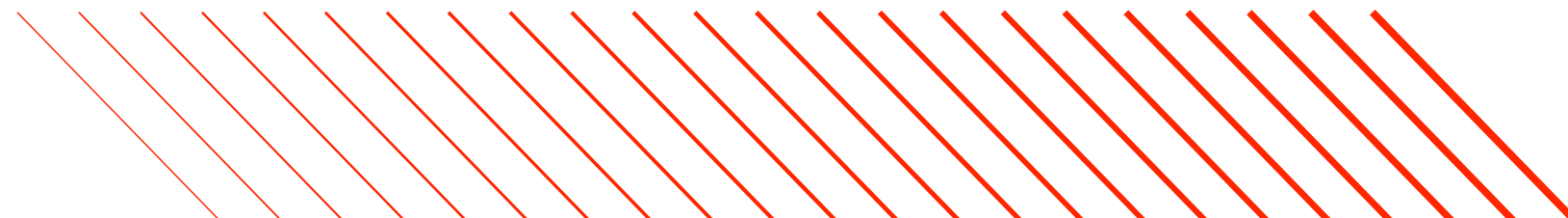
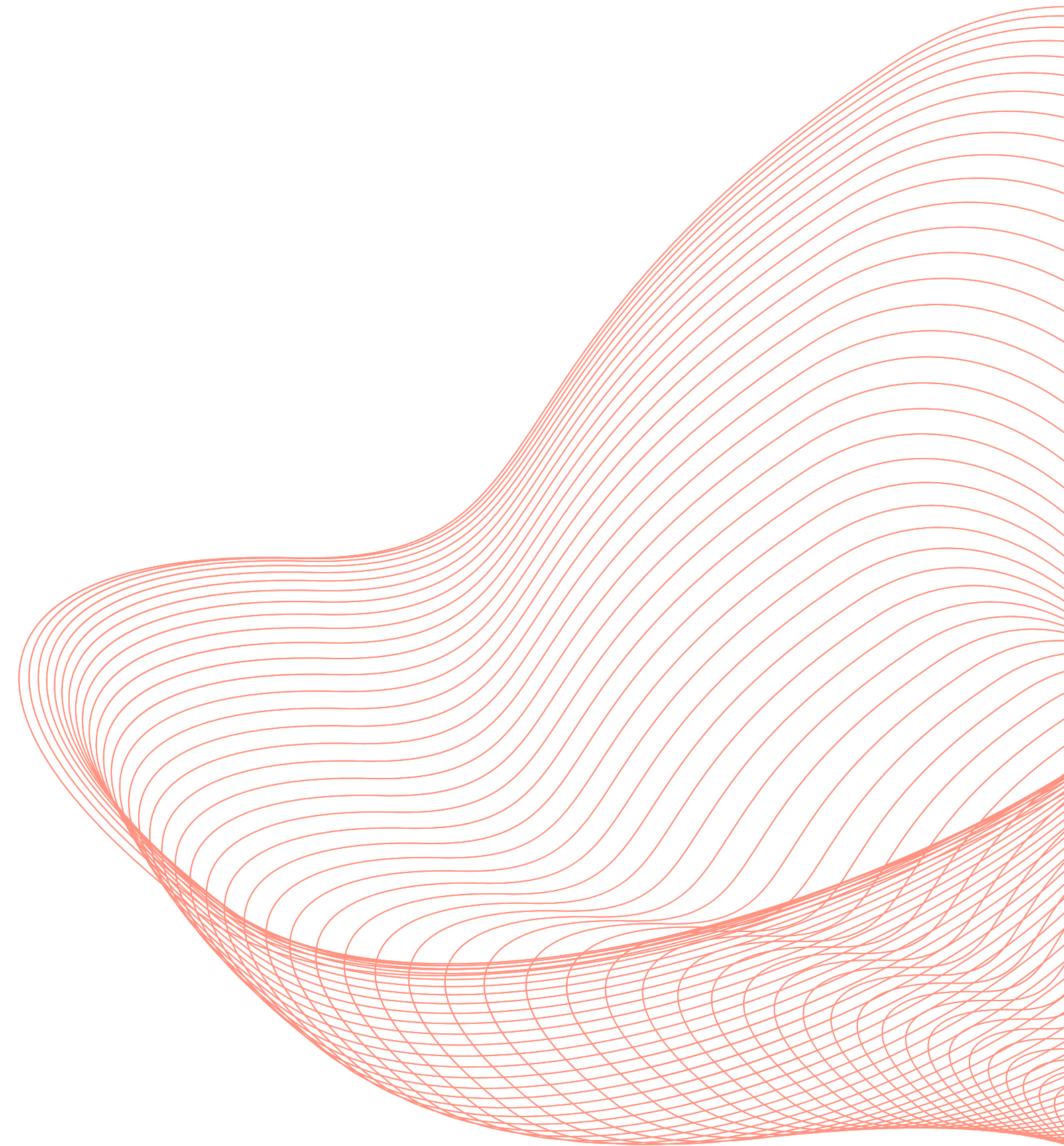
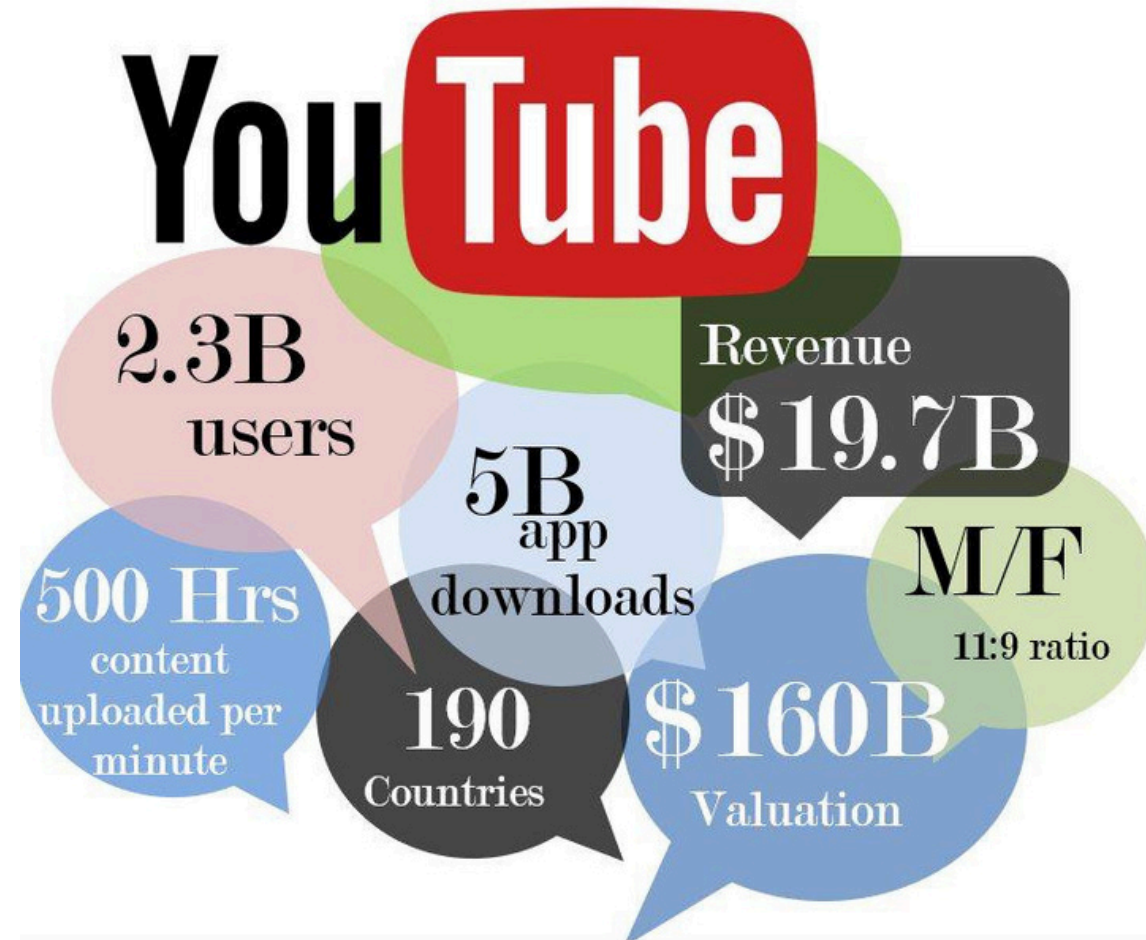


COMPANY OVERVIEW





- AMERICAN SOCIAL MEDIA AND ONLINE VIDEO SHARING PLATFORM OWNED BY GOOGLE
- FOUNDED ON FEBRUARY 14, 2005, BY STEVE CHEN, CHAD HURLEY, AND JAWED KARIM
- HEADQUARTERED IN SAN BRUNO, CALIFORNIA(2ND PLACE OF MOST-VISITED SITE IN THE WORLD)
- ON NOVEMBER 13, 2006, YOUTUBE WAS PURCHASED BY GOOGLE FOR \$1.65 BILLION



OVERVIEW OF EBUSINESS/ECOMMERCE SYSTEMS

BUSINESS MODELS

- **B2C (BUSINESS-TO-CONSUMER):** DELIVERS VIDEO CONTENT TO USERS, MONETIZED VIA ADS, SUBSCRIPTIONS, AND MERCHANDISE SALES.
- **C2C (CONSUMER-TO-CONSUMER):** EMPOWERS CREATORS TO UPLOAD CONTENT AND EARN REVENUE.
- **B2B (BUSINESS-TO-BUSINESS):** OFFERS ADVERTISING OPPORTUNITIES FOR BRANDS AND BUSINESSES THROUGH GOOGLE ADS INTEGRATION.

ECOMMERCE FEATURES

- **YOUTUBE PREMIUM & MUSIC:** SUBSCRIPTION-BASED SERVICES OFFERING AD-FREE CONTENT AND EXCLUSIVE FEATURES.
- **SUPER CHAT & MEMBERSHIPS:** MONETIZATION TOOLS ENABLING FANS TO SUPPORT CREATORS.
- **MERCHANDISE SHELF:** DIRECT PRODUCT SALES INTEGRATION UNDER VIDEOS VIA THIRD-PARTY PLATFORMS.
- **YOUTUBE SHOPPING:** IN-VIDEO PRODUCT TAGS AND SHOPPABLE LIVESTREAMS INTEGRATED WITH PLATFORMS LIKE SHOPIFY.



OVERVIEW OF IS AUDIT AND CONTROLS

- OWNED BY GOOGLE — FOLLOWS STRICT AUDIT AND CONTROL FRAMEWORKS
- CERTIFICATIONS: ISO/IEC 27001, 27017, 27018, 27701, SOC 1 & 2
- COMPLIANCE AUDITS: GOOGLE CLOUD PLATFORM (GCP) IS REGULARLY AUDITED
- DISASTER RECOVERY & BACKUP: STRONG BUSINESS CONTINUITY PLANS
- FRAMEWORKS USED: ISACA'S GCP AUDIT PROGRAM, GOOGLE CLOUD SECURITY MODEL

SECURITY CONTROLS:



DATA ENCRYPTION



ACCESS MANAGEMENT



IDENTITY VERIFICATION

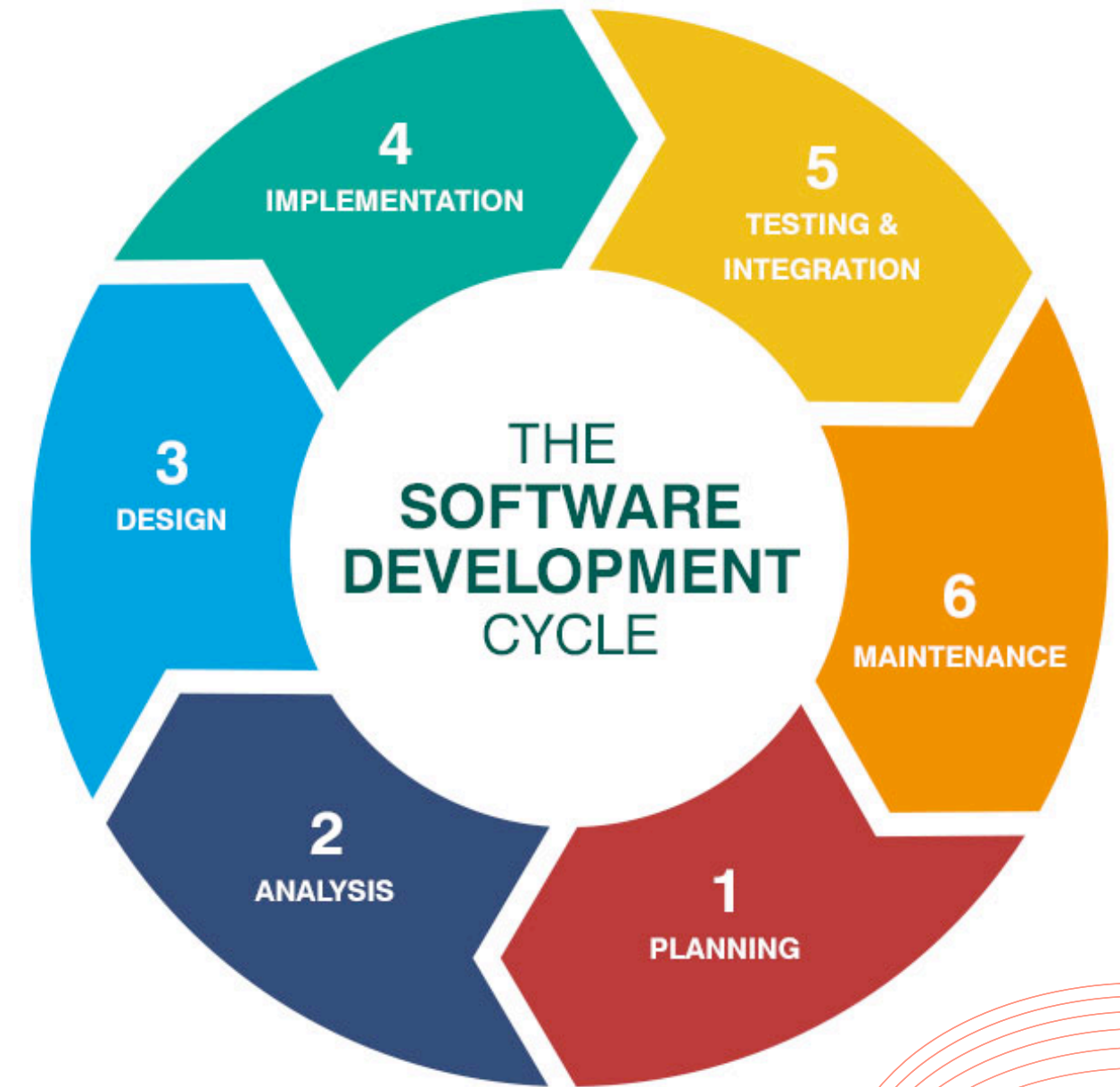


CONTINUOUS MONITORING & LOGGING

SDLC PRACTICES AND DEVELOPMENT METHODOLOGY

DEVELOPMENT METHODOLOGY:

- YOUTUBE, AS PART OF GOOGLE, FOLLOWS AN AGILE/ITERATIVE SDLC MODEL.
- EMPLOYS SHORT DEVELOPMENT SPRINTS WITH REGULAR RELEASES.
- USES A COMBINATION OF SCRUM, KANBAN, AND DEVOPS FOR FLEXIBILITY AND SPEED.



SYSTEM INTERACTIONS IN YOUTUBE

1

CLIENT SIDE:

WEB AND MOBILE APPS

COMMUNICATE VIA REST/GRPC APIS

2

API GATEWAY

ROUTES ALL CLIENT REQUESTS

HANDLES AUTH, RATE LIMITING, AND LOAD BALANCING

3

BACK-END SERVICES

MICROSERVICES ARCHITECTURE

SERVICES INTERACT WITH DISTRIBUTED DATABASES

4

DATA LAYER

VIDEO STORAGE

STRUCTURED DATA STORED

5

ML & DATA PIPELINES

EVENT LOGS FEED INTO ML MODELS

PIPELINES USE DATAFLOW, BIGQUERY, AND TENSORFLOW

6

CDN

GOOGLE'S CDN CACHES AND DELIVERS VIDEO CONTENT



GENERAL RECOMMENDATIONS



- **SMARTER TESTING & DEV SPEED**

AI-DRIVEN TEST PRIORITIZATION, TRUNK-BASED
DEVELOPMENT, CODING ASSISTANTS

- **BUILT-IN SECURITY (DEVSECOPS)**

EARLY STATIC CHECKS, DEPENDENCY SCANS, AND THREAT
MODELING

- **STRONGER STAKEHOLDER FEEDBACK**

FORMAL BETA PROGRAMS, CREATOR & POWER-
USER ADVISORY PANELS

- **MODERN ARCHITECTURE**

MIGRATE MONOLITHS TO MICROSERVICES FOR
SCALABILITY

- **SERVICE MESH ADOPTION**

IMPROVED OBSERVABILITY, TRAFFIC CONTROL, AND
SECURITY

- **CONTINUOUS IMPROVEMENT**

REGULAR SPRINT RETROSPECTIVES AND CROSS-TEAM
LEARNING

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