



Google Cloud

PRESENTS



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BNI  
Round 02

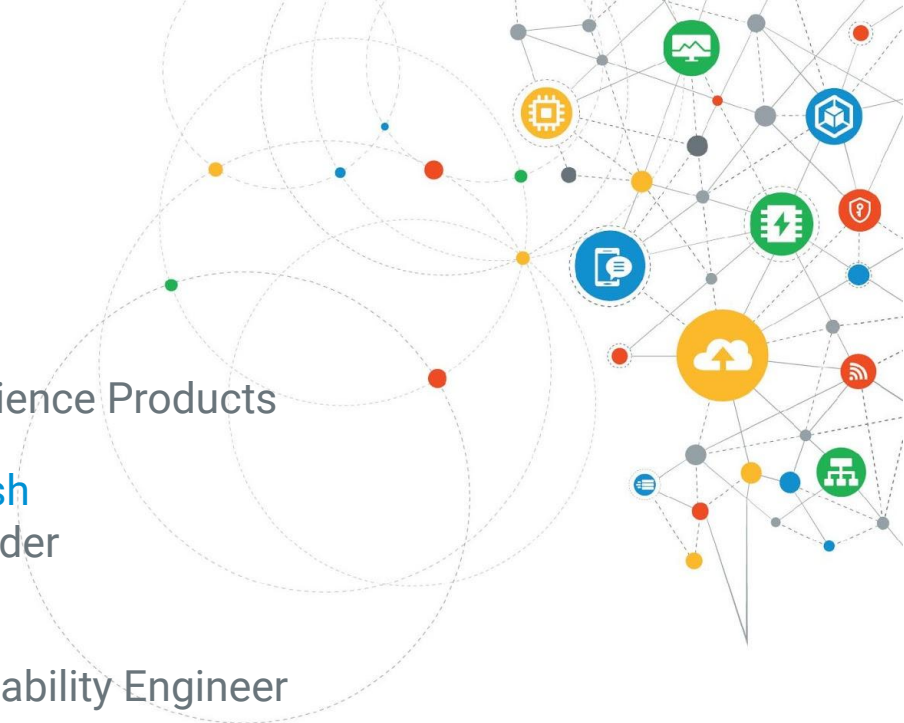


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# Business Overview

- BNI Limited - founded in 2001, based in New Delhi
- INR 8000 Cr media conglomerate
- Spans all traditional media like newspapers, TV + has a dysfunctional website and a mirror app
- Known and well respected for data journalism, research based content well and objectiveness, powered by their own Intelligence Bureau which is a high margin unit
- Its TV channel BNI TV covers stock markets, equity and does critically-acclaimed interviews of executives
- Its digital strategy has been lagging and with margins squeezed from traditional media, they need to create BNI 2.0 for the internet

# Opportunities & Tech Interventions

- Huge potential for growth in digital landscape
- Quality Video Content
- Localized content for India based on user demographic
- Better CMS
- Better Search
- Streaming Capabilities for live events
- Subscriptions
- Server side ads
- Making it Cloud-native (GKE and Anthos)

# The Big Idea

- Go deep into video-first - focus on short form content, India relevant, first to get larger user base; have long form & premium content behind paywall
- Lightweight app where sectoral video content is customized according to users' needs, identified through ML/AI
- Dynamic short stories based on - Video Intelligence + AutoML powered 'Propensity to Subscribe' metric
- Voice based + full text search - Localisation for voice
- Subscription model for long-form, premium content, archives, research content - can be for direct users as well as B2B
- Port TVC's to app first; as new publishers will take some time to add native app ad content

# Project Objectives

- Radical overhaul of brand image and next gen targeting through digital
- Video first, with short-form content on the app being the portal to get new users
- Subscription and ads based model for revenue
- Search has to work flawlessly, both voice based and text
- Security will be an important consideration
- Scalability has to be a top priority
- Reliability has to be top-notch
- Smooth customer experience

# Project Scope and Risks

## Scope:

- Build light-weight app focused on easy short-form video content viewing
- Existing content cleaning, parsing and tagging - extracted metadata to be searchable through ElasticSearch
- Customized layout and content personalized for users, based on ML model. Layout and content controlled through Firebase
- Paywall and payment gateway integration for subscription
- Ad creation, tracking & management system through Google Ad Manager + Doubleclick (for publishers)
- Direct-sold ads from Youtube through Player for Publishers

## Risks/Challenges:

1. Security:
  - a. Reduce risk and protect attack surfaces with Intelligent insights
  - b. Keep data secure with centralize control management - Cloud KMS, IAP
2. Speed and scalability bottlenecks
3. Accounting for human error and manual deployments
4. Poor Support for advanced use cases

# Technologies & Tools

## Overall

- Anthos
- GKE
- Istio
- Cloud Spanner
- Cloud Functions
- Anvato

## Big Data

- Cloud Dataflow
- Cloud Storage
- BigQuery

## AI

- AutoML Video Classification
- Video Intelligence API
- Natural Language API

## Security

- Cloud KMS

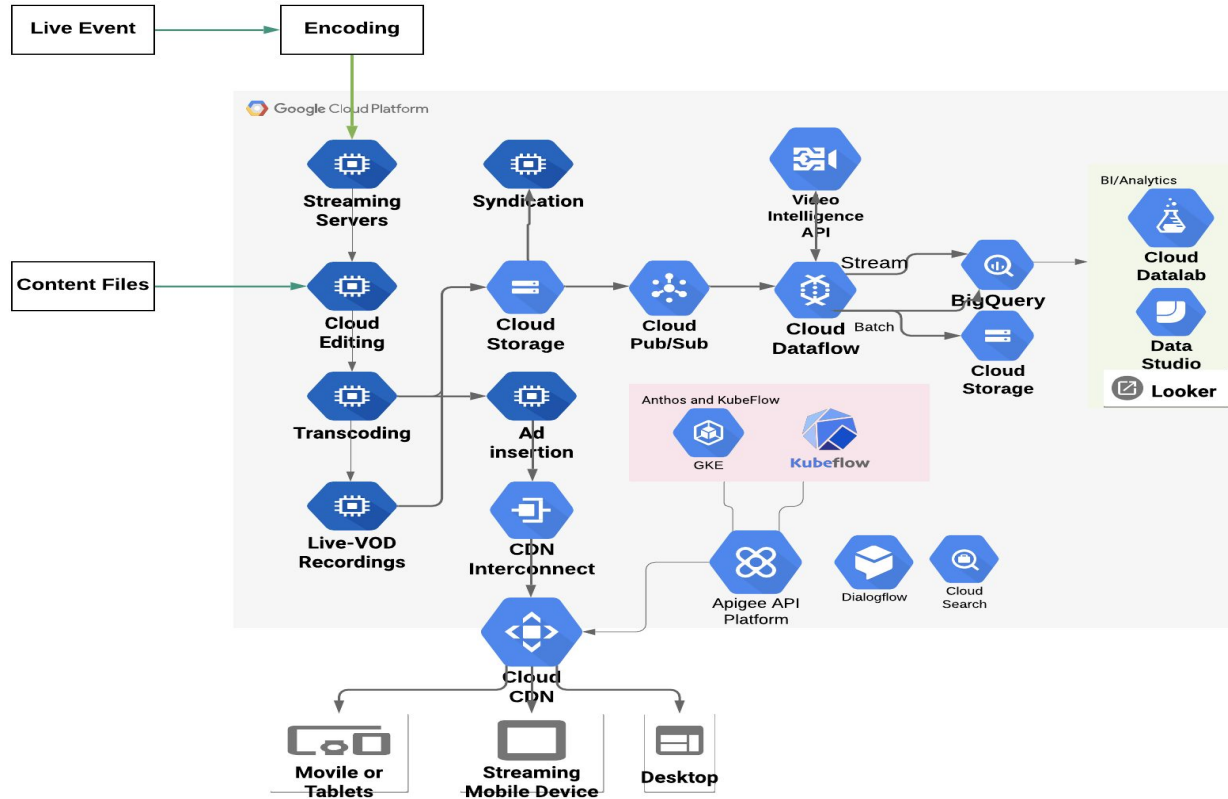
## CI/CD

- Source (CSR) -> GCB (Build) -> GCR -> Spinnaker -> StackDriver

## Monitoring

- StackDriver

# Architecture





# Project Plan

- **AMP Stories** for short video content to draw subscribers
- **Google Ad Manager** for ad management/tracking + **Player for Publishers** for direct-sold ads from Youtube
- Use **Anthos** - Migrate and modernize On-premises to **GKE** [Compute Engines]
- Build Video streaming capabilities
- Build **ButterCMS**
- Improve the Search - **Elastic** for full-text search
- Processing content [Video Intelligence API] for ML
- Automating metadata extraction for video - **CloudVision**
- Build Data Warehouse and Data Lake - BigQuery
- Personalized content and ads
- Security
- CI/CD

# Why Anvato, Google's complete OTT video platform ?

- Create video-on-demand files from live streams
- Scale without limits and simplify the video streaming infrastructure
- Cloud Editor to cut snippets from mobile or compute devices
- Dynamically insert high-value, targeted interactive ads for users
- Provide authorized users premium content while blocking others
- Google Cloud CDN to accelerate content delivery
- Access real-time metrics, player statistics and social metrics

# Business Impact and Outcomes

- AMP Stories, to give readers a more visual entry point to BNI's coverage. As per Greg Manifold, Design Director at The Washington Post, "Some of the most highly engaging stories are the most visually compelling..We're transforming the storytelling experience to delight readers who are increasingly visually-oriented when consuming information.."
- AMP improves video load-time by 90% as we saw in Washington Post's case - leading to 23% uptick in user retention
- By utilizing direct Youtube ads we reach users who are coming to watch videos anyway - watch time improved by 280% in WP's case for users coming from Youtube
- Programmatic ads targeted through the power of ML added ~\$1 million to WP's ad revenues last year, a YoY growth of >10%

# Final Recommendations

- Looks increasingly likely that BNI will have to take a bet on videos and monetize the content - use Anvato for OTT platform
- Current content needs to be searchable - which Elastic can help with, based on metadata extracted using CloudVision
- Publishers/Advertisers platform on Google Ad Manager
- Direct sold ads on Youtube for getting engaged users
- Improve 'Propensity to Subscribe' - using ML/AI, personalized content for users
- Anthos will help BNI migrate necessary pieces to GKE (Kubernetes for the smartest deployment, monitoring and management)
- Security 2.0 and Privacy 2.0
- Focus on customer experience - the app and website **should just work**



Thank you

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