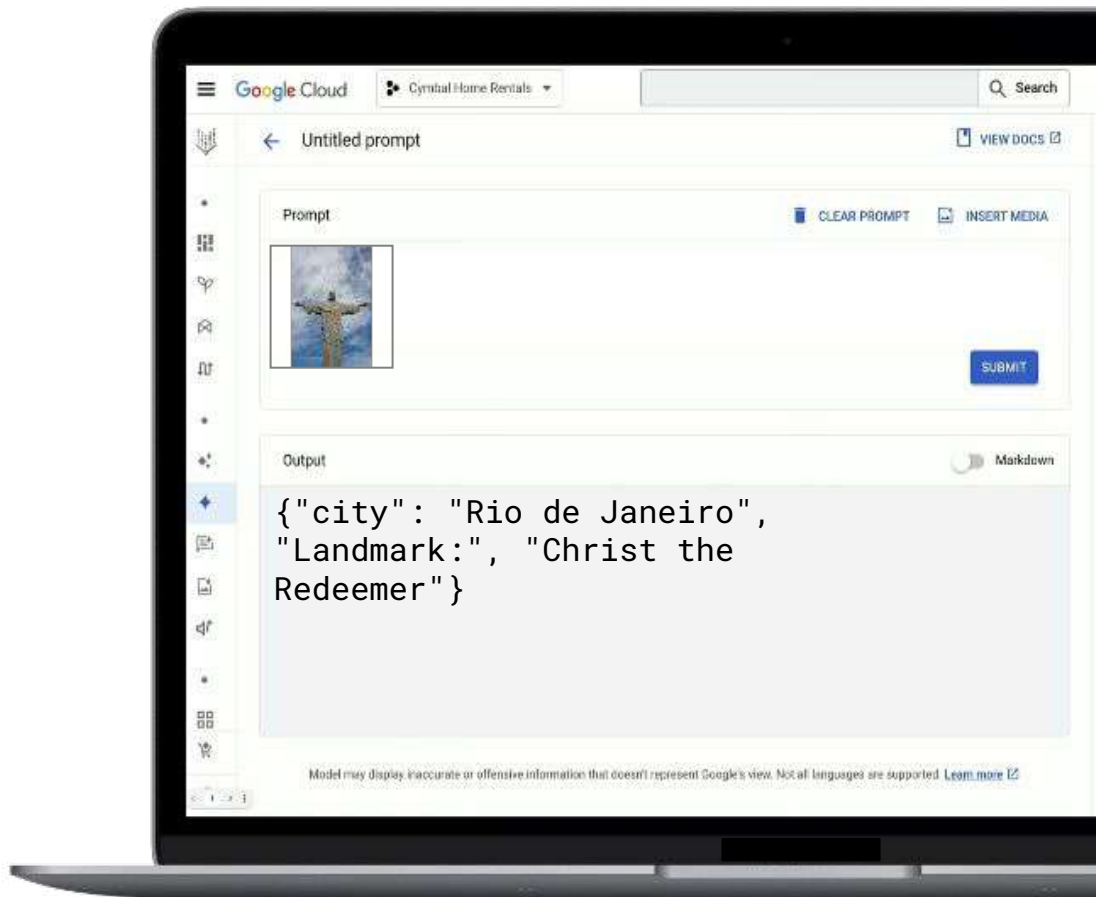


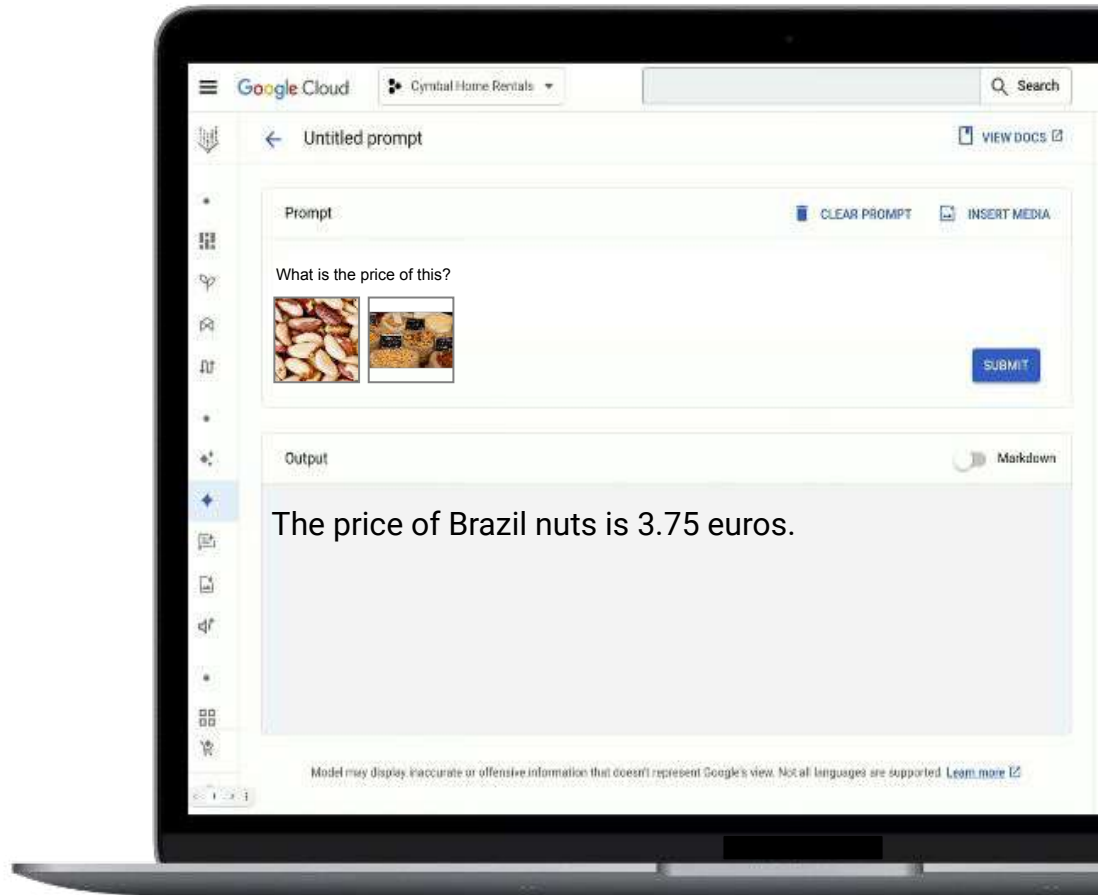
OPEN

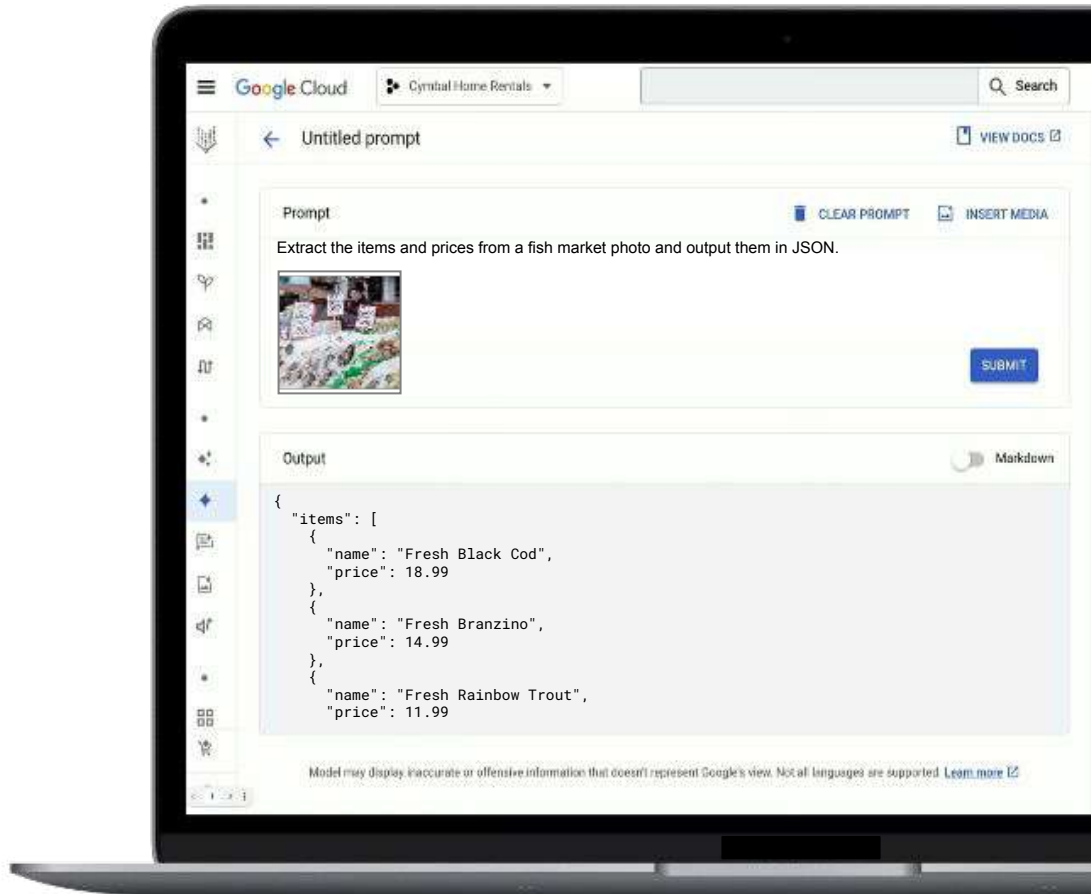














Write a creative story inspired by this image



A Great Dane named Oakley loved to play in the snow. He would spend hours running around and chasing snowballs. One day, Oakley's owner took him to a new park. Oakley was so excited to explore the new place. He ran around and played in the snow for hours.

Suddenly, Oakley saw a squirrel. He took off after it, barking and chasing it up a tree. The squirrel was too quick for Oakley, and it escaped. Oakley was disappointed, but he didn't give up. He kept looking for the squirrel.

Finally, Oakley saw the squirrel again. This time, he was determined to catch it. He chased the squirrel up a tree, and this time, he was successful. Oakley caught the squirrel and brought it down to the ground. He was so proud of himself.

Oakley's owner was so happy to see him catch the squirrel. He gave Oakley a big hug and a treat. Oakley was so happy. He had a great day playing in the snow and catching a squirrel.

Oakley's goggles were a big help in catching the squirrel. They kept the sun out of his eyes so he could see the squirrel clearly. They also helped to protect his eyes from the snow. Oakley's goggles were the perfect accessory for his day of playing in the snow.

Generative AI Industry Use Cases



[Media & Entertainment](#)



[Retail](#)



[Financial Services](#)



[Manufacturing](#)



[Automotive](#)



[Healthcare & Life Sciences](#)



[Consumer Packaged Goods](#)



[Supply Chain & Logistics](#)



[Games](#)

Gen AI for Media & Entertainment: Key Themes

Improving content
creation, production,
and management



Enhancing and
personalizing audience
experiences



Improving content
and platform
monetization





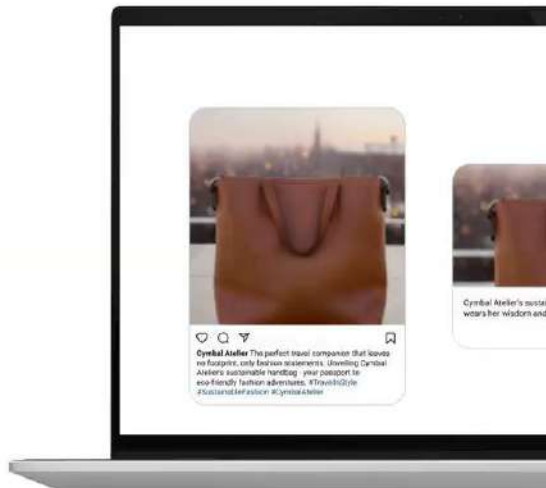
Transform content creation and prototyping with generative AI

Deliver personalized marketing content to target audiences fast and at low cost with gen AI. See how Generative AI Studio accelerates creative workflows by rapidly generating images and text for advertisements, social media, website content, emails, and more.



Transform content creation and prototyping with generative AI

Google Cloud



Generative AI for Retail

Key Themes & Use Cases



Gen AI for Consumer Packaged Goods: Key Themes

Generating and
optimizing content



Creating conversational
commerce experiences

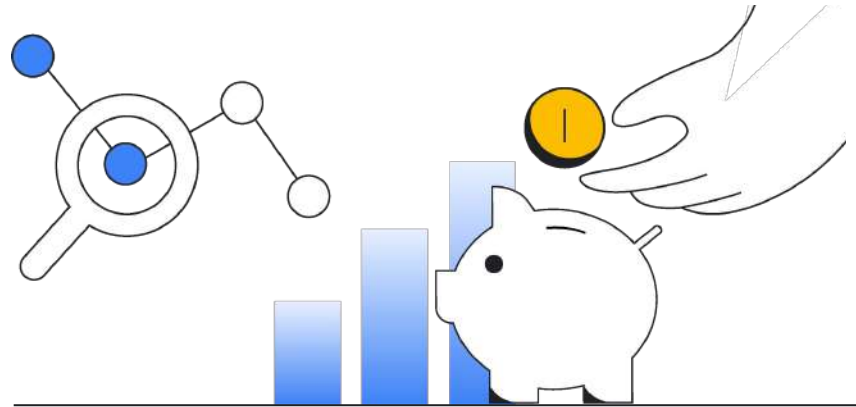


Automating and
improving operations



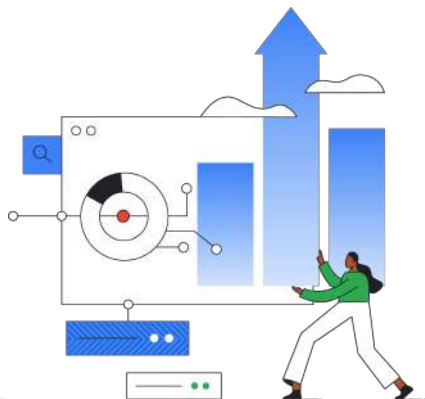
Generative AI for Financial Services

Key Themes & Use Cases



Gen AI for Financial Services: Key Themes

**Accelerate
growth & opportunities**



**Drive cost and
operational efficiency**

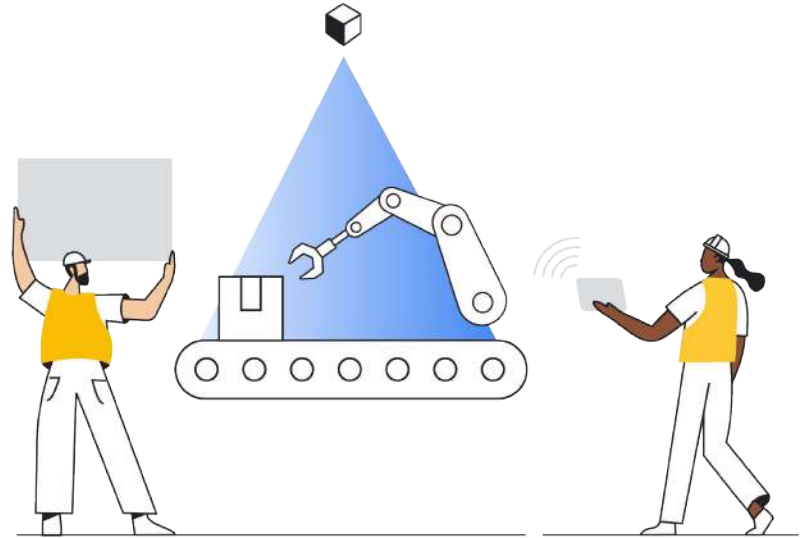


**Manage risk &
regulatory requirements**



Generative AI for Manufacturing

Key Themes & Use Cases



Gen AI for Manufacturing: Key Themes

Get closer to
the end consumer



Turn all products
into smart ones

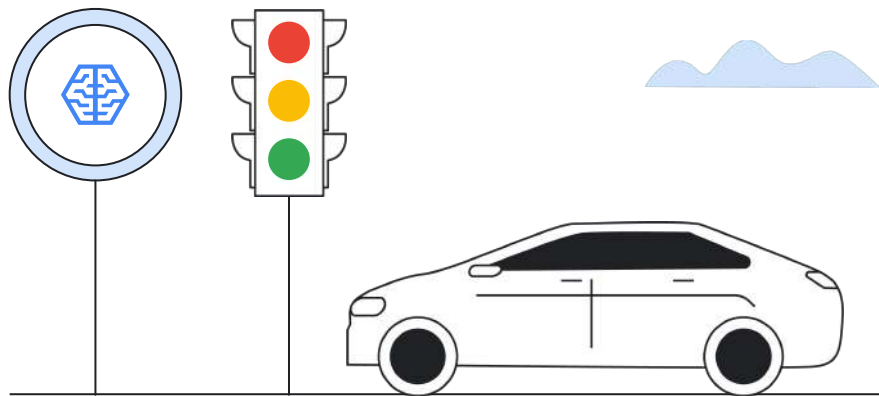


Optimize
supply chain &
manufacturing



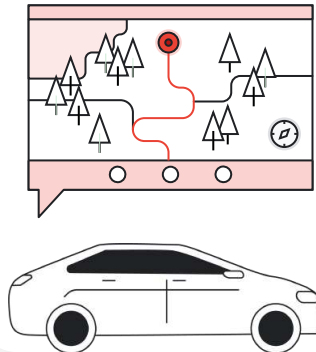
Generative AI For Automotive

Key Themes & Use Cases

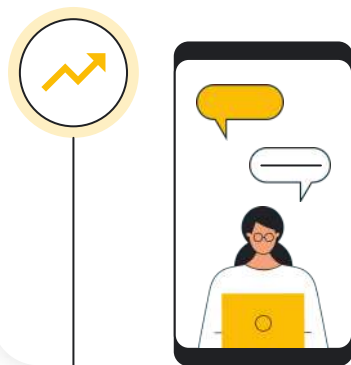


Gen AI for Automotive: Key Themes

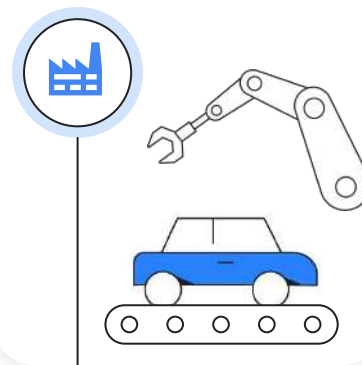
Unlock the
**software-defined
vehicle**



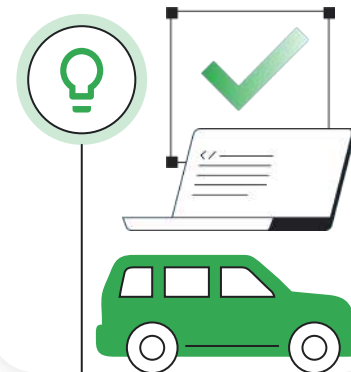
Deliver a seamless
**customer
experience 360**



Drive sustainable
and efficient
operations



Accelerate R&D
innovation



Generative AI for Healthcare & Life Sciences

Key Themes & Use Cases



Gen AI for Healthcare and Life Sciences: Key Themes

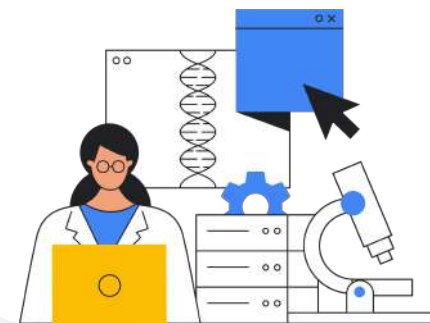
Reduce Clinician
burnout, boost
efficiencies



Elevate consumer and
patient-centricity



Advancing Life Sciences
research &
development



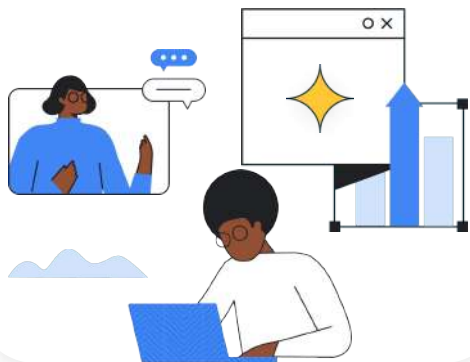
Generative AI for Consumer Packaged Goods

Key Themes & Use Cases

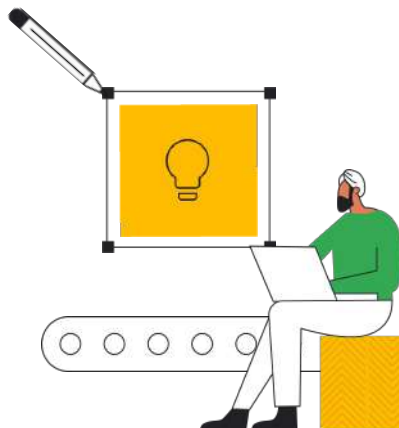


Gen AI for Consumer Packaged Goods: Key Themes

Advertising & Creative Assistance



Product Innovation Accelerator

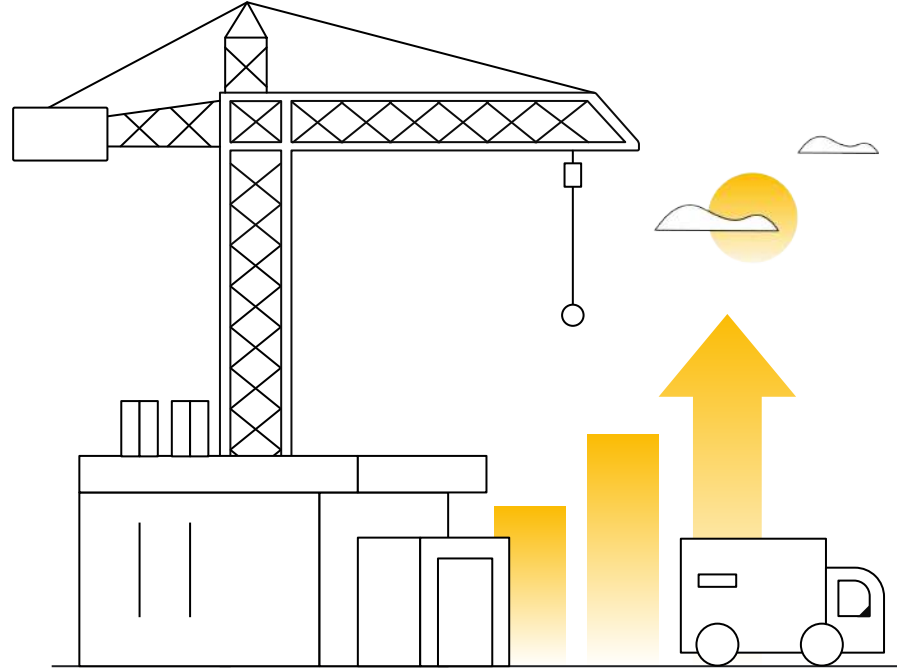


Increasing Employee and Operational Productivity

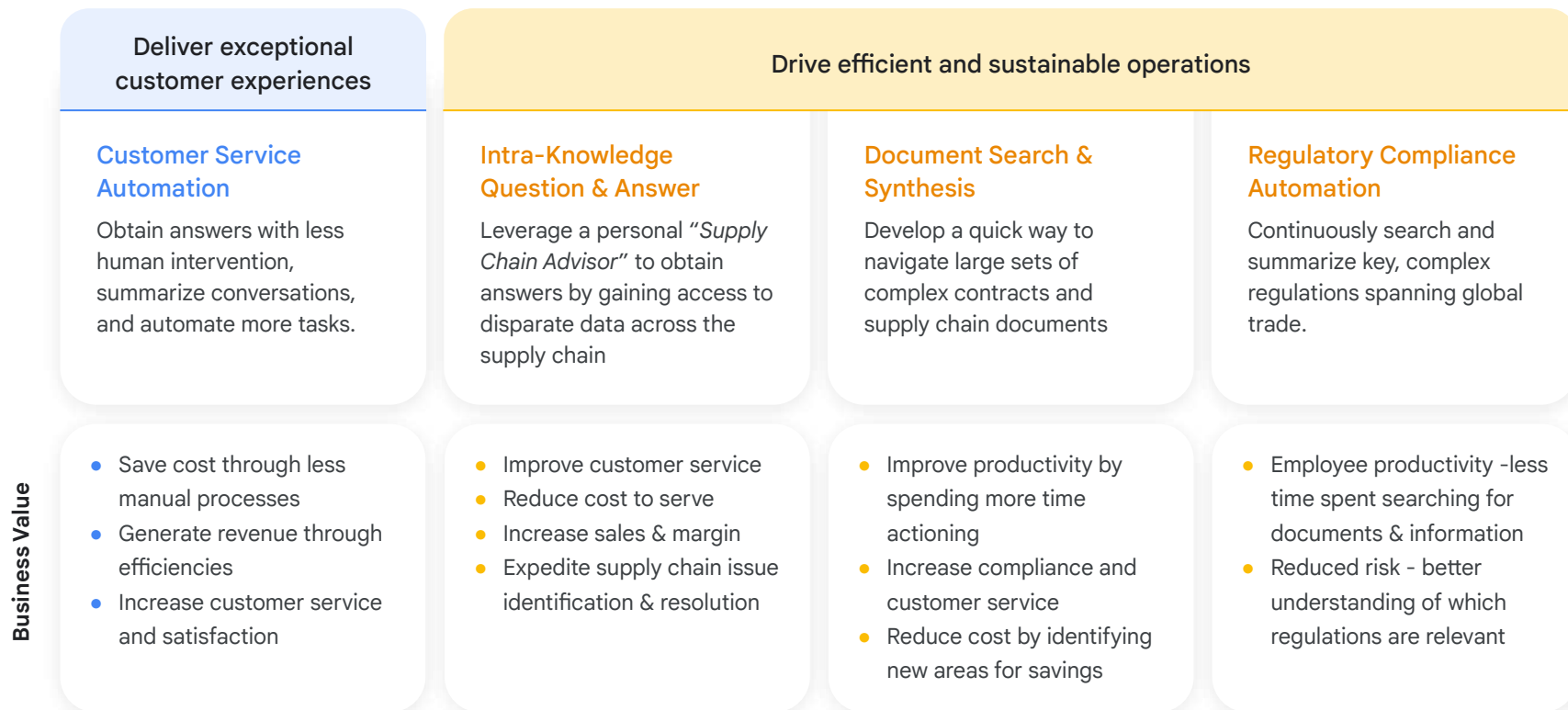


Generative AI for Supply Chain & Logistics

Key Themes & Use Cases

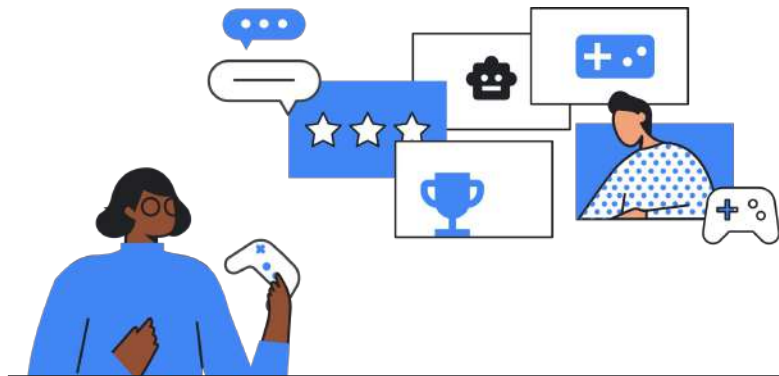


Gen AI for Supply Chain & Logistics: Top Use Cases



Generative AI for Games

Key Themes & Use Cases

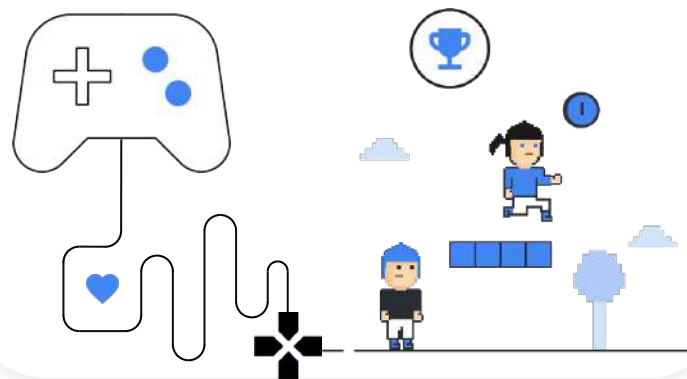


Gen AI for Games: Key Themes

Scale **game**
development teams



Create **entirely new**
game experiences



Gen AI will transform every industry



Retail and CPG

Creative Assistance

Conversational Commerce

Customer Service Automation

New Product Development

Improving Employee Productivity

Supply Chain Advisor



Financial Services

Financial Document Search & Synthesis

Enhanced Virtual Assistant

Capital Markets Research

Regulatory Code Change Consultant

Personalized Financial Recommendations



Healthcare & Life Sciences

Digital Patient Concierge

Public & Private Contextual Search

Expedite Prior Authorization Letter

Clinical Trial Report Generation

Customer Service Agent



Media & Entertainment

Media Content Discovery

Creative Assistance

Internal Document/ Media Search

Branded Consumer Interactions

Content Summarization and Metadata



Manufacturing

Machine Generated Events Monitoring

Customer Service Automation

Document Search & Synthesis

Product/Content Catalog Discovery

Supply Chain Advisor



Communications Service Providers

Customer/Employee Service Automation

Network Planning & Operations*

Advertising & Content/Creative Assistance

Employee Knowledge Search

Test/Code Script Generation

Contract Analysis & Negotiation

Gen AI will transform every industry



Retail and CPG

Creative Assistance

Conversational Commerce

Customer Service Automation

New Product Development

Improving Employee Productivity

Supply Chain Advisor



Financial Services

Financial Document Search & Synthesis

Enhanced Virtual Assistant

Capital Markets Research

Regulatory Code Change Consultant

Personalized Financial Recommendations



Healthcare & Life Sciences

Digital Patient Concierge

Public & Private Contextual Search

Expedite Prior Authorization Letter

Clinical Trial Report Generation

Customer Service Agent



Media & Entertainment

Media Content Discovery

Creative Assistance

Internal Document/Media Search

Branded Consumer Interactions

Content Summarization and Metadata



Manufacturing

Machine Generated Events Monitoring

Customer Service Automation

Document Search & Synthesis

Product/Content Catalog Discovery

Supply Chain Advisor



Communications Service Providers

Customer/Employee Service Automation

Network Planning & Operations*

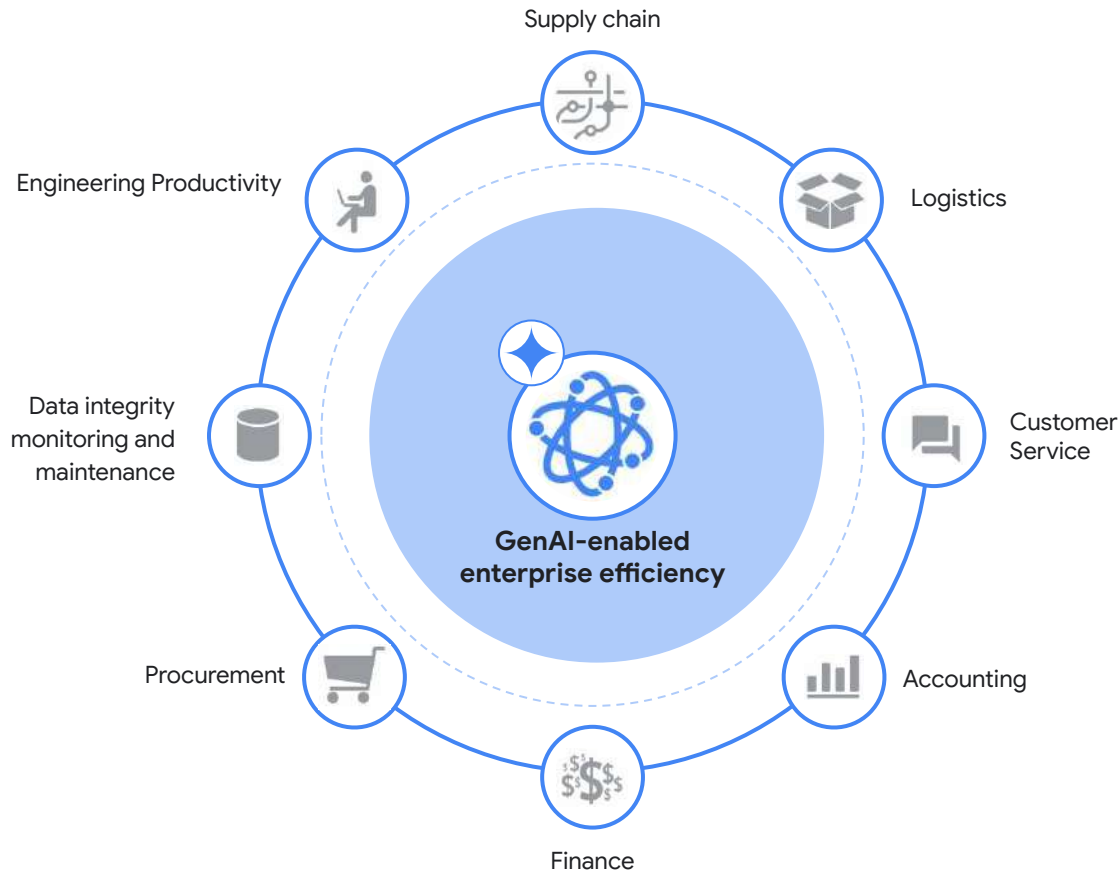
Advertising & Content/Creative Assistance

Employee Knowledge Search

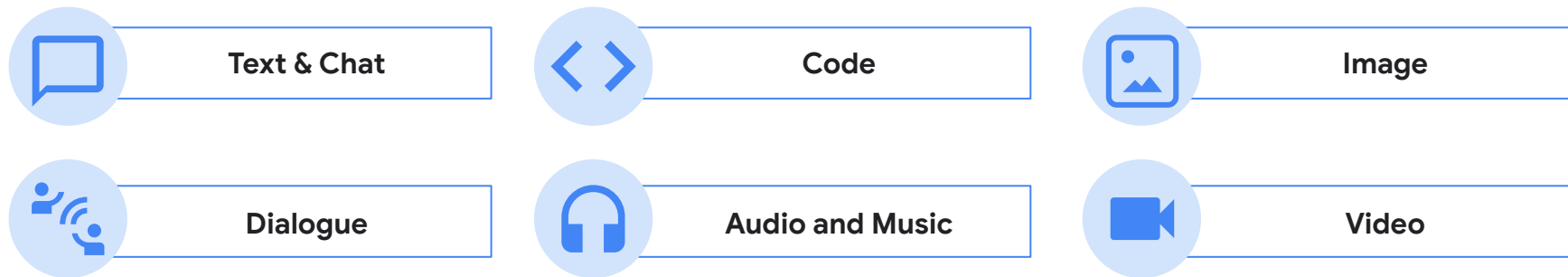
Test/Code Script Generation

Contract Analysis & Negotiation

GenAI will transform how work gets done across all business functions



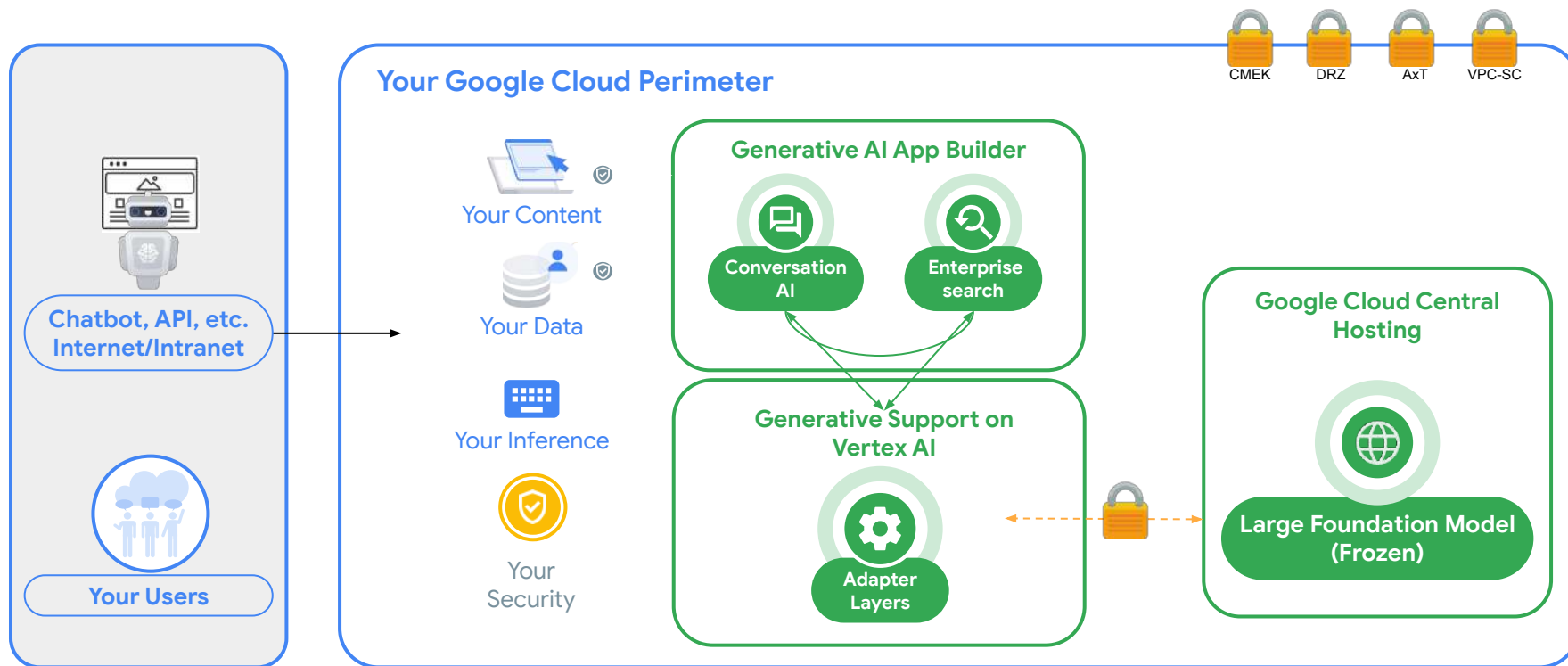
Across many modes



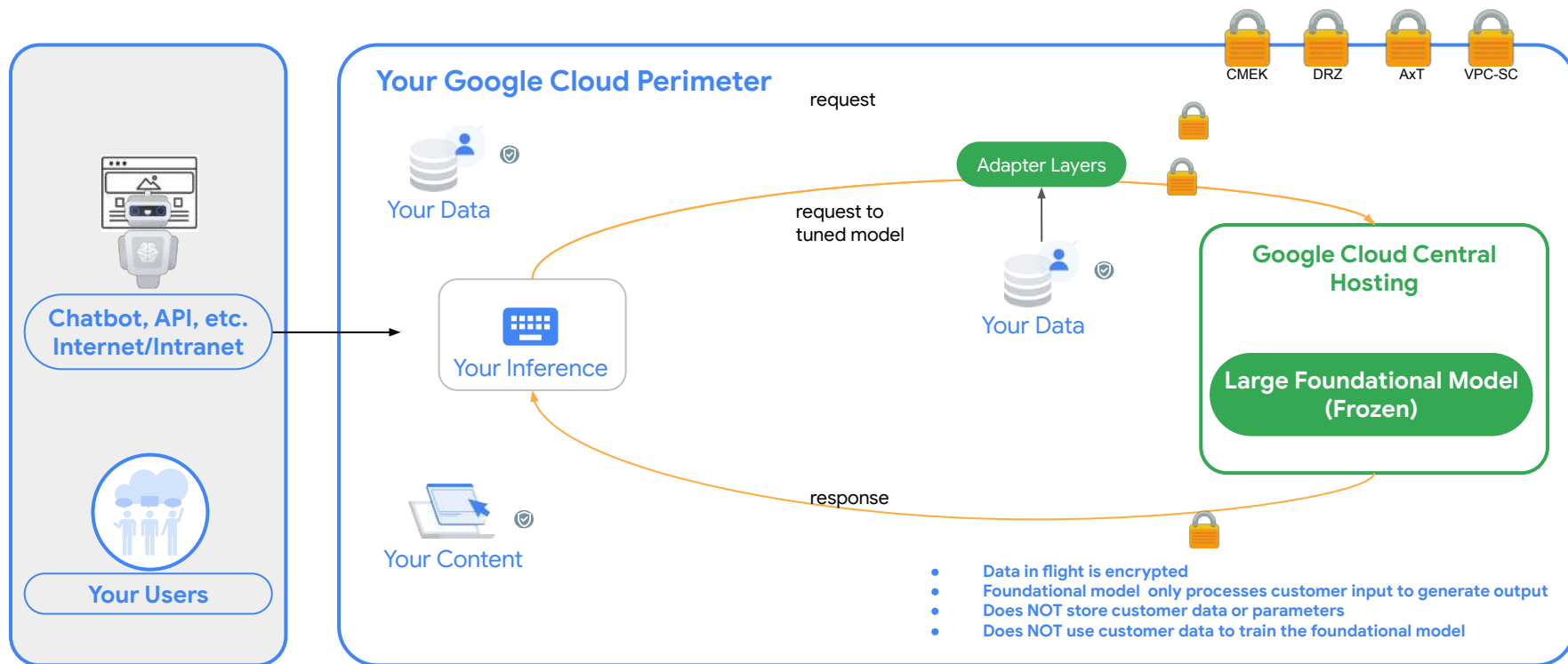
And across many roles...



Security with Generative AI



Security zoom-in with Foundational Models



Bring your gen AI use case to life with Google

Move from concept to MVP in just two weeks with four new gen AI Jumpstart offers



CREATE

Bring your thoughts and visions to life with Google & gen AI

Sample use cases

- Generate descriptions from images
- Improve images



SUMMARIZE

Condense and summarize the knowledge of the internet into an understandable format with Google & gen AI

Sample use cases

- Video summarization
- Intra-Knowledge Q&A



DISCOVER

Help your customers find what they want with Google & gen AI

Sample use cases

- Search for a document
- Machine generated event monitoring



AUTOMATE

Automate your customer service across multiple channels with Google and gen AI

Sample use cases

- Contract extraction & classification
- Feedback classification and ticket creation



Codelabs

Codelab #1 - [Getting Started with the Vertex AI Gemini API & Python SDK](https://bit.ly/vertexai-codelab)
(<https://bit.ly/vertexai-codelab>)

Codelab #2 - [A Tour of Duet AI for Developers](https://bit.ly/duetai-codelab) (<https://bit.ly/duetai-codelab>)

Supercharge your growth with the Google for Startups Cloud Program

Gain access to dedicated startup experts, Cloud credits for your first two years, Google tools built for speed and insights, and more

 Scan to get started.



-  Google Cloud credits up to \$200,000 USD (up to \$350,000 USD for AI startups) over 2 years
-  Access to startup credits
-  Business & technical guidance
-  Google-wide offers