



# **HOMEE Optimal Planning Engine (H.O.P.E.): Pioneering AI Interior Design for the Global Home Industry**

Elevating Living Spaces with HOMEE AI's Integration of NVIDIA Omniverse and Google Cloud

Gene Chang, CTO of HOMEE AI

Rajesh Thallam, Senior Solution Architect of Google



**Design Made Effortless  
Bringing Joy to Every Space**



# Challenges

High complexity of current processes

## Pre-design (1 Week)

Measure

Consult

Assess



## Explore (2-4 Weeks)

Plan

Concept

Refine



## Design (5-6 Weeks)

Drawings

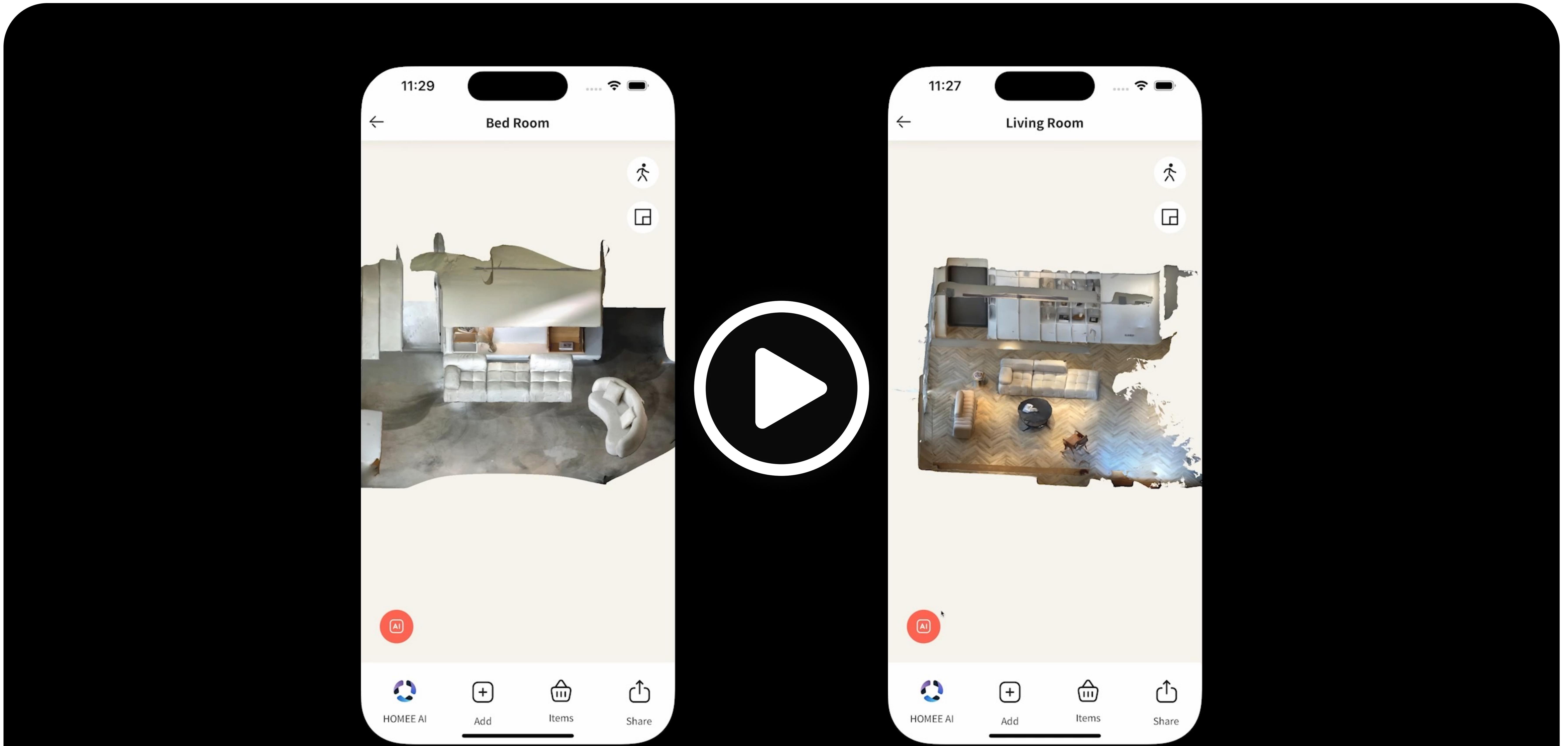
Materials

# With HOMEER.AI

Personalized Design and Purchase Channel

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**Interior AI designer** (5 Mins)



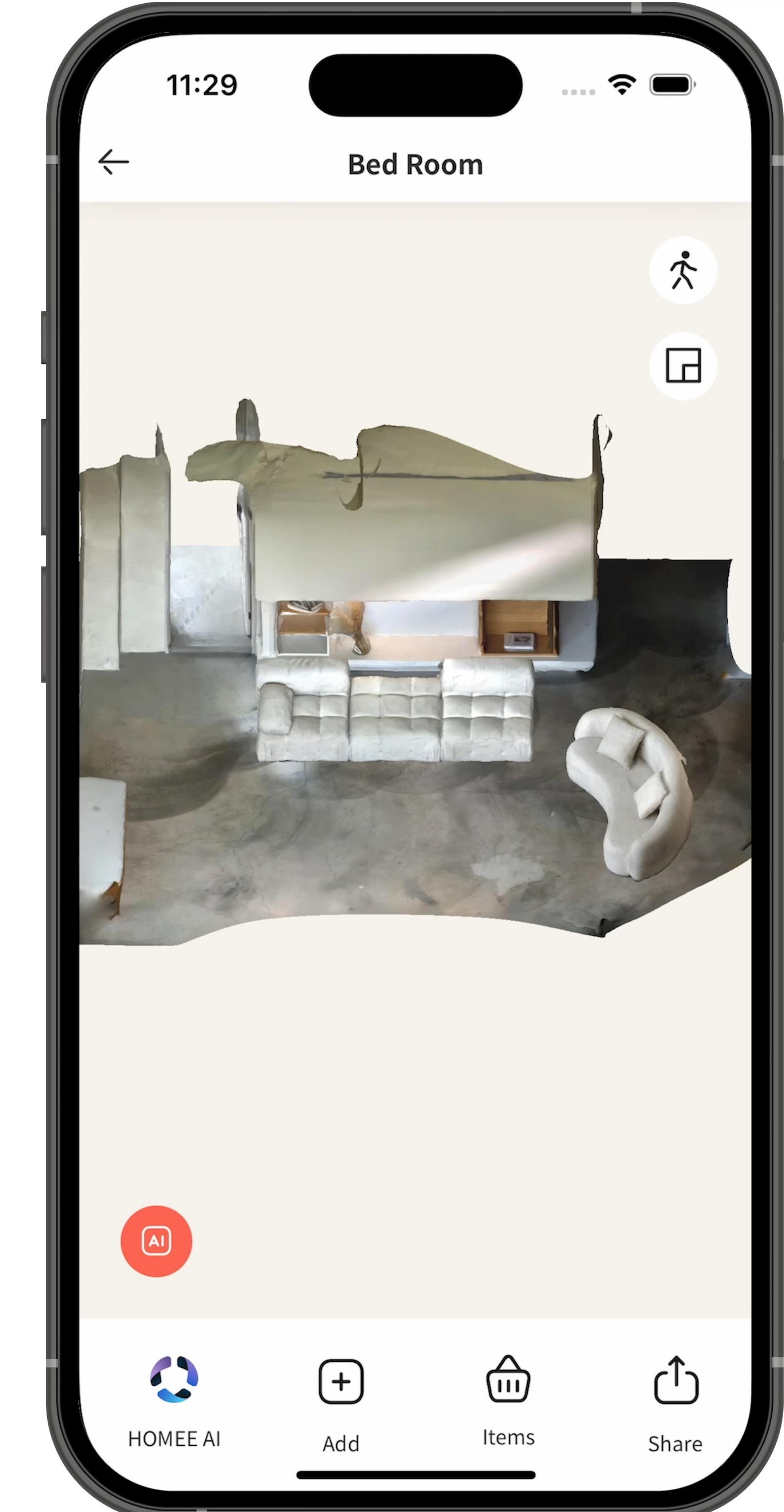


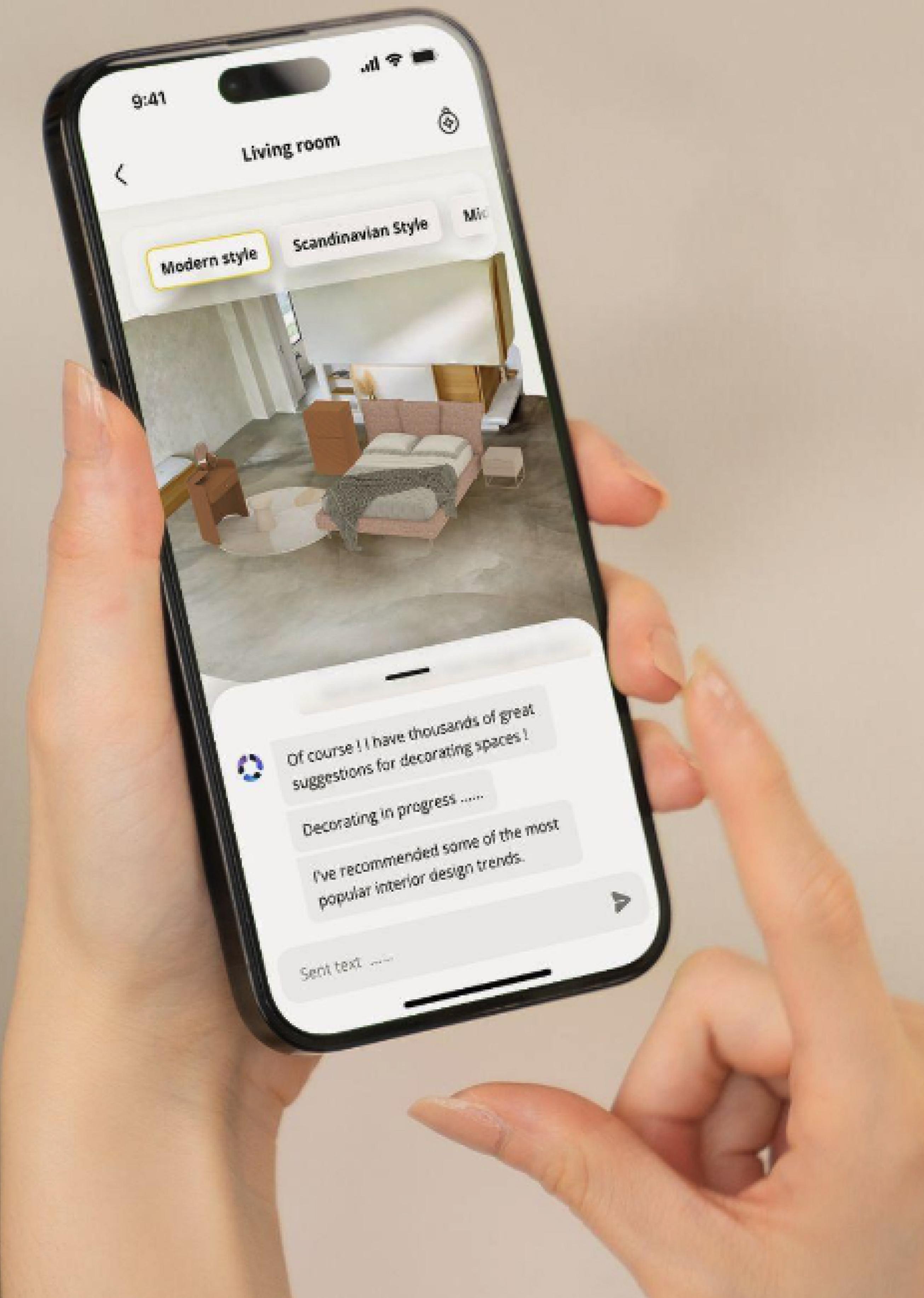
# Advanced Spatial Computing

- Real world 3D scene reconstruction
- Real world 3D scene understanding

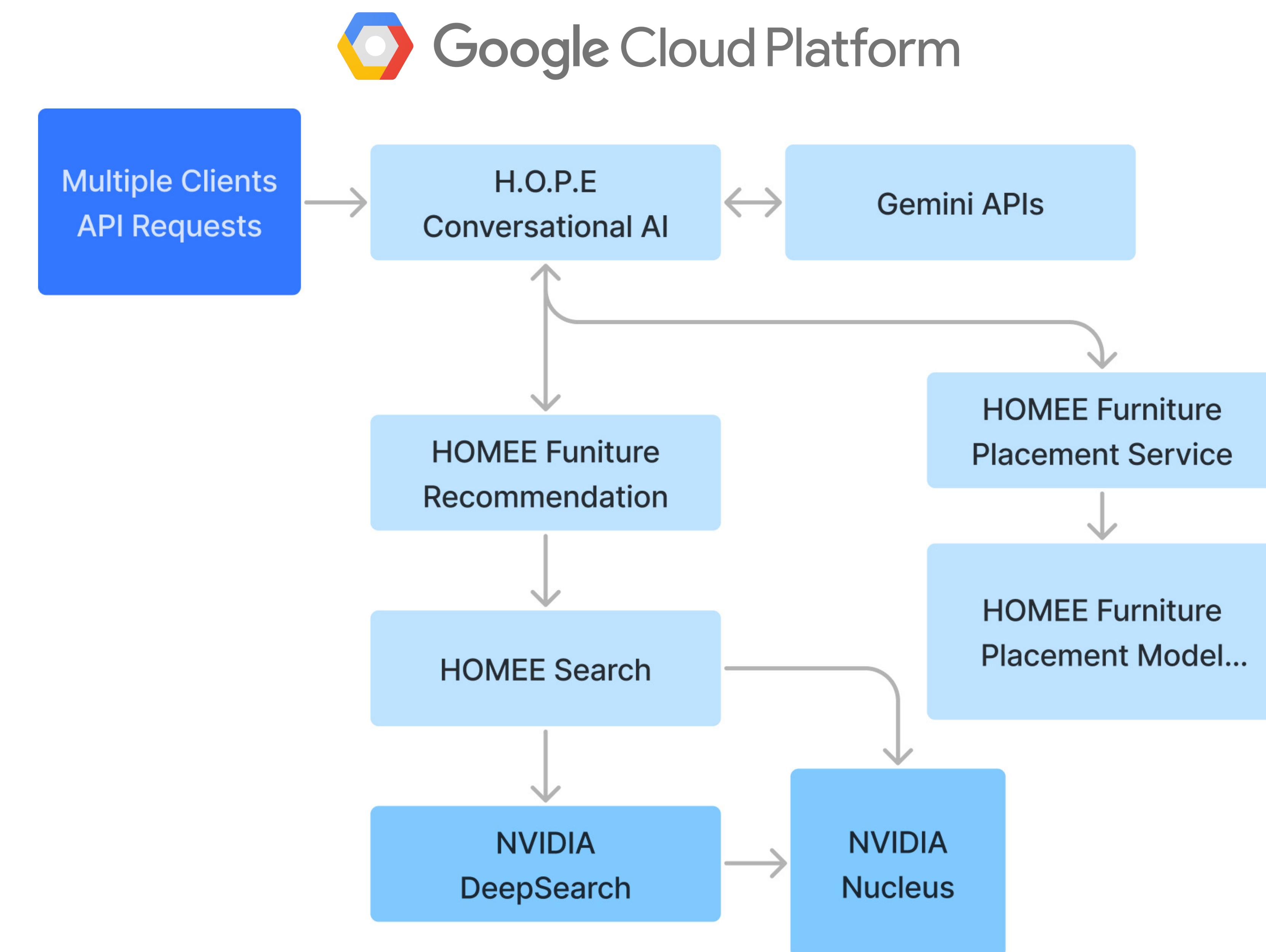
# Interactive AI Designer

- Domain specialized LLMs
- Conversation based requirement understanding
- Generate real dimension interior designs

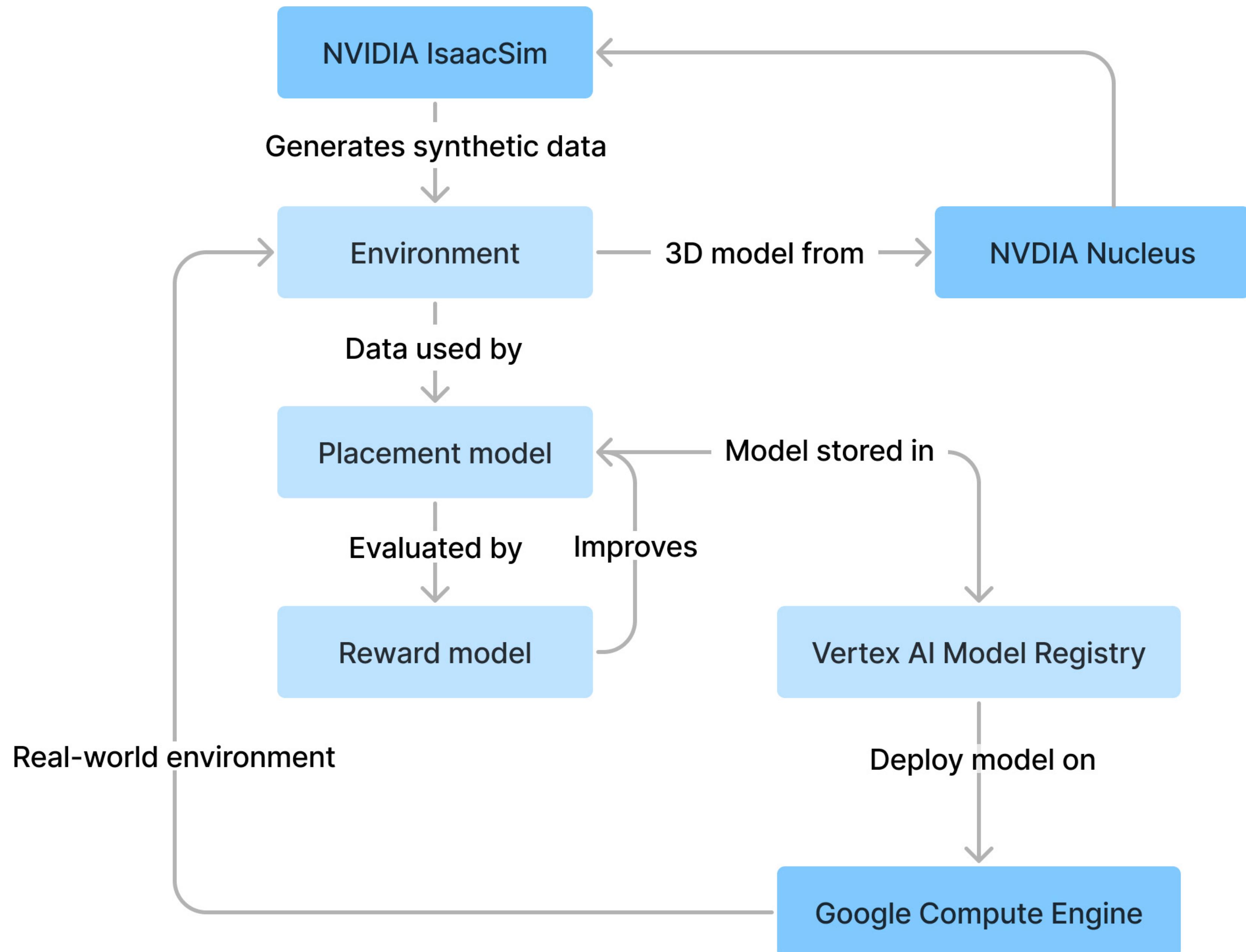




# Collaboration Synergy in H.O.P.E.



# Training with Synthetic Data





## Omniverse for Industries

- NVIDIA Omniverse Nucleus
- NVIDIA Omniverse Connectors

## Omniverse for 3D ML

- NVIDIA Omniverse DeepSearch
- NVIDIA Omniverse IsaacSim



## Google Cloud for AI

- Vertex AI Pipelines
- Google Kubernetes / Compute Engine

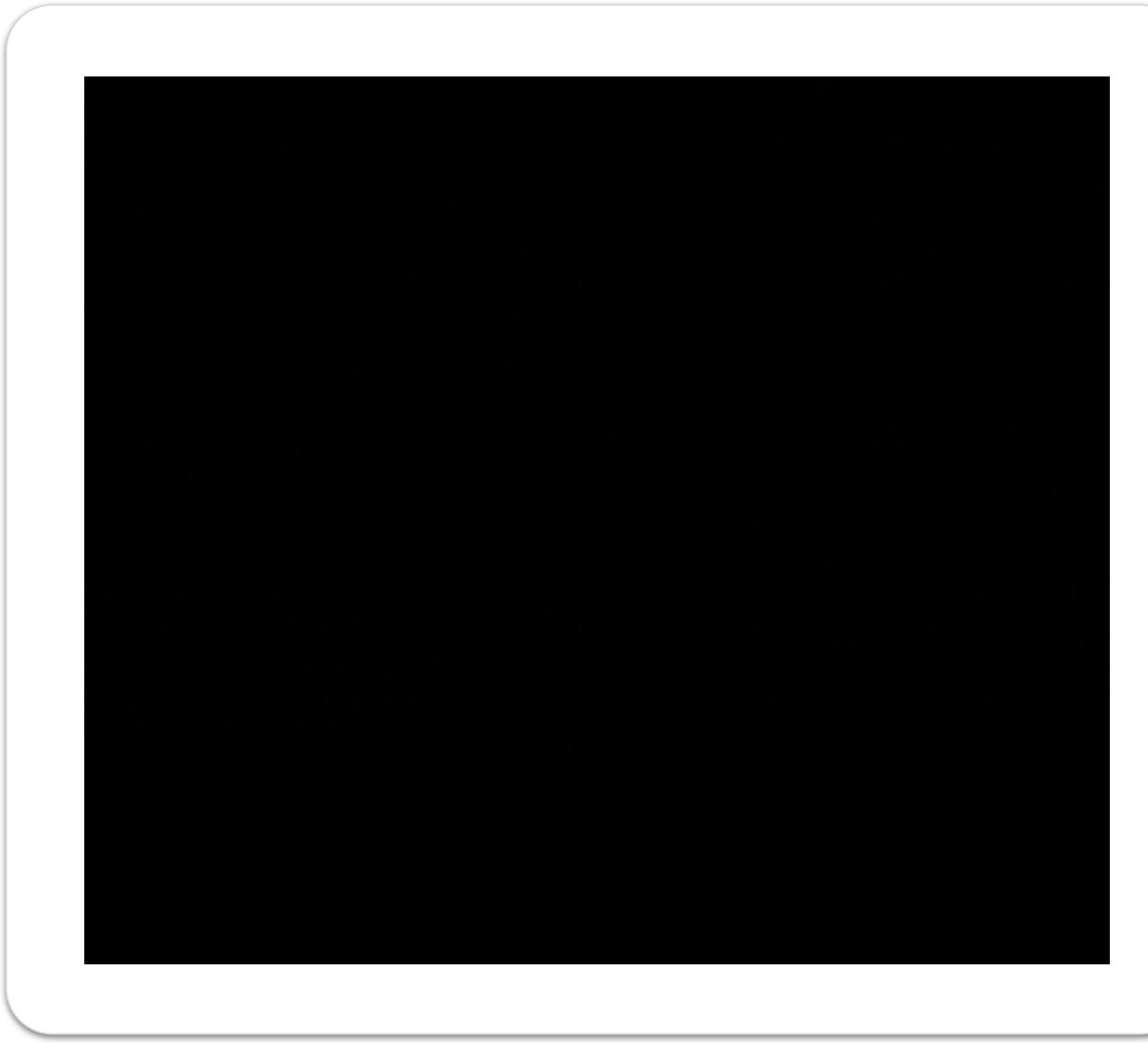
## Vertex AI Gemini for Understanding

- Language Processing
- Visual Presentation

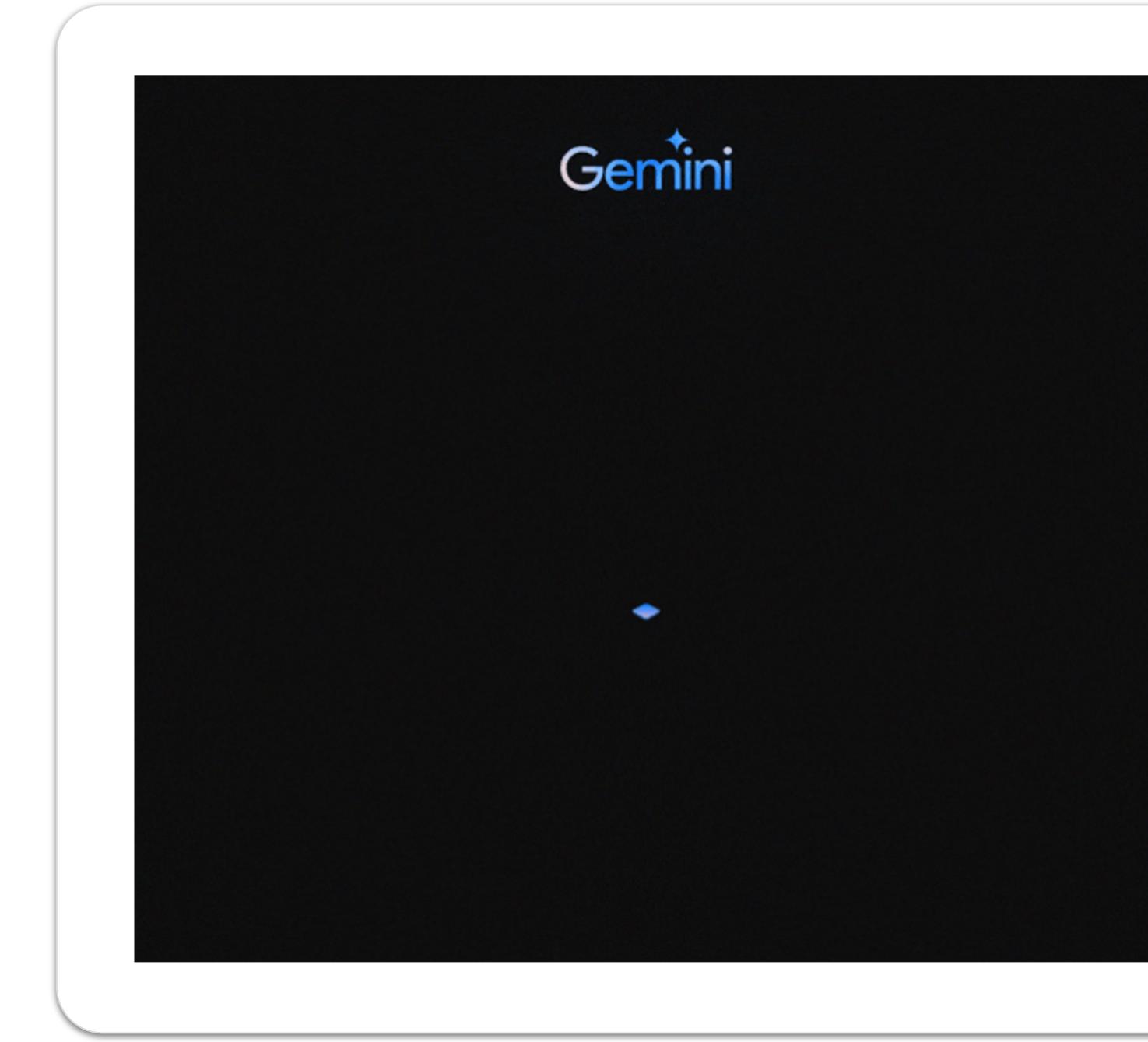


## Universal Scene Description Framework

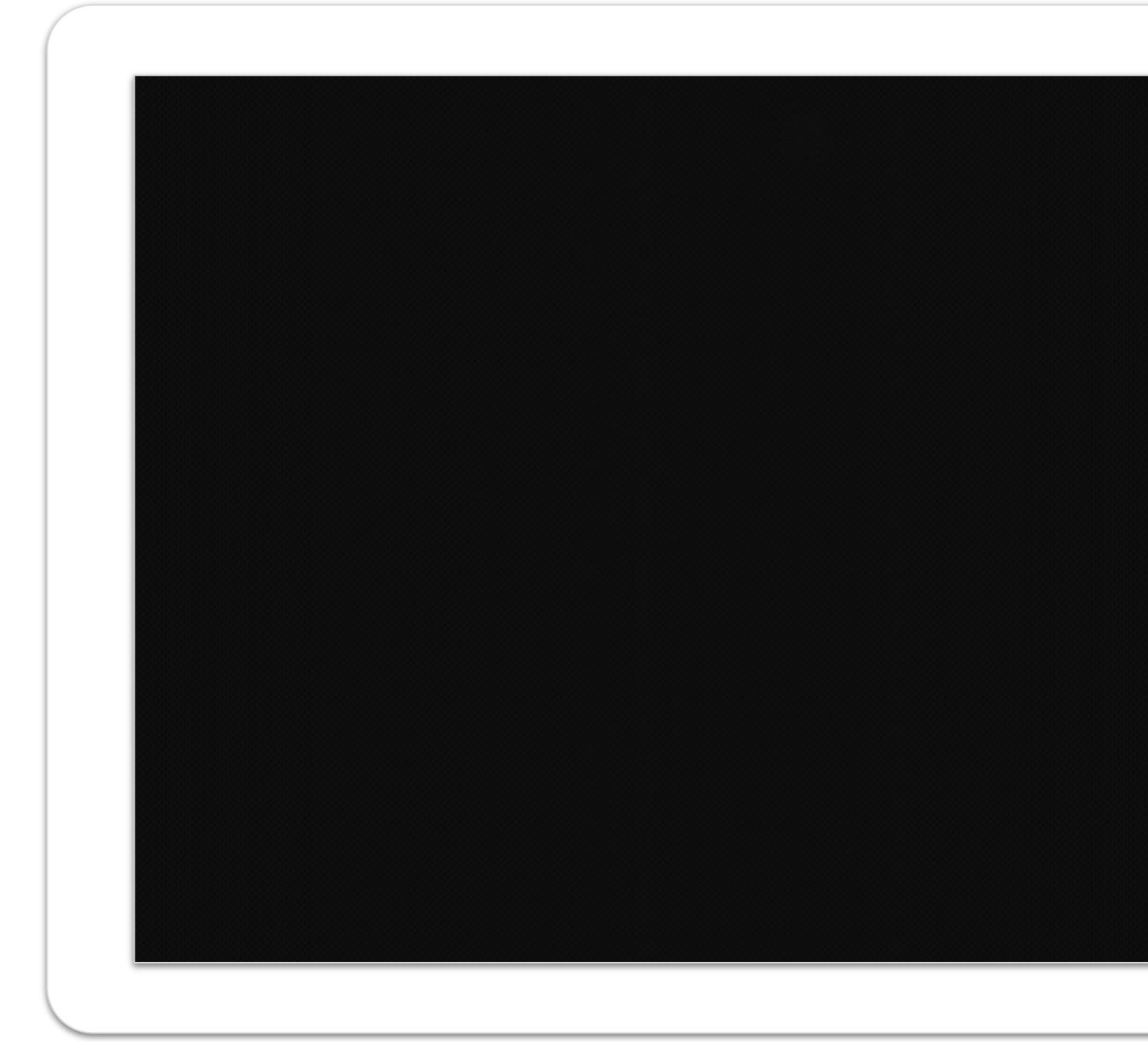
# Gemini marks the next phase on our journey to making AI more helpful for everyone



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



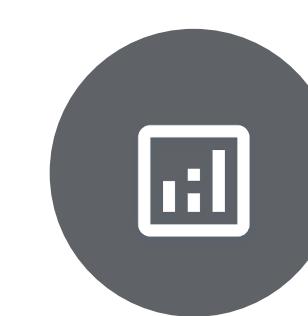
Highly optimized while  
preserving choice



Built with responsibility  
and safety at the core

# It takes more than just a model to drive business value with GenAI

Google Cloud delivers a differentiated, vertically integrated GenAI portfolio



Super scalable AI infrastructure



Access to world class, state of the art models



Platform to develop and deploy production ready applications



AI powered solutions to assist everyone in their day to day work



Broad ecosystem of partners at every level of the stack

# This manifests in Vertex AI portfolio

Gemini for

Google Cloud

Google Workspace



## Vertex AI

### AI Solutions

Contact Center | Document | Discovery | Risk | Healthcare

Search

Conversation

### AI Platform

Extension | Connectors | Grounding  
Prompt | Serve | Tune | Distill | Eval  
Notebooks | Training | Feature Store | Pipelines | Monitoring

### Model Garden

Google | OSS | Partner Models

Google Cloud Infrastructure | Data Cloud

# Imagen 2.0

Our most advanced text-to-image model to date

## Higher image quality



**PROMPT:** A woman brushing her teeth, smiling, happy, toothpaste advertisement

## Text overlay



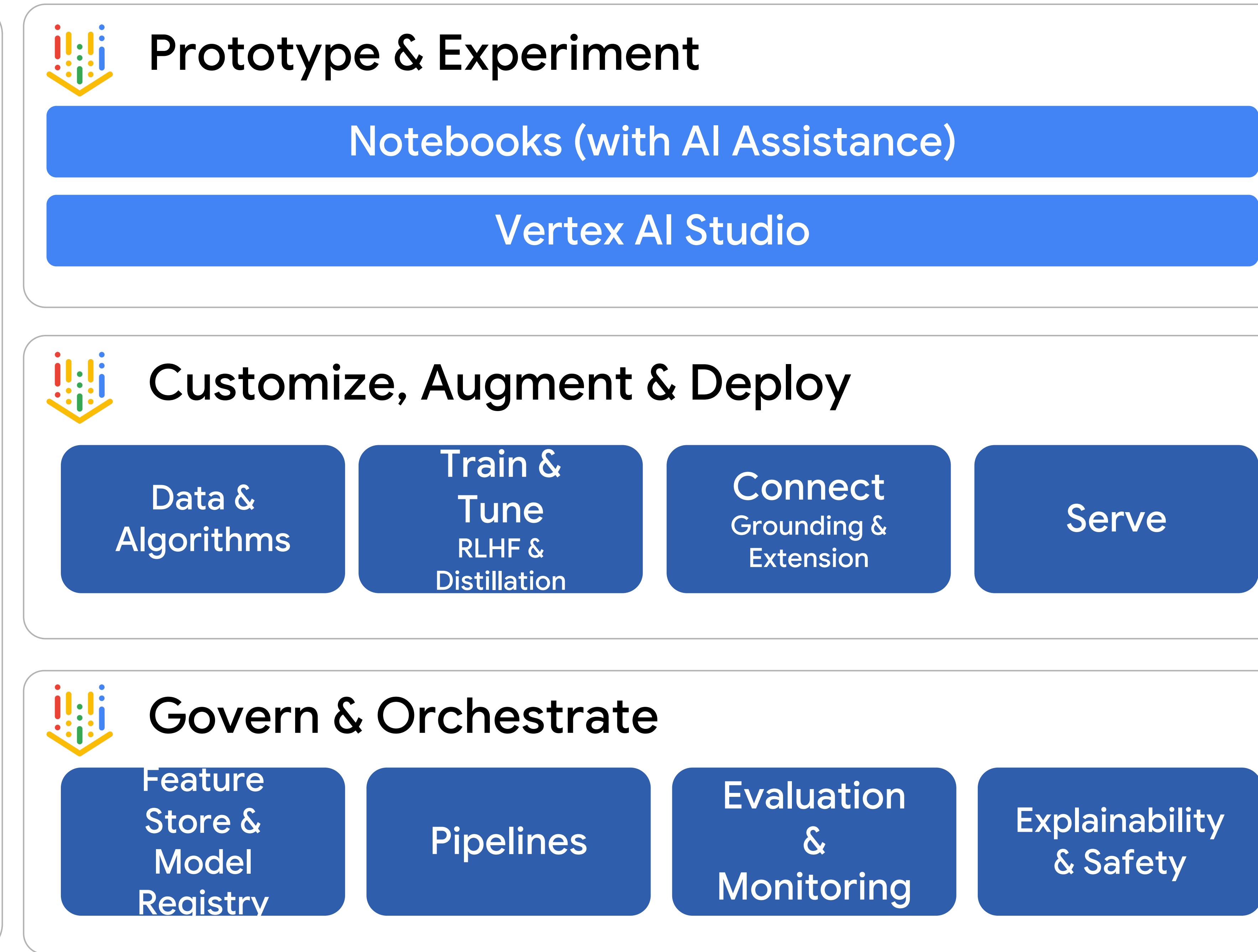
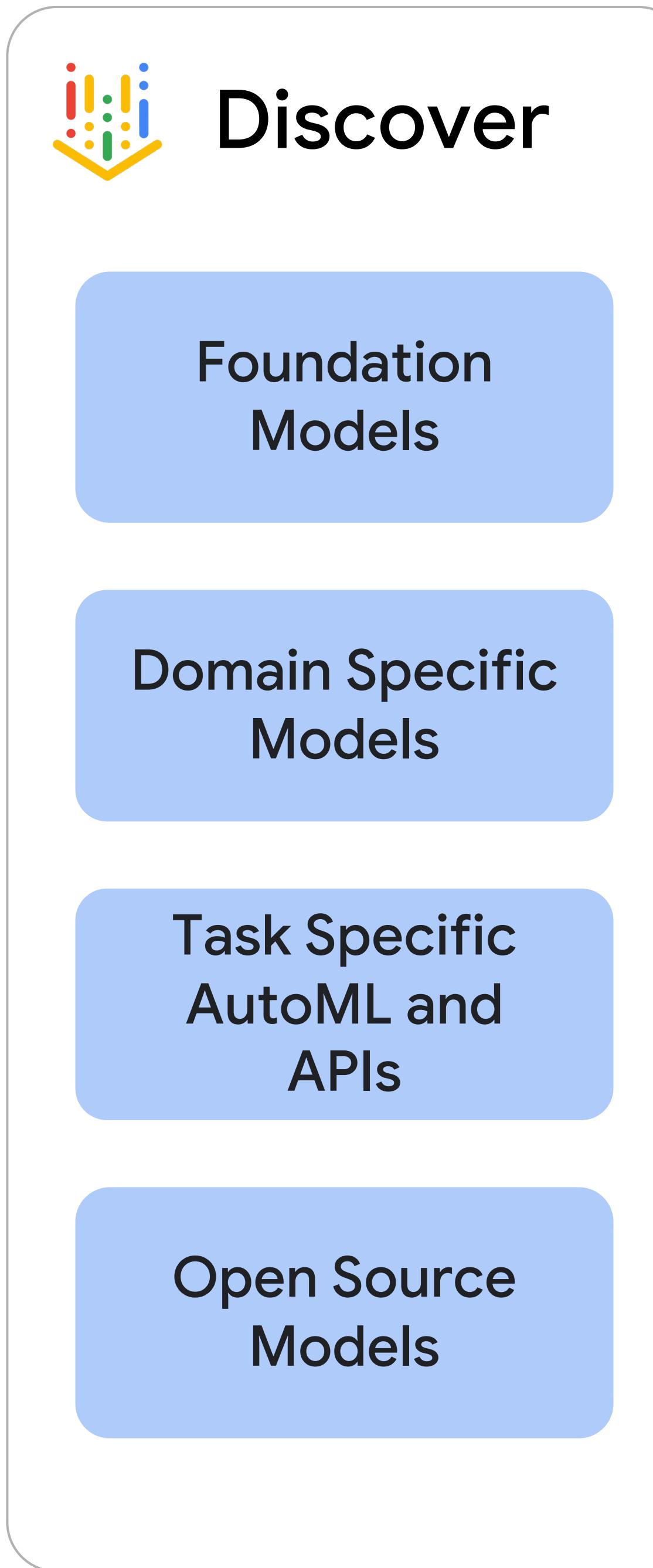
**PROMPT:** A tube of toothpaste with the words "CYMBAL" written on it, on a bathroom counter, advertisement

## Logo generation



**PROMPT:** a clean minimal emblem style logo for an ice cream shop, cream background.

# The best of predictive and generative AI in one platform



- Unified interface for **data analysis** and **AI development** to kickstart AI-powered projects across various tasks & modalities
- **Augmentation tooling** to differentiate yourself using your enterprise data
- Consistent workflows with minimal data movement **simplify data governance** for every enterprise
- Unification of **predictive and generative** through MLOps

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



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

- **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**

# Conclusion and Vision Forward

## Recap of H.O.P.E.: An AI Interior Designer

- Enriching User Interactions through Conversational Experiences
- Utilizing NVIDIA Omniverse for 3D Synthetic Data Generation and Management
- Leveraging Vertex AI and Gemini to Enhance AI Workflows

## Revolutionizing the Industry

- Crafting an AI-driven platform for brands to offer personalized product designs
- Seamlessly integrating with existing eCommerce platforms, serving a unified customer base

HOMEET.CASA



Go Shop

AI

# Redefine Your Space with Spatial AI Designer

HOMEET AI is the pioneer in AI technology  
for spatial planning



## New Feature Announce !

Use 3D scan to decorate  
your own space !



## Let's Start !

[Style exploration](#)[Searching furniture](#)[Personal suggestions](#)[AI Designer](#)

+ Search or give me an order ...

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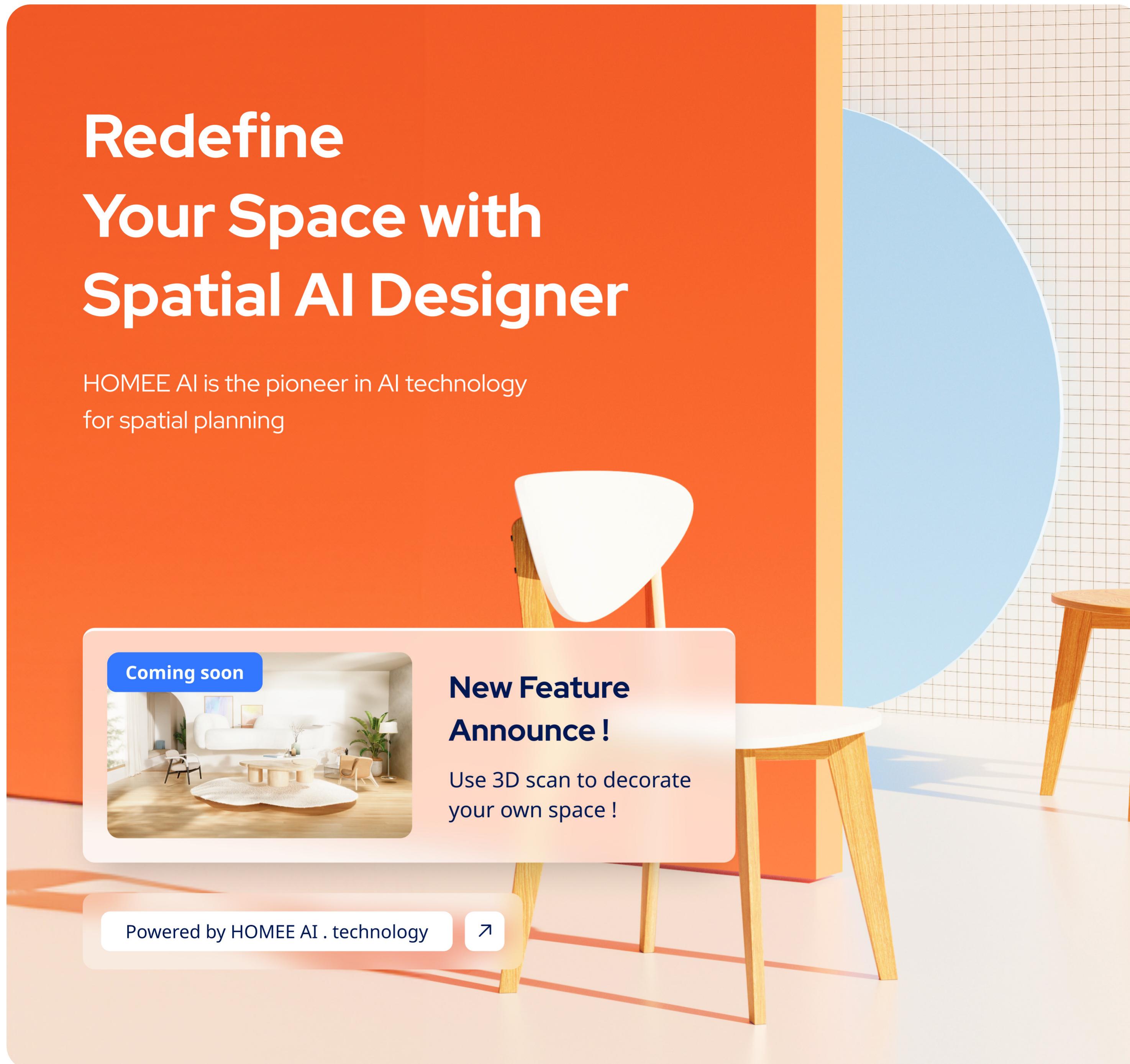


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Coming soon

New Feature  
Announce !

Use 3D scan to decorate  
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Powered by HOMEER.AI technology

# HOMEER.CASA

**The best personalized  
AI interior designer platform**

Unlock design possibilities and create unique,  
functional spaces perfectly tailored to your needs  
and preferences.

**CASA AI Designer Platform** (Launch in April 29)  
**Immersive 3D Experience** (Launch in June 28)

# Q&A

# Welcome to Contact Us



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Booth #I139