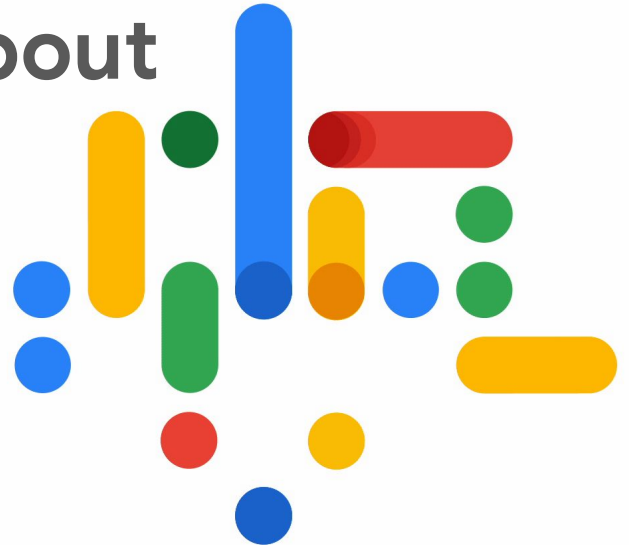


How Google Cloud thinks about (Responsible Gen)AI

Adelina Cooke, Global AI Public Policy lead
adelinacooke@google.com



Google is the pioneer in (Responsible) AI



2015

Google DeepMind AlphaGo defeats Go champion



2016

Google's DeepMind helps **detect eye disease**



2017

Google invents **Transformer** kickstarting LLM revolution



2018

Google's groundbreaking large language model, BERT

T5

2019

Text-to-Text Transfer Transformer LLM 10B P Model Open Sourced



2020

Google LaMDA Model Trained to converse



2022

AlphaFold predicts structures of all known proteins

BARD

2023

A conversational AI Service powered by LaMDA.

3,000

Researchers

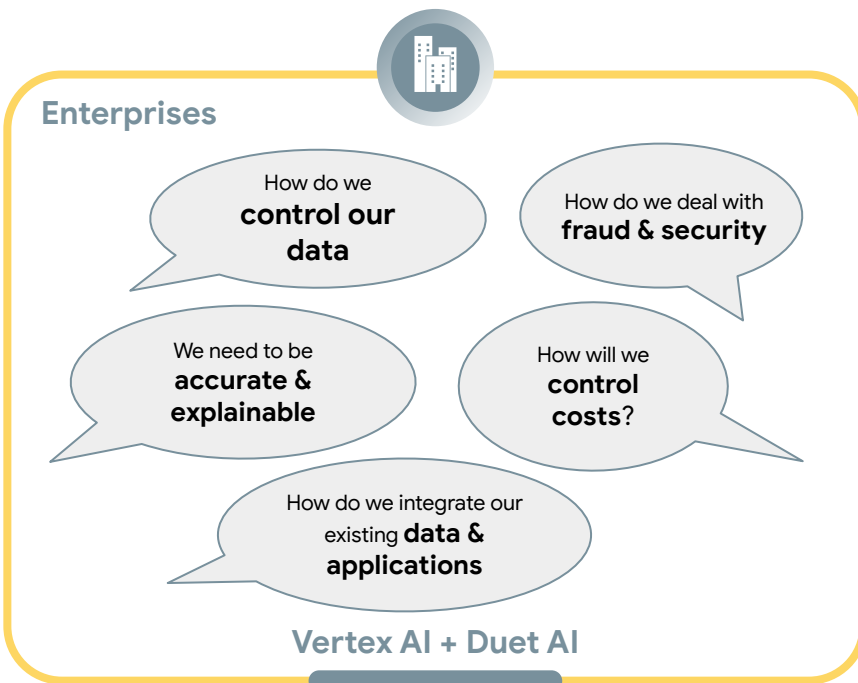
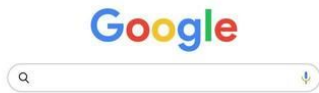
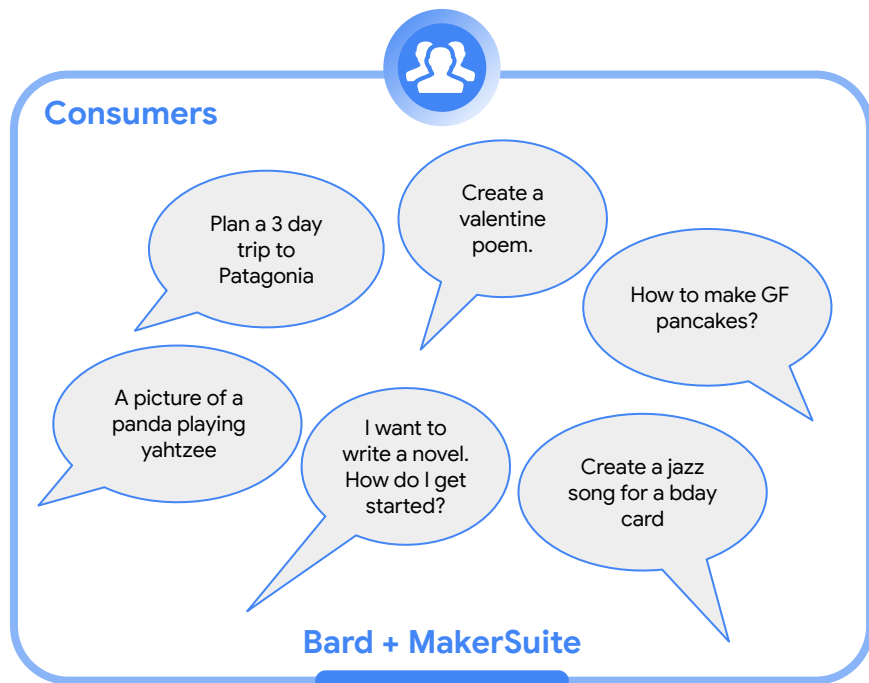
7,000

Publications

Responsible AI

- ✓ Built & Tested for Safety
- ✓ Upholds high scientific standards
- ✓ Socially Beneficial
- ✓ Privacy in design
- ✓ Accountable to People
- ✓ Avoid creating unfair bias

Consumers & enterprises have different needs....



Google's research drives a family of models

That power experiences for all users

Foundation Model Families

PaLM 2

Codey

Imagen

Across many modalities.... Text, Code, Image, Dialogue, Multimodal.....

Powers

Consumer / Hobbyist Experiences



Bard

MakerSuite

Enterprise Experiences

Duet AI for

Google Workspace



Google Cloud

In-console Code & Chat Assistance
Security AI Workbench

AI Builder Experiences



Vertex AI

Med-PaLM 2

Sec-PaLM

Models for AI Builders

Example:

PALM API's Model:

text-bison-001

Animal indicates size

- Unicorn
- Bison
- Otter
- Gecko

Numbers indicate version

001 -> 002

Signifies refresh

Applying AI responsibly - policy considerations for a successful risk management

Enterprise readiness is at the core of our approach to Generative AI



Data governance
and privacy



Security and
compliance
support



Reliability and
sustainability



Responsible AI

Cloud Governance Processes

1

Data Stewardship

- ★ GCP AI/ML Data Use Commitment
- ★ Data Stewardship Assessments & Reviews

2

Responsible AI

- ★ Customer AI Deal & Product Development Reviews
- ★ Fairness Testing

3

Privacy & Security

- ★ ML Privacy Commitment
- ★ Security & Privacy Policies

You control your data, not Google

We ensure responsible use of data for Cloud AI/ML with these commitments to customers:



By default, we do not use customer data to train our models, in accordance with [GCP Terms](#) and [Cloud Data Processing Addendum](#). *Your customer data is only processed according to your instructions.*

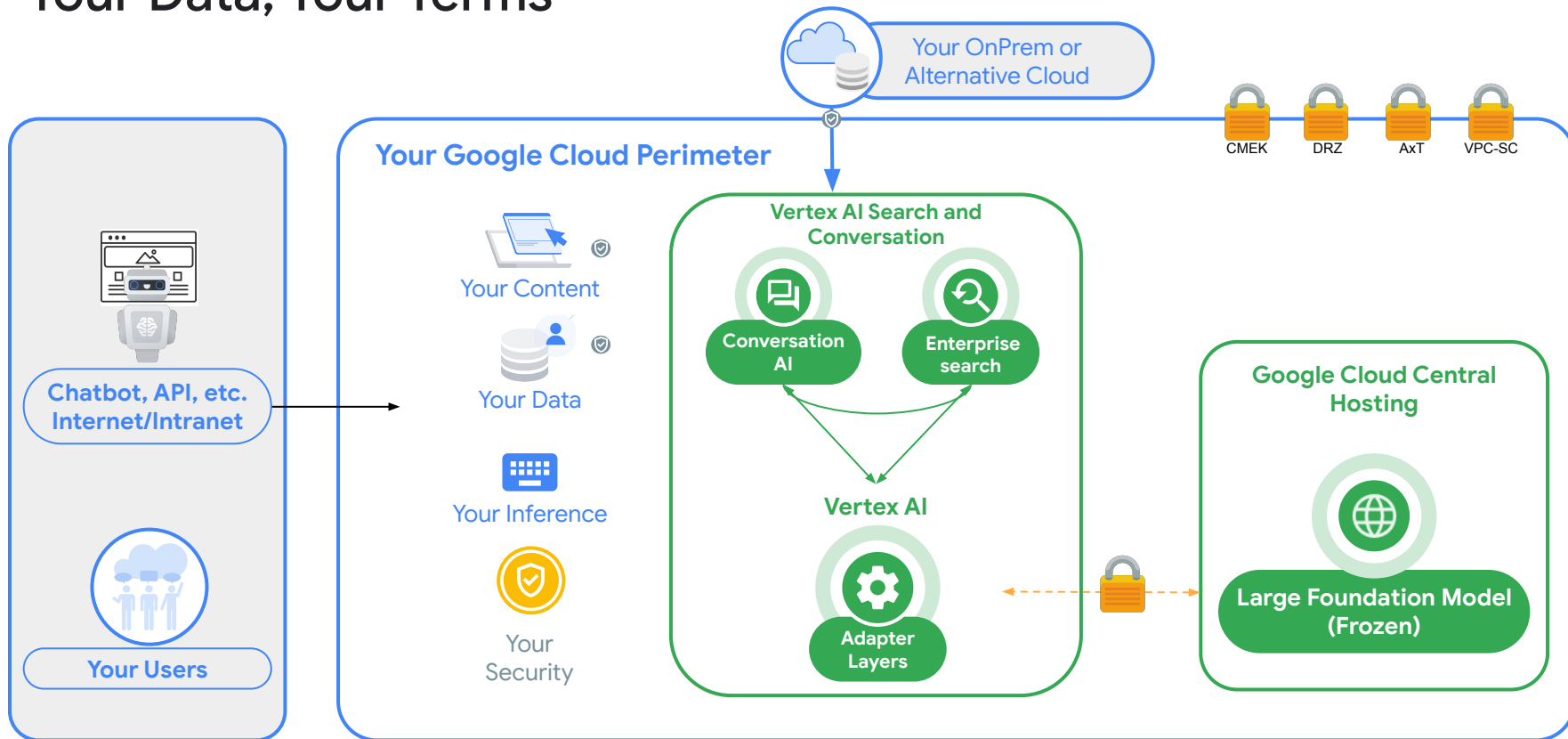


You benefit from our privacy experience and commitments to transparency, compliance with regulations such as the GDPR, and privacy best-practices.



Our extensive data governance & security controls provide you with confidence in the protection of your data from other customers, users, attackers, and unauthorized access by Google employees.

Your Data, Your Terms



Google Cloud's approach to Responsible AI



Generative AI comes with its own set of unique challenges.

At Google, we are integrating AI into our products boldly and with a deep sense of responsibility and highest standards of information integrity with our AI principles.

gcat.google.com



Education, research & tools

Online training courses, guidebooks, research papers, product documentation, RAI best practices, Tensorflow Responsible AI toolkit



Product & use case reviews

Customer AI Use case & Product Development Reviews, Fairness Testing



Responsible AI offerings

ML Metadata, Model Registry, Model Monitoring, Technical Safeguards, Content Moderation API, Recitation Checker, and Unfair Bias Evaluation Tooling

Google's AI Principles: A timeline

Summer 2017

How do we become not just an AI first company but a **Responsible AI first company**?

June 2018

AI Principles launched

2018 →

A daily commitment:
Principles into Practice



Google's AI Principles

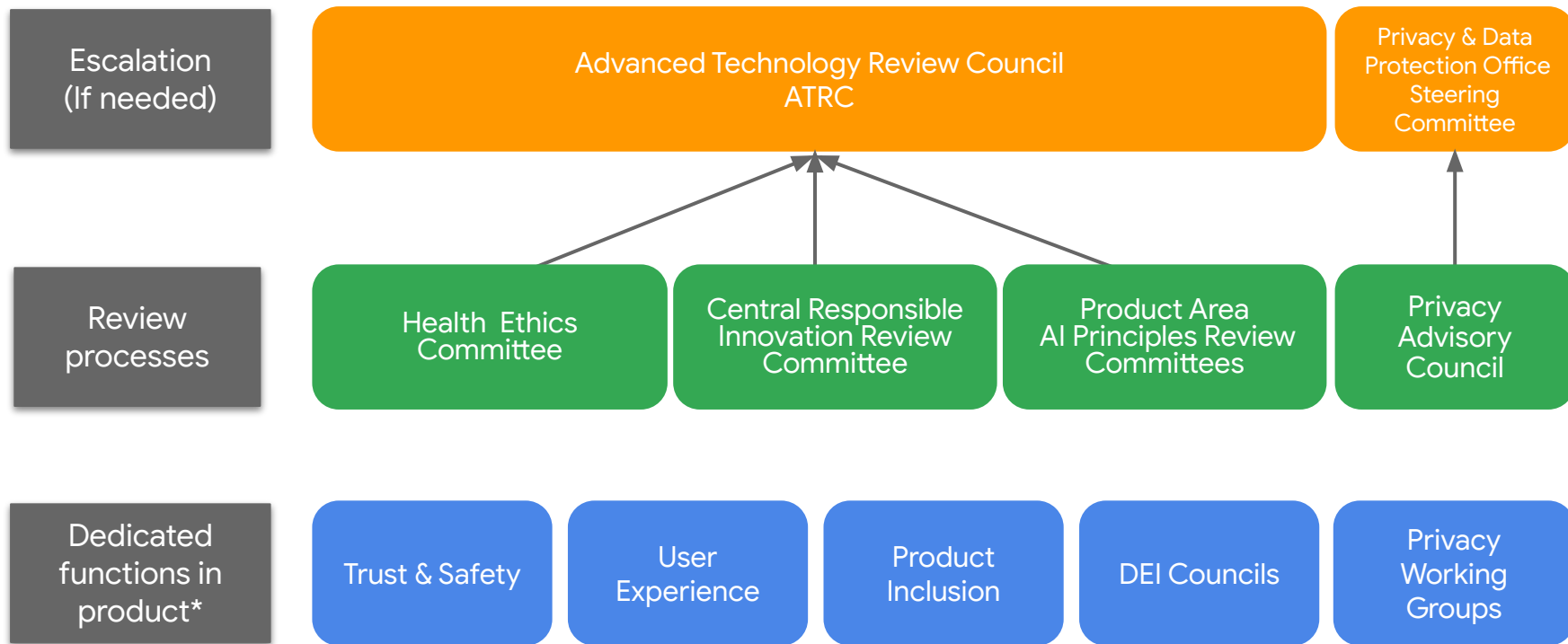
AI should:

- 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

Applications we will not pursue:

- 1 likely to cause overall harm
- 2 weapons or those that direct injury
- 3 surveillance violating internationally accepted norms
- 4 purpose contravenes international law and human rights

Google AI Principles Structures and Processes



* This is not an exhaustive list, and does not include PA-specific teams and functions

**More info in our [2021 AI Principles Progress Update](#) and at ai.google/responsibilities

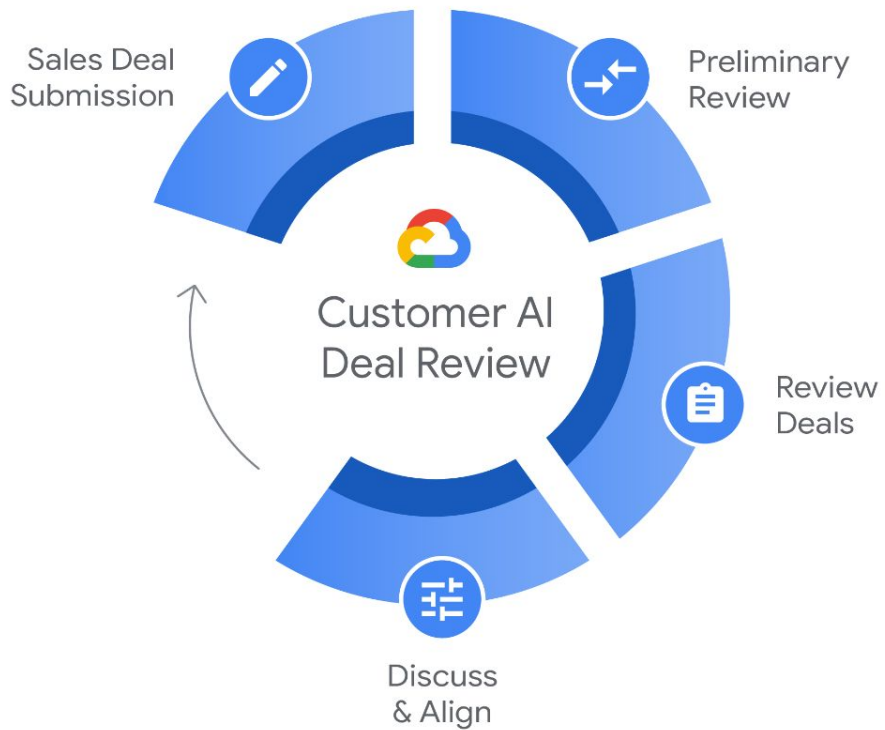
Cloud AI Principles Reviews



Customer AI deal review



Cloud AI product
development review





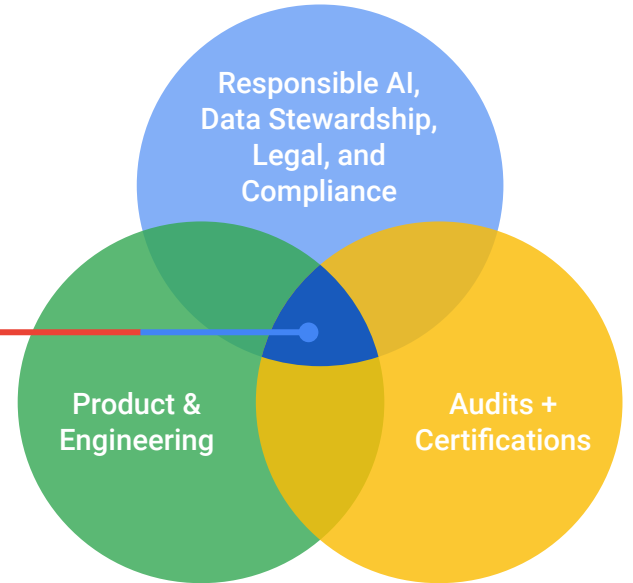
We support risk-based, proportionate AI regulation

AI is too important not to regulate.

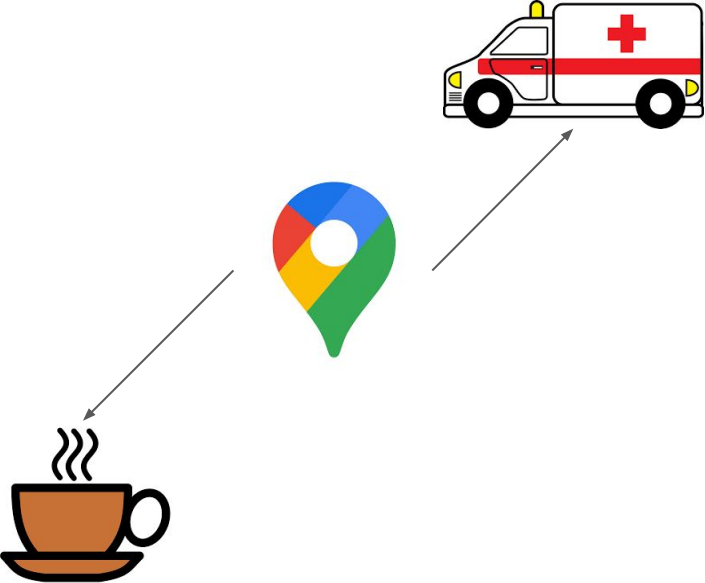
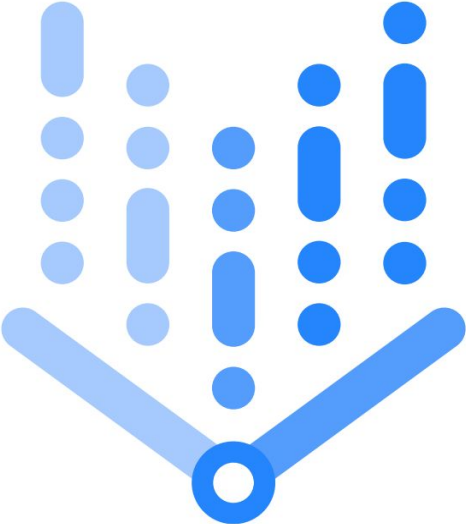
- Google CEO Sundar Pichai, *Financial Times*, Jan. 2020

Google Cloud's Approach to Regulations

The Cloud GAPP team works closely with internal teams to ensure we are ahead of the curve to support our customers.



What is a risk-based approach?



Applying AI innovation

Pursuing a (**Responsible**) Generative AI transformation



Identify and prioritize use cases

Evaluate business needs along with Generative and traditional AI capabilities.



Data first strategy

Bring together disjointed data sets and strong governance to lay a solid AI foundation.



Organizational readiness

Assess your organization's current status along with costs and benefits of AI solutions.



Test and scale

Not all AI is built equal. POC often and fail fast to identify what works for your business.

Increasing Employee and Operational Efficiency

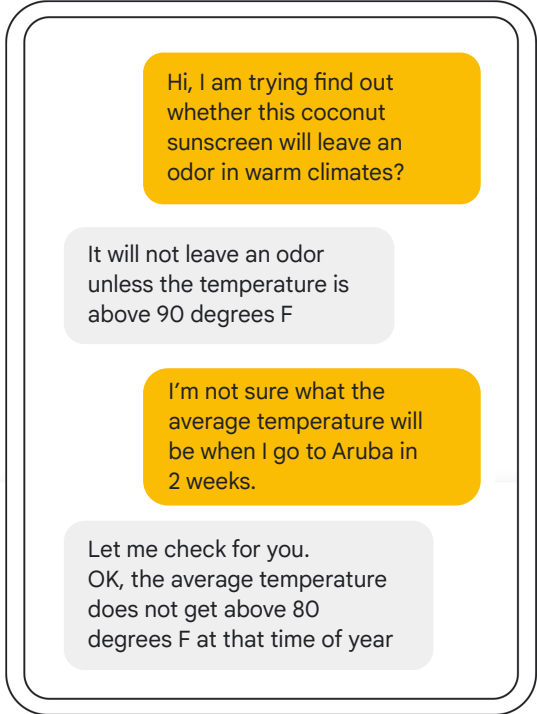
Consumer/Employee Services Automation

Example only

Ingest company catalog data, consumer service training, employee guidelines and processes to equip chatbots to answer complex consumer and employee questions.

Allow for escalation in areas of risk (e.g. product safety or employee security.)

Example: A consumer can find out how a skincare care product will perform when she is traveling to a new country interacting with the company's Conversational AI.

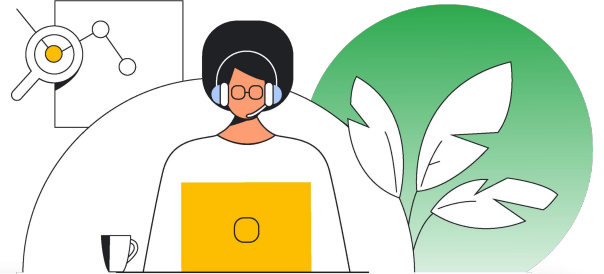


Hi, I am trying find out whether this coconut sunscreen will leave an odor in warm climates?

It will not leave an odor unless the temperature is above 90 degrees F

I'm not sure what the average temperature will be when I go to Aruba in 2 weeks.

Let me check for you. OK, the average temperature does not get above 80 degrees F at that time of year

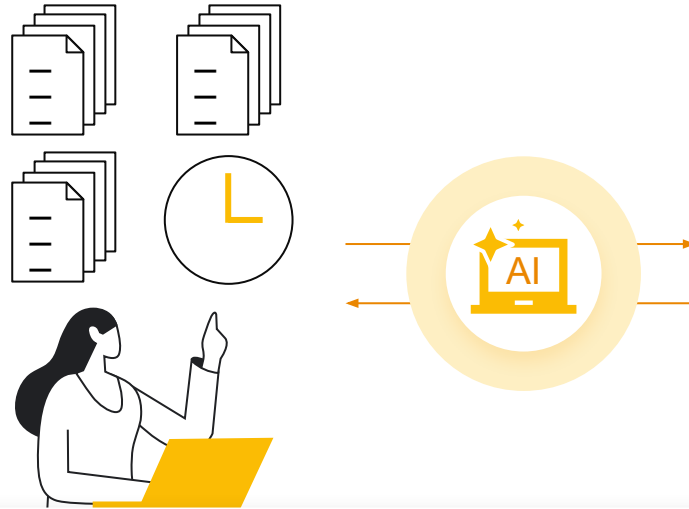


Employee Knowledge Search and Productivity

Example only

Quickly find the most relevant content via natural language search to **reduce hours of manual work**

Example: A global HR leader wants to find out the policy in each region on unused vacation days.



Hours spent navigating decades-worth of archives

Summarized Vacation Policy Findings:



Our company has varying vacation policies across our six regions.

Allowed vacation days span from 15 per year to 30 per year depending on local laws and regulations.

In the US, employees use up 75% of their vacation days on average. In EMEA this average is slightly higher at 80%. In APAC.....

Duet AI for Google Workspace Enterprise



Helps you write  
in Gmail and Docs

Duet AI works behind the scenes to help you write — whether it's refining existing work or helping you get started



Helps you visualize
in Slides 

With Duet AI, you can easily create images for presentations and meetings from a simple prompt



Helps you organize
in Sheets 

Duet AI is here to help you organize, classify and analyze your data faster than ever before



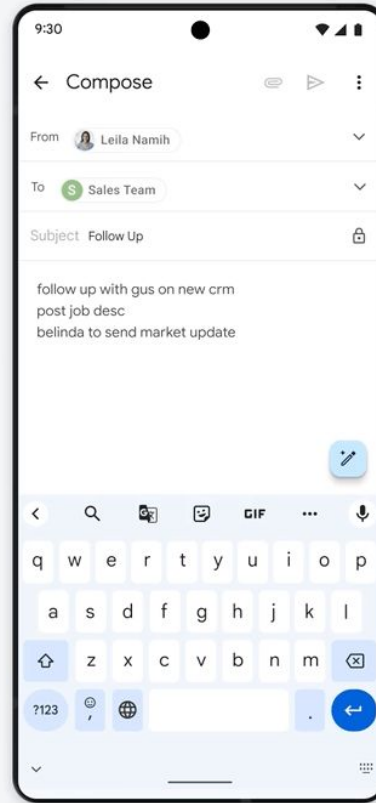
Helps you connect
in Meet 

Duet AI helps you look and sound your best on video calls so you can focus on the conversation

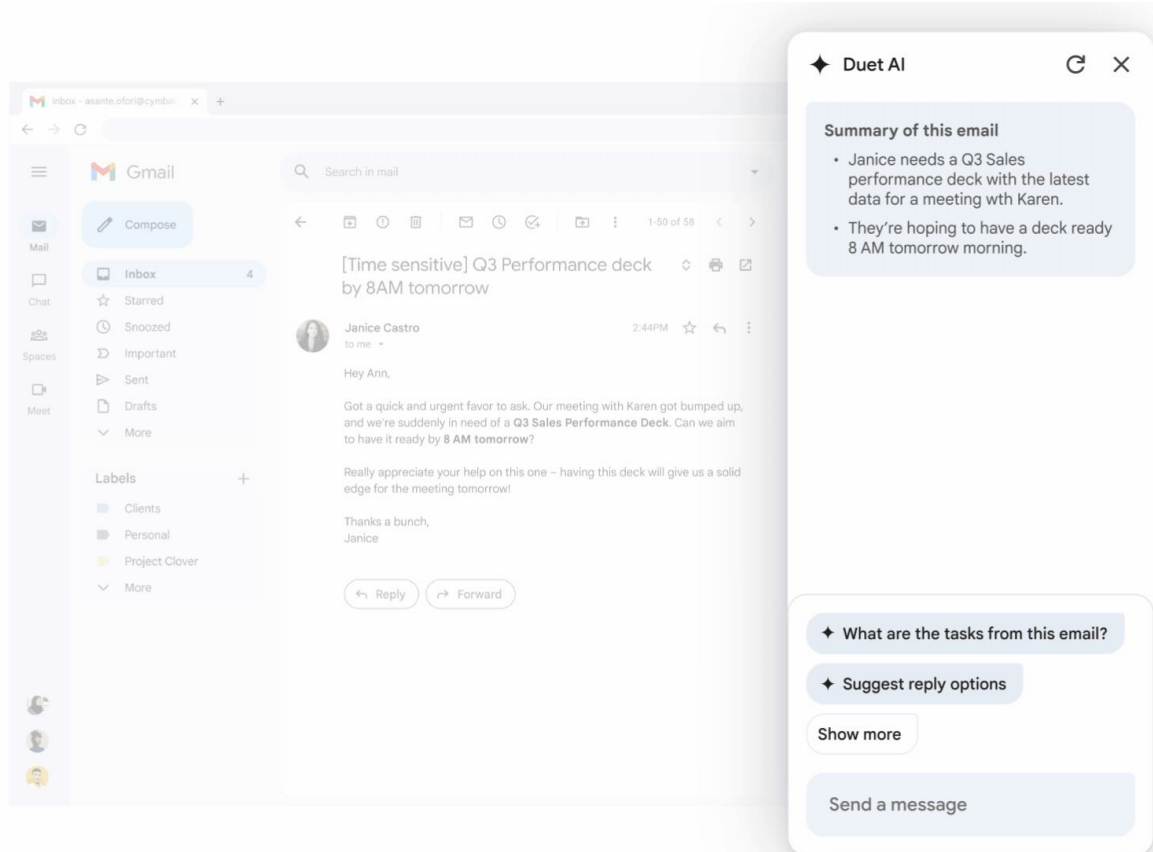
 Help me write an engaging headline

Increasing Employee and Operational Efficiency

Duet AI: help write emails

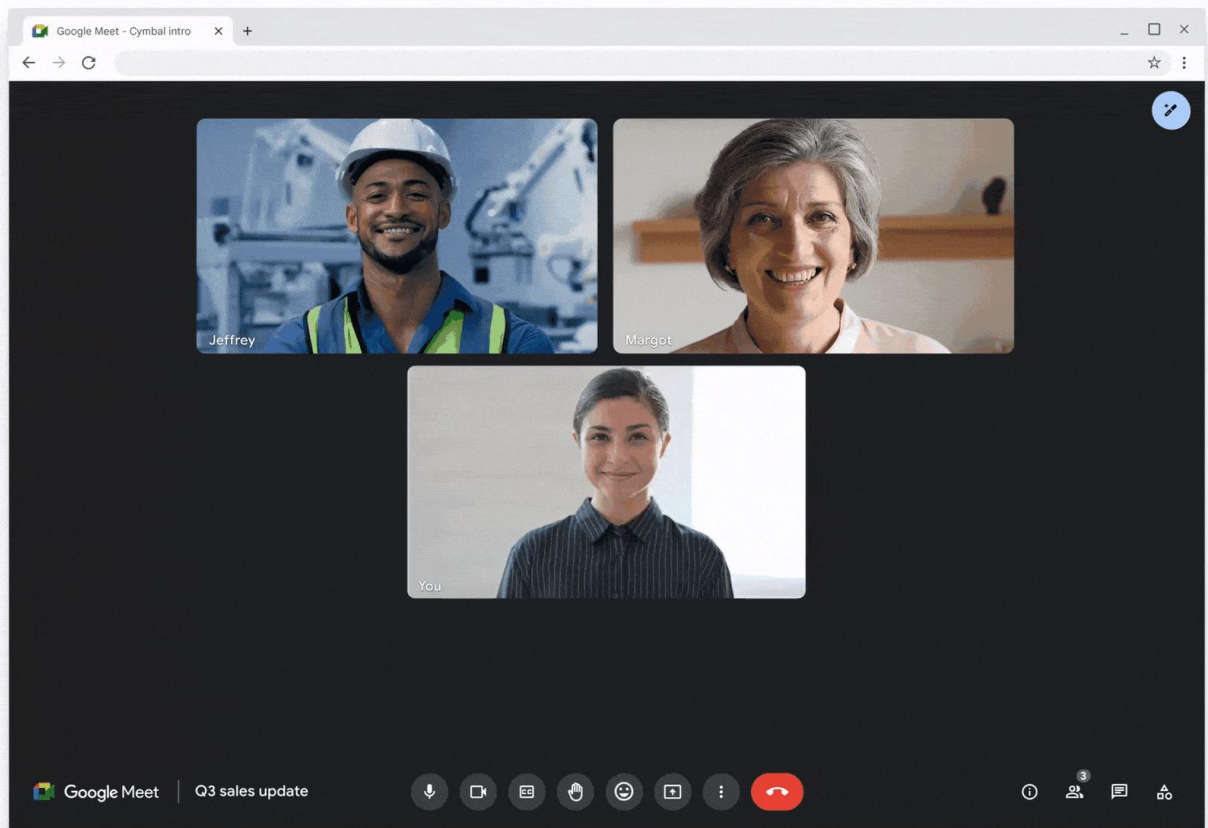


Duet AI across Workspace: Sales Performance

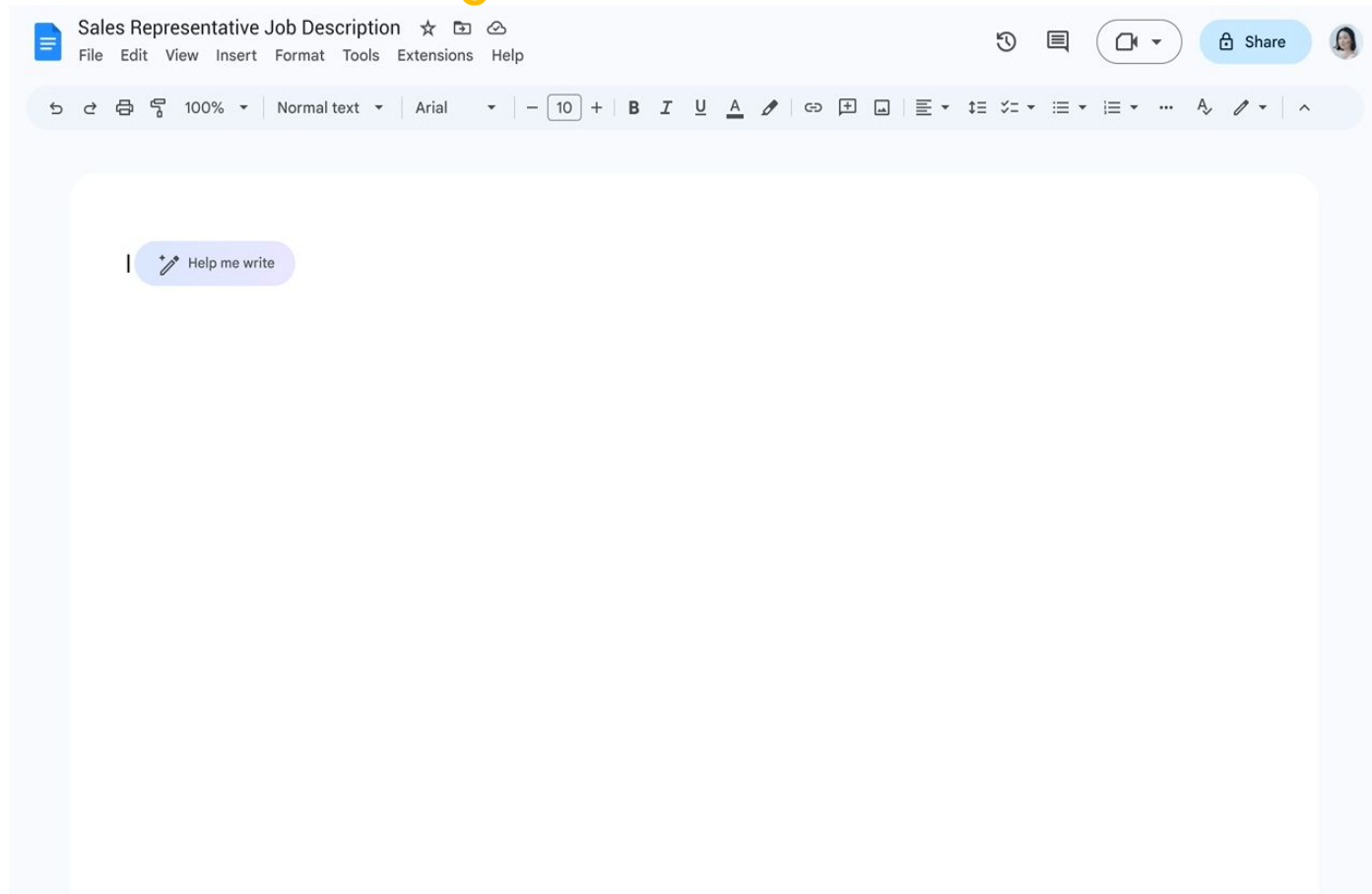


Increasing Employee and Operational Efficiency

Duet AI in Meet: Call summaries and action items



Duet AI in Docs: Job Postings

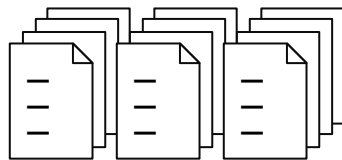


Drive cost and operational efficiency

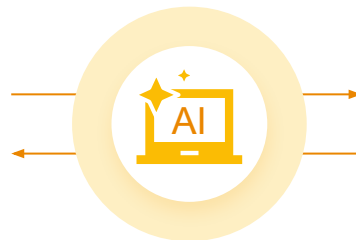
Document Search & Synthesis

Improve the ability to understand large document sets to help identify, summarize, and explain relationships to other documents.

Example: Using Gen AI, a relationship manager could quickly identify relevant contract clauses that need to be updated and then generate tailored communications to notify the customer of the change.



Existing Contracts



“Flag all customers with LIBOR in their contract and automatically send them updated T&Cs that alert them to the replacement of LIBOR”

Example only

[Dear customer]

We are writing to inform you about an important change to your contract.

The London Interbank Offered Rate (LIBOR) is a benchmark interest rate that is used to price many financial products, including loans, mortgages, and derivatives.

Your contract currently refers to LIBOR. As a result of the LIBOR phase-out, we are updating your contract to reference a new benchmark interest rate, the Secured Overnight Financing Rate (SOFR)

Drive cost and operational efficiency

Vertex AI Search & Conversation

The screenshot displays the Google Cloud Vertex AI Search & Conversation interface. At the top, there is a navigation bar with the Google Cloud logo, a 'Project Name' dropdown, and a search bar containing the text 'Search (/) for resources, docs, products, and more'. Below the navigation bar, the main content area is titled 'App overview > My search App: Preview'. On the left side, there is a sidebar menu with options: 'Data', 'Preview' (which is highlighted), 'Configurations', 'Integration', and 'Analytics'. The main content area shows a search query 'What is Alphabet's sustainability strategy?' in a search bar. Below the search bar, there are four search results, each starting with a red 'PDF' icon and a file name followed by a page number and a vertical ellipsis:

- 20220202_alphabet_10K.pdf** : Page 9
Our sustainability strategy is focused on three key pillars: accelerating the transition to carbon-free energy and a circular economy, empowering everyone with technology, and benefiting the
- 20230203_alphabet_10K.pdf** : Page 10
Our sustainability strategy is focused on three key pillars: accelerating the transition to carbon-free energy and a circular economy, empowering everyone with technology, and benefiting the
- alphabet-investor-pdfs_-_pdf** : Page 6
Ongoing Commitment to Sustainability We strive to build sustainability into everything we do from designing and operating efficient data centers, advancing carbon-free energy, creating
- 20210203_alphabet_10K.pdf** : Page 22
the sufficiency and timing of our proposed remedies in response to decisions from the European Commission ("EC") and other regulators and governmental entities; - our expectations regarding



Thank you!

