Google Cloud Engineering

# Cloud Engineering Strategy

This strategy describes how a Cloud Engineering team can operate efficiently at Google Cloud, focusing on metrics, goals, SLAs, roles, and skills to generate $1 million in annual sales per team member.

**By Mario Ernesto Orozco Salazar**

# C O N T E N T S

## Phase 1

**Strategic objectives**

The group's objectives will be aligned with customer satisfaction and revenue growth.

## Phase 2

**Roles and Responsibilities**

To achieve support and sales goals, the team will be structured with specialized roles, each with the goal of generating $1 million annually in sales through their interactions and recommendations.

## Phase 3

**SLAs**

SLAs will be the basis of our commitment to customers

## Phase 4

**KPIs**

To ensure the success and growth of the team, we will focus on global company metrics.

## Phase 5

**Sales and Revenue Generation Strategy**

Achieving the $1 million annual goal per member will not be based solely on direct sales, but on a combination of tactics:

Phase 1

# Strategic objectives

The group's objectives will be aligned with customer satisfaction and revenue growth

# Strategic Objectives

The group's objectives will be aligned with customer satisfaction and revenue growth


## Customer Satisfaction

Achieve an average CSAT score of 4.5/5.0

## Business Growth

Ensure each engineer contributes to generating $1 million in annual sales of Google Cloud services


## Operational Excellence

Maintain an SLA completion rate above 95% annually

## Performance Optimization

Reduce MTTR by 15% over the next 12 months.

## Cost Efficiency

Identify and execute cost optimizations on customer infrastructure that result in an average cost savings of 10% annually.

## Continuous Innovation

Implement at least 3 new innovative solutions or services for key customers per quarter.

Phase 2

# Roles and Responsibilities

To achieve support and sales goals, the team will be structured with specialized roles, each with the goal of generating $1 million annually in sales through their interactions and recommendations

# Roles and Responsibilities

To achieve sales and support goals, the team will be structured with specialized roles, each with the goal of generating $1 million annually in sales through their interactions and recommendations

| Solution Architects | Cloud Network Engineer | Cloud DevOps Engineers | Cloud Security Engineers | Cloud Data Engineer / AI/ML Specialists | Cloud Application Modernization Engineer |
|---|---|---|---|---|---|
| Grace Morton | John Doe | Silvia Ramsey | Clara Ramsey | Jeshua Turner | Jeshua Turner |

# Cloud Solution Architect

Designing and architecturing complex solutions on Google Cloud, ensuring that technical proposals align with the client's business objectives and that they allow the sale of new services or the expansion of existing ones. Identify up-selling and cross-selling opportunities.

## Responsibilities

- ❑ Collaborate closely with sales teams to understand customer needs and translate business requirements into Google Cloud technical solutions.
- ❑ Design scalable, secure, and cost-effective architectures using a wide range of Google Cloud services (Compute Engine, GKE, Cloud Functions, BigQuery, Dataflow, AI/ML Platform, etc.).
- ❑ Present and defend technical solutions to clients, justifying value and ROI.
- ❑ Actively identify opportunities to introduce new Google Cloud services that solve customer challenges or improve customer operations, thereby driving revenue growth.
- ❑ Create proofs of concept (PoCs) and prototypes to demonstrate the feasibility of proposed solutions. Act as a trusted technical advisor to clients, fostering long-term relationships.

## Key Skills

- ❑ Proficiency in Google Cloud Platform (GCP): Extensive knowledge of GCP's core and specialized services.
- ❑ Solution Architecture: Ability to design complex and scalable architectures.
- ❑ Technical Pre-Sales: Experience in presentation, negotiation and closing of technical sales.
- ❑ Communication: Excellent verbal and written communication skills to interact with customers and internal teams.
- ❑ Strategic Thinking: Ability to align technical solutions with business objectives and sales opportunities

## Certifications

Google Cloud Professional Cloud Architect (Must),
Google Cloud Professional Data Engineer o Machine Learning Engineer (Desirable)

# Cloud Network Engineer

Design, deploy, and manage complex network architectures on Google Cloud (VPC, Interconnect, CDN, Load Balancing, DNS). Solves connectivity, latency, and network performance issues

## Responsibilities

- ❑ Design, deploy, and manage network architectures on Google Cloud (VPC, Subnets, Firewall Rules, VPN, Interconnect, Cloud CDN, Load Balancers).
- ❑ Optimize network connectivity and performance for customer applications.
- ❑ Ensure network security by configuring firewall policies, private networks, and secure access.
- ❑ Diagnose and resolve complex network issues, ensuring business continuity.
- ❑ Advise clients on network best practices and hybrid and multi-cloud connectivity solutions.
- ❑ Identify opportunities for improvement in customers' existing network infrastructure, proposing advanced solutions (e.g., use of Cloud Armor, Network Intelligence Center, Private Service Connect) that generate value and, therefore, sales.
- ❑ Participate in strategy meetings with customers to understand their future connectivity needs and propose proactive solutions.
- ❑ Document network solutions and create best practice guides.

## Key Skills

- ❑ Expertise en Redes de Google Cloud: Profundo conocimiento de VPCs, Cloud VPN, Cloud Interconnect, Cloud Load Balancing (HTTP(S), TCP/UDP), Cloud CDN, Cloud DNS, Cloud NAT, Cloud Routers.
- ❑ Fundamentos de Redes: Sólida comprensión de TCP/IP, enrutamiento (BGP), firewalls, VPNs, MPLS, y conceptos de red avanzados.
- ❑ Seguridad de Red: Experiencia en la implementación de controles de seguridad de red, como firewalls de aplicación web (WAF - Cloud Armor), segmentación de red y gestión de accesos.
- ❑ Automatización: Capacidad para automatizar tareas de red utilizando herramientas como Terraform, Python, o scripts de gcloud.
- ❑ Resolución de Problemas: Habilidades analíticas para diagnosticar y resolver rápidamente problemas de conectividad y rendimiento.
- ❑ Certificaciones: Certificaciones relevantes de Google Cloud (ej. Google Cloud Professional Cloud Network Engineer) son altamente deseables.
- ❑ Habilidades de Comunicación y Ventas: Capacidad para explicar conceptos técnicos complejos de manera clara a clientes no técnicos, identificar sus puntos de dolor relacionados con la red y articular cómo las soluciones de Google Cloud pueden resolverlos y generar valor de negocio.

## Certifications

Google Cloud Professional Cloud Network EngineeEngineer or Machine Learning Engineer (desirable)

# Cloud DevOps Engineers

Deploy and automate CI/CD pipelines, manage infrastructure as code, and streamline operations on Google Cloud. Its contribution to sales stems from implementing solutions that improve customers' operational efficiency, freeing up resources that can be reinvested in more Google Cloud services, or showcasing the value of automation to scale adoption


## Responsibilities

- ❑ Automate the deployment, monitoring, and management of applications and infrastructure on GCP using tools such as Terraform, Cloud Deployment Manager, Ansible.
- ❑ Deploy and optimize CI/CD pipelines with Cloud Build, Jenkins, GitLab CI, etc.
- ❑ Collaborate with customers' development and operations teams to implement DevOps and SRE practices.
- ❑ Identify operational inefficiencies and propose automated solutions that reduce operational costs and improve agility, often leading to the adoption of services such as GKE, Cloud Functions, or Managed Services.
- ❑ Configure and maintain monitoring and alerting systems (Cloud Monitoring, Prometheus, Grafana).
- ❑ Provide expert support in resolving infrastructure and deployment-related issues

## Key Skills

- ❑ Google Cloud experience: In-depth knowledge of compute, networking, storage, and operations services in GCP.
- ❑ Automation and IaaS: Terraform Proficiency, Cloud Deployment Manager, scripting (Python, Bash)
- ❑ CI/CD: Experience with Cloud Build and other continuous integration/delivery tools.
- ❑ Containers and Orchestration: Docker, Kubernetes (GKE).
- ❑ Inux and Networks: Solid knowledge of operating systems and networking.
- ❑ Problem Solving: Strong analytical capacity to diagnose and resolve incidents.

## Certifications

Google Cloud Professional DevOps Engineer (Essential)
Google Cloud Professional Cloud Developer (desirable).

# Cloud Security Engineers

Design, implement, and audit security solutions on Google Cloud. His role in generating sales focuses on identifying security gaps and proposing Google Cloud security services that mitigate risks, as well as consulting for regulatory compliance, which often requires the adoption of specific tools

## Responsibilities

- ❑ Implement and manage security controls on Google Cloud (IAM, VPC Service Controls, Security Command Center, Cloud Armor, KMS, Cloud DLP, etc.).
- ❑ Perform security audits and risk assessments on customer GCP environments.
- ❑ Ensure compliance with regulations and standards (GDPR, HIPAA, PCI DSS) on Google Cloud infrastructure.
- ❑ Proactively identify customers' security needs and propose Google Cloud security solutions that strengthen their cybersecurity posture, which directly translates into sales of those services.
- ❑ Develop security policies and procedures for cloud environments.
- ❑ Respond to security incidents and perform basic forensics.

## Key Skills

- ❑ Cloud Security: In-depth knowledge of security principles and best practices at GCP.
- ❑ IAM and Identity Management: Experience with Cloud IAM, Identity-Aware Proxy.
- ❑ Network Security: VPC Service Controls, Cloud Armor, DNS Security.
- ❑ Encryption and Key Management: Cloud KMS.
- ❑ Regulatory Compliance: Knowledge of security and privacy regulations.
- ❑ Risk Analysis: Ability to identify and mitigate vulnerabilities.

## Certifications

Google Cloud Professional Cloud Security Engineer (indispensable),
CompTIA Security+
CISSP (desirable).

# Cloud Data Engineer / AI/ML Specialists

Design, build, and optimize data pipelines, data warehouses, and machine learning solutions on Google Cloud. Its sales generation comes from identifying opportunities to monetize customer data, implement analytics solutions that generate business insights, and deploy AI/ML models that improve efficiency or create new products, all driving the consumption of Google Cloud's ML and data services.

## Responsabilidades

- ❑ Design and implement data ingestion, processing, and storage solutions on GCP (BigQuery, Dataflow, Pub/Sub, Cloud Storage, Dataproc, Cloud Spanner).
- ❑ Develop and optimize ETL/ELT pipelines for data analysis.
- ❑ Build and deploy machine learning models using Vertex AI, AutoML, or TensorFlow/PyTorch on GCP.
- ❑ Advise customers on how to leverage their data to drive business value and propose data and ML solutions that drive new use cases and thus the consumption of GCP services.
- ❑ Implement BI and data visualization solutions (Looker, Data Studio).
- ❑ Provide support and optimization for existing ML and data solutions.

## Habilidades Clave

- ❑ GCP Data Services: BigQuery Domain, Dataflow, Pub/Sub, Cloud Storage, Dataproc, Cloud SQL, Cloud Spanner.
- ❑ Machine Learning and AI: Experience with Vertex AI, TensorFlow, PyTorch, Scikit-learn.
- ❑ Programming: Python (essential), SQL.
- ❑ Data Modeling: Ability to design database schemas and data warehouses.
- ❑ Data Analysis: Strong ability to interpret and extract insights from data.
- ❑ Technical Communication: Ability to explain complex data and ML concepts to non-technical audiences.

## Certificaciones

Google Cloud Professional Data Engineer (indispensable),
Google Cloud Professional Machine Learning Engineer (desirable).

# Cloud Application Modernization Engineer

Specialist in charge of guiding customers in the transformation of their applications, moving them to a cloud-native environment or modernizing them to take full advantage of Google Cloud services. Their role is key to the adoption of modern architectures and operational efficiency.

## Responsabilidades

- ❑ Evaluate existing application architectures and recommend modernization strategies (rehosting, refactoring, re-platforming, re-architecting, replace).
- ❑ Design and implement solutions based on containers (Cloud Run, GKE), serverless (Cloud Functions, App Engine), and APIs (Apigee).
- ❑ Help customers migrate and optimize their databases to Google Cloud managed solutions (Cloud SQL, Cloud Spanner, Firestore, BigQuery).
- ❑ Implement CI/CD practices using Cloud Build, Cloud Source Repositories, and other DevOps tools.
- ❑ Advise on cloud-native microservices, APIs, and architecture patterns.
- ❑ Collaborate with customer development teams to ensure smooth integration and successful adoption.
- ❑ Actively identify opportunities to modernize customer applications, quantifying potential ROI (reduced operating costs, improved scalability, accelerated time-to-market) to justify the investment and close new sales.
- ❑ Develop customized value propositions for application modernization projects, highlighting business benefits.
- ❑ Demonstrate the value of modernization solutions through proofs of concept (PoCs) and prototypes.

## Habilidades Clave

- ❑ Software Development: Experience in at least one modern programming language (Python, Java, Node.js, Go, etc.) and in software development principles.
- ❑ Containers and Orchestration: Extensive knowledge and experience with Docker, Kubernetes (especially GKE), and microservices design patterns.
- ❑ Serverless: Experience with Cloud Functions, Cloud Run, App Engine, and other Google Cloud serverless services.
- ❑ Databases: Familiarity with relational databases and NoSQL, and experience in migrating and optimizing databases in the cloud.
- ❑ DevOps and CI/CD: Knowledge of CI/CD pipelines, version control (Git), monitoring (Cloud Monitoring, Cloud Logging), and configuration management tools.
- ❑ API Design: Experience in the design, development and management of APIs (RESTful, GraphQL).
- ❑ Software Architecture: Ability to evaluate application architectures, identify bottlenecks, and propose modernization solutions.
- ❑ Business and Consultative Selling Skills: Ability to translate the technical benefits of modernization into tangible business value (cost savings, agility, innovation), develop compelling business cases, and present solutions to executives.Certificaciones

## Certifications

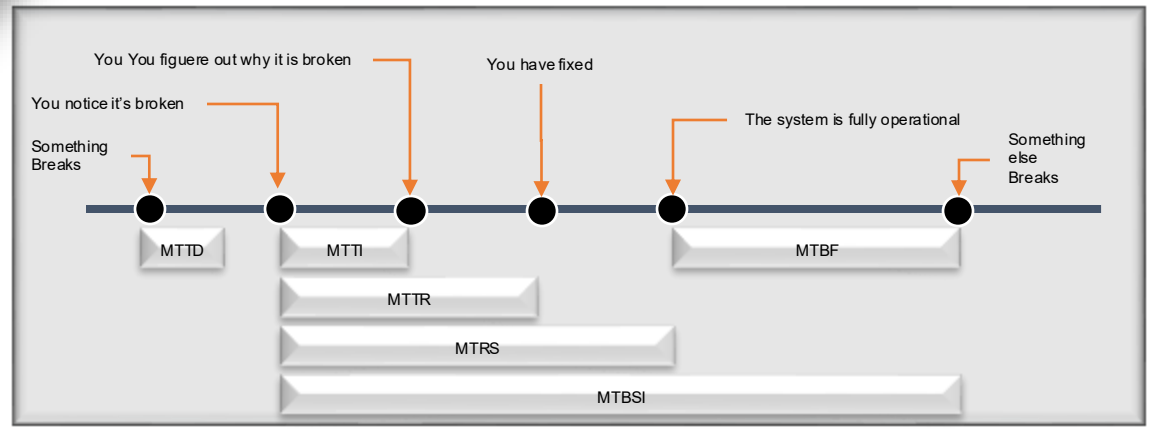
Google Cloud Professional Cloud Developer,
Google Cloud Professional Cloud Architect Engineer (desirable).

Phase 3

# Key Performance Indicators

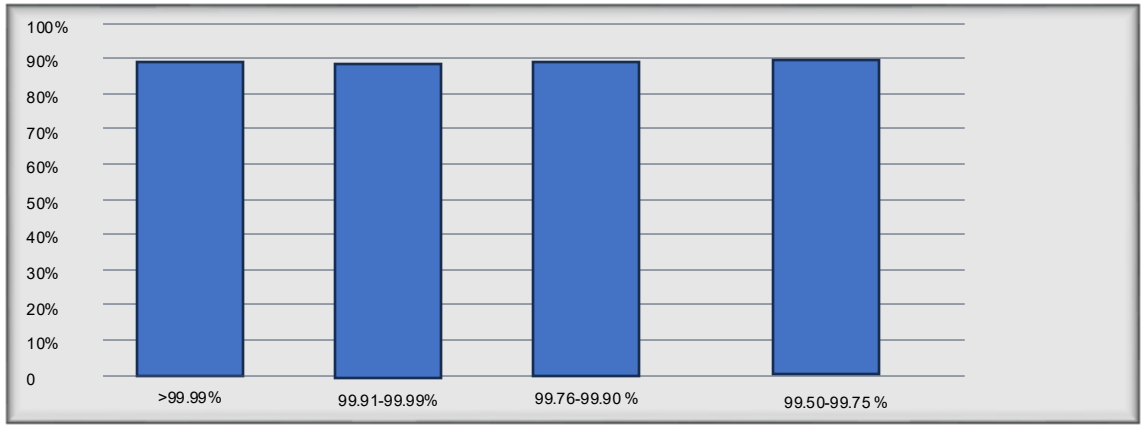
# Key Performance Indicators

To ensure the team's success and growth, we will focus on the following metrics



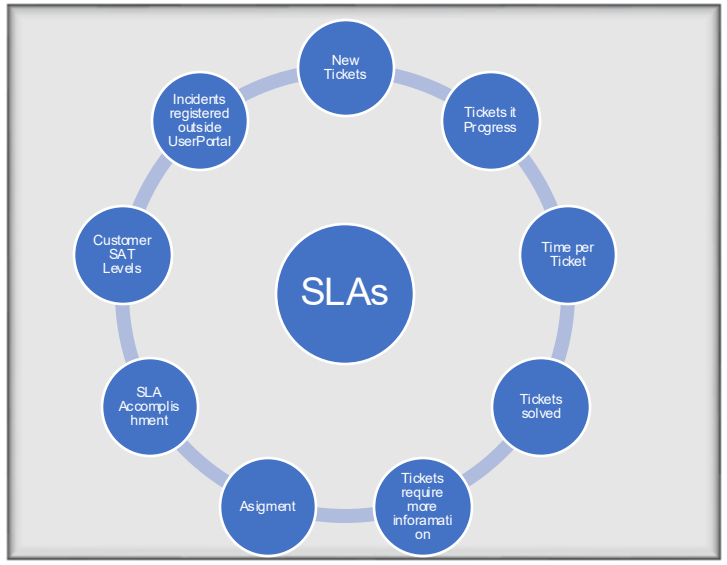

## Resolution Time(MTTR)

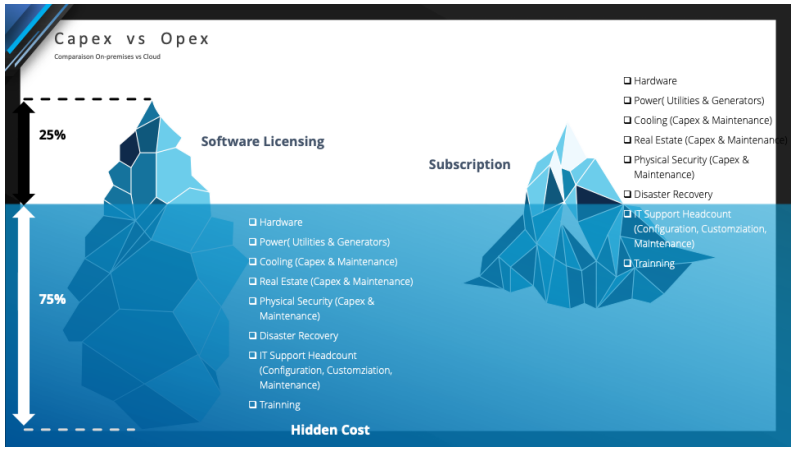
Average time it takes to resolve an incident or support request




## Service Availability goals for misssion-critical systems

Percentage of time that services deployed on Google Cloud are operational and accessible




Reducing infrastructure costs for customers through optimizations and recommendations


Revenue Generated Per Member: Each engineer's direct contribution to identifying and facilitating sales of Google Cloud services.
Percentage of customers deploying new Google Cloud solutions or services recommended by the team

# KPIs

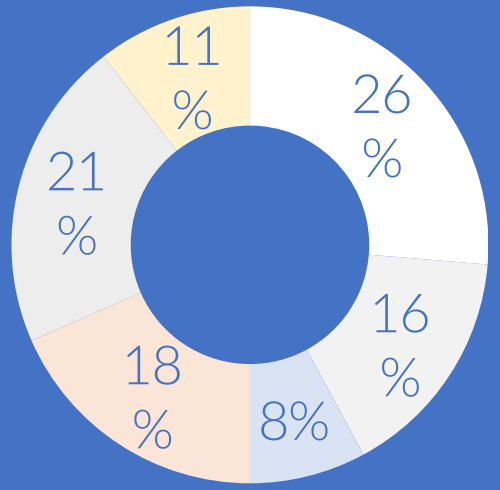
Revenue Generated Per Member: Each engineer's direct contribution to identifying and facilitating sales of Google Cloud services.
Percentage of customers deploying new Google Cloud solutions or services recommended by the team

| New Leads This Month | Revenue This Month | Quoted > Invoiced | Planned vs. Actual Time | New Projects This Month | Outstanding Invoices |
|---|---|---|---|---|---|
| 4 QUOTES | 11.5 K | 7.7% | 96.3% | 6 PROJECTS | 96.3% |

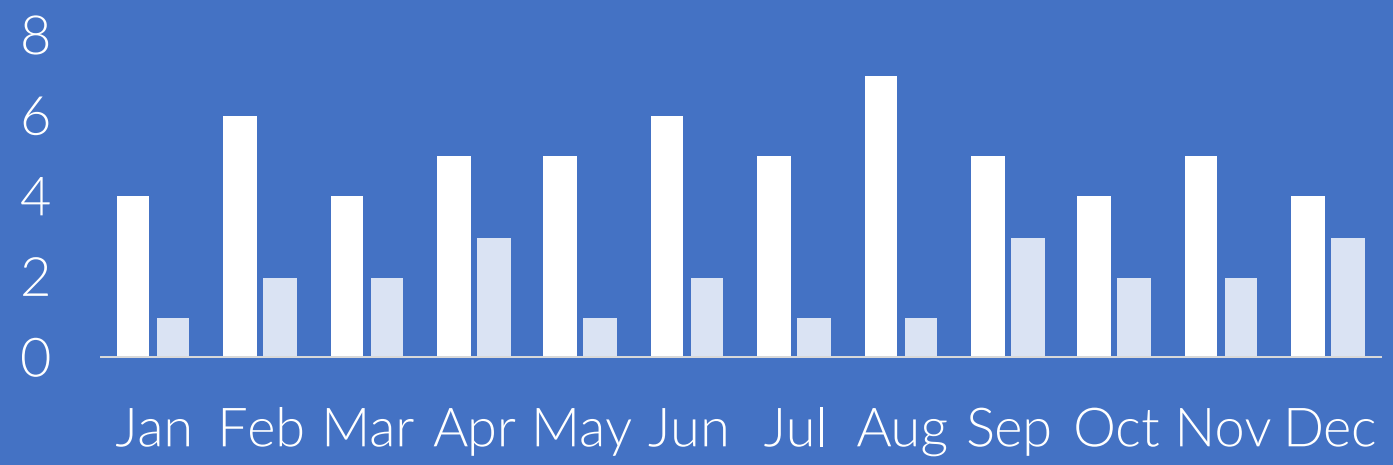
## ACTIVE BUDGET

| PERIOD | ACTUAL | BUDGET | STATUS | DIFFERENCE |
|---|---|---|---|---|
| Jan | 30,988 | 88,000 | 56% | -123,987 |
| Q1 | 45,000 | 23,000 | 25% | -45,785 |
| 2020 | 128,900 | 56,000 | 12% | -234,765 |

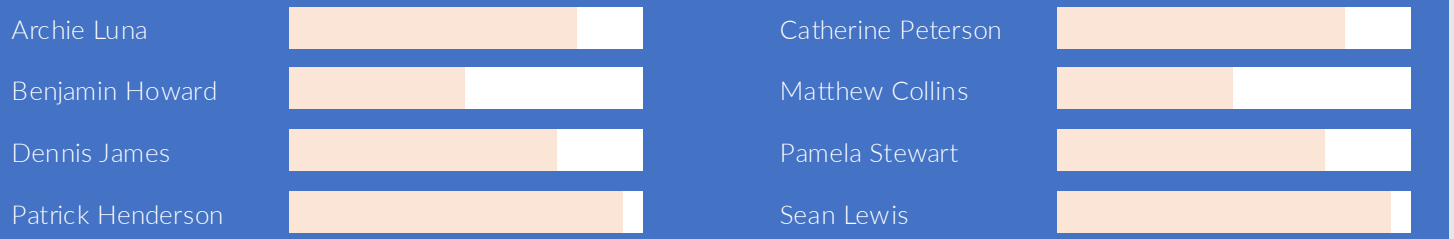
## TEAM HOURS BY ACTIVITIES




## REVENUE 2019 VS. 2020




## TEAM HOURS LOGGED THIS WEEK



# Capex vs Opex

Comparaison On-premises vs Cloud

25%

75%

## Software Licensing

- Hardware
- Power( Utilities & Generators)
- Cooling (Capex & Maintenance)
- Real Estate (Capex & Maintenance)
- Physical Security (Capex & Maintenance)
- Disaster Recovery
- IT Support Headcount (Configuration, Customziation, Maintenance)
- Trainning

## Subscription

- Hardware
- Power( Utilities & Generators)
- Cooling (Capex & Maintenance)
- Real Estate (Capex & Maintenance)
- Physical Security (Capex & Maintenance)
- Disaster Recovery
- IT Support Headcount (Configuration, Customziation, Maintenance)
- Trainning

## Hidden Cost

Phase 4

# Service Level Agreements

# Service Level Agreements

## Soporte Crítico

### Severidad 1 - Impacto Total

Initial Response Time: 15 minutes.
Target Resolution Time: 2 hours.

## Soporte Mayor

### Severidad 2 - Impacto Significativo

Initial Response Time: 30 minutes.
Target Resolution Time: 4 hours

## Soporte Menor

### Severidad 3 - Impacto Limitado

Initial Response Time: 1 hour.
Target Resolution Time: 8 hours

## Solicitudes de Cambio/Mejora

### EXECUTE & AUTOMATE

Initial Response Time: 2 hours.
Target Execution Time: Agreed on a case-by-case basis, with action plan within 24 hours

Phase 5

# Sales and Revenue Generation Strategy

Achieving the goal of $1 million per member annually will not be based solely on direct sales, but on a combination of www tactics

# Sales and Revenue Generation Strategy

Achieving the goal of $1 million per member annually will not be based solely on direct sales, but on a combination of the fdlowing tactics

## Proactive Opportunity Identification

### GET ALIGNED AND ORGANIZED

Every engineer should be empowered to actively identify unmet customer needs or areas for improvement where Google Cloud services can add value.

## Up-selling

### CODIFY AGREEMENTS

Recommend more advanced versions or additional features of services already used by the customer

## Cross-selling

### MAKE IT ACTIONABLE

Propose new Google Cloud services that complement current ones or solve challenges in other areas of the customer's business (e.g., a DevOps engineer suggests security services, or a solutions architect proposes AI/ML services)

## Optimization and Modernization

### EXECUTE & AUTOMATE

Demonstrate how migrating or optimizing existing workloads to GCP PaaS or SaaS services can generate savings and efficiency, which in turn frees up budget for new cloud initiatives.

# Sales and Revenue Generation Strategy

Achieving the goal of $1 million per member annually will not be based solely on direct sales, but on a combination of the fdlowing tactics

## Value Consulting

### GET ALIGNED AND ORGANIZED

Position the team as strategic advisors who help customers maximize their investment in Google Cloud. This involves understanding the customer's business and how technology can drive it.

## Po-X

### CODIFY AGREEMENTS

Create internal success stories and tangible demonstrations (PoCs) that demonstrate the value of Google Cloud services, facilitating the customer's purchasing decision.

## Training and Workshops

### MAKE IT ACTIONABLE

Organize training sessions or technical workshops for customers, educating them on Google Cloud capabilities and generating interest in new services

## Collaborative

### EXECUTE & AUTOMATE

Work closely with Google's sales teams and account managers to support the sales cycle with technical expertise and deep product knowledge. Engineers act as the technical arm that validates and enables sales.

# Sales and Revenue Generation Strategy

Achieving the goal of $1 million per member annually will not be based solely on direct sales, but on a combination of the fdlowing tactics

## Observability

### GET ALIGNED AND ORGANIZED

Use monitoring tools (Cloud Monitoring, Cost Management) to identify usage patterns and suggest optimizations or expansions that generate value for the customer and, therefore, increase service consumption

## High Value Solutions

### CODIFY AGREEMENTS

Prioritize the sale of solutions that involve higher value-added services, such as AI/ML, Big Data, advanced security solutions, or complex migrations, which naturally have a greater impact on revenue.

Cloud Engineering Strategy

# Thanks