

# The Future is GCP

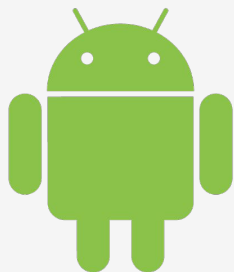
## Google Cloud Platform Overview



Google Cloud

# G Suite

Drive and Sheets  
integrated with BigQuery



Easily create mobile  
applications for Android



## chrome

Fast, Secure, Browser

Easy-to-use, secure  
Chromebooks



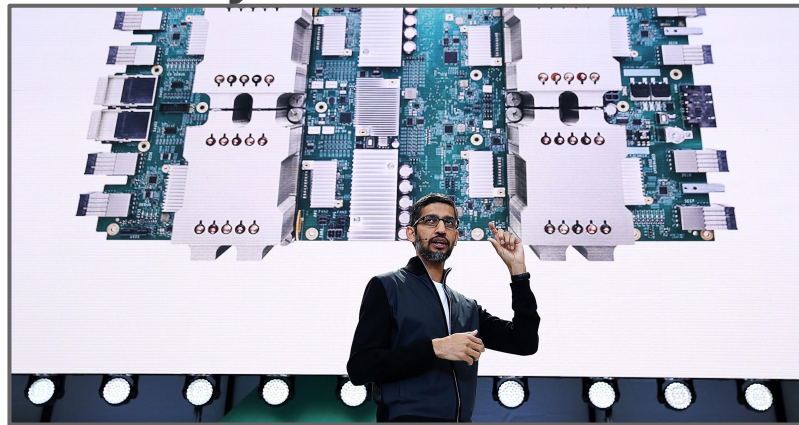
## Google Maps

Build Geo-aware apps using Maps API

Погляньте на  
минуле...



...щоб побудувати  
майбутнє



YouTube



1 Billion daily unique users across 8 services



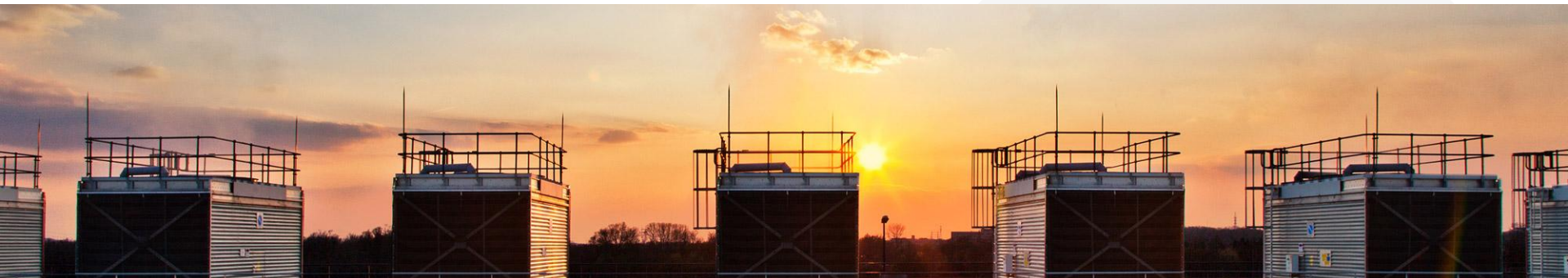


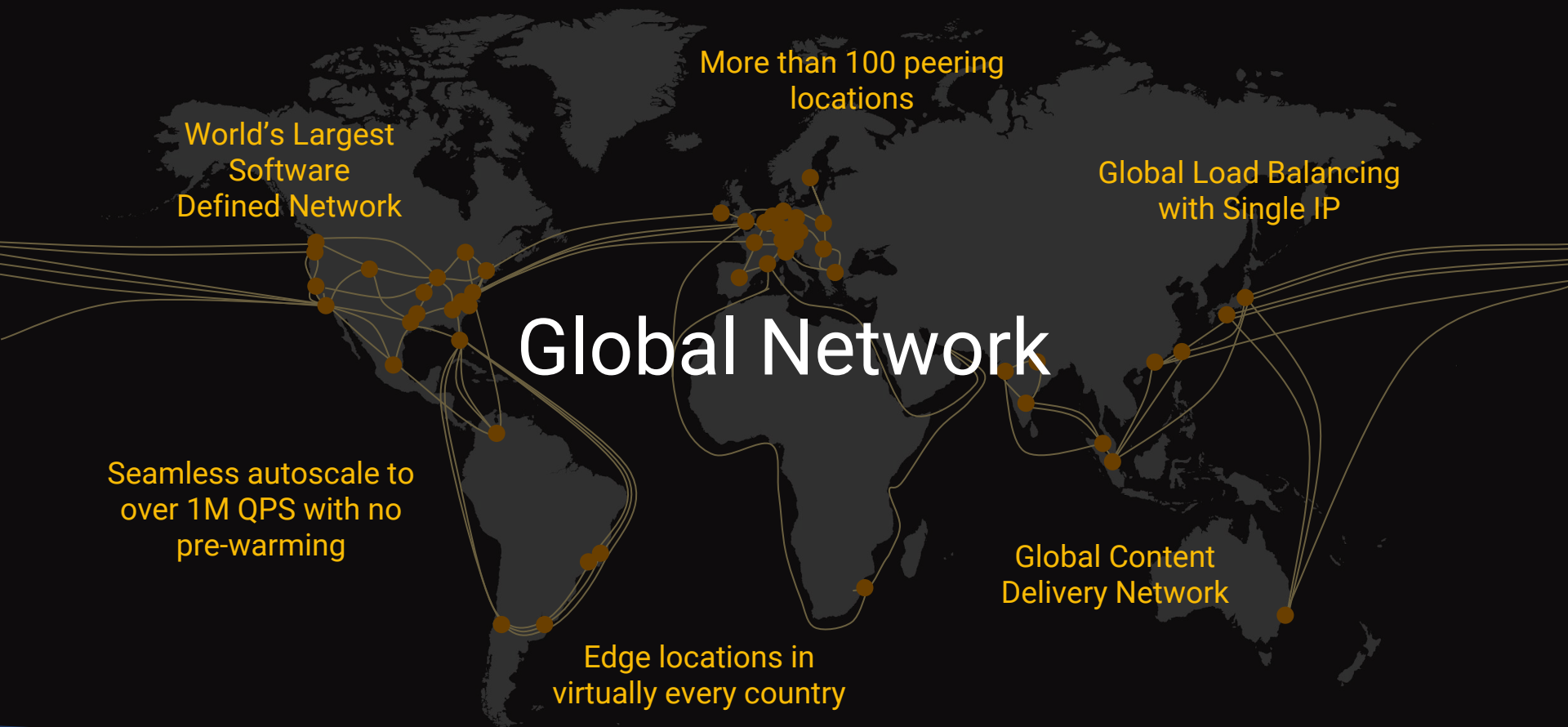
We're not just thinking about now.

We're thinking about, and building, what's next.



# The Open Cloud





World's Largest  
Software  
Defined Network

More than 100 peering  
locations

Global Load Balancing  
with Single IP

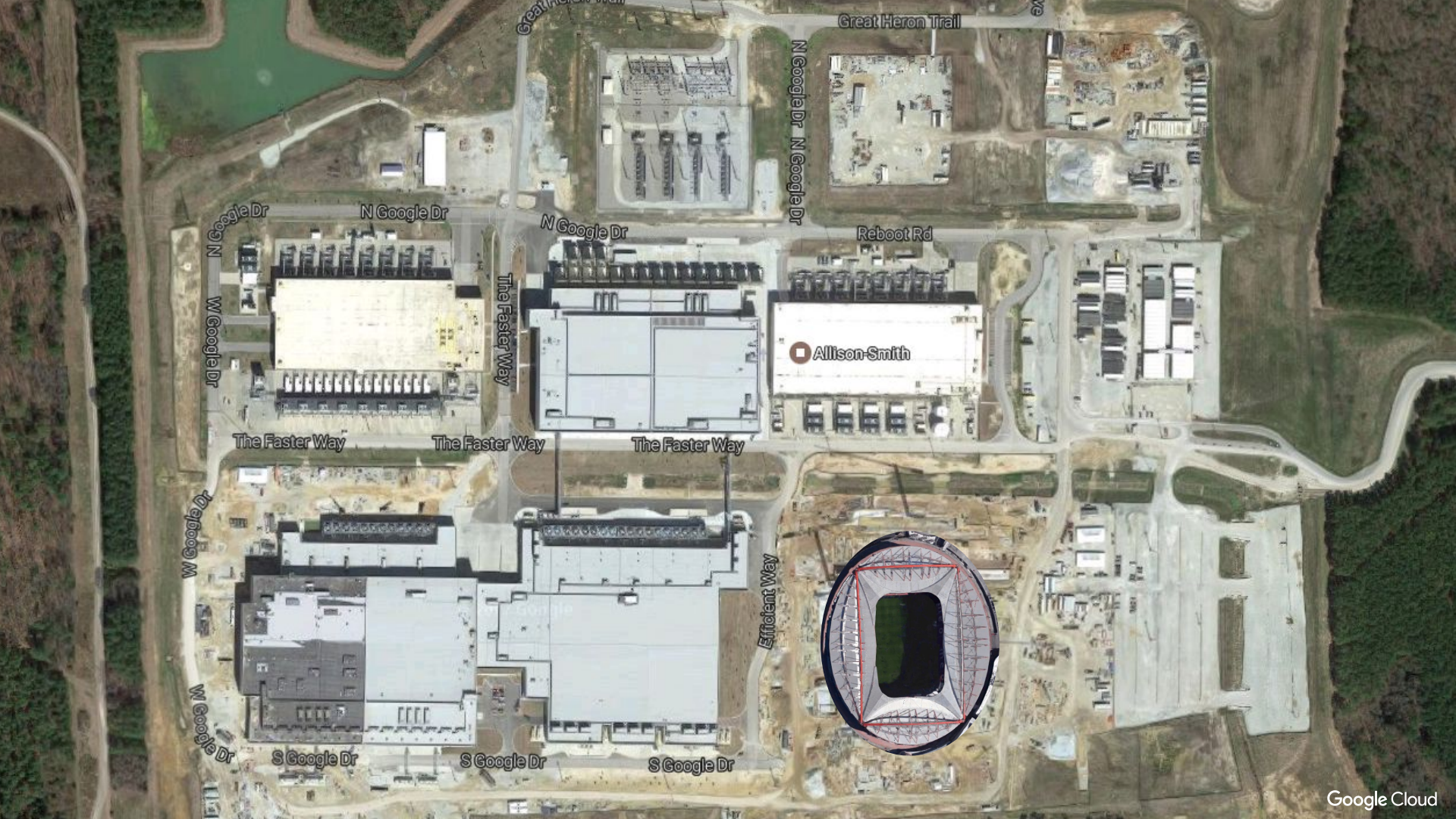
# Global Network

Seamless autoscale to  
over 1M QPS with no  
pre-warming

Global Content  
Delivery Network

Edge locations in  
virtually every country





N Google Dr

Great Heron Trail

N Google Dr

N Google Dr

N Google Dr

Reboot Rd

W Google Dr

The Faster Way

Efficient Way

The Faster Way

The Faster Way

The Faster Way

Allison-Smith

W Google Dr

W Google Dr

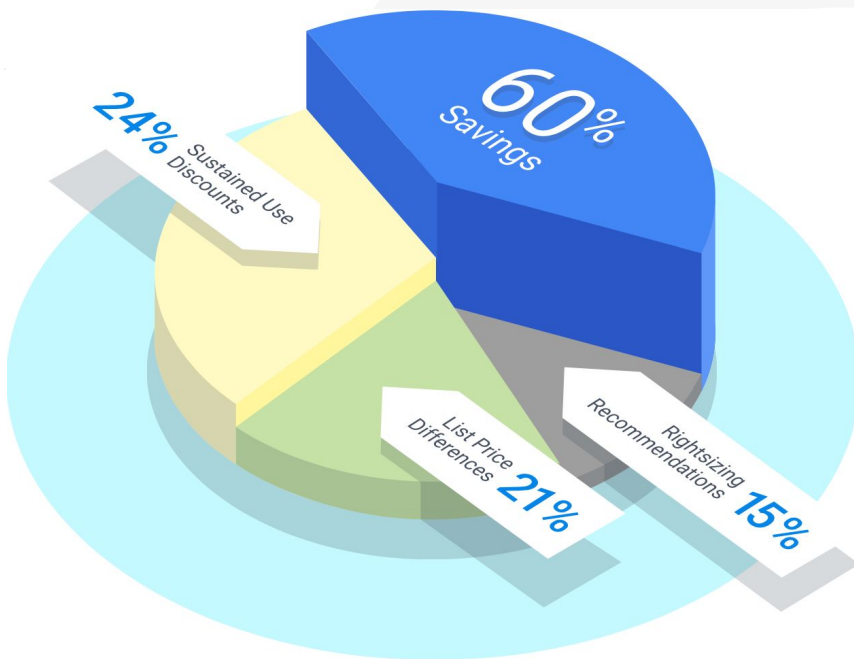
S Google Dr

S Google Dr

S Google Dr

# Pricing Innovation

- Per-Second billing
- Sustained-use discounts
- Custom machine types
- Rightsizing
- Committed-use discounts
- Preemptible machines





# More than 60 Google Cloud Platform services

## Compute



Compute Engine



App Engine



Container Engine



Container Registry



Cloud Functions

## Storage and Databases



Cloud Storage



Cloud Bigtable



Cloud Datastore



Cloud SQL



Cloud Spanner



Persistent Disk

## Networking



Virtual Private Cloud



Cloud Load Balancing



Cloud CDN



Cloud Router



External IP



Cloud Interconnect



Cloud DNS



Networking



VPN

## Big Data



BigQuery



Cloud Dataflow



Cloud Dataproc



Cloud Datalab



Cloud Pub/Sub



Genomics

## Machine Learning



Cloud Machine Learning



Cloud Vision API



Cloud Speech API



Cloud Natural Language API



Cloud Translation API



Cloud Jobs API

## Identity & Security



Cloud IAM



Cloud Resource Manager



Cloud Security Scanner



Key Management Service



Firewall



BeyondCorp



Data Loss Prevention



Identity-Aware Proxy



Security Key Enforcement

# Where should I run my code?



Compute Engine



Kubernetes Engine



App Engine



Cloud Functions



## IaaS

Raw compute  
Granular control

## Container clusters

Manages your container  
cluster and actively  
schedules your containers

## PaaS

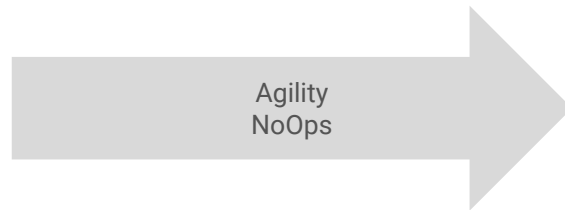
Build your scalable app  
faster

## Functions

Event-driven and  
serverless programming



Configurability  
DevOps



Agility  
NoOps





# Compute Engine

VMs or  
Infrastructure as a Service



## Fast, Easy Provisioning

Quickly deploy large clusters of virtual machines with a RESTful API.



## (Really) Pay for what you use

Get the best price automatically with sustained use discounts and preemptible VMs



## High-performance Virtual Machines

From sub 1 to 96 cores and from 0.6 to 1.4 TB RAM - High Performance VMs



## One size does not fit all

Choose the amount of cores and RAM you really need with custom VM types

## Compliance & Security

All data written to disk in Compute Engine is encrypted on the fly and then transmitted and stored in encrypted form.

# What is Kubernetes?



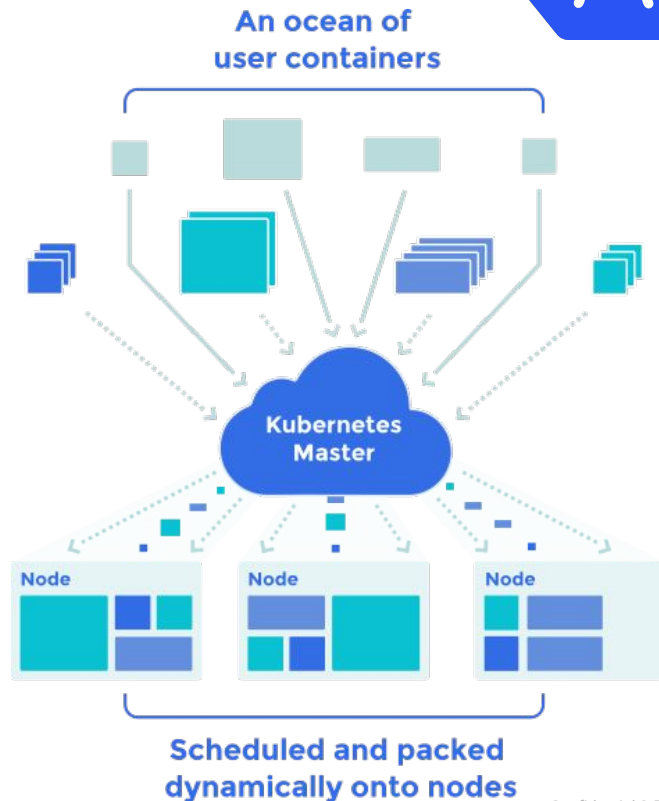
## “Container Orchestration”

Container-centric infrastructure

Inspired by Google’s internal systems and experience managing containers

## Runs Anywhere

Open sourced in 2014





# Kubernetes Community



Contributors  
And users



Google Cloud

Confidential & Proprietary

# Google App Engine



```
// Index router
app.get("/", function (req, res) {

  // Compute hashes to consume a lot of CPU
  var ts = hashes(NUM_HASHES);
  var update = {};
  update[ts] = 1;

  // Save this request in Firebase
  instanceRef.push(update, function(err) {
    if (err) {
      console.log(err);
    }

    // Tell NEXT "Hello World."
    res.send(`Hello World at ${hash}\n`);
  });
});
```

# Cloud Functions



A serverless environment to run code when a event is triggered.

Event emitted



Your code executed

***Function triggered***

No servers



Automatic scaling



Only pay for what you use



# Fastest Path for New App Development



## Cloud Functions

Event-driven serverless environment



## App Engine

Web-scale PaaS lets Devs just code, now serving 100B requests/day



## Container Engine

Fully managed Kubernetes container orchestration



## Firebase

Integrated platform for building great mobile apps on iOS and Android



# Complete Storage, Data and Analytics Platform

## Storage and Databases

---



Cloud Storage



Cloud SQL



Cloud Datastore



Cloud Bigtable



Cloud Cache

## Big Data and Analytics

---



BigQuery



Cloud Pub/Sub



Cloud Dataflow



Cloud Dataproc



Cloud Datalab

## Machine Learning

---



Cloud ML



Cloud Speech API



Cloud Translate API



Cloud Vision API



Cloud Natural Language API

# Four storage classes

Retrieval Frequency



## Coldline

Cold  
99% SLA  
Milliseconds

Archive  
Source file backup  
Disaster recovery



## Nearline

Infrequent Access  
99% SLA  
Milliseconds

Backup  
Long-tail content  
Rarely accessed docs



## Regional

Regional  
99.9% SLA  
Milliseconds

Transcoding  
Data Analytics  
General compute



## Multi-Regional

Geo-redundant  
99.95% SLA  
Milliseconds

Video  
Multimedia  
Business continuity

# Products & services **Storage and Databases**



---

## **Cloud Storage**

Powerful, simple and cost effective object storage service with global edge-caching



---

## **Cloud Bigtable**

Cloud Bigtable is a fast, fully managed, massively scalable NoSQL database service



---

## **Cloud Datastore**

A managed, NoSQL, schemaless database for storing non-relational data

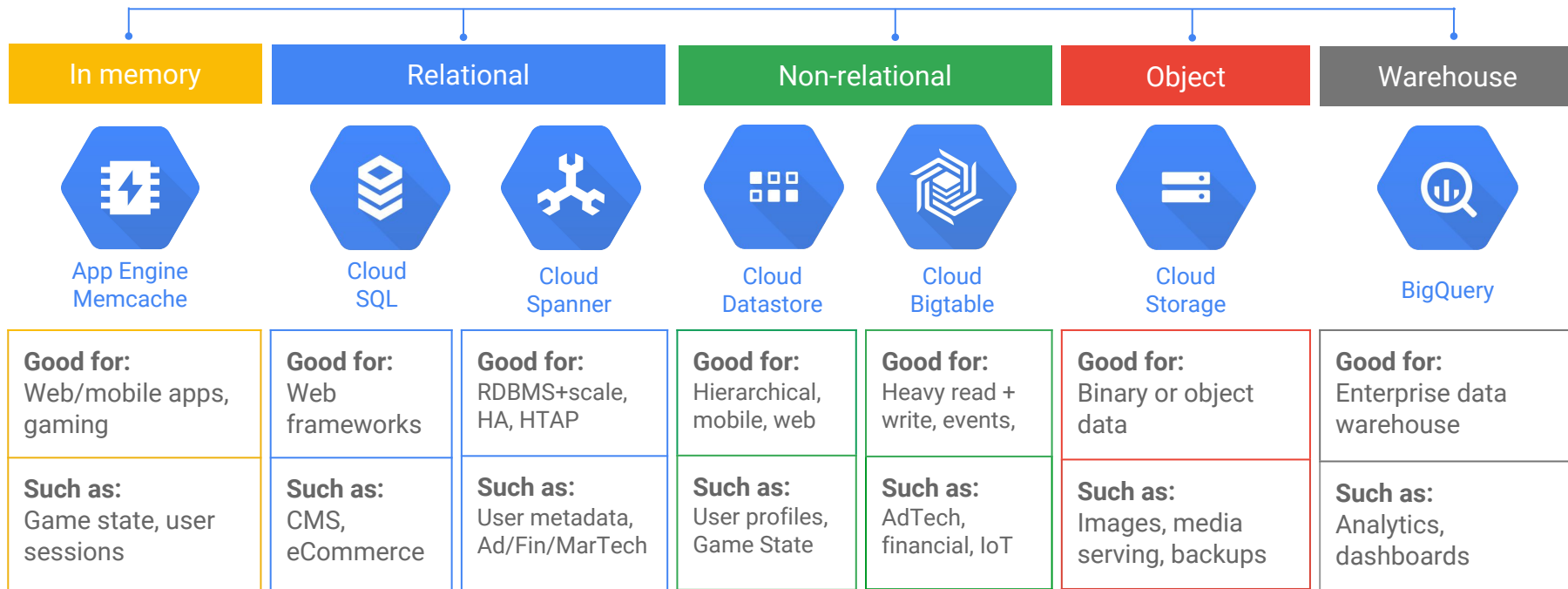


---

## **Cloud SQL**

Store and manage data using a fully-managed, relational MySQL database

# Storage & Database Portfolio





# How Google Cloud Storage is Being Used

## Content Storage and Delivery

---



Video



Music



Websites



Multimedia

## Data Analytics and General Compute

---



motorola  
a **Lenovo** company

Manufacturing



**BROAD**  
INSTITUTE

Genomics



E-commerce

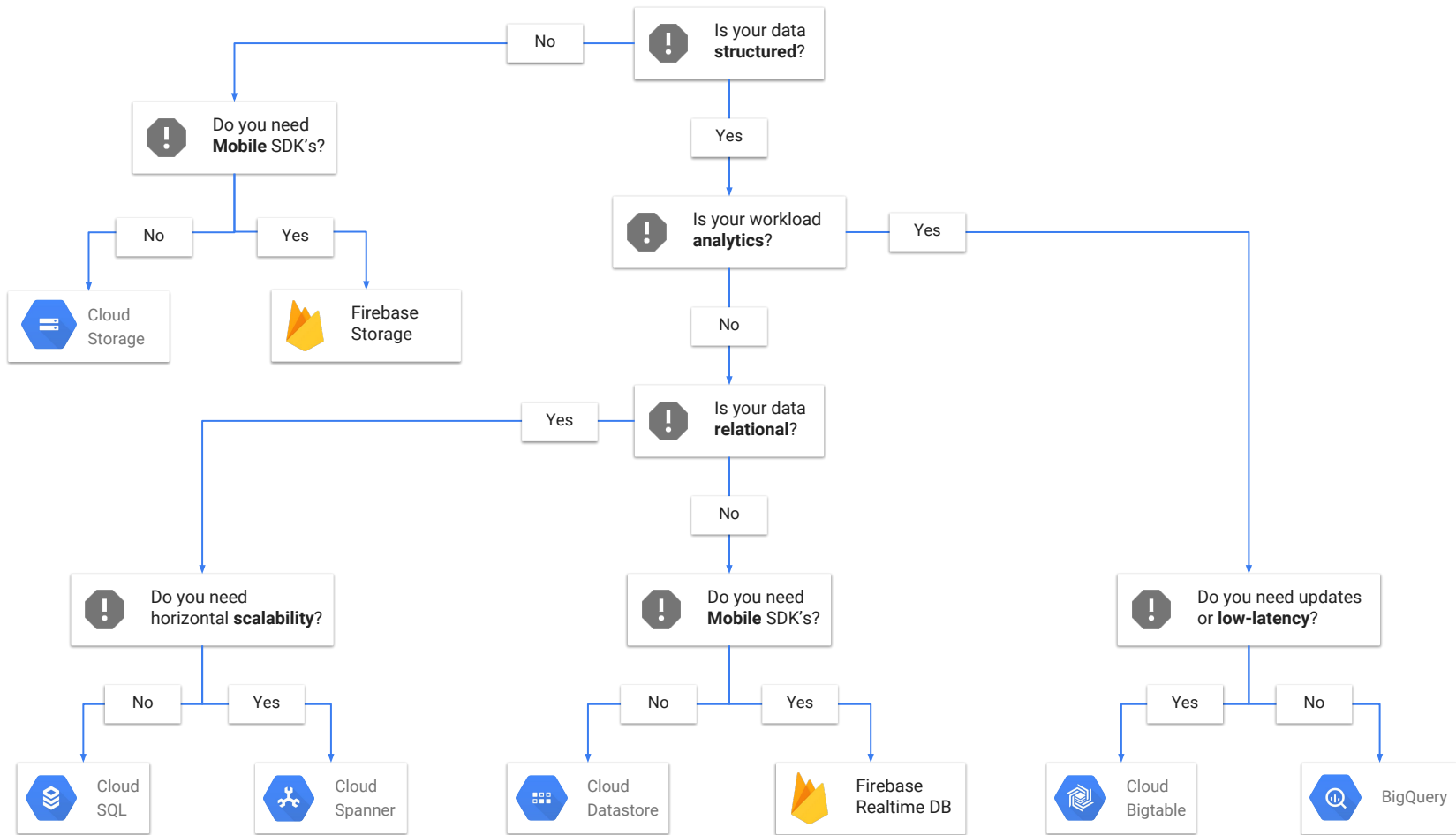


IoT

## Backup, Archival and Storage Partners

---

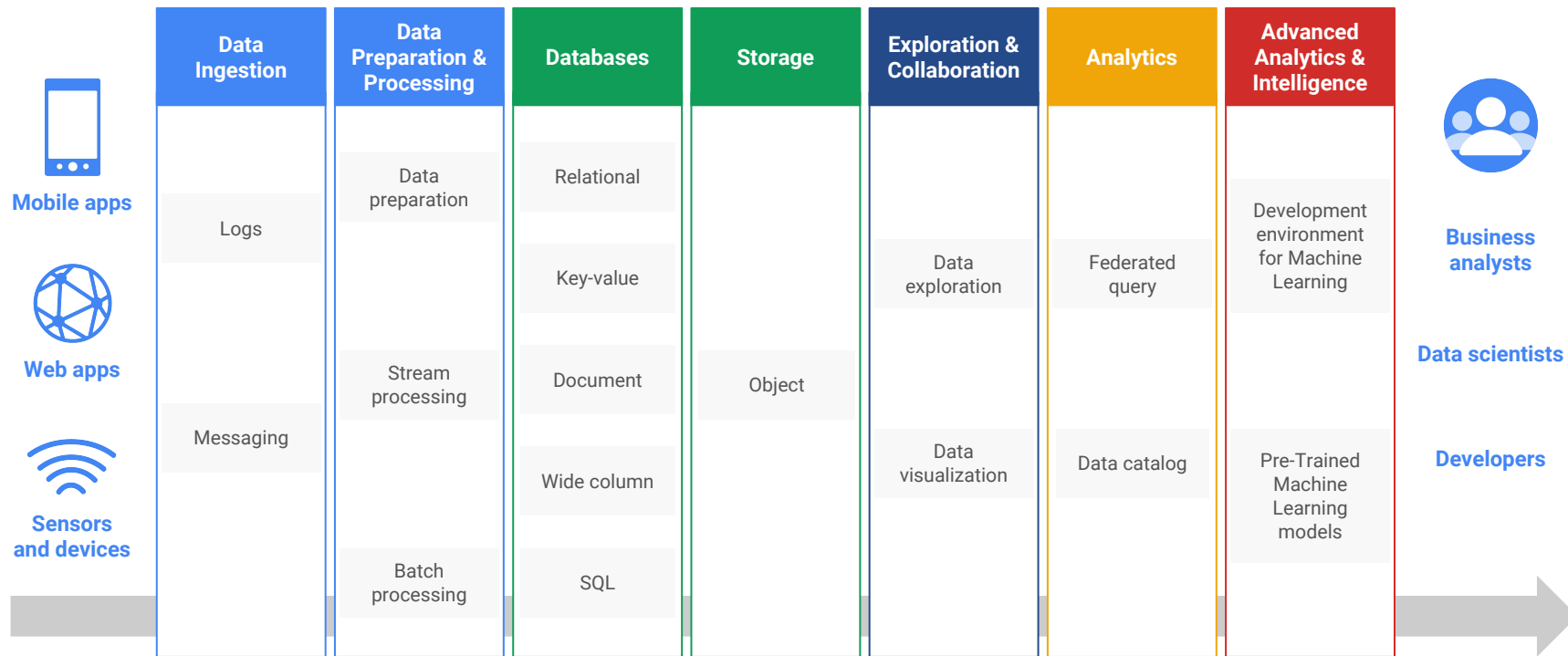






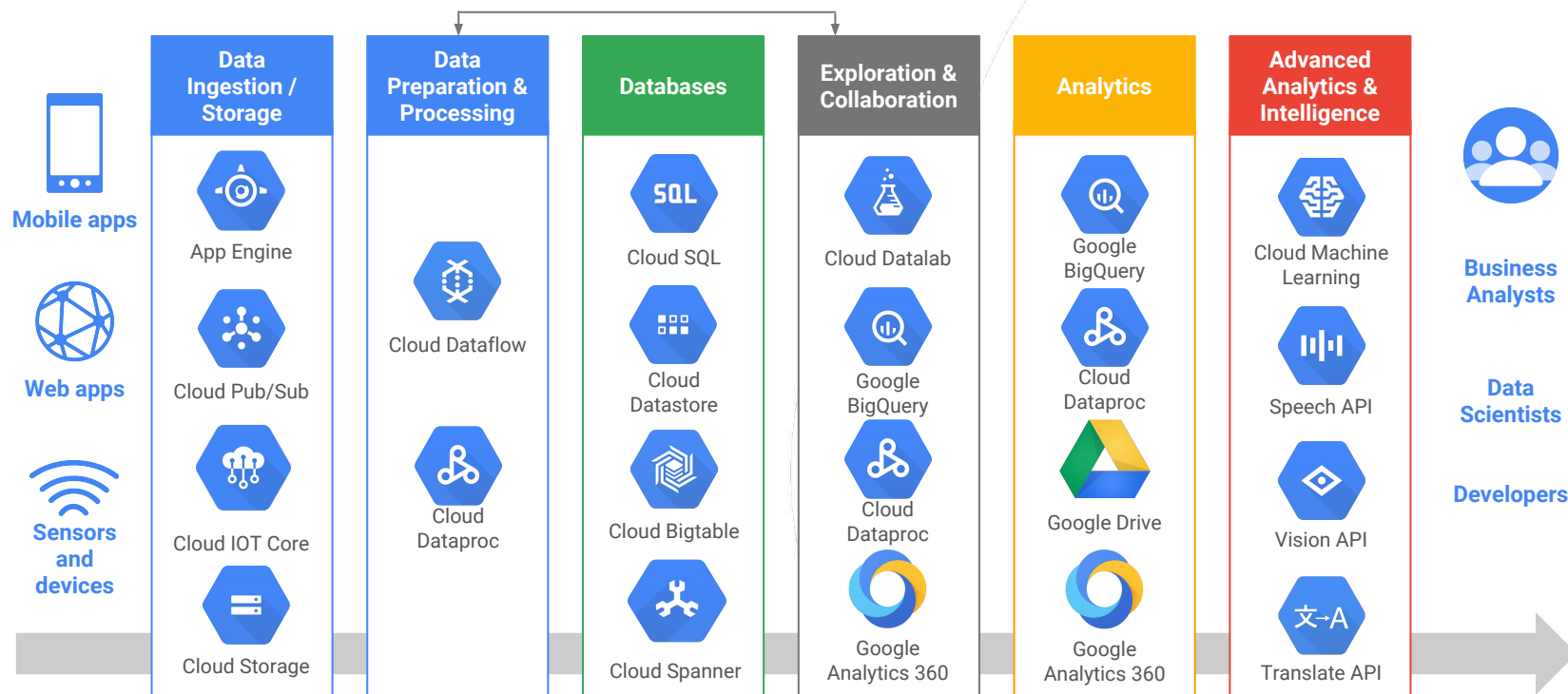
## Big Data and Analytics Services for Smarter Computing

# Transform data into actions





# Transform data into actions



# Everything You Need To Build And Scale



StackDriver



IAM



Support



Compute Engine



Kubernetes Engine



App Engine



Cloud Storage



Cloud SQL



Cloud Datastore



Bigtable



Cloud Spanner



VPC



Load Balancer



CDN



DNS



Interconnect



BigQuery



Data Flow



Dataproc



Pub/Sub



Datalab



Cloud ML



Speech API



Vision API



Translate API



Video API



View the entire list at  
[cloud.google.com/launcher](https://cloud.google.com/launcher)

Management

Compute

Storage

Networking

Data

Machine  
Learning

Launcher

# Machine learning is



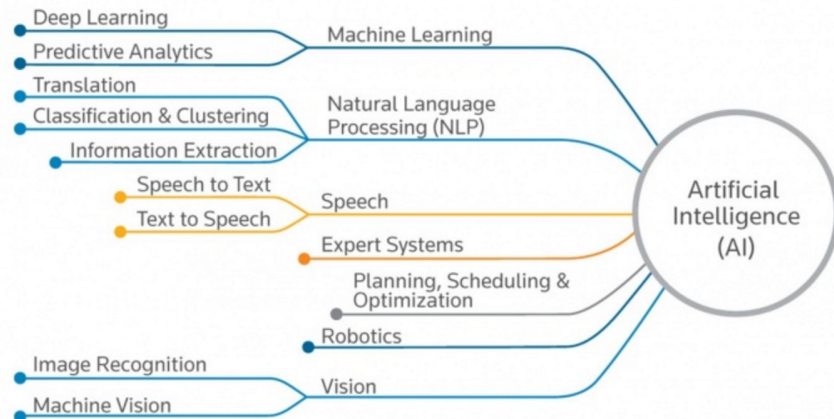
a branch of artificial intelligence



a way to solve problems without explicitly codifying the solution



a way to build systems that improve themselves over time



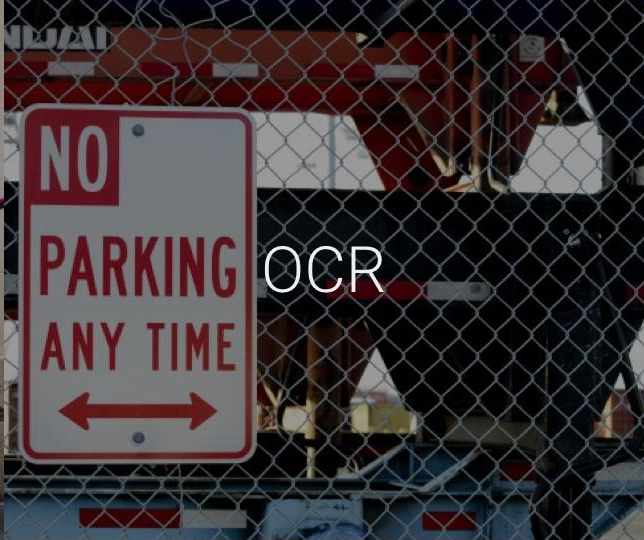
Source: Neota Logic



Label  
Detection



Face  
Detection



OCR



Explicit Content  
Detection



Landmark  
Detection



Logo  
Detection



# Two ways we can help you benefit from ML



## Use your own data to train models



TensorFlow



Cloud Machine  
Learning Engine

## Machine Learning as an API



Cloud  
Vision API



Cloud  
Speech API



Jobs API



Cloud  
Natural Language  
API



Cloud  
Translation API



**Cloud Video  
Intelligence**

#1

Machine Learning  
repository on GitHub

475+

non-Google  
contributors

14,000+

Commits  
in 14 months



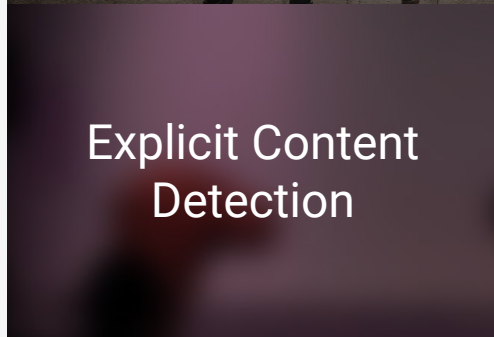
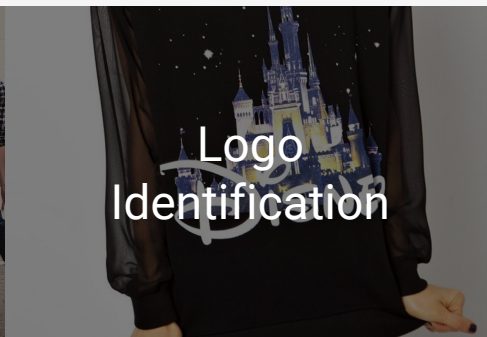
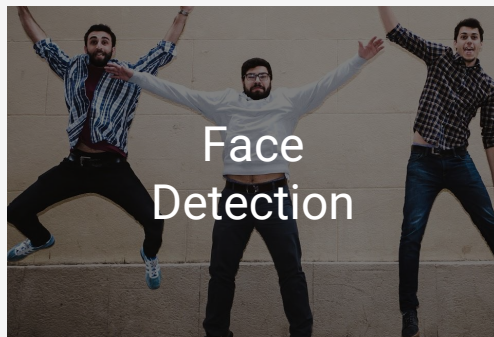
TensorFlow

# Cloud Vision

Derive insight from images with powerful API

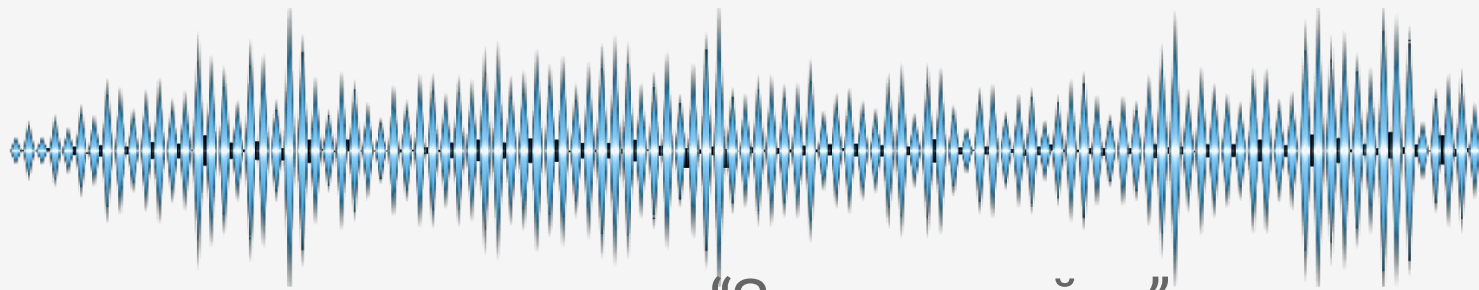


[DEMO](#)



# Cloud Speech

Speech to text conversion powered by Machine Learning



“Hello”

“Bonjour”

“Hola”

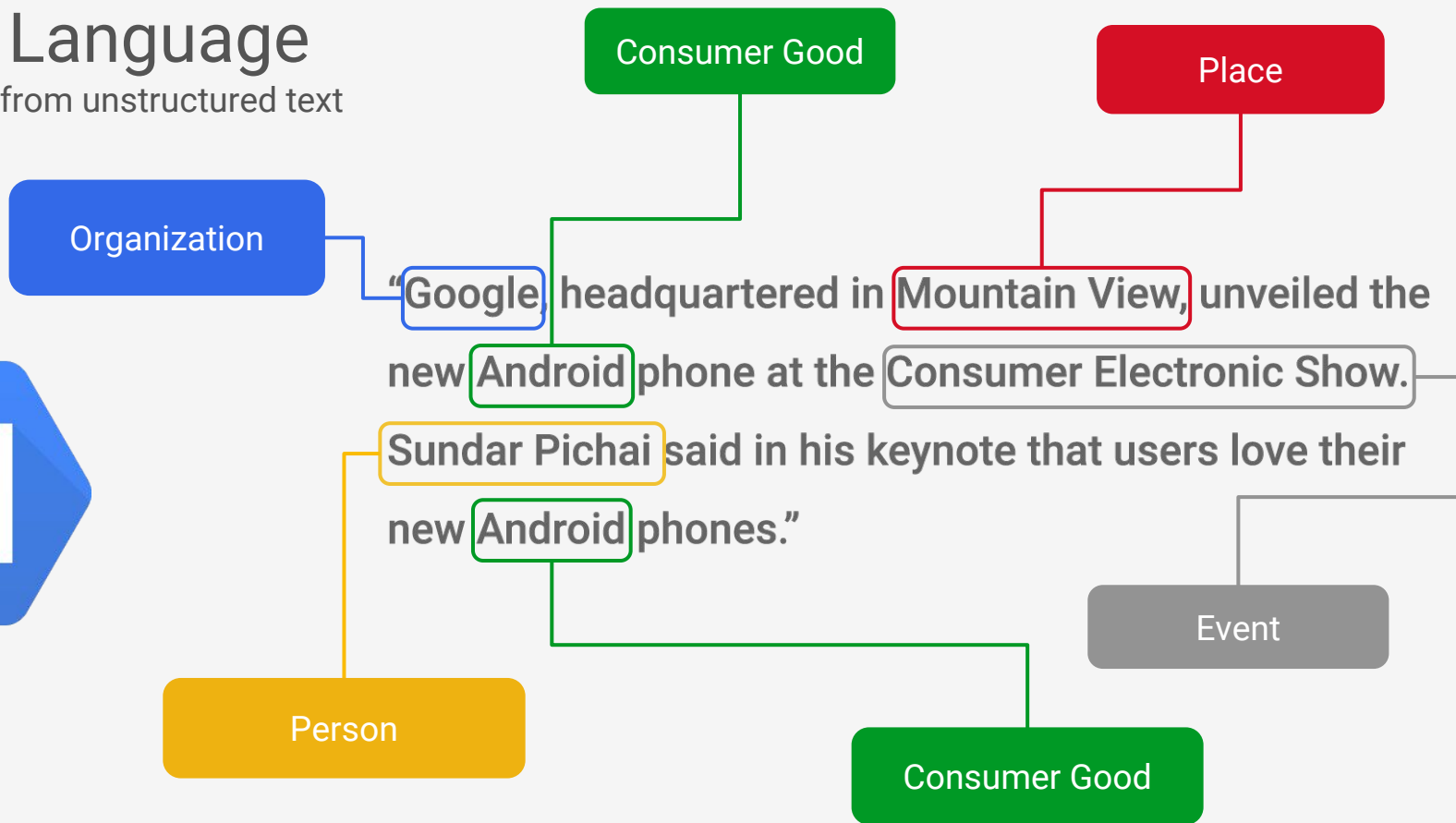
“Здравствуйते”

“안녕하세요”

“こんにちは”

# Natural Language

Derive insights from unstructured text



# Use Your Own Data



Cloud Storage



BigQuery



Cloud Datalab



Cloud Machine  
Learning



Develop, Model,  
Train, Test





---

# Data Analytics & Machine Learning

# Everything You Need To Build And Scale



## Compute

From virtual machines with proven price/performance advantages to a fully managed app development platform.

Compute Engine

App Engine

Kubernetes Engine

Container Registry

Cloud Functions



## Storage and Databases

Scalable, resilient, high performance object storage and databases for your applications.

Cloud Storage

Cloud Bigtable

Cloud Datastore

Cloud SQL



## Networking

State-of-the-art software-defined networking products on Google's private fiber network.

Cloud Virtual Network

Cloud Load Balancing

Cloud CDN

Cloud Interconnect

Cloud DNS



## Management Tools

Monitoring, logging, and diagnostics and more, all a easy to use web management console or mobile app.

Stackdriver Overview

Monitoring

Logging

Error Reporting

Debugger

Deployment Manager & More



## Big Data

Fully managed data warehousing, batch and stream processing, data exploration, Hadoop/Spark, and reliable messaging.

BigQuery

Cloud Dataflow

Cloud Dataproc

Cloud Datalab

Cloud Pub/Sub

Genomics



## Machine Learning

Fast, scalable, easy to use ML services. Use our pre-trained models or train custom models on your data.

Cloud Machine Learning Platform

Vision API

Speech API

Translate API



## Developer Tools

Develop and deploy your applications using our command-line interface and other developer tools.

Cloud SDK

Deployment Manager

Cloud Source Repositories

Cloud Endpoints

Cloud Tools for Android Studio

Cloud Tools for IntelliJ

Google Plugin for Eclipse

Cloud Test Lab



## Identity & Security

Control access and visibility to resources running on a platform protected by Google's security model.

Cloud IAM

Cloud Resource Manager

Cloud Security Scanner

Cloud Platform Security Overview

# Start using the ML APIs today!

**Video:** [cloud.google.com/video-intelligence](https://cloud.google.com/video-intelligence)

**Vision:** [cloud.google.com/vision](https://cloud.google.com/vision)

**Speech:** [cloud.google.com/speech](https://cloud.google.com/speech)

**Natural Language:** [cloud.google.com/natural-language](https://cloud.google.com/natural-language)

**Translation:** [cloud.google.com/translation](https://cloud.google.com/translation)

**Try them all in the browser!**

# Try Them Yourself and have 500\$ from us !

[cloud.google.com/translate/](https://cloud.google.com/translate/)

Enter a word or phrase:

Hello world

Translate from:

English

Translate to:

Albanian

TRANSLATE

[cloud.google.com/natural-language/](https://cloud.google.com/natural-language/)

Try the API

Google, headquartered in Mountain View, unveiled the new Android phone at the Consumer Electronic Show. Sundar Pichai said in his keynote that users love their new Android phones.

ANALYZE

Enter text in English, Spanish or Japanese

[cloud.google.com/vision/](https://cloud.google.com/vision/)

Try the API

Drag image file here or  
Browse from your computer

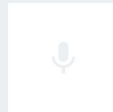


[cloud.google.com/speech/](https://cloud.google.com/speech/)

Convert your voice to text right now

Click on the microphone icon to start recording

English (United States)





# Thank you !



[google@techsvit.eu](mailto:google@techsvit.eu)  
044 359 09 89