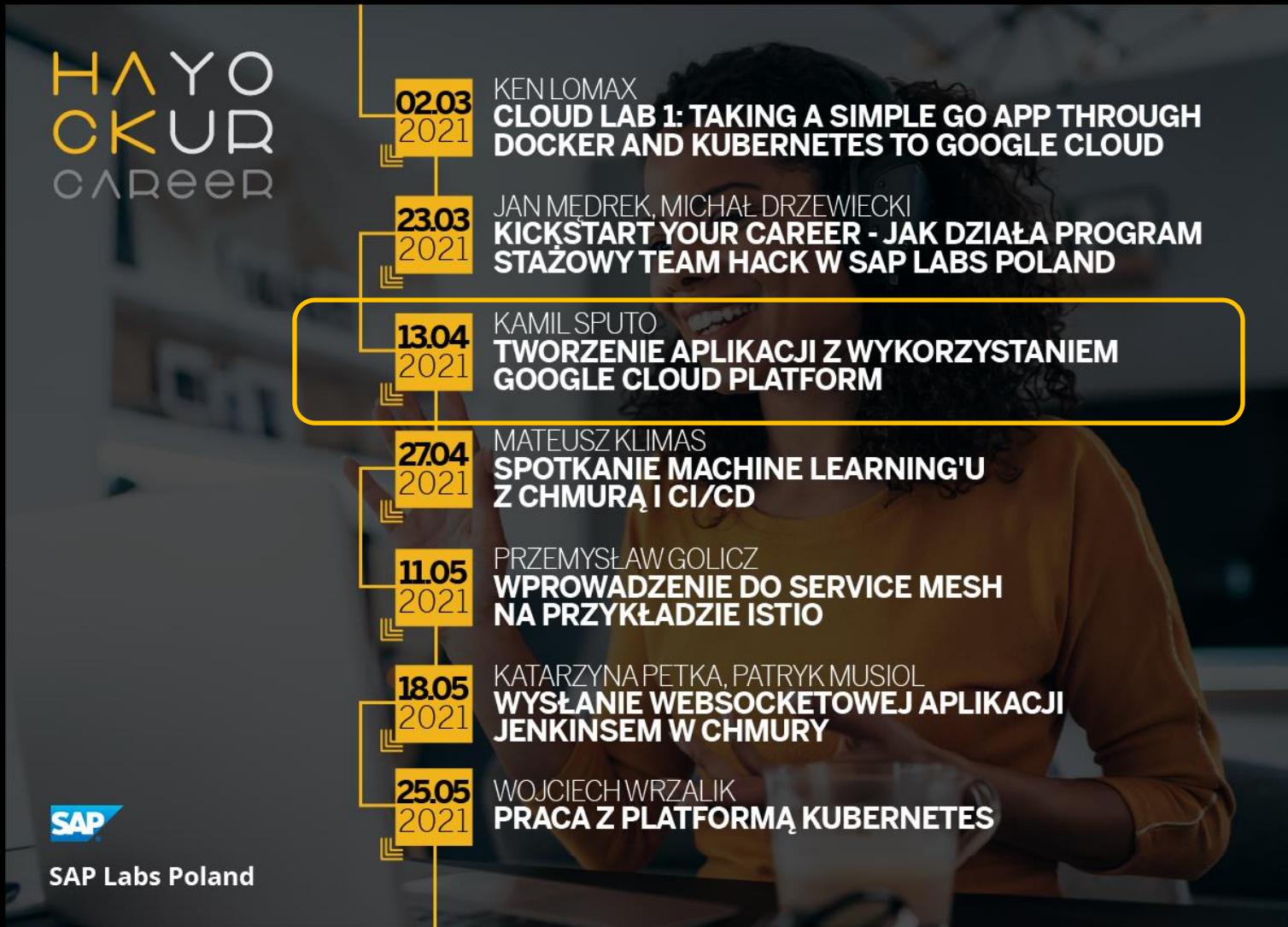


# Hack Your Career

HAYO  
CKUR  
CAREER



<https://hackyourcareer.github.io/>  
<https://www.facebook.com/Hack.your.Career/>

# Tworzenie aplikacji z wykorzystaniem **Google Cloud** **Platform**

Kamil Sputo, SAP  
13 April, 2021

PUBLIC



# Agenda



# SAP Labs Poland

## Różnorodność domen

E-commerce, social commerce, cloud platform, open source,...

**Development:** Go, Java, Angular, Cloud Native solutions, ...

## Możliwość nauki i rozwoju:

Platformy do edukacji on-line, certyfikacje, łatwy dostęp do ekspertów na całym świecie

> 350 pracowników

**Różnorodność specjalizacji**  
Product teams, project teams, innovation projects teams, support teams

Jedno z 21 centrów SAP's Labs Network



# SAP Labs Poland - dołącz do nas

HAYO  
CKUR  
CAREER

## Dołącz do zespołu Kyma

- Na letnią praktykę wakacyjną
- Jako programista

<https://url.sap/w8mpos>

## Pozostałe oferty pracy w SAP Labs

- 46 otwartych stanowisk w Gliwicach**

<https://url.sap/v2tu89>

- <https://www.facebook.com/Hack.your.Career> - dołącz do nas na FB
- <https://hackyourcareer.github.io/> - materiały z wykładów
- <http://saplabs.pl/> - poznaj nasze biuro w Gliwicach

# Tworzenie aplikacji z wykorzystaniem **Google Cloud Platform**

1. O prelegencie
2. Chmura publiczna
3. Cloud Native
4. Usługi Google Cloud Platform
5. DEMO



# Kamil Sputo

- Software Developer @ Kyma @ SAP Labs Poland
  - Go, Docker, Kubernetes
- Absolwent Politechniki Śląskiej w Gliwicach
  - Automatyka i Robotyka

# Chmura publiczna



# Kiedyś to było...



On Premise



Time-sharing



Cloud

# Kiedyś to było...



On Premise



Time-sharing



Cloud

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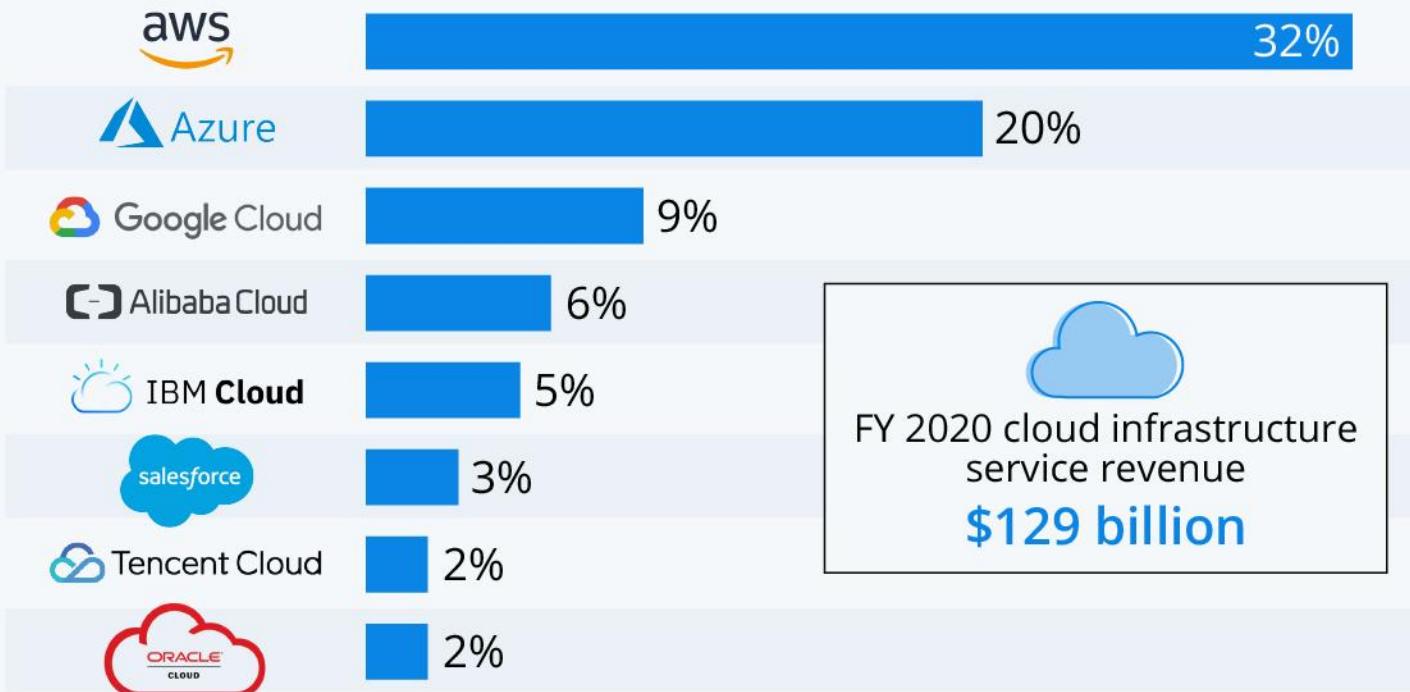
Cloud

## Chmura publiczna - definicja

“Chmura publiczna jest definiowana jako usługi obliczeniowe oferowane przez dostawców z innych firm za pośrednictwem publicznego Internetu, dzięki czemu są one dostępne dla każdego, kto chce ich używać lub je zakupić. Mogą być one bezpłatne lub sprzedawane na żądanie, co umożliwia klientom płacenie tylko za faktyczne zużycie cykli procesora CPU, pojemności lub przepustowości.”

# Cloud Providers

Worldwide market share of leading cloud infrastructure service providers in Q4 2020\*



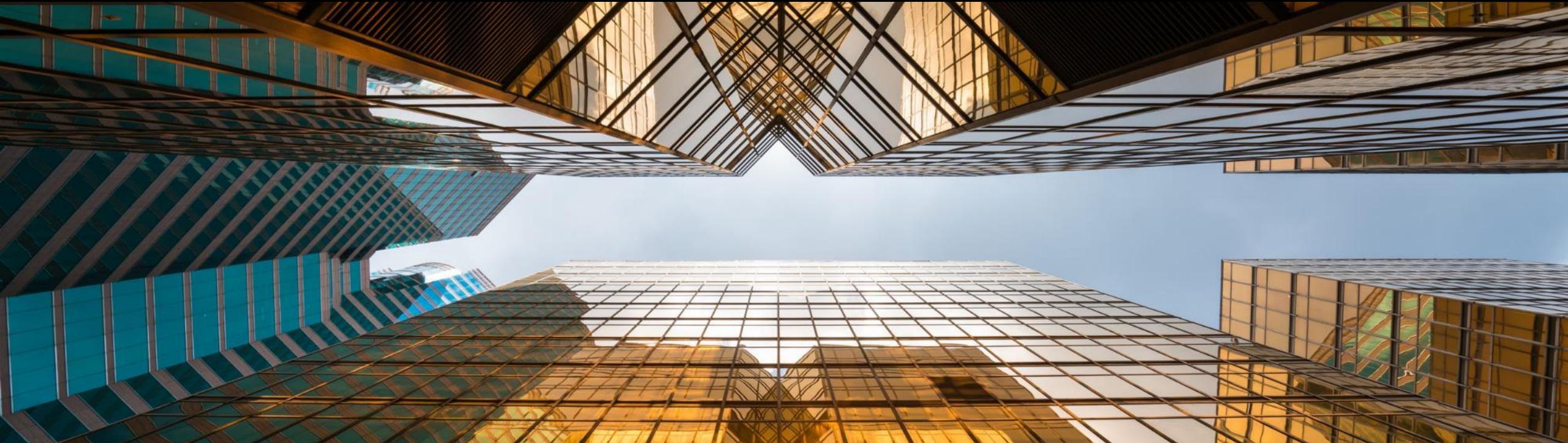
\* includes platform as a service (PaaS) and infrastructure as a service (IaaS) as well as hosted private cloud services

Source: Synergy Research Group



**statista** 

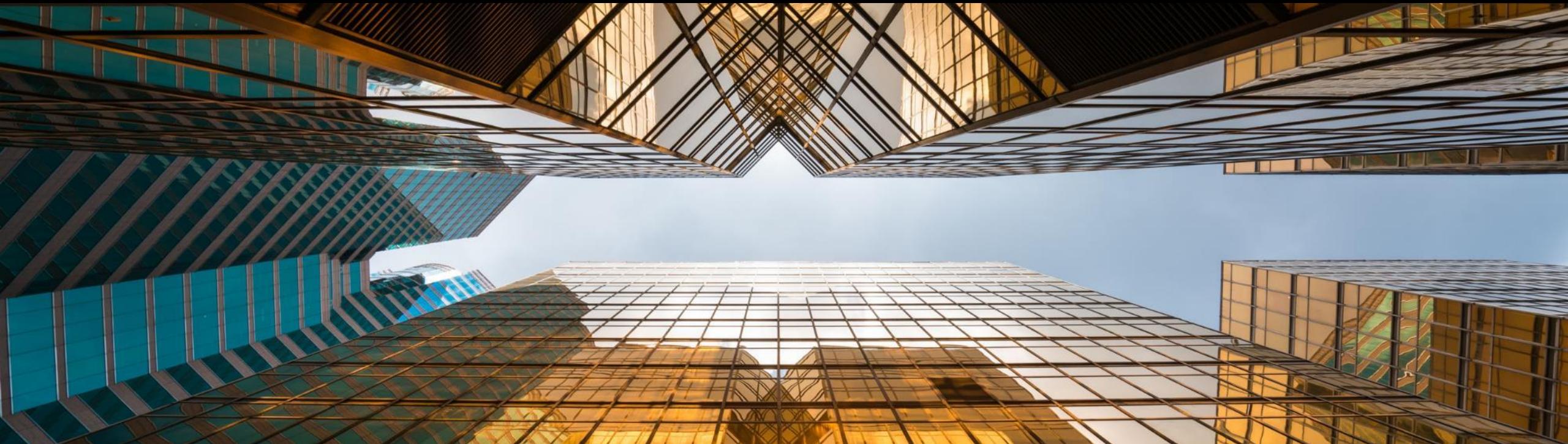
# Cloud Native



# Cloud Native – definicja CNCF

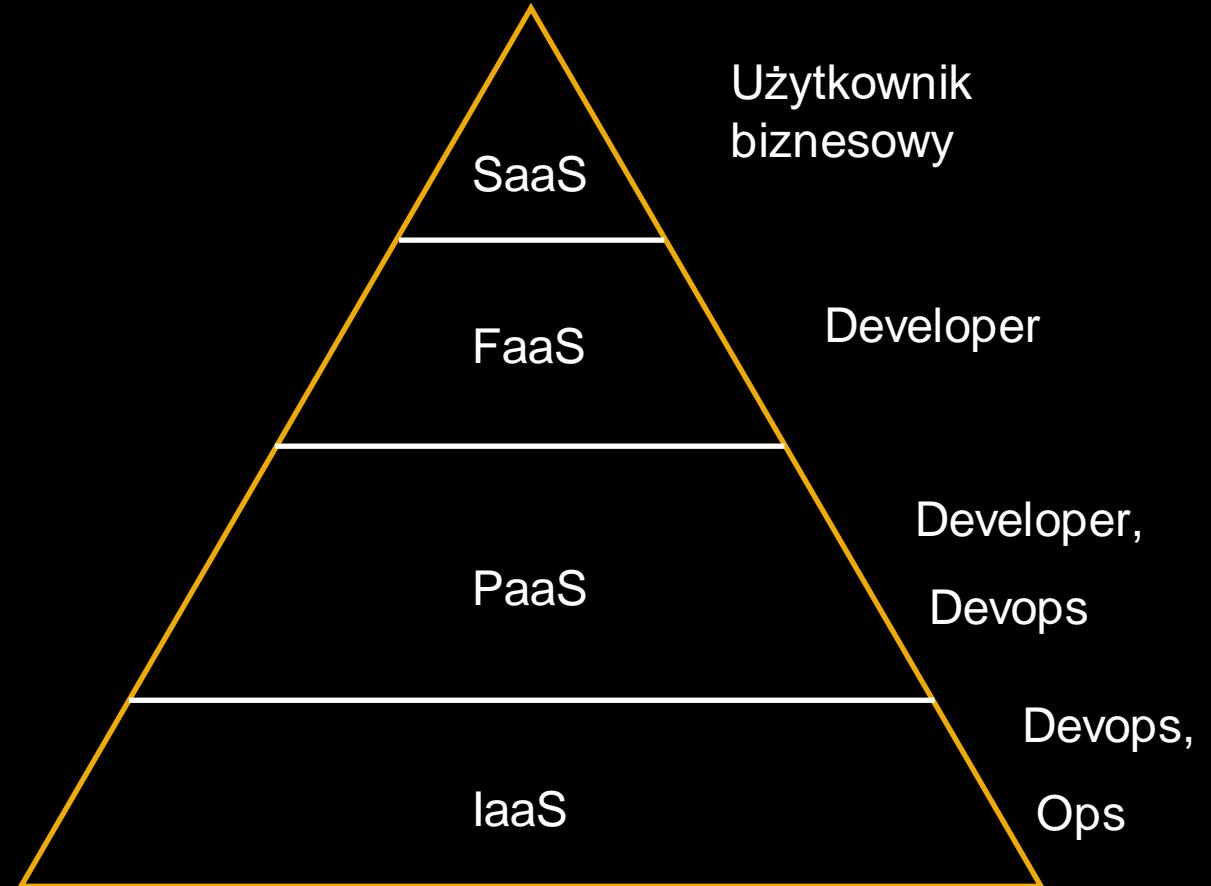
“Technologie **Cloud Native** pozwalają organizacjom tworzyć i wykorzystywać skalowalne aplikacje w nowoczesnych, dynamicznych środowiskach takich jak chmury publiczne, prywatne czy hybrydowe. Przykładami tego podejścia technologicznego są **wirtualne kontenery** (ang. *containers*), mikrousługi (ang. *microservices*), platformy **dla mikrousług** (ang. *service mesh*), **niezmienna infrastruktura** (ang. *immutable infrastructure*) i **deklaratywne interfejsy aplikacyjne** (ang. *declarative APIs*).”

# Google Cloud Platform

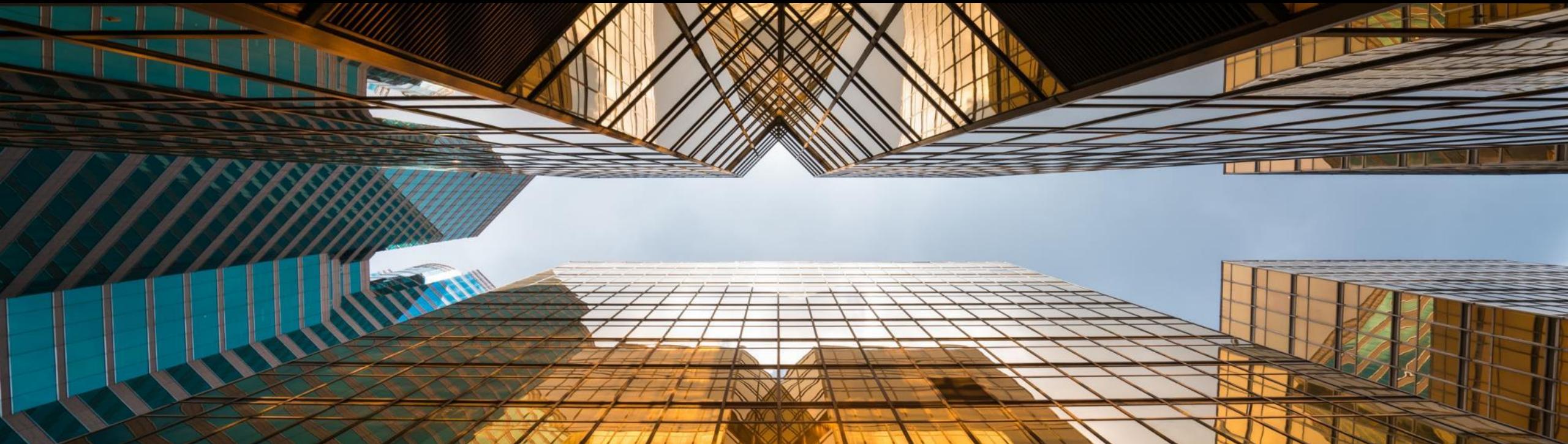


# Usługi chmurowe

- SaaS – Software as a Service
- FaaS – Function as a Service
- PaaS – Platform as a Service
- IaaS – Infrastructure as a Service
- DBaaS – Database as a Service
- DaaS – Data as a Service
- ...
- ..
- **XaaS - Everything as a Service**



# Usługi dostępne w GCP





# Google Cloud

## DEVELOPER'S CHEAT SHEET

v2021.3.3

Created by the Google Developer Relations Team  
Maintained at <https://github.com/gregsranglings/google-cloud-4-words>

Feedback? [@gregsranglings](https://twitter.com/gregsranglings) [@pvergadlia](https://twitter.com/pvergadlia)

### COMPUTE

Cloud Functions	Event-driven serverless functions
App Engine	Managed app platform
Cloud Run	Serverless for containerized applications
Kubernetes Engine (GKE)	Managed Kubernetes/containers
Compute Engine	VMs, GPUs, TPUs, Disks
Bare Metal Solution	Hardware for specialized workloads
Preemptible VMs	Short-lived compute instances
Shielded VMs	Hardened VMs
Sole-tenant Nodes	Dedicated physical servers
VMware Engine	VMware on Compute Engine

### STORAGE

Cloud Filestore	Managed NFS server
Cloud Storage	Multi-region object storage
Persistent Disk	Block storage for VMs
Local SSD	VM locally attached SSDs

### DATABASE

Cloud Bigtable	Petabyte-scale, low-latency, non-relational
Cloud Firestore	Serverless NoSQL document DB
Cloud Memorystore	Managed Redis and Memcached
Cloud Spanner	Horizontally scalable relational DB
Cloud SQL	Managed MySQL, PostgreSQL, SQL Server
Database Migration Service	Migrate to Cloud SQL
DB Insights	SQL Inspector

### DATA AND ANALYTICS

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BigQuery BI Engine	In-memory analytics engine
BigQuery ML	BigQuery model training/serving
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Cloud Data Fusion	Graphically manage data pipelines
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Traffic Director	Service mesh traffic management
Apigee API Management	API management, development, security

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Explainable AI	Understand ML model predictions
Vision Product Search	Create custom recommendations
	Visual search for products

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CARRIER Peering	Peer through a carrier
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Dedicated Interconnect	Dedicated private network connection
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Virtual Private Cloud	Software defined networking
VPC Service Controls	Security perimeters for API-based services
Network Intelligence Center	Network monitoring and topology

### GAMING

Google Cloud Game Servers	Orchestrate Agones clusters
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### INTERNET OF THINGS (IOT)

Cloud IoT Core	Manage devices, ingest data
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### IDENTITY AND SECURITY

Access Transparency	Audit cloud provider access
Assured Workloads	Workload compliance controls
Binary Authorization	Kubernetes deploy-time security
Certificate Authority Service	Managed private CA's
Cloud Asset Inventory	All assets, one place
Cloud Audit Logs	Audit trials for GCP
Cloud DLP	Classify and redact sensitive data
Cloud HSM	Hardware security module service
Cloud IAM	External keys you control
Cloud Identity	Resource access control
Cloud Identity-Aware Proxy	Manage users, devices & apps
Cloud KMS	Identity-based app access
Cloud Resource Manager	Hosted key management service
Security Command Center	Cloud project metadata management
Cloud Security Scanner	Security management & data risk platform
Confidential Computing	App engine security scanner
Context-aware Access	Encrypt data in-use
Event Threat Detection	End-user attribute-based access control
Managed Service for Microsoft	Scans for suspicious activity
Active Directory	Managed Microsoft Active Directory
Secret Manager	Store and manage secrets

### IDENTITY AND SECURITY (CONT.)

Security Key Enforcement	Two-step key verification
Shielded VMs	Hardened VMs
Titan Security Key	Two-factor authentication (2FA) device
VPC Service Controls	VPC data constraints

### MANAGEMENT TOOLS

Cloud APIs	APIs for cloud services
Cloud Billing API	Programmatically manage GCP billing
Cloud Billing	Billing and cost management tools
Cloud Console	Web-based management console
Cloud Deployment Manager	Templated infrastructure deployment
Cloud Mobile App	iOS/Android GCP manager app
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Cloud Trace	App performance insights
Transparent SLIs	Monitor GCP services

### DEVELOPER TOOLS

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Cloud Code for VS Code	VS Code GCP tools
Cloud Code	Cloud native IDE extensions
Cloud Tools for Eclipse	Eclipse GCP tools
Cloud Tools for Visual Studio	Visual Studio GCP tools
Gradle App Engine Plugin	Gradle App Engine plugin
Maven App Engine Plugin	Maven App Engine plugin
Cloud SDK	CLI for GCP
Cloud Shell	Browser-based terminal/CLI
Artifact Registry	Universal package manager
Cloud Source Repositories	Hosted private git repos
Container Registry	Private container registry/storage
Container Analysis	Automated security scanning
Eventarc	Event-driven Cloud Run services
Cloud Scheduler	Managed cron job service
Cloud Tasks	Asynchronous task execution
Cloud Workflows	HTTP services orchestration

### MIGRATION TO GCP

BigQuery Data Transfer Service	Bulk import, analytics data
Cloud Data Transfer	Data migration tools/CLI
Google Transfer Appliance	Rentable data transport box
Storage Transfer Service	Online/on-premises data transfer
Migrate for Anthos	Migrate VMs to GKE containers
Migrate for Compute Engine	Compute Engine migration tools
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Migrate from Teradata	Migrate from Teradata to BigQuery
VM Migration	VM migration tools
Cloud Foundation Toolkit	Infrastructure as Code templates
KF	Cloud Foundry to Kubernetes

### API PLATFORM AND ECOSYSTEMS

API Analytics	API metrics
API Monetization	Monetize APIs
Apigee API Platform	Develop, secure, monitor APIs
API Gateway	Fully managed API Gateway
Apigee Hybrid	Manage hybrid/multi-cloud API environments
Apigee Sense	API protection from attacks
Cloud Endpoints	Cloud API gateway
Cloud Healthcare API	Healthcare system GCP interoperability
Developer Portal	API management portal
GCP Marketplace	Partner & open source marketplace
AppSheet	No-code App creation

### GOOGLE MAPS PLATFORM

Directions API	Get directions between locations
Distance Matrix API	Multi-origin/destination travel times
Geocoding API	Convert address to/from coordinates
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Maps Embed API	Display iframe embedded maps
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### GOOGLE MAPS PLATFORM (CONT.)

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Calendar API	Create and manage calendars
Classroom API	Unified search for enterprise
Cloud Search	Create and edit documents
Docs API	Retrieve Google Drive activity
Drive Activity API	Read and write files
Drive API	Drive file selection widget
Drive Picker	Interactive email using schema.org
Email Markup	Extend G Suite apps
Workspace Add-ons	Convert coordinatess to workspace
Workspace Marketplace	Storefront for integrated applications
Gmail API	Enhance Gmail
Hangouts Chat Bots	Conversational bots in chat
People API	Manage user's Contacts
Sheets API	Read and write spreadsheets
Slides API	Create and edit presentations
Task API	Search, read & update Tasks
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Google Cloud Open Source	<a href="http://medium.com/google-cloud">medium.com/google-cloud</a>
GCN Medium Publication	<a href="http://apigee.com/about/blog">apigee.com/about/blog</a>
Firebase Blog	<a href="http://firebase.googleblog.com">firebase.googleblog.com</a>
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Google Cloud Certifications	<a href="http://cloud.google.com/certification">cloud.google.com/certification</a>
Google Cloud System Status	<a href="http://status.cloud.google.com">status.cloud.google.com</a>
Google Cloud Training	<a href="http://cloud.google.com/training">cloud.google.com/training</a>
Google Developers Blog	<a href="http://developers.googleblog.com">developers.googleblog.com</a>
Google Maps Platform Blog	<a href="http://mapsplatform.googleblog.com">mapsplatform.googleblog.com</a>
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Google Cloud Home Page	cloud.google.com
Google Cloud Blog	cloud.google.com/blog
Google Cloud Platform Podcast	gcppodcast.com
Kubernetes Podcast from Google	kubernetespodcast.com
Google Cloud Open Source	opensource.google/projects/list/cloud
GCP Medium Publication	medium.com/google-cloud
Apigee Blog	apigee.com/about/blog
Firebase Blog	firebase.googleblog.com
Workspace Developers Blog	gsuite-developers.googleblog.com
Workspace GitHub	github.com/gsuitedevs
Workspace Twitter	twitter.com/gsuitedevs
Google Cloud Certifications	cloud.google.com/certification
Google Cloud System Status	status.cloud.google.com
Google Cloud Training	cloud.google.com/training
Google Developers Blog	developers.googleblog.com
Google Maps Platform Blog	mapsplatform.googleblog.com
Google Open Source Blog	opensource.googleblog.com
Google Security Blog	security.googleblog.com
Kaggle Home Page	www.kaggle.com
Kubernetes Blog	kubernetes.io/blog
Regions and Network Map	cloud.google.com/about/locations
DORA - Software & Delivery Research	cloud.google.com/devops

# DEMO

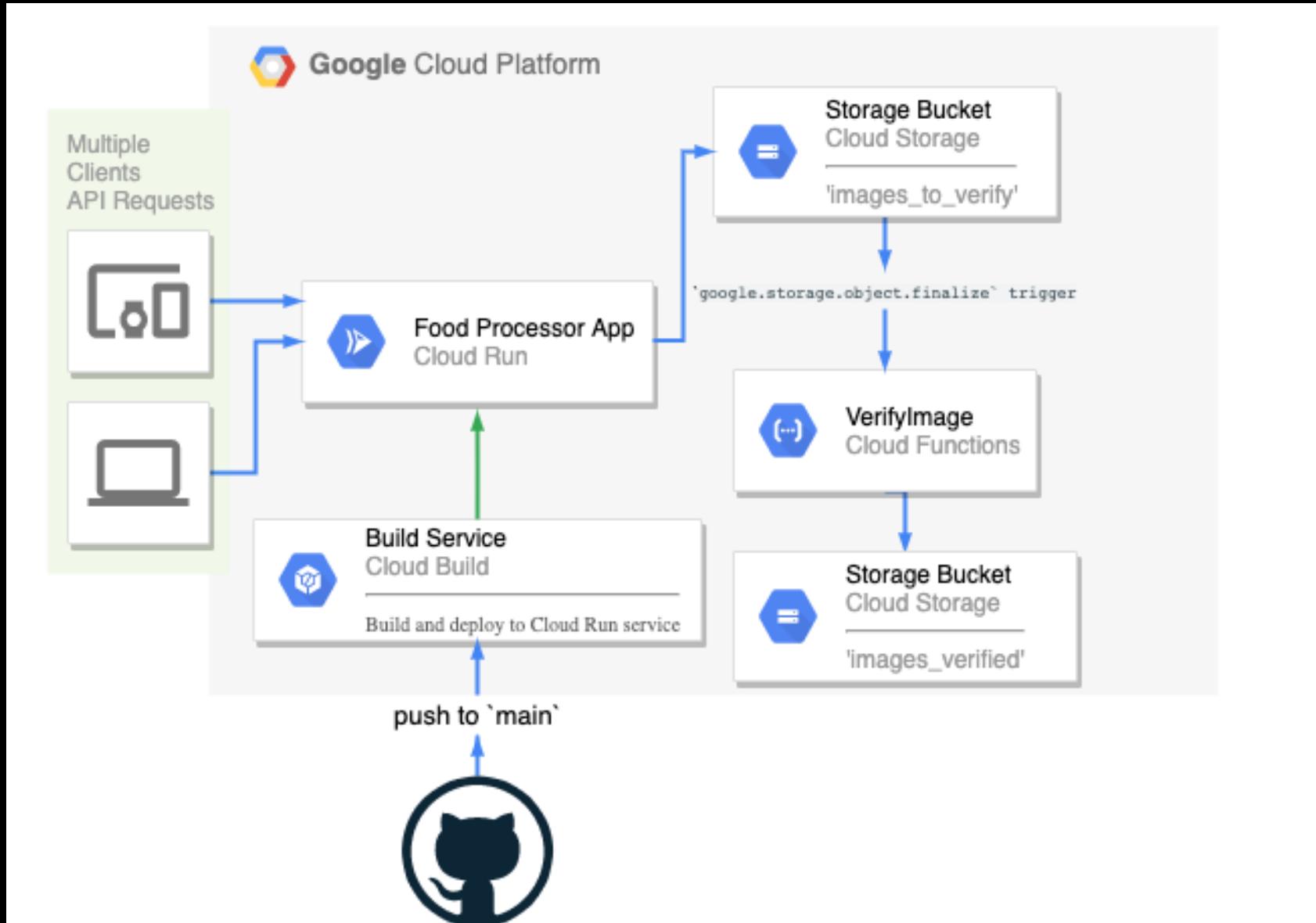
# Foodstagram – like Instagram, but **only** for food

Wymagania biznesowe:

- Aplikacja ma pozwalać na **uploadowanie** przez użytkownika zdjęć
- **Tylko** zdjęcia przedstawiające jedzenie mogą zostać umieszczone w aplikacji



# Proponowana architektura aplikacji



# Quiz z nagrodami

