



Google Cloud

PRESENTS



SMART STRATEGIES  
WINNING TEAMS • 2019

BRAND OF  
CIO&LEADER ITNEXT

# Omega Hospitals Round 02

ICICI Bank Ltd.

Munish Blaggan  
Head Technology Management Group

Debashish Barai  
Assistant General Manager - IT

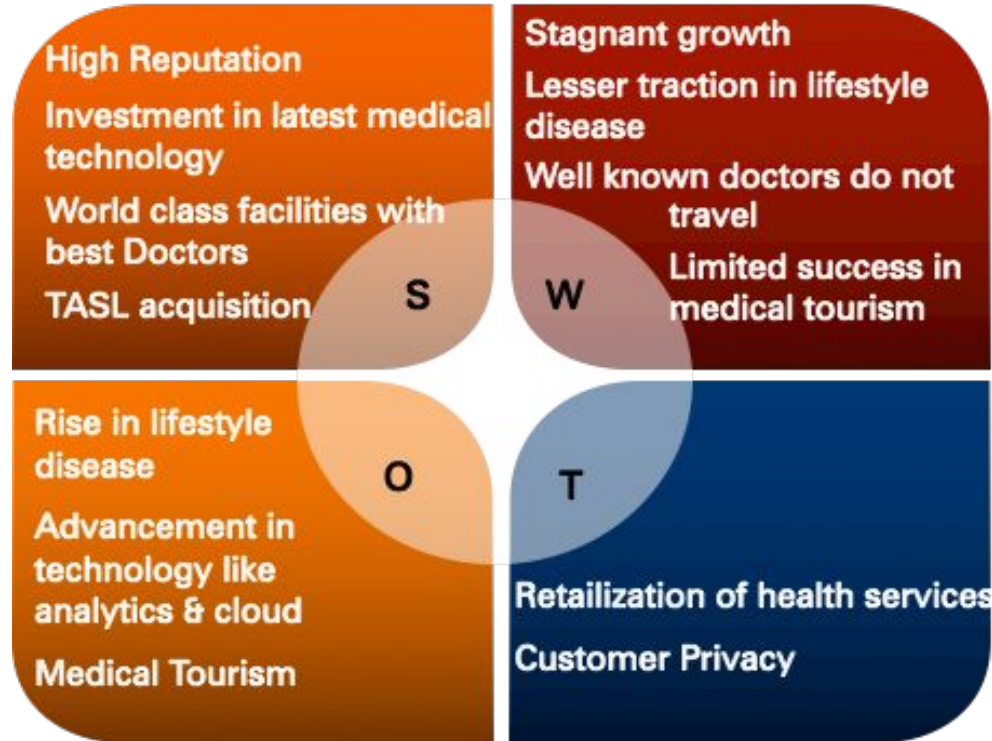
Prachi Joshi  
Chief Manager - IT

Praveen Nair  
Chief Manager - IT

# Business Overview

- Headquartered in Bangalore
- Started in 1991 as one of the 'first new gen' hospitals in India
- Presence in metros and tier 2 cities (Total: 17 locations)
- Specialities: Oncology, Cardiovascular and Orthopedic
- Revenue: INR 5200 crore; Operating Margin: 22%; Net Profit: 14% (FY19)
- Growth rate has stagnated
- Recently acquired TASL to tap inorganic growth

# Opportunities & Tech Interventions

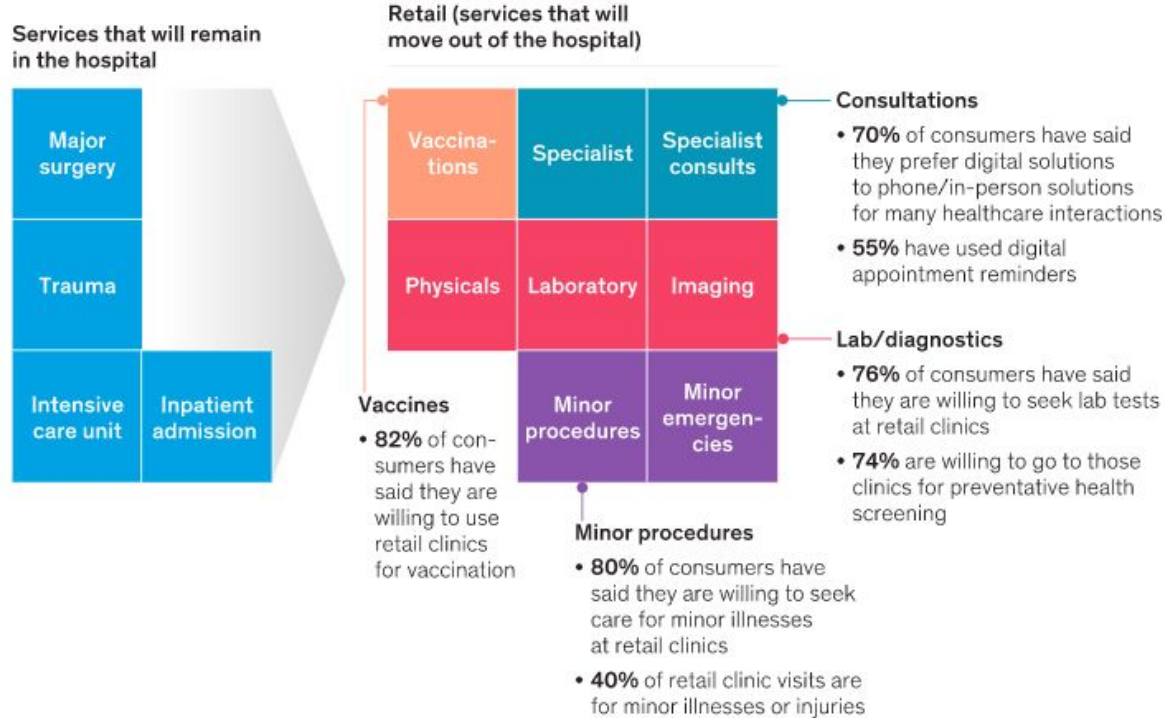




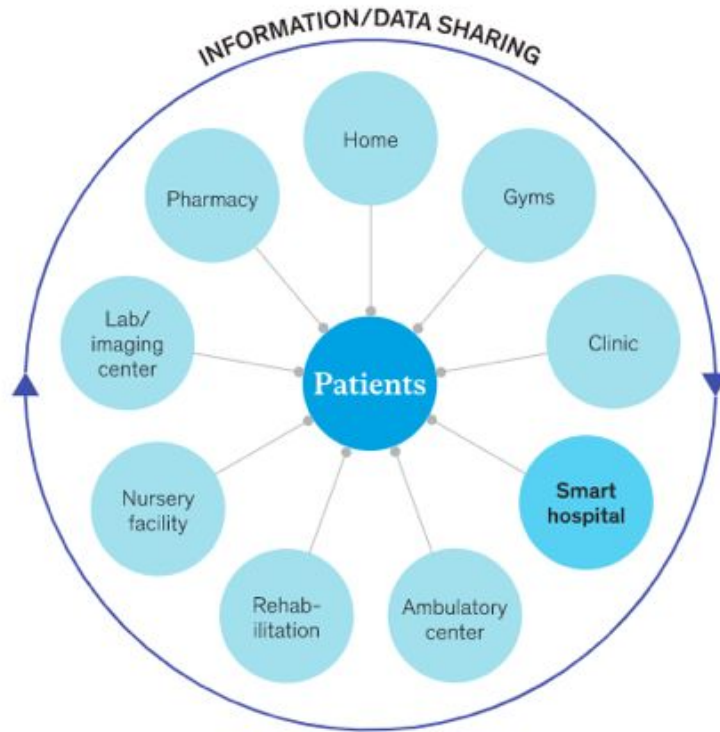
Google Cloud



# Smart healthcare – how the hospital of future will look like ?



# Smart healthcare – decentralized system & patient centric

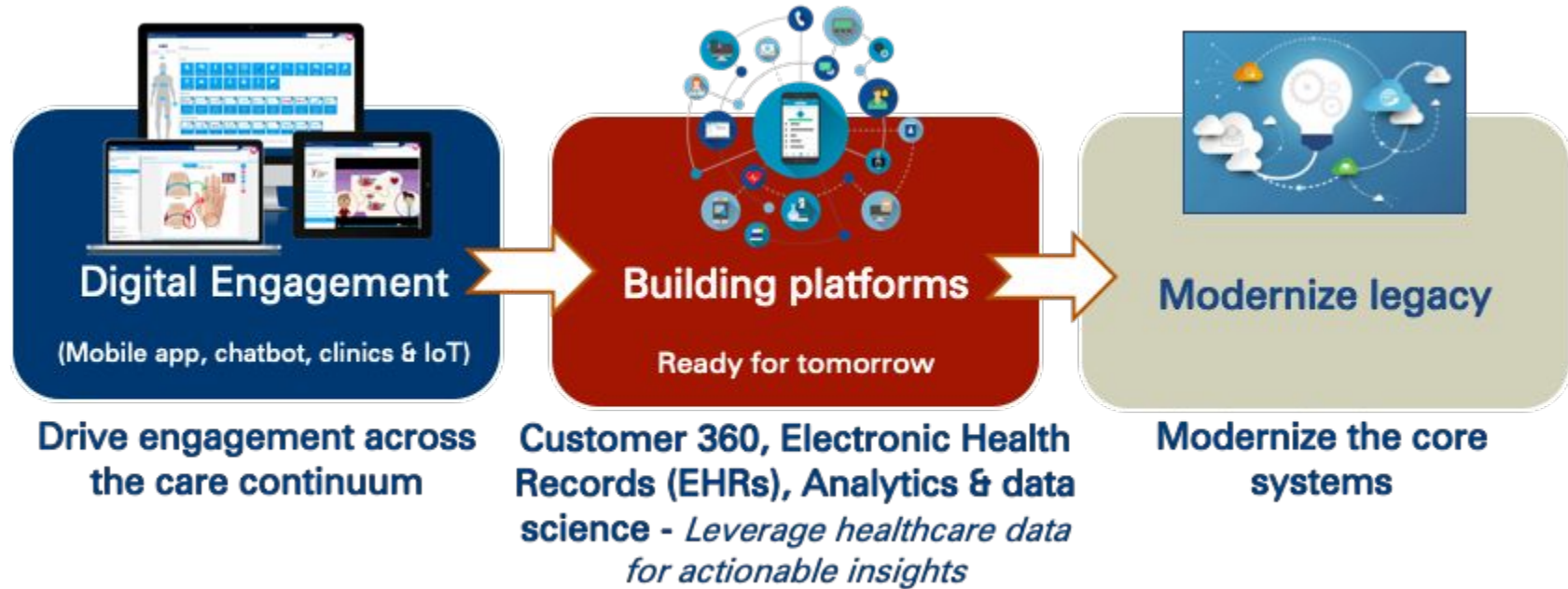


Information/data sharing can make possible:

- Secured and shared personal health record
- Effective disease prevention and primary care
- Targeted and better quality acute care
- Long-term chronic disease management

**The result:** More convenient and effective health service delivery, lower medical costs, and improved service quality due to clear roles and responsibilities

# The Big Idea



# The Big Idea - leveraging cloud

## Short term (0-6 months) - **Digital Engagement Platform**

- Immersive mobile app (agile development) using firebase:
  - Search and schedule an appointment
  - Submission of medical reports
  - Telemedicine - Chat/chatbot & teleconsultation (video conference)
  - Review and submit Doctor feedback
  - Targeted services for medical tourism
  - Knowledge section
  - Payment processing





# The Big Idea - leveraging cloud

## Short term (0-6 months) - **Digital Engagement Platform**

- Solution for Clinics (In future will be leveraged by Omega Pink)
  - Electronic Health Record / submission of medical reports
  - Telemedicine - Chat/chatbot & teleconsultation
- IoT integration capabilities
  - Enable future ready capabilities to integrate with IoT devices





# The Big Idea - leveraging cloud

## Immediate term (6-12 months) - **Building Platforms**

- Analytics & data science (using BigQuery & BigTable)
  - Leverage healthcare data for actionable insights
  - Intelligent doctor support system
- Customer360
  - Complete 360 degree view of the patient engagement
  - Enable required interfaces/API to integrate with external ecosystems
- Electronic Health Record (leveraging GCS & data leakage prevention)

# The Big Idea - leveraging cloud

Long term (1-2 years) - **Modernise Legacy**

- Review and migrate/modernise applications to cloud

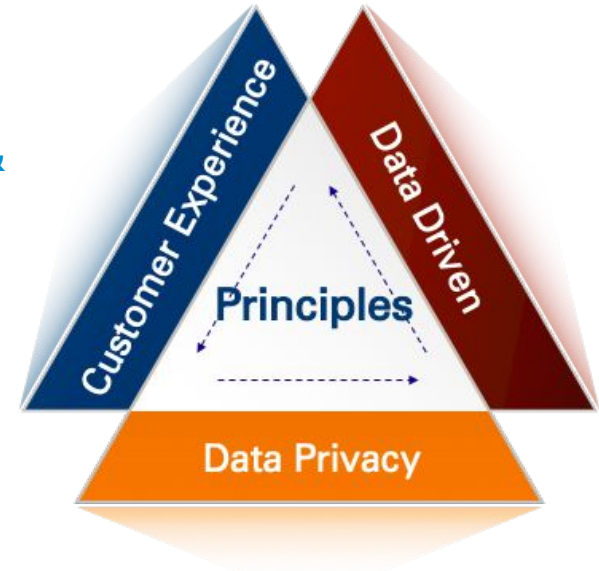
# Project Scope and Risks

## Scope

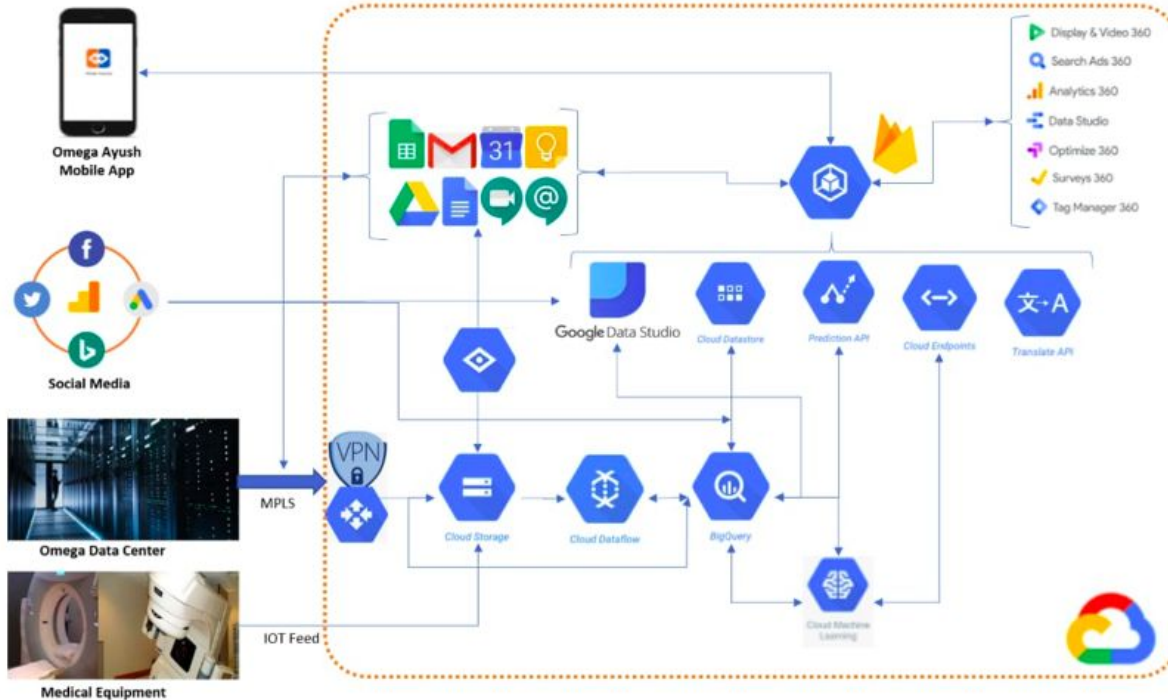
- Delivering short and long term deliverables & keeping in mind the key principles

## Risk

- Skill development (cloud architects, cloud operations, data scientists etc.)
- Data protection
- Cloud concentration



# Technologies & Tools



G-Suite  
 Firebase  
 Vision API  
 Data Studio  
 Cloud Storage  
 Big Query  
 Big Table  
 GKE

# Project Plan

#	Phase	High Level Milestone	Months																								
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1	Project Initiation	Cost & Effort Estimation, SOW Finalization & Project Kick-off	█																								
2		Project Planning, Requirement Analysis & Charter Preparation		█																							
3	Immediate Actionable	Setting up Infra (MPLS, VPN, Cloud Router, LDAP, Layer-7 Security etc)		█	█																						
4		Configuring Gsuit			█	█																					
5		Configuring Google Marketing Cloud				█	█																				
6		Configuring BigQuery, ML, DataFlow & Data Studio					█	█																			
7		Mobile App Development & Deployment			█	█	█																				
8		Functional Testing, Pilot & Go-Live					█	█																			
9		Application & Infra Management Training						█	█																		
10		Application Migration (Lift & Shift)								█	█																
11		Legacy Application Re-Architecting from Monolithic to Microservice & Stateful to Stateless									█	█	█														
12	Short-Term Actionable	Docker based containerization & Kubernetes based orchestration									█	█	█														
13		Functional & Resilience Testing											█	█	█												
14		Implementation of CI-CD													█	█											
15	Application Management & Deployment Training														█	█											
16	Long-Term Actionable	IOT Based Equipment monitoring & Proactive Maintenance																								█	

# Business Impact and Outcomes

Based on the short term and long term IT strategy and leveraging cloud facilities Omega will be able to tap newer customer segments and newer medical areas and will be able to deliver business objectives.

## Revenue:

Medical Tourism : USD 9 bn in India (by 2020)

Revenue from Medical Tourism (assumption: 1% customer target):  
₹ 630 crore

Assumption: No. of customers (by 2024): 80 million

Revenue from Diabetes growth (assumption: 1% customer target): ₹ 40 crore

# Cost

## Capital expenditure (one-time):

Platform development: ₹ 6 crore (considering approx. 10 developers for 2 year period)

## Operating expenditure:

Resources: ~₹3.50 crores (considering 12 resources across support, data scientist & cloud admin)

Cloud: ₹ 1.5 crore (including G-Suite for 100 doctors & 5 PB storage)

Training of IT resources: ₹ 15 lakhs



# Final Recommendations

- Shift focus from 'illness to wellness'
- Leverage cloud to deliver differentiating IT services
- Creating platforms to meet short term and long term business objectives
- Investments in Data science and advanced analytics for delivering precise medical services
- Reskilling IT staff

**Overall recommendation of additional IT expense of ~ ₹ 8 crore per annum**



Thank you

Build What's Next with Google Cloud

