



SynapseHealthTech

Leading Healthcare Through Advanced Technology

SynapseHealthTech : Corporate Overview



Vision

To become the region's **most trusted partner in healthcare market** to help healthcare organizations reinvent themselves by **accelerating digital innovation**, **leveraging next-gen technologies** and driving data convergence across the ecosystem



Mission

- ▶ Leading **pure-play healthcare-focused** technology solutions and services provider
- ▶ Be the **partner-of-choice** for best-in-class healthcare innovative solutions providers in the Middle East

Trusted Technology Partner

With proven expertise in AI and data management, SynapseHealthTech is the ideal partner to guide your healthcare organization into the future.

Proven Results

We deliver tangible results, from improved patient outcomes to operational efficiencies and new revenue streams.

SynapseHealthTech : Recognition & Partnerships



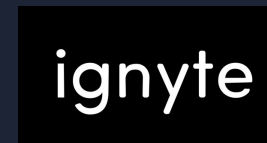
Global
Recognition







Technology
Partners



Events & Other
Partners



SynapseHealthTech : Market Segments

 Payers	 Providers	 MedTech	 Life Sciences
<ul style="list-style-type: none"> ▶ AI/ML based decision library for targeted provider/ member outreach ▶ Cohort Generation Expanded cohort size (optimized parameters) with unsupervised ML model analysis ▶ Payer-Provider Data Convergence services and accelerators for modernized data exchange (FHIR), clinical data collection and management 	<ul style="list-style-type: none"> ▶ Value-based Performance Mgmt. combining clinical, claims and advanced analytics ▶ AI-enabled Care Management e.g., CKD prediction., disease progression, etc. ▶ Digital Patient engagement leveraging consumer analytics, journey mapping, no-show predictions, etc. ▶ Data Strategy Modernization leveraging cloud, data lakes, API gateways, IoMT, FHIR, etc. 	<ul style="list-style-type: none"> ▶ Connected Health 360° patient view and multivariate analytics ▶ AI-Assisted Health & Predictive Analytics for patient access, CDS, next-gen imaging, device mgmt. & risk mgmt. ▶ Digital Transformation to digitize paper records, reduce technical debt, modernize platforms and enable future strategies 	<ul style="list-style-type: none"> ▶ Sequencing Services & NGS Data Analysis Whole Exome Sequencing (WES), Whole Genome Sequencing (WGS), or targeted NGS - identify genomic variants, to make informed decisions quickly. ▶ Variant Annotation expert interpretation of genomic variants, to prioritize and make informed decisions about patient care ▶ Pharmacogenomics Understand the impact of a patient's genetic information on their response to drugs

SynapseHealthTech : Our Products



PrivaSure

Protect **sensitive patient information** with our advanced de-identification solution. Our platform seamlessly combines the robust **Safe Harbor** method with the precision of **Expert Determination and Tokenisation**, ensuring comprehensive data privacy.



PDCM

Post Discharge Care Management (PDCM) is a patient management application to help track **recovery progress**, manage co-morbidities, monitor status of the engagement and monitor health indicators for individuals **post-surgery**



Radio-Reporter

Simply upload any radiology or medical image, and our advanced algorithms will swiftly **generate insightful reports**, highlighting **potential diagnoses**, anomalies, and **critical findings**. Empower your healthcare team with accurate, timely, and actionable information, leading to improved patient outcomes and streamlined workflows.



Intel-Med Coder

Say goodbye to time-consuming manual coding and hello to unparalleled accuracy and efficiency. Our advanced AI algorithms analyze medical documentation, automatically **identify relevant codes**, and generate accurate and **compliant medical codes within seconds**.

SynapseHealthTech : Our Services



Artificial Intelligence

Developing AI/ML strategies, models, and data analysis solutions that enable healthcare organizations to leverage the **power of data** and drive **actionable insights** for improved decision-making and patient care



Digital Transformation

Guiding healthcare organizations through their digital transformation journey, creating **digital roadmaps**, implementing robust data management systems, and enabling agile project management to drive **operational efficiency and innovation**



Healthcare IT Interop

Enabling seamless **data exchange** between systems, empowering providers to make informed decisions. From **EHR implementation** to data analytics, we deliver tailored strategies that drive efficiency, enhance security, and ultimately, **improve patient outcomes** and achieve **regulatory compliance**.



Blockchain and Web 3.0

Enhance **data security, privacy, and interoperability**, enabling seamless collaboration across the healthcare ecosystem. Transform the way healthcare data is managed and shared.

SynapseHealthTech : Artificial Intelligence



Model Development

- **Develop** end-to-end AI/ML programs - from Data to Decisions
- Support / lead development of new DS (AI/ML) models
- Data pre-processing, mining & EDA for development of custom models



Model Operationalization

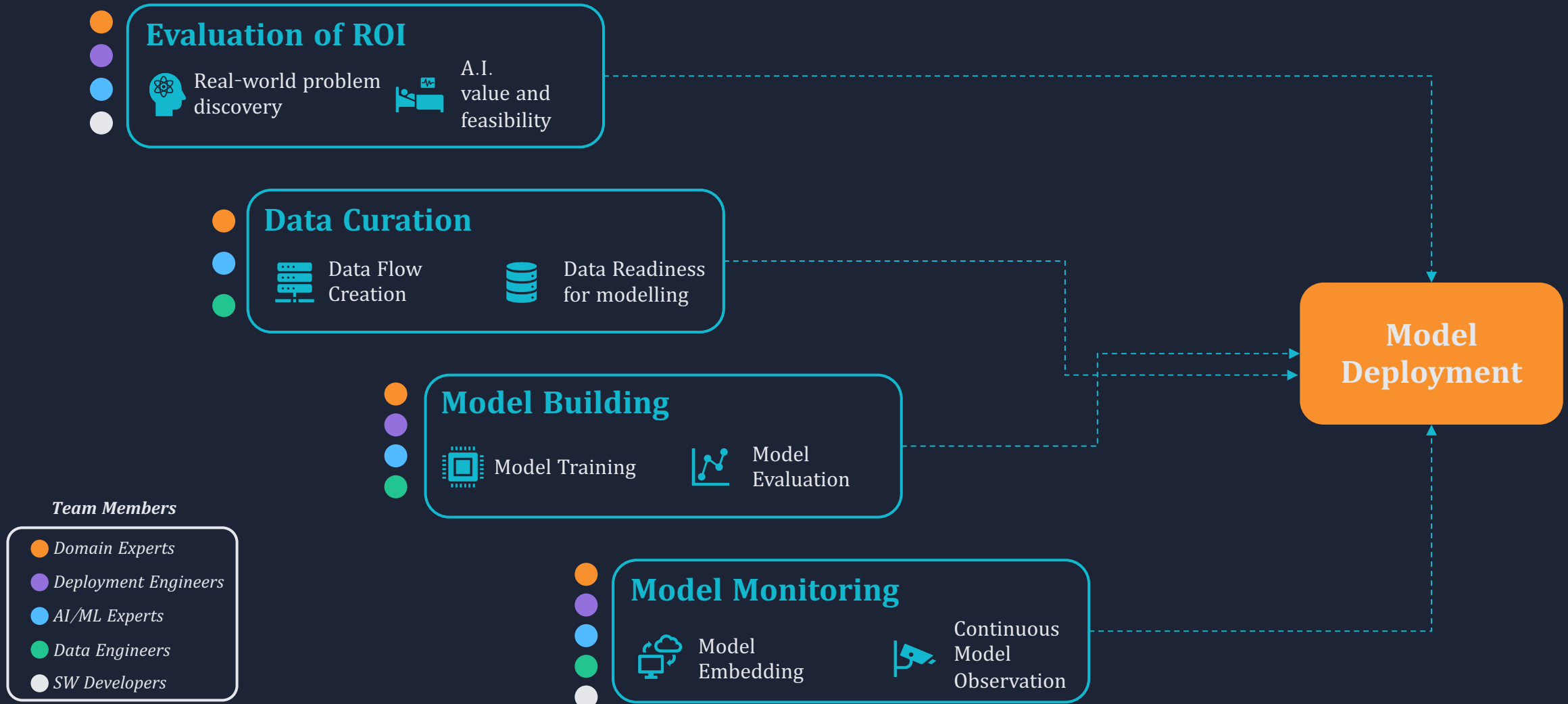
- Validate & **integrate models** with business workflows (model operationalization)
- Develop models for 3rd party use (model productization)
- Provide ongoing monitoring of model performance



AI Training & CoE Enablement

- Help organizations set up **Data Science Center of Excellence (CoE)**
- Scale client's Data Science capabilities (incl. ROI assessment, platforms, processes)

Artificial Intelligence : Capabilities



SynapseHealthTech : Digital Transformation

Clinical and Administrative Process



Improved quality and efficiency in patient care: Having instant and constant access to data on a patient's health can make it much easier for medical professionals to diagnose, monitor and adjust treatments for maximum effectiveness.

Decision support tools: Equip health care professionals with insights and suggestions that enhance diagnostic accuracy. Additionally, these resources can incorporate preventive care reminders and warnings about potential high-risk conditions.

Data, Reporting and Analytics



Better disease prevention: Big data analytics and AI can help identify trends enabling more effective and targeted interventions at the population level.

Cost-effectiveness: Reduce health care costs by streamlining processes, facilitating preventive care, and enabling remote consultations

Fragmentation of service delivery: Aligning with a standard objective of closer integration, digital health can be effectively used to improve the level of coordination required.

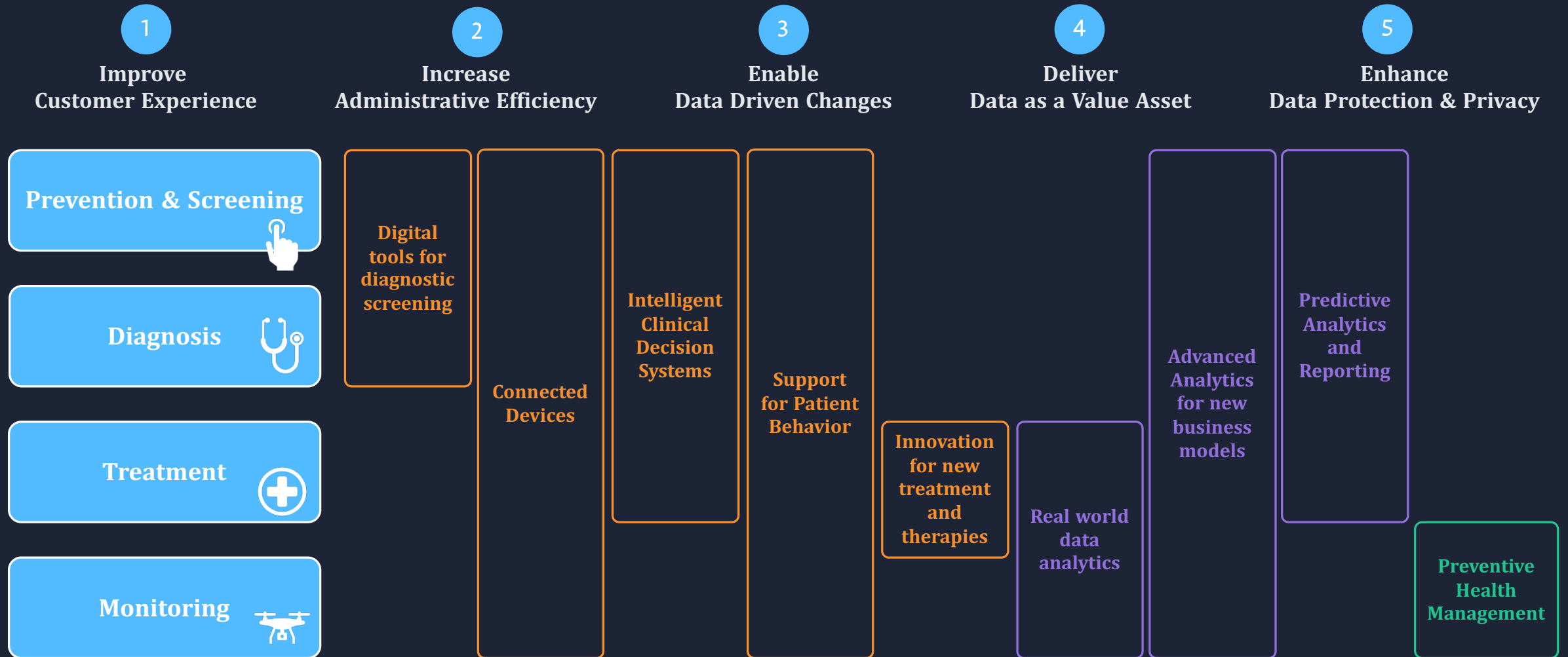
Access, Communication and Integration



Preventive care : Wearable devices, mobile health apps, and remote monitoring can help track patients' vital signs allowing for early detection of potential health issues, reducing the need for hospitalizations, and lowering health care costs.

Personalized health care and precision medicine: Digital health technologies, such as genomics, AI, and machine learning, can help in the development of targeted therapies and precision medicine, tailoring treatments to individual patients' specific needs and genetic profiles.

Digital Transformation : Capabilities



SynapseHealthTech : Healthcare IT & InterOp

Key Segment Offerings

EHR & Clinical Applications

Develop & certify EHRs, web portals & mobile apps, comply to 21st century cures, FHIR standards and ONC, CMS, FDA regulations

Medical Imaging

Integrate modalities, RIS / PACS using DICOM / IHE / HL7, FHIR apps, AI-based imaging & long-term support

Medical Devices

Develop SaMDs & embedded software, cloud-enable devices, extract, analyse device data & comply with regulations

Financial & RCM Apps

Develop RCM solutions, EDI integration, AI/ML based claims analysis & RPA (intelligent automation)

Pharma & Life Sciences

Comprehensive tech solutions for clinical trials enablement, patient monitoring, medication access and more

Core Technology Practices



Product Engineering

Build next generation Healthcare platforms on cloud-ready, scalable technologies & modernize legacy



Data Management

Integrate (HL7, FHIR, EDI, DICOM etc.) and manage (EDW, Data Lake) complex healthcare data & apps



Data Science

Streamline operations & improve outcomes through AI/ML, NLP and Deep Learning solutions



Serviceability

Stay focused on future by leveraging end-to-end support services for existing products



Quality & Cybersecurity

Improve quality, performance with QA Automation & DevOps while ensuring HIPAA, GDPR compliance



Professional Services

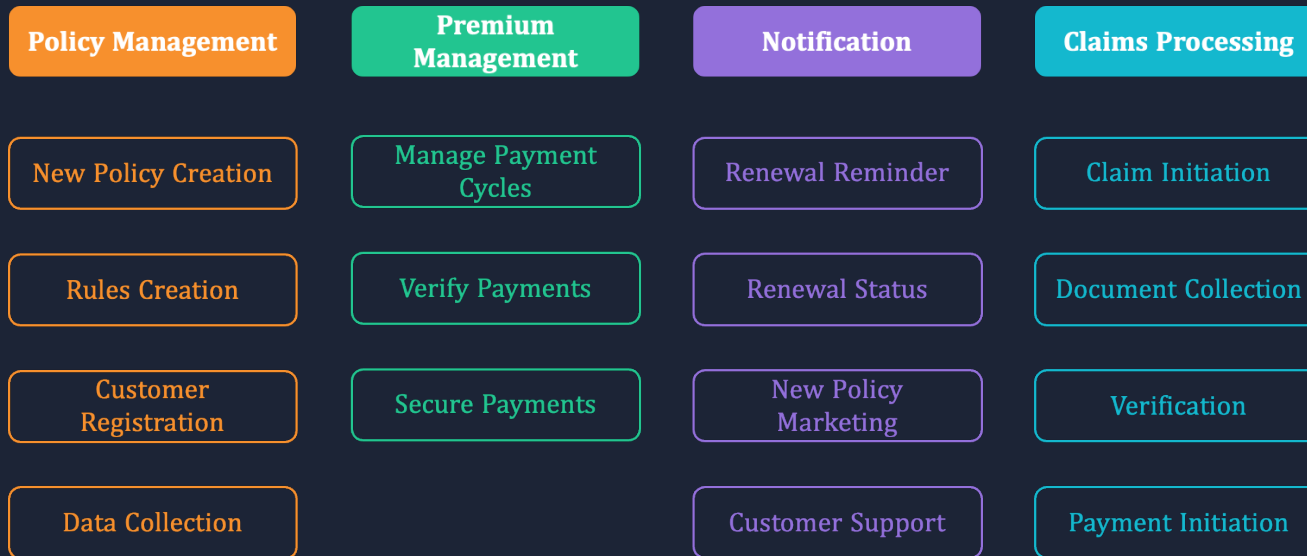
Implement and configure HIT products, monitor interfaces and reduce operational errors

SynapseHealthTech : Blockchain & Web 3.0

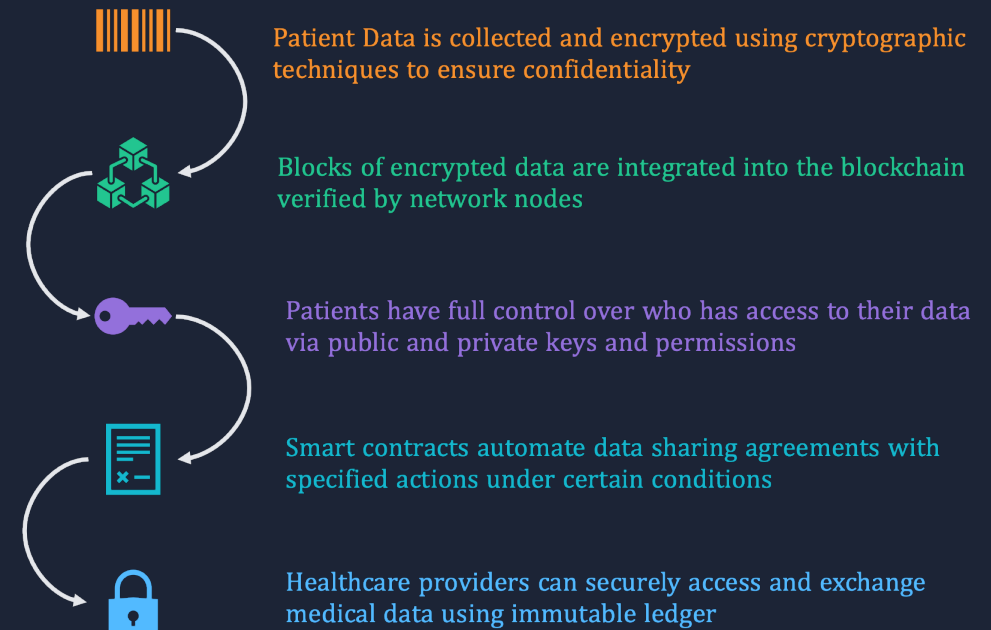


For Payers

Blockchain Environment



For Providers



Blockchain & Web 3.0 : Capabilities

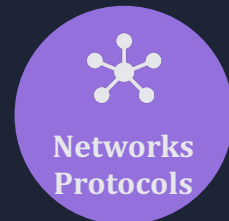
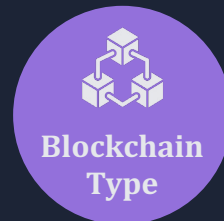
Stakeholders

Government | Public | Researchers | Regulators | Patients

Healthcare
Applications



Blockchain
Technology



Security & Privacy

Healthcare
Data

Clinical | Lab Data | Claims Data | Medical Images | EHR/EMR Data

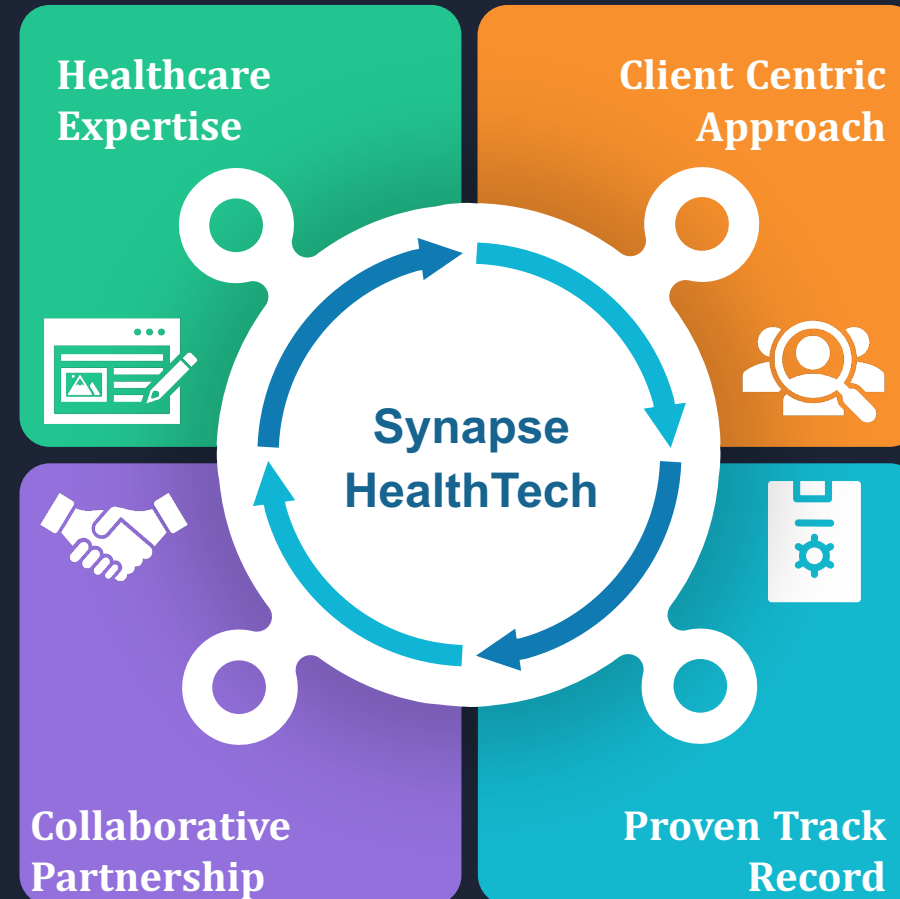
SynapseHealthTech : Value Proposition

Healthcare Expertise

Our team comprises certified healthcare domain experts, data scientists, technology architects, and project management professionals

Collaborative Partnership

We believe in building strong partnerships with our clients, working closely with their teams to co-create solutions that address their specific needs, align with their strategic goals, and deliver tangible results



Client Centric Approach

We recognize that every healthcare organization is unique. Therefore, we take a customized approach, offering personalized services and solutions that fit our clients' requirements, resources, and organizational culture

Proven Track Record

We have a successful history of delivering innovative solutions and achieving measurable results for our clients across various healthcare sectors. We comply to 21st century cures, FHIR standards and ONC, CMS, FDA regulations, HIPAA, GDPR compliance, DICOM / IHE / HL7, FHIR apps

SynapseHealthTech : Expertise & Team

Business Analyst

- Offers subject matter expertise and consultation during the course of the project
- Provides the business context to the statistical findings
- Expert Profile: Consulting physicians , radiologists, etc.

Data Analyst/ Data Engineer

- Helps build, construct and transform data into relevant information
- Establishes pipelines to help data analysts pull out relevant data sets for analysis
- Expert Profile: Certified Engineers (HL7, MS, AWS , GCP, etc.)

Data Scientist/ Statistician

- Offers expertise in disease modeling, statistical techniques and toolsets
- Model, test and check analytic workflows exposed in analytic apps, for validity for the specific datasets
- Expert Profile : PhD / Masters in Statistics , Math , Bioinformatics, etc.



Clinical Informatician

- Identifies clinical practice workflows and processes
- Defines system and process requirements to optimize performance
- Identifies technology utilization by medical practitioners
- Expert Profile: Masters / Bachelors in Pharmacy, Public Health, etc.

SynapseHealthTech : Engagement Strategies



Staff Augmentation

- **Dedicated SynapseHealthTech team**, either standalone or an extension of in-house analytics team
- **Time and material based** analytics support, e.g., data profiling, model development, reporting
- **Quick turnaround** time due to experience with clinical systems & data

Ideal for ongoing and ad-hoc projects



Project-Based Engagement

- **Clearly scoped out projects** – to develop end-to-end analytics solution
- **Fixed project milestones** and key deliverables that are tracked by SynapseHealthTech
- **Completely managed services** – with senior level resources managing the project

Ideal for specific timelines and budgets



Gain-Sharing Model

- Clearly defined business targets – with an **outcome-based approach** to costs
- **Continuous tracking of value** to customer and changes to resource / team structure based on needs
- **Lower upfront investment** plus significant upside for meeting / exceeding targets

Ideal for lower upfront investment and clear business needs

SynapseHealthTech : Client Success Stories (1)

Predicting Risk of Opioid addiction

The healthcare provider required a predictive analytics solution to identify patients at high risk of opioid addiction early, enabling timely intervention and support to enhance patient outcomes

Optimized Pricing for Insurance

The client aims to analyse insurance data to identify key factors affecting charges. The goal is to predict and manage insurance charges accurately using data science and machine learning

Health Insurance Cross Sell Prediction

The client wants to use health insurance data to predict policyholders' interest in vehicle insurance. They aim to identify key factors to improve targeting and communication strategies for vehicle insurance offerings.

Predictive Arrhythmia Detection

The client needed a model to detect arrhythmia from wearable sensor data, including accelerometer, gyroscope, magnetometer, and ECG signals.

Automated Medical Coding

The client required an automated solution to enhance ICD-10 coding accuracy and efficiency, utilizing advanced language models to predict ICD-10 codes and descriptions from medical condition descriptions

Medical Text Classification

Improve the accuracy of classifying clinical notes into five disease categories using a BERT-based model to enhance diagnostic efficiency and patient outcomes

Predicting the patients at risk of Brain Stroke

The client seeks to use medical data to identify factors influencing stroke occurrences. They aim to leverage data science and machine learning to predict stroke risks and improve healthcare strategies

Image Analytics for Adult Teeth Segmentation

The client aims to enhance dental diagnostics and treatment planning by using Attention UNet for accurate segmentation of adult teeth in dental Xray images.

SynapseHealthTech : Client Success Stories (2)

Image Analytics for Child Teeth Segmentation

The goal is to enhance dental diagnostics and treatment planning through precise identification of dental structures, addressing the challenges associated with manual segmentation

Pediatric Dental Detection Image Analytics

The client seeks to enhance dental diagnostics and treatment planning by using deep learning, to accurately detect paediatric dental conditions from X-ray images

Breast Cancer Classification

The client seeks a deep learning model leveraging convolutional neural networks (CNNs) to effectively differentiate between benign and malignant breast cancer images.

Quantifying Risk of Skin Cancer

The client aims to leverage dermoscopic images to quantify the patient's risk of skin cancer by segmenting skin lesions accurately.

Lung Cancer Identification - Image Analytics

The goal is to utilize chest X-ray images to detect and segment regions indicating the presence of lung cancer.

Lung Cancer Classification - Image Analytics

Develop a robust system capable of accurately classifying DICOM images as either cancerous or non-cancerous lung conditions.

Forecasting Staffing Needs using EHR data

Develop a workforce planning program to analyse and improve staffing efficiencies to better meet the short-term and long-term needs as part of future annual business and budget planning process

NLP to Predict Neonatal Jaundice using Clinical Notes

Harness the power of natural language processing (NLP) and machine learning to automate the process of abstracting patient level predictor capable of identifying jaundice in ICU clinical notes.

SynapseHealthTech : Client Success Stories (3)

Image Analytics for Lung Cancer

The client aims to leverage Computed Tomography (CT) images to quantify the patient's risk of suffering from lung cancer.

Predicting Risk of Accidental Falls

Payer client was interested in leveraging advanced analytics to save costs by preventing accidental falls among seniors

Cost Containment for Payers

Objective was to implement a scalable and automated framework to quantify total savings and fair allocation to individual initiatives.

Predicting Claims Denials

A leading healthcare information management company wanted to apply predictive analytics on its claims data to analyse factors that caused denials, predict claim denials and reimbursed/ denied amounts

Underpayment of Claims

Client has a coding, auditing workflow management platform and wanted to mine the claims and payments data to generate actionable insights to identify underpayments scenarios

Predicting Length-of-Stay

Leading Health care provider wanted to reduce length of stay (LOS) of its diabetes patients, and needed a simulation model to identify patients likely to have High Length of Stay (HLOS) at the time of admission

Probability of Readmissions

A leading provider of inpatient healthcare services wanted to significantly lower its readmission. The required solution needed to analyse factors that caused readmissions

Predicting High Risk CKD Patients

Client was interested in harnessing the power of predictive analytics to deliver the best value to the nephrologists. Objective was to identify high-risk (CKD) patients progressing rapidly towards (ESRD).

SynapseHealthTech : Next Steps

- Engage with SynapseHealthTech to explore how our AI and data solutions can transform your healthcare business.
- Initiate AI-driven pilot programs to validate and refine healthcare solutions.
- Invest in the future with SynapseHealthTech as your trusted technology partner.

1 Initial Assessment (5 weeks)

Identifying High-Impact Opportunities, Sizing and Prioritizing Paths to Achieve Your Strategic Goals

2 First 50 (9 weeks)

Develop detailed plans for key initiatives, assigning clear ownership and outlining actionable roadmaps for implementation throughout the organization.

3 Final Delivery

Execution and acceleration initiatives ensuring lasting change, with continuous governance guaranteeing sustained value. Unlocking maximum benefit through agile execution & strategic acceleration that locks in positive change.

Thank You



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