

INTERNSHIP

at



by

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1. INTRODUCTION

One of the most notable areas where data analytics is making big changes is healthcare. In fact, healthcare analytics has the potential to reduce costs of treatment, predict outbreaks of epidemics, avoid preventable diseases, track the health of populations and identify people at risk for chronic diseases and improve the quality of life in general.

Healthcare technology refers to any IT tools or software designed to boost hospital and administrative productivity, give new insights into medicines and treatments, or improve the overall quality of care provided. From telehealth to robotic-assisted surgery, our guide will walk you through what it is and how it's being used. The use of technology increases provider capabilities and patient access while improving the quality of life for some patients and saving the lives of others.

Examples of technology in healthcare include the following:

- Clinical decision support.
- Computerized disease registries.
- Consumer health IT applications.
- Electronic medical record systems (EMRs, EHRs, and PHRs).
- Electronic prescribing
- Telehealth or Telemedicine
- Remote Monitoring Tools

‘Big data’ represents large amounts of data that is unmanageable using traditional software or internet-based platforms. It surpasses the traditionally used amount of storage, processing and analytical power.

In the healthcare industry, various sources for big data include hospital records, medical records of patients, results of medical examinations, and devices that are a part of internet of things.

This data requires proper management and analysis in order to derive meaningful information. There are various challenges associated with each step of handling big data which can only be surpassed by using high-end computing solutions for big data analysis. That is why, to provide relevant solutions for improving public health, healthcare providers are required to be fully equipped with appropriate infrastructure to systematically generate and analyse big data. An efficient management, analysis, and interpretation of big data can change the game by opening new avenues for modern healthcare. That is exactly why the healthcare industry, is taking

vigorous steps to convert this potential into better services and financial advantages. With a strong integration of healthcare data, modern healthcare organizations can possibly revolutionize the medical world.

Currently, many data analytics tools exist in healthcare that provide better clinical support, at-risk patient population management, and cost of care measurement. Based on these insights, providers can determine more precise treatment plans for individual patients or patient populations.

One such organization working on Technology and Big data analytics in healthcare field is THB (stands for Technology HealthCare Big Data Analytics), which is Asia's leading clinical intelligence company. THB is a full-stack data intelligence and technology platform delivering value to 200+ clients across 5 countries.

THB's healthcare partners include some of the top hospital and diagnostic chains such as CK Birla, BLK, Max, Zydus and so on. THB is working with leading Global and South Asian Pharma MNCs such as Roche, Cipla, Sun Pharma, Sanofi, Glenmark, Mankind, AZ, Novo Nordisk and so on.



Figure 1 – THB Logo

2. OBJECTIVES OF INTERNSHIP

- To understand the profile of the organization and its complete functioning.
- To understand the working and process flow of different departments under THB.
- To equip the student with knowledge and tools to be successful in their future position.
- To observe various protocols followed in the organization and try to acquire skills to accomplish them.
- To get familiarized with different types of product and services provided by THB to its consumers.
- To understand the company's offerings.
- To learn how to communicate with clients, customers, and other members of the team.
- To understand the different functions of the staff, the roles of different teams, how the firm is operated, and the drivers of success.
- To gain working knowledge of spreadsheet-based data manipulation and basic formulas.
- To learn how to build presentations — from storyboarding to design, copywriting, and rehearsing.
- To learn how to conduct online market research.
- To build a network of contacts.

3. ORGANIZATION PROFILE

THB (stands for Technology HealthCare Big Data Analytics) is India's leading clinical intelligence company. THB leverages real world evidence to empower the healthcare ecosystem with state-of-the-art clinical and business modules to improve patient outcomes. THB is on the mission to transform the healthcare industry from gut-based to data and evidence-based treatment and decisions.

THB was founded in September 2015, and is headquartered in Gurugram (Haryana) with sales offices in 8 cities across India. Through its network, THB is currently spread across 50+ Indian cities in more than 12 states.

Asia's leading healthcare data-technology platform delivering value to 200+ clients across 5 countries

- Headquartered in India; presence in S. Asia, GCC, SEA
- Deep experience of working across all healthcare formats: providers, pharma, med-tech, payors, health-tech
- Processed 750mn+ parameters across 50mn+ patient lives with proprietary data lake technology
- Enabling engagements with >20mn patients/ 600K+ HCPs across therapies and disease conditions
- 100+ publications / white papers across peer reviewed journals, and conferences
- Funded by Healthquad/ Quadria Capital, Blume Ventures, DI (Japan), Koïs (Belgium), HealthX (S'pore)



Mission – Enable data and evidence-based decisions across the healthcare ecosystem.



Vision – Build the largest global health stack to enable innovation and research for positive patient outcomes

UNIQUE ABOUT THB

1. Core Business



THB is India's first core Real World Data / Evidence focused company

2. Advisory Board



Team of highly qualified medical and industry leaders; supported by dedicated team of Medical advisors, Consultants and SMEs

3. 360-degree Offerings



Capability of offerings range from Strategy / Assessment to Clinical Evidence generation to Digital Doctor Engagement

4. Coverage



Data partnerships with diagnostic labs, clinic chains, hospitals, stand-alone doctor clinics and KOLs ensure coverage across all zones

5. Comprehensive “Quant+ Qual” Approach



Availability of longitudinal datapoints ensure quick Quantitative insights; Qualitative flavor added through in-depth partner discussions

6. Aggregation Play in a Fragmented Country



THB solves for the issues of uniformity, representability and diversity in a fragmented country by aggregating datasets from multiple data partners

7. Data Partnerships/ EC Approvals



Seamless and unrestricted data usage is ensured through robust agreements with data partners

Core Team

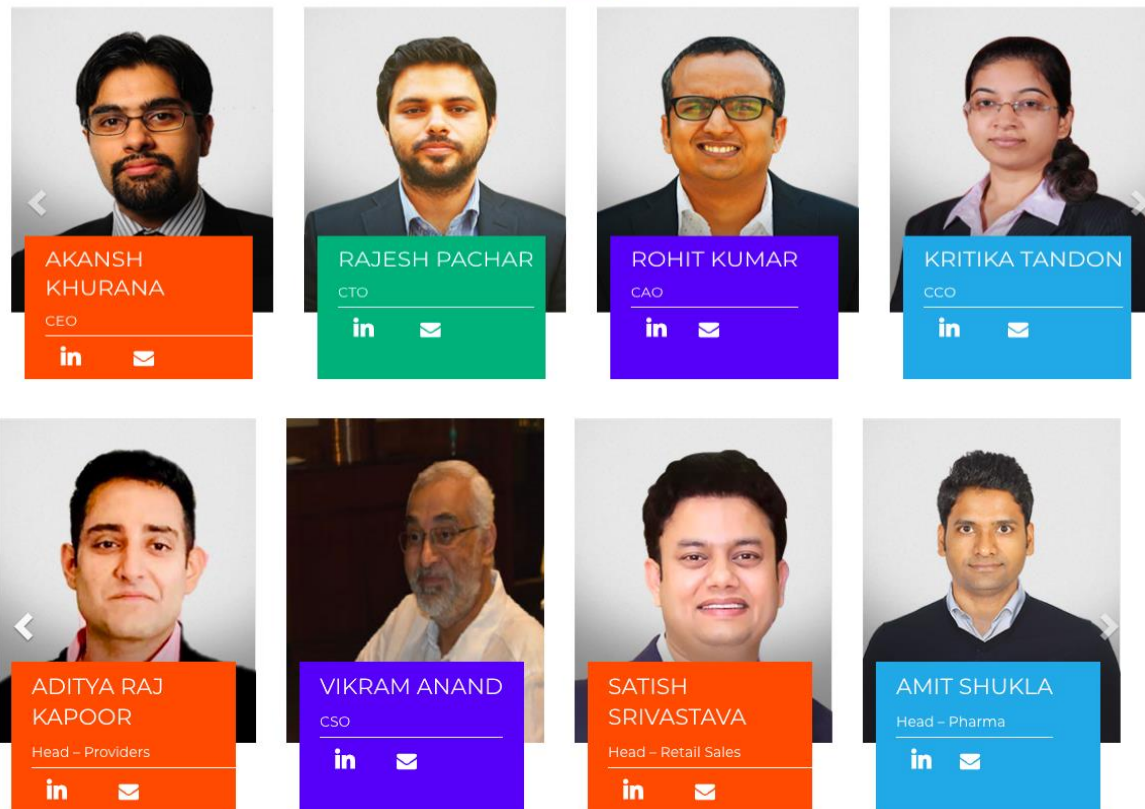


Figure 2 – THB Core Team

ORGANIZATION STRUCTURE –

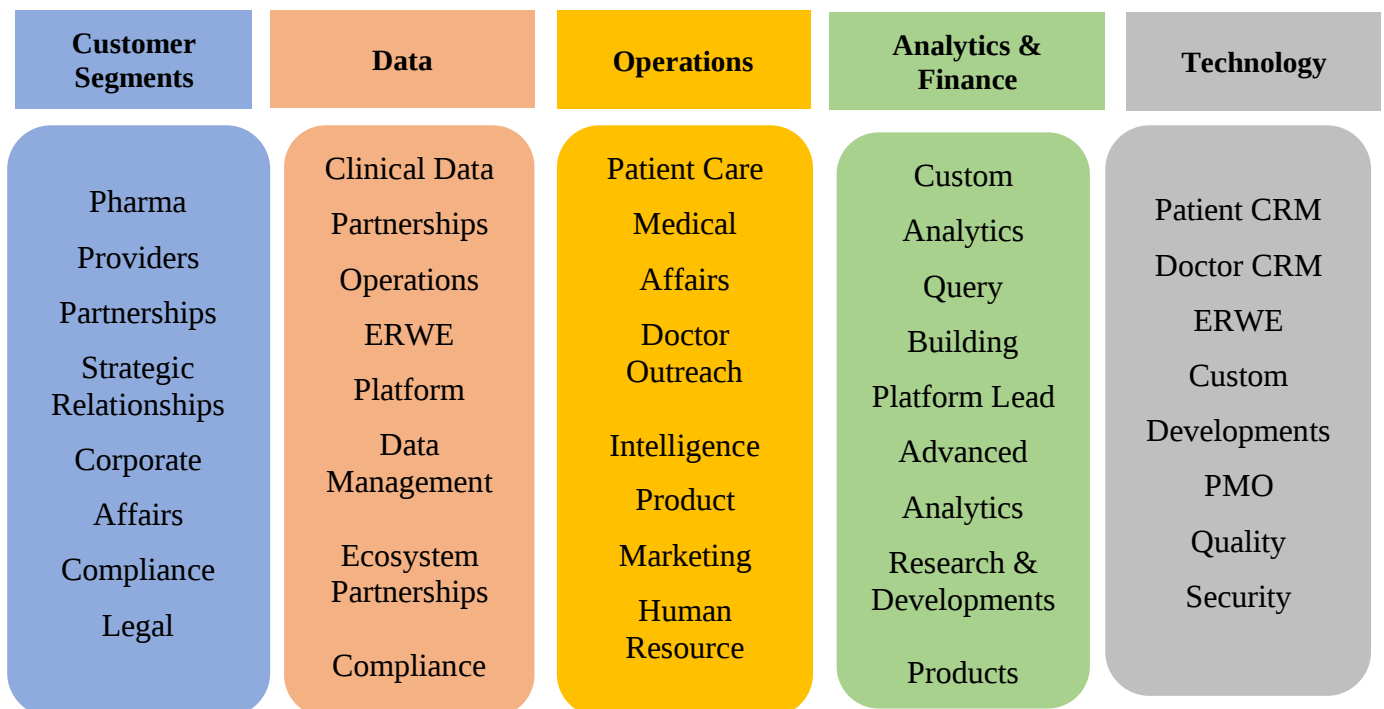


Figure 3 – Organization Structure

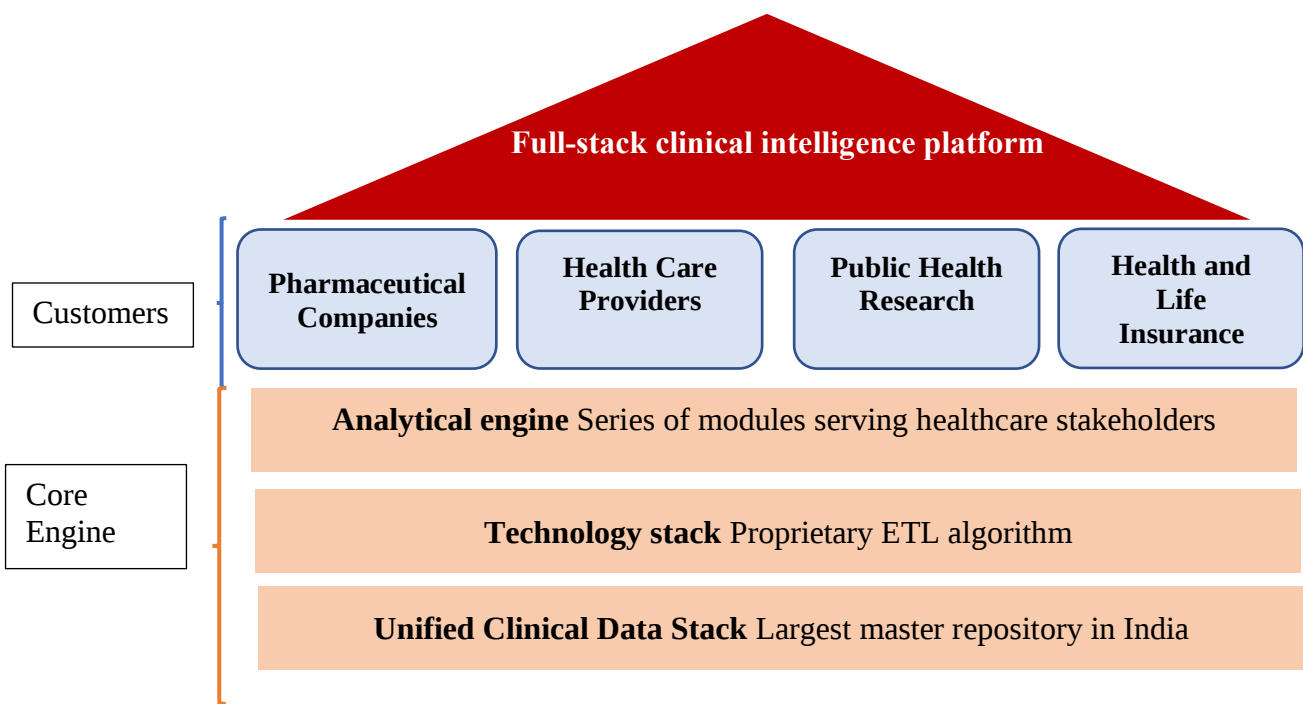


Figure 4 – THB Customers and Core Engine

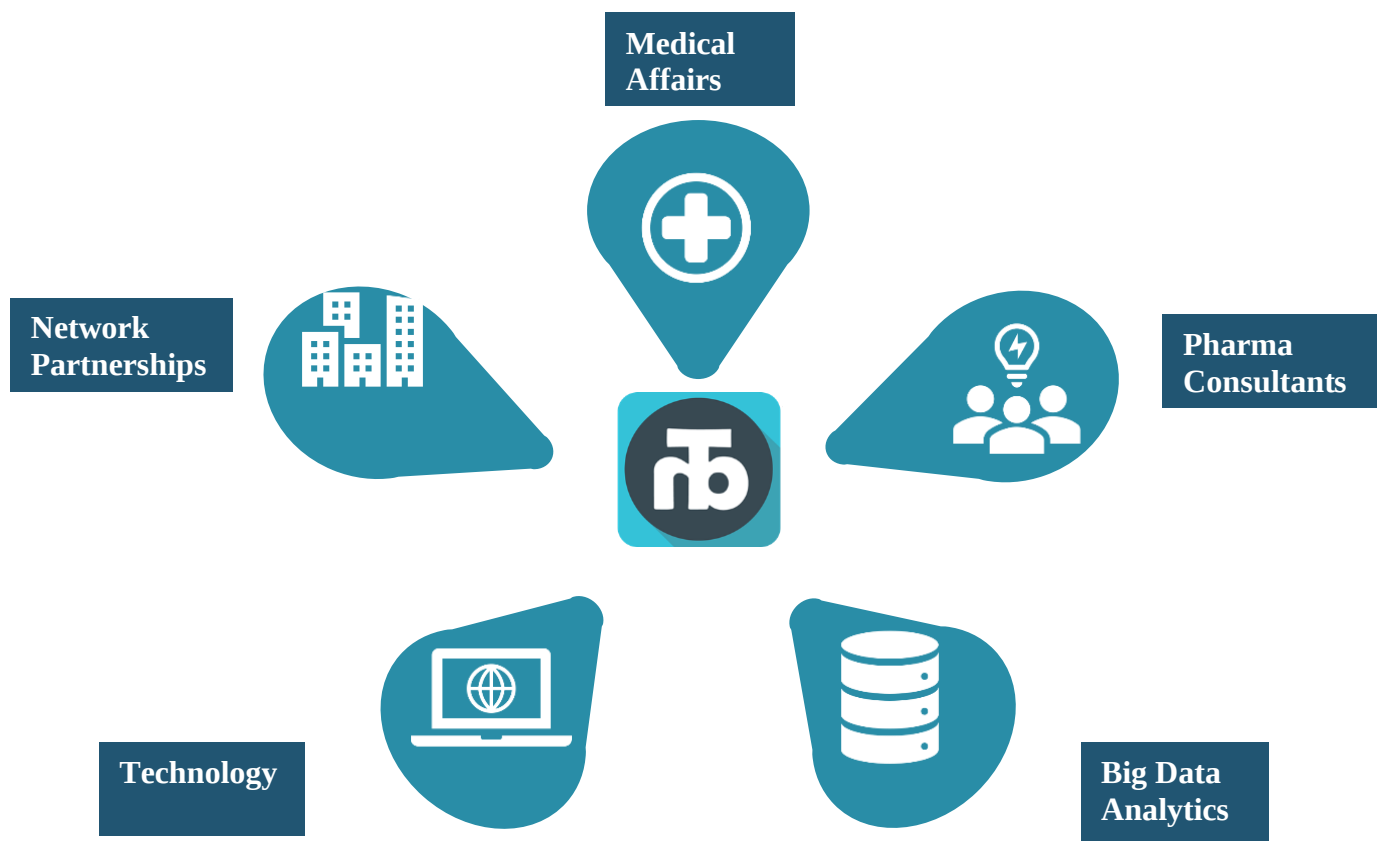


Figure 5 – THB 5 centers of excellence

3. SERVICES PROVIDED BY THE ORGANIZATION

I. Data Foundation

THB helps healthcare providers structure their datasets into a flexi-warehouse with "one source of truth". THB's no-sql framework, powered by the proprietary standardization and de-duplication algorithms, empowers management and clinical teams to drive full-potential value from their datasets.

II. Personalized Patient Care

Product name: PEP

Customers: Healthcare providers, Medical practitioners, Insurance

THB's PEP is a state-of-the-art, fully automated, self-learning personalized patient care and engagement engine. PEP integrates capabilities of patient support team, marketing team, IT teams, as well as customer care in one robust application.

Key highlights include:

- 200mn+ engagements executed to-date
- Improves patient health outcomes by up to 10% within 3-4 quarters
- Increases patient retention rate by up to 1000 basis points
- Delivers net promoter score of 50%+
- Accelerates revenues by 15-20%

III. Real-world evidence backed Population Health

THB empowers the healthcare ecosystem (including but not limited to -- providers, pharma, insurance, public health organizations) to leverage real-world evidence clinical datasets to generate clinical and commercial insights across a variety of areas:

- Disease epidemiology
- Disease prediction and clinical diagnosis
- Treatment pathways and outcomes
- Patient and Doctor behaviours
- Clinical research

IV. Medical salesforce productivity booster

Product name: DMR

Customers: Healthcare providers, Pharma

THB's DMR is a first-of-its-kind platform that enables personalized engagement with medical practitioners, powered by real world evidence, advance analytics, and a proprietary personalization algorithm.

Key highlights of the platform include:

- Exclusive real world evidence content
- Omni-channel digital personalized
- 30%+ improvement in salesforce productivity
- Measurable Outcomes and RoI
- 100%+ increase in clinician outreach

V. Online Doctor

Same Day Same Time

Clinytics in online consultations, providing video appointments accessible and affordable health service in the hands of every person on earth.

- **Completely white-labelled:** Branding as per your practice, clinic & hospital. You are not bringing patients to applications owned by others.
- **No need for patients to download any app:** They just need a smartphone. Consultation & payment link on SMS for video consultation for Doctors. App & Browser solution for hospitals / doctors.
- **Patients only get to see and select your hospital and doctors:** Unlike other applications where they can choose from multiple hospitals / doctors.
- **Can be integrated with your website:** Video consult can be integrated in your website. No need for patients to visit other sites.

VI. Clinical Decision Support

THB supports medical practitioners with algorithms and clinical risk calculators on Indian population.

Some of sample tools include:

- Diabetes Risk-assessment Online Platform (DROP)

- Breast cancer Awareness Wheel (BRAW)
- CKD Prediction Tool

VII. Percept Platform

Customers: Healthcare providers, Pharma

- Perception Audit (one-of-its-kind lead indicator); NPS based precepting monitoring
- Mix of quantitative and qualitative approach to unlock “whys?”
- Advanced analytics tools to unlock real value of data

VIII. Syndicated Therapy Platforms

Customers: Healthcare providers, Pharma

- Patient level data for Oncology (largest in India), Rare diseases
- 360⁰ patient journey including Rx, diagnostics,
- Clinical and commercial insights at one click with right visualization

IX. CapPredict BI Solution

Customers: Healthcare providers

‘CapPredict’ aims to help healthcare organizations move towards high quality, evidence driven, cost effective and patient centric service delivery.

- CapPredict is an advanced BI solution which provides insights to healthcare providers through analysis of their HIS and EMR/EHR data
- The solution is hosted on Amazon and comprises of over 30 dashboards measuring more than 100 KPIs

4. KEY ACTIVITIES/ PROJECTS UNDERTAKEN OTHER THAN DISSERTATION

- Review the KPIs of various healthcare providers.
- Create data logics and baseline data for projects during the pre-sales stage.
- Prepare Project Proposal and Discussion Guide to understand the doctors' perception and awareness for particular brand/drug/molecule.
- Understand HIS and hospital reports in detail. Develop dashboard to improve efficiencies in performance and rating for healthcare providers.
- Monitor KPI performance for healthcare providers, and identify means to improve process and outcome efficiencies.
- Prepare the visualization part for various dashboards on Power BI.
- Carry out preliminary desk research and examine existing and relevant data in order to assess how best to approach the challenges.
- Deliver a robust and decisive or a directional report specifying key steps that must be taken to optimize performance.
- Conduct market research for various brands/drugs/molecules.

5. KEY LEARNINGS FROM INTERNSHIP

- In depth knowledge of the KPIs used to track Revenue Cycle Management, Supply Chain Management, Clinical and quality excellence, Expenses and EBIDTA process in the hospital.
- Working of various departments in THB such as Medical, Product and Insights and Data Analytics.
- In depth knowledge of various products and offerings provided by THB.
- Understanding of the analysis of HIS and EMR/EHR data of healthcare providers.
- Comprehensive knowledge of Discussion Guide and NPS coding done for various drugs/brands/molecules.
- Thorough understanding of drafting of project proposal for various clients.

SOFT SKILLS

- Teamwork
- Problem Solving Skills
- Work Ethics
- Adaptability Skills
- Communication Skills
- Time Management and
- Responsibility