Smart Care For Improved Healthcare Outcomes

IMPROVING EFFICIENCY & REDUCING OVERHEADS IN HEALTHCARE THROUGH CONNECTED CARE

Who We Are

We are a healthcare technology company specializes in Tele-health and Connected Care Products and Solutions. Products are purpose built atop our proprietary platform and optimized for small-to-medium health and wellness settings allowing integrated and personalized care delivery to patients.

What we Offer

Broad spectrum of healthcare products suite includes:

- Connected Care, Tele-medicine, EHR and Patient-side smart solutions.
- FHIR based integration with EMR such as Cerner and Epic
- AI Chatbot and Process Automation Solutions
- Fully Integrated platform pre-integrated with medical devices and capable to get integrated with Pharmacies to enhance patients' experience.
- Care Platform-as-a-Service (PaaS) for ISVs and System Integrators

Business Model

Since 2017, we have established footprints in USA, UAE and Asia.

We run our sales cycles through channel partners, OEMs and direct sales.

Typical customers range from small hospitals/clinics, private practicing doctors, augment care delivery centers and ISVs.

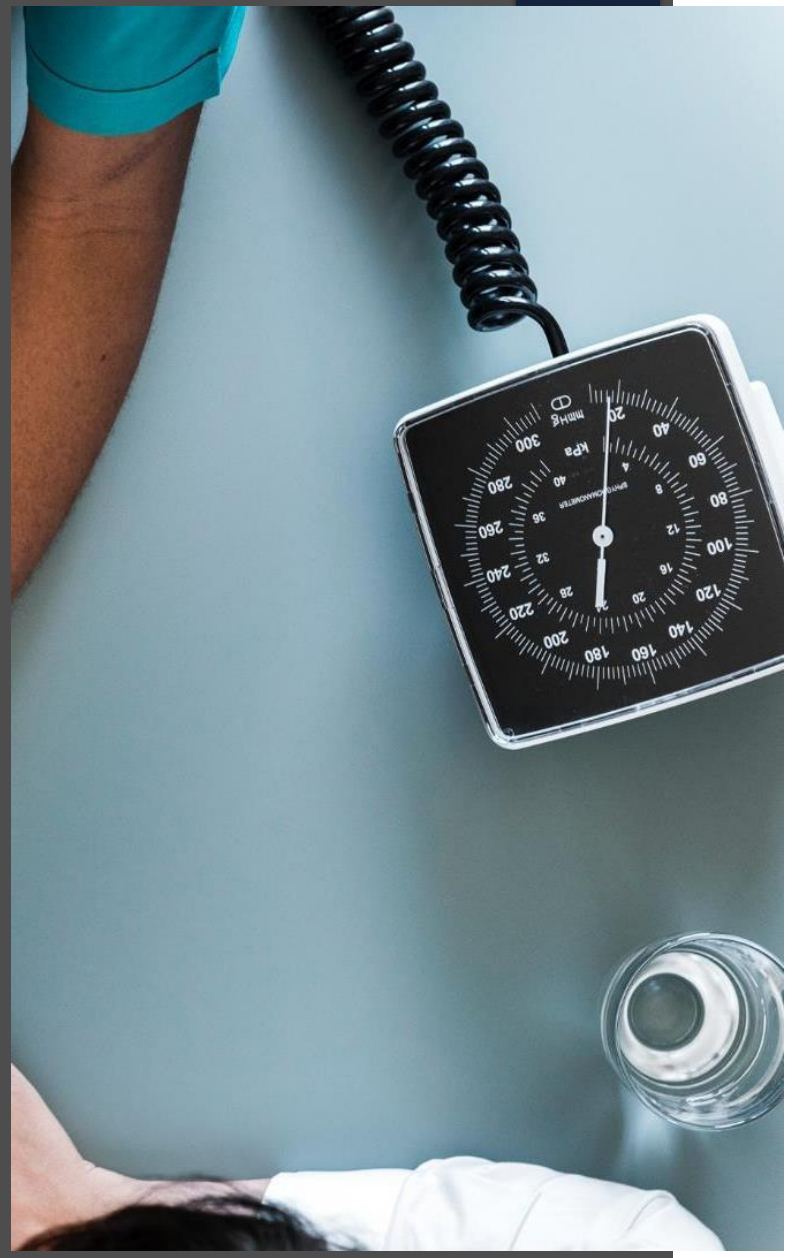
Sales and Growth Strategy

Since 2019, reasonable year-over-year growth in sales owing to our strategic alliances and partnerships.

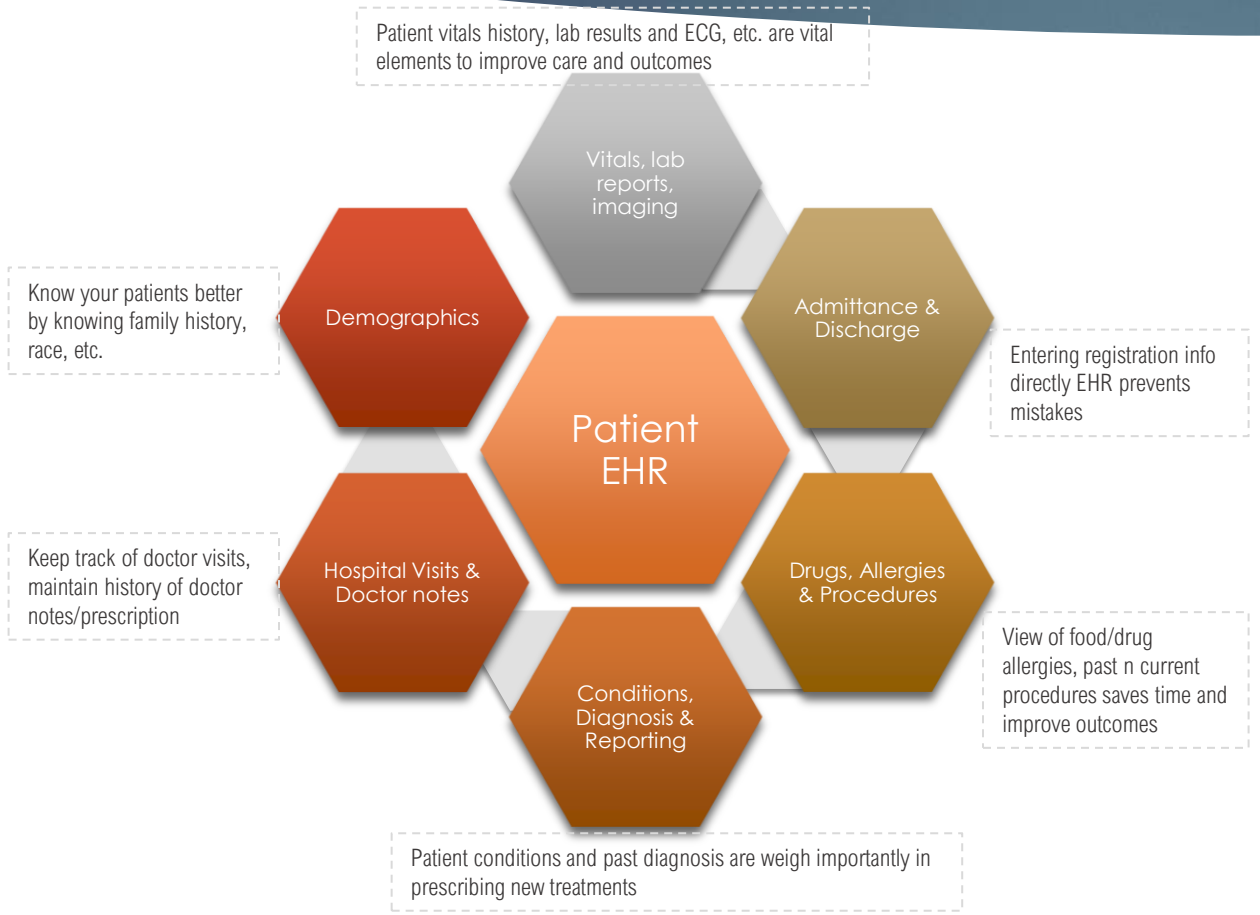
As part of our growth strategy we offer Care Platform-as-a-Service, AI based applications (such as chatbot), Tele-health and Connected Care solution for augmenting service delivery.

Electronic Health Records

WHAT DOES IT MEAN TO HOSPITALS AND DOCTORS



Electronic Health Records



Fundamental elements of Electronic Health Records

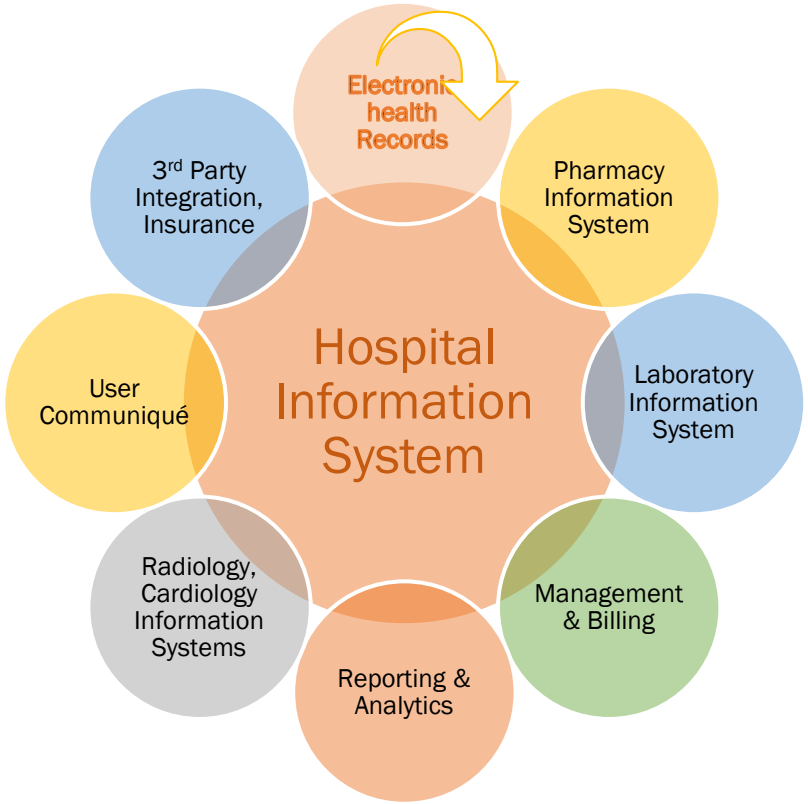
EHR is the practice of acquiring, analyzing and recording traditional Medical and Health information in a digital format.

With the widespread computerization of health records, traditional (paper-based) records are being replaced with EHRs

A well-organized Electronic Health Record system is vital to providing quality, values-based patient care

EHRs may include a range of data, including demographics, medical history, medication and allergies, immunization status, laboratory test results, radiology images, vital signs, personal statistics like age and weight, and billing information

Hospital Information System



Digital System model showing notable elements (sub-systems) of Hospital Information Management System (HIMS)

Hospital Information System (HIS) is a data collection system specifically designed to support planning, improved management, and decision making in health facilities.

A well-organized EHR (vital element of HIS) is important for a thriving health system. Hence the Information digitization.

Users (Patients, Doctors, Physician, Nurses) are essential elements of any HIS

Centered around Patient outcomes, several (small and large) systems collectively make up the foundation of HIS that maintain holistic view about patients

Connected Care

CHANGING TIMES AND NEW TRENDS IN CARE DELIVERY MAKES IT CRUCIAL TO HAVE FOR PROVIDERS TO STAY RELEVANT

The Problem

Total Cost of Care

Cost for doctor visits and hospitalization is getting exorbitant

Time Management

Imbalanced doctor to patient ratio in hospitals and long wait times

Overloaded OPD

Insufficient staff available to cope with the patients load especially in the wake of COVID-19

Lack of Adherence

Patients find it hard to adhere to chronic treatments without a good support system

Health worries for the staff

Too many and frequent physical visits take its toll on management and facilities

Value Proposition

Decreased Costs

Patient monitoring done on a real-time basis and seamless transfer of information, cuts down on costs due to decreased in-patient stays and by cutting down on unnecessary visits to doctors.

Improved Outcomes

Real-time feedback from all parties of the care team, creates scope for a much more informed decision making. This ensures healthcare provision is timely and treatment outcomes are improved.

Reduced Errors

Accurate collection of data, automated workflows combined with data driven decisions are an excellent way of cutting down on waste, reducing system costs and most importantly minimizing on errors.

Enhanced Patient Experience

Proactive treatments, improved accuracy when it comes to diagnosis, timely intervention by physicians and enhanced treatment outcomes result in accountable care that is highly trusted among patients.

Enhanced post-acute care & drug management

Harmonization between patient and physician post hospitalization, ensures proactive care and better drug management, thereby reducing re-admissions and increasing scope of full recovery.

Importance of Connected Care

- ✓ Smart care delivery causes improved outcomes and patient satisfaction; decrease in re-admissions and physical visits.
- ✓ Tele-consultation, treatment & nutrition plans, health discussions and health tips with professionals via MMS and virtual visits.
- ✓ Almost no overhead to reach patients in timely manner and intervene promptly when needed.

Digital Care Eco-system

Health Devices

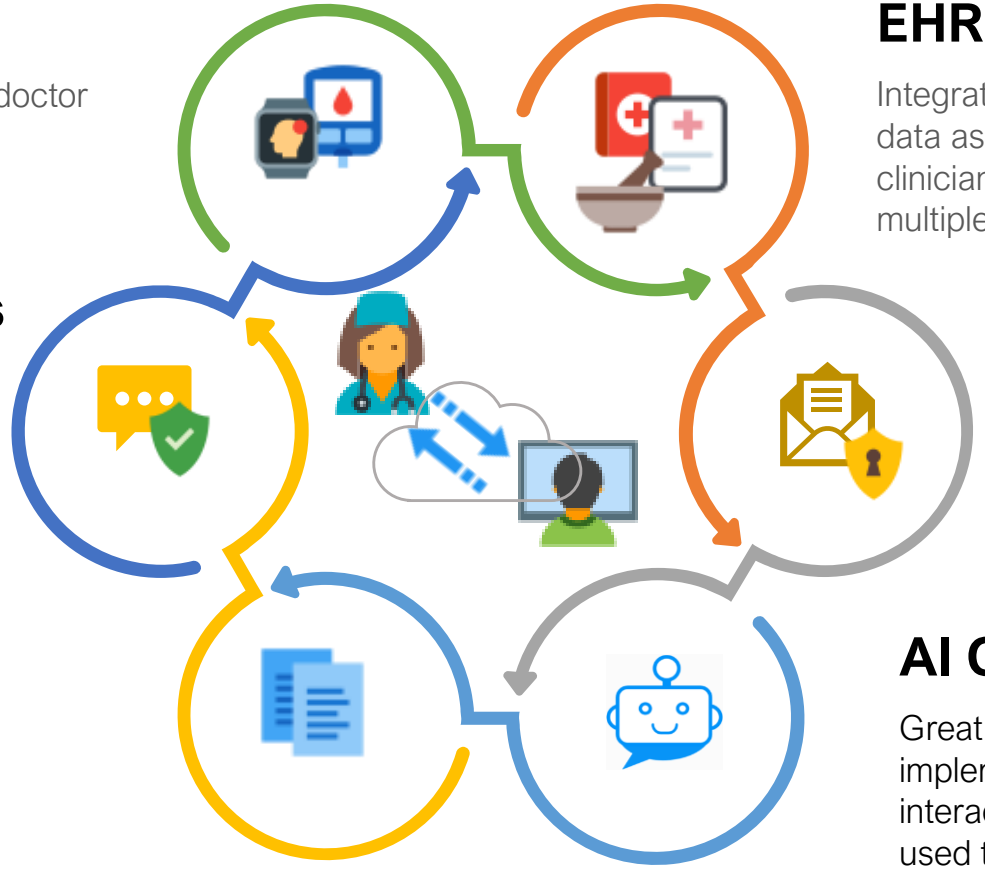
Connect and share vitals with your doctor from home based medical devices.

Push Notificaiton & Alerts

Securely send messages and push notificaiton

Lab Reports, Blood Tests

Share reports between providers and patients



EHR & Pharmacy Integration

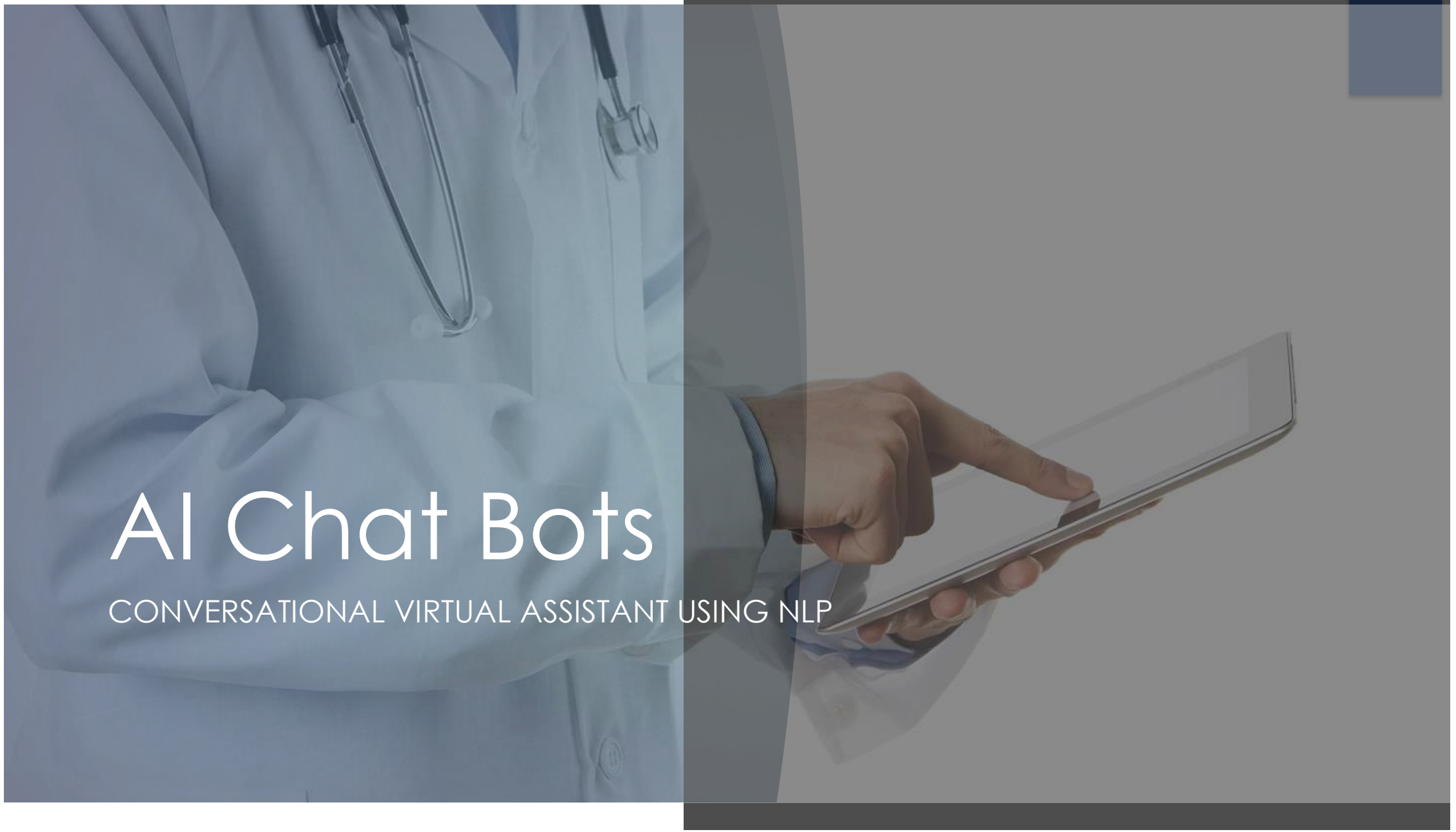
Integrating digital health products both in terms of data as well as clinical workflow. It requires clinicians and other users to login and use multiple products

Secure Communication

All patient data within the system is secured and clinician and patient can access the data without risk of a breach.

AI Chatbot

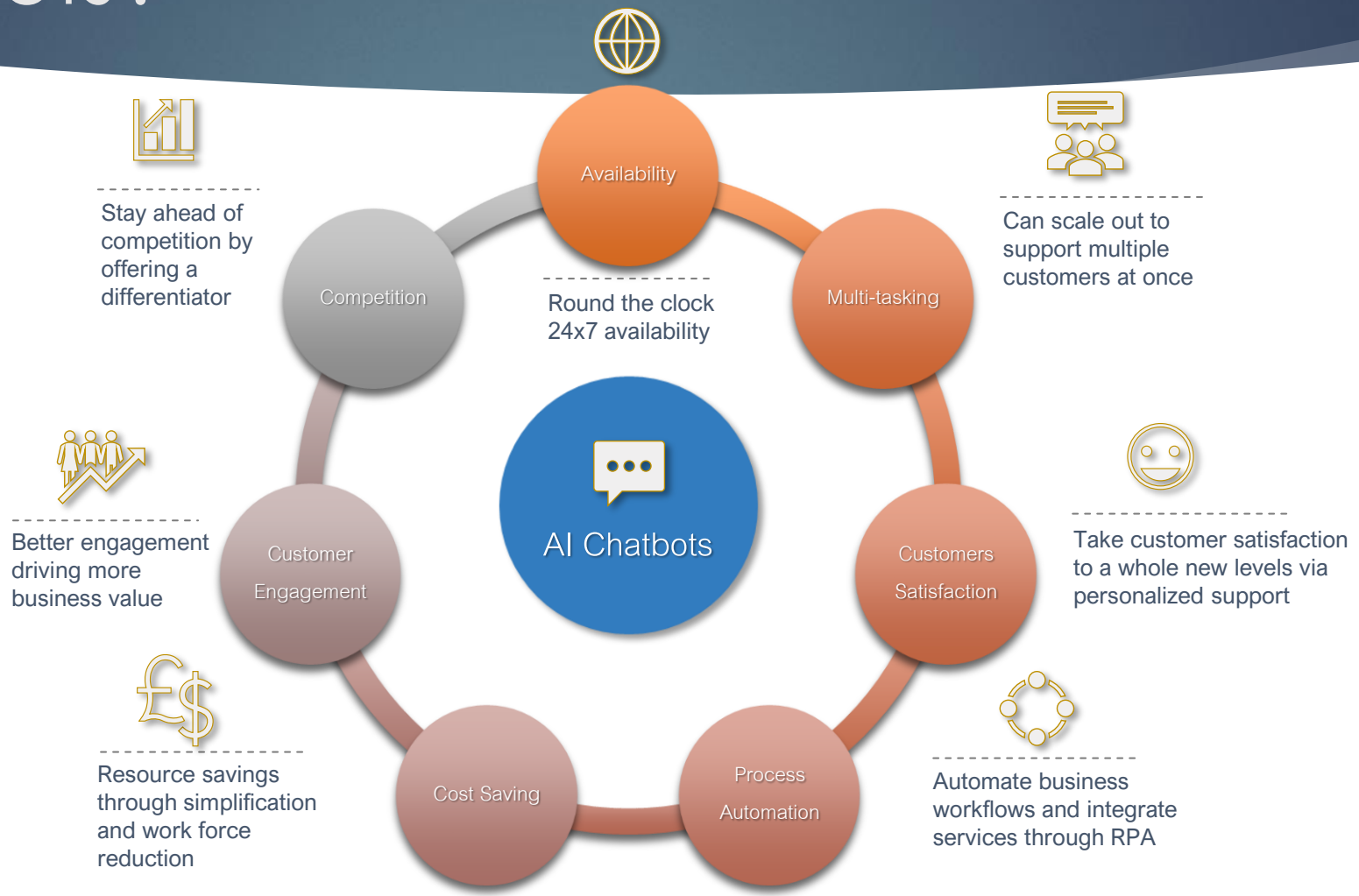
Great way to disseminate care knowledge, implement process automation (RPA), tailored and interactive user experience delivery as well as be used to help doctors fetch information, order supplies, etc.



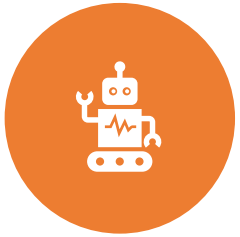
AI Chat Bots

CONVERSATIONAL VIRTUAL ASSISTANT USING NLP

Why Do Businesses Invest in AI Chatbots?



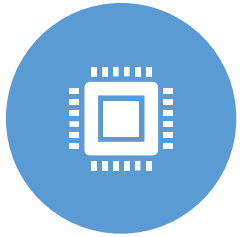
Operational Benefits



BUSINESS PROCESSES AUTOMATION AND MULTI-TASKING

TAILORED AND INTERACTIVE USER EXPERIENCE DELIVERY

COLLECTIVELY SUPPORTING COMPLEX QUERIES AND PERMUTATIONS



SCALABILITY, DEPENDABILITY, TRACEABILITY AND SELF-LEARNING

TIME AND COST SAVINGS THROUGH ADMINISTRATIVE BURDEN REDUCTION

Chatbot Relevance In Healthcare

Medical Knowledge

Trained using real historical data, bots can guide the parents or patients by understanding symptoms, assessing conditions, demographics, etc. and identify the care needed.

Context Awareness

Much like a real conversation between a doctor and a patient, bots learn the dialog flow and stay relevant.

Relevant and Data driven

Data and evidence drive them, as opposed to hard coded logic making them effective learner. It can remind patients to take their medication, help them stay motivated to stick to their schedules.

Operational Efficiency

Not only they can provide relevant medical information, they can also be used to help doctors look up medication information, order supplies, write prescriptions and other practitioner-specific administrative tasks.

Process Automation

Bots are the enablers for Robotic Process Automation (RPA). Patient history, training materials and other notes can be sent to relevant parties to create treatment plans or keep patients on track with their health goals.

Provider's Assistant

Chatbots can also help healthcare providers with customer service, assisting with tasks like taking patient information, answering medical questions, and booking appointments.

Patients' Administration

Used to streamline admissions, create discharge or transfer requests, schedule patients, send and receive referrals and quickly retrieve pertinent patient information from EMR/EHR files.

Chatbots Landscape

Sensely	Ada	*Pollak	Babylon	Sophie
Patients can report their symptoms and receive either a referral or self-care advice. In partnership with the Mayo Clinic.	You tell the bot your symptoms, and it gives you a possible diagnosis.	NLP (AI) based bot helps in automating tasks such as health records retrieval, sending custom reminders, basic symptoms checker, appointment booking and much more.	Provides a symptom checker bot. It helps in booking in-person or tele-health appointment with a doctor.	Helps in navigating healthcare journey. AI chatbot allows to upload medical data and evaluate symptoms

Chatbot In Healthcare System

Scenario #1: Patient Conversation	*Hi Sam! What can I do for you today?*
	I have been feeling dizzy for the last hour.
	Oh! What is your current body temperature?
	39 C
	I see. That is above normal. Are you feeling any other symptoms?
	I'm also feeling slightly feverish.
	Okay. I recommend you meet your doctor. He is available at 6 PM today. Would you like me to book an appointment for you?
	Yes, please!
	Done! I have fixed your appointment.

Chatbot In Healthcare System

Scenario #2:

Doctor Conversation

Hi Dr. Filipe! What can I do for you today?

I am looking for treatment plan for patient Dennis

You have treated 2 patients by the name Dennis, which Dennis will it be?

Dennis Jackson | *Dennis Miller*

You selected Dennis Miller, here are the links to his treatment plan based on certain priorities:

Telemedicine notes, EHR record, Questionnaire, Prescriptions

Great, thanks! One more thing, I need to send email reminder to this patient for follow up visit

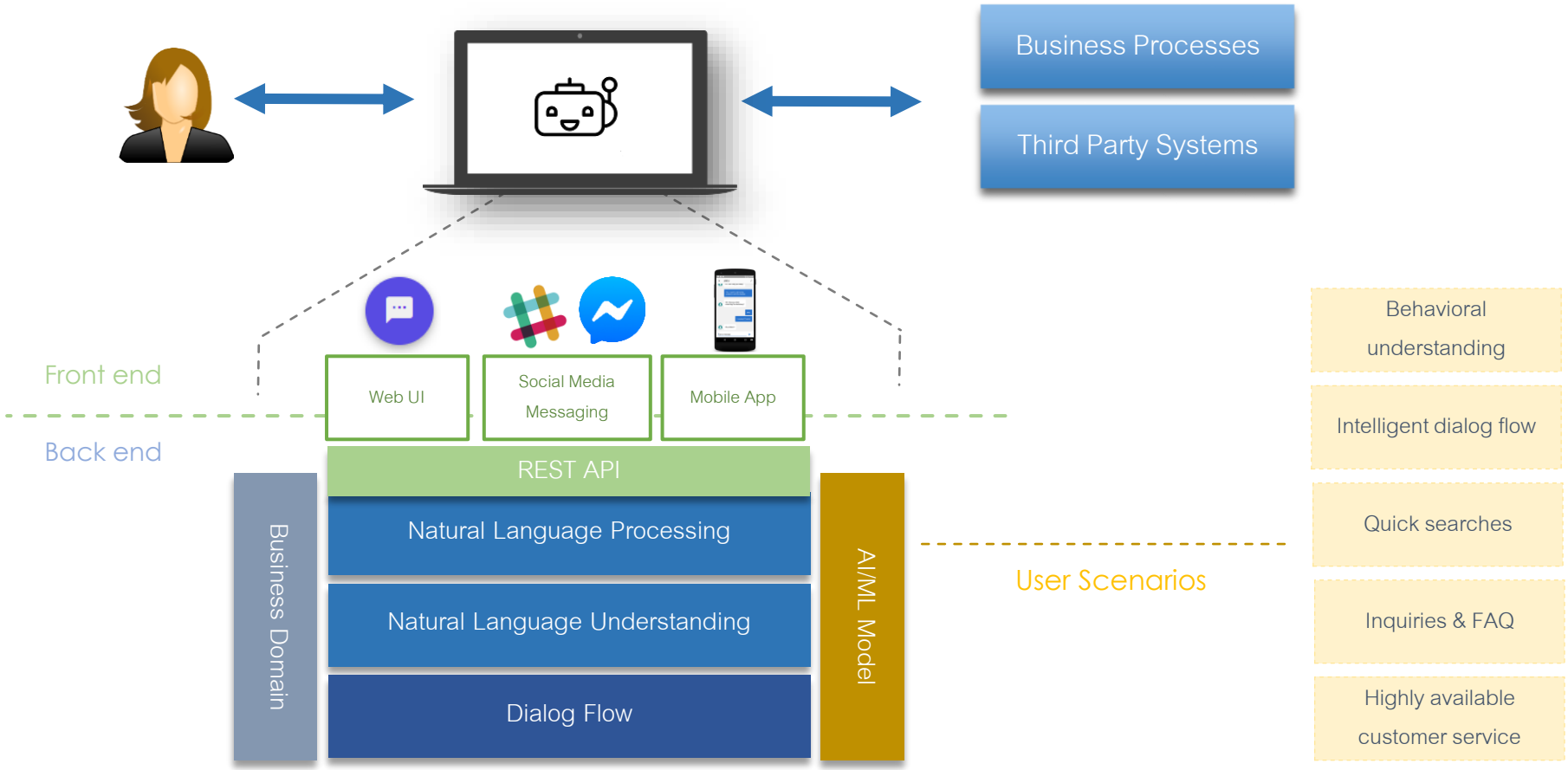
I see that he doesn't have an appointment setup. Will provide him 3 available appointments choices based on your schedule.

Anything else?

Lastly, email me his blood pressure chart over 2 months period.

Here it is

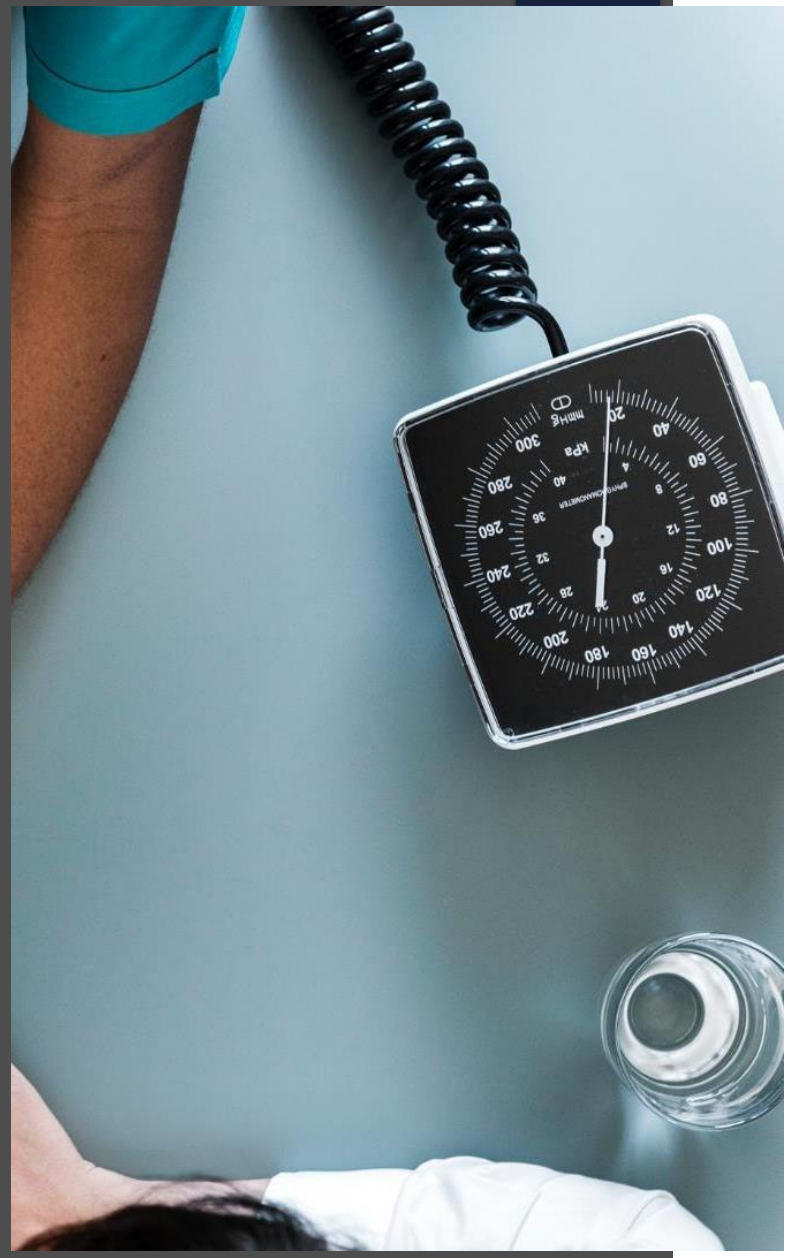
Architectural Components



Telemedicine

REMOTE CARE TO GO BEYOND THE PHYSICAL LIMITATIONS OF HOSPITALS

– RELEVANT AND MODERNIZED FORM OF VIRTUAL CARE DELIVERY



Solution benefits

For Patients

Improved care reception

Cost-effective healthcare

Awareness & empowerment

Personalized care & Engagement

Care availability without boundaries

For Providers

Virtual care delivery

Increased patient satisfaction

Focused medical prevention

Improved outcomes

Population health management

For Payers

Transparency

Cost-effective healthcare

Claims reduction

Social and community care at scale

Capabilities Differentiation

AI BOTS PART OF OUR EXTENDED OFFERING TO SUPPORT BUSINESS PROCESSES AUTOMATION

REMOTE CARE DELIVERY THROUGH ALL-IN-ONE TELE-HEALTH AND CONNECTED CARE SYSTEM

CAPABILITY TO SECURELY INTER-LINK PHARMACIES, LABS, INSURANCE PROVIDERS AND OTHER ECO-SYSTEM PLAYERS

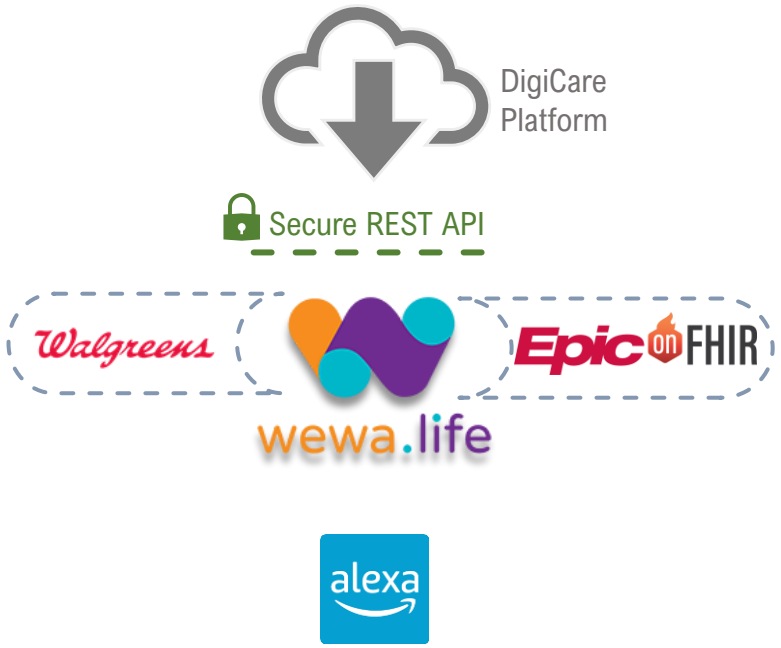
MAINTAIN LIBRARY OF SELECTED ARTICLES AND DISSEMINATE TAILORED INFORMATION TO PATIENTS

GROW NETWORK OF CARE GIVERS THROUGH SECURE HEALTH DATA SHARING

SECURELY INTEGRATED WITH LEADING DEVICE MAKERS AND EMR VIA FHIR (HL7)

Case Studies

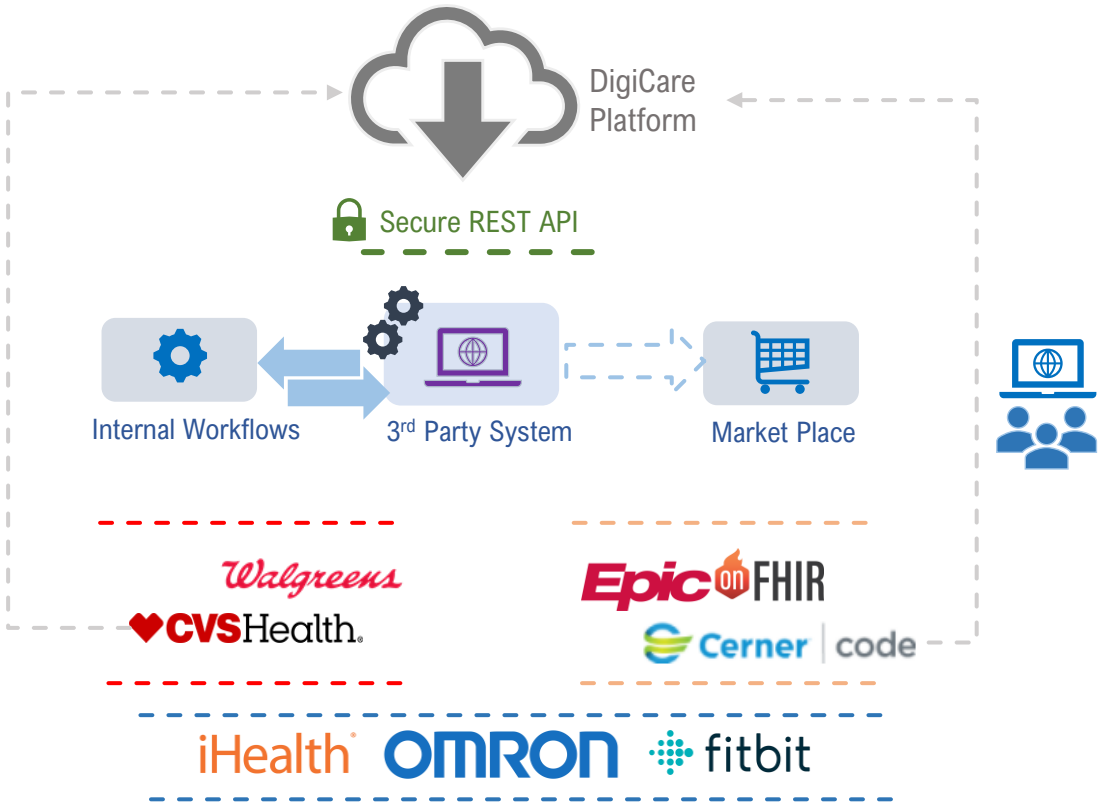
#1: WeWa Life App



- ✓ WeWa.Life* – A personal health navigator platform & app
- ✓ Medication Adherence, Education and Elderly Care
- ✓ Enabled for Alexa Skills
- ✓ Incorporated Walgreens Refill and Transfer API
- ✓ Integrated with Epic FHIR (STU3 specifications)

* Runner up of AHRQ 2020 challenge - https://www.ahrq.gov/mcctransitions-challenge/about.html

#2: Connected Care Continuum

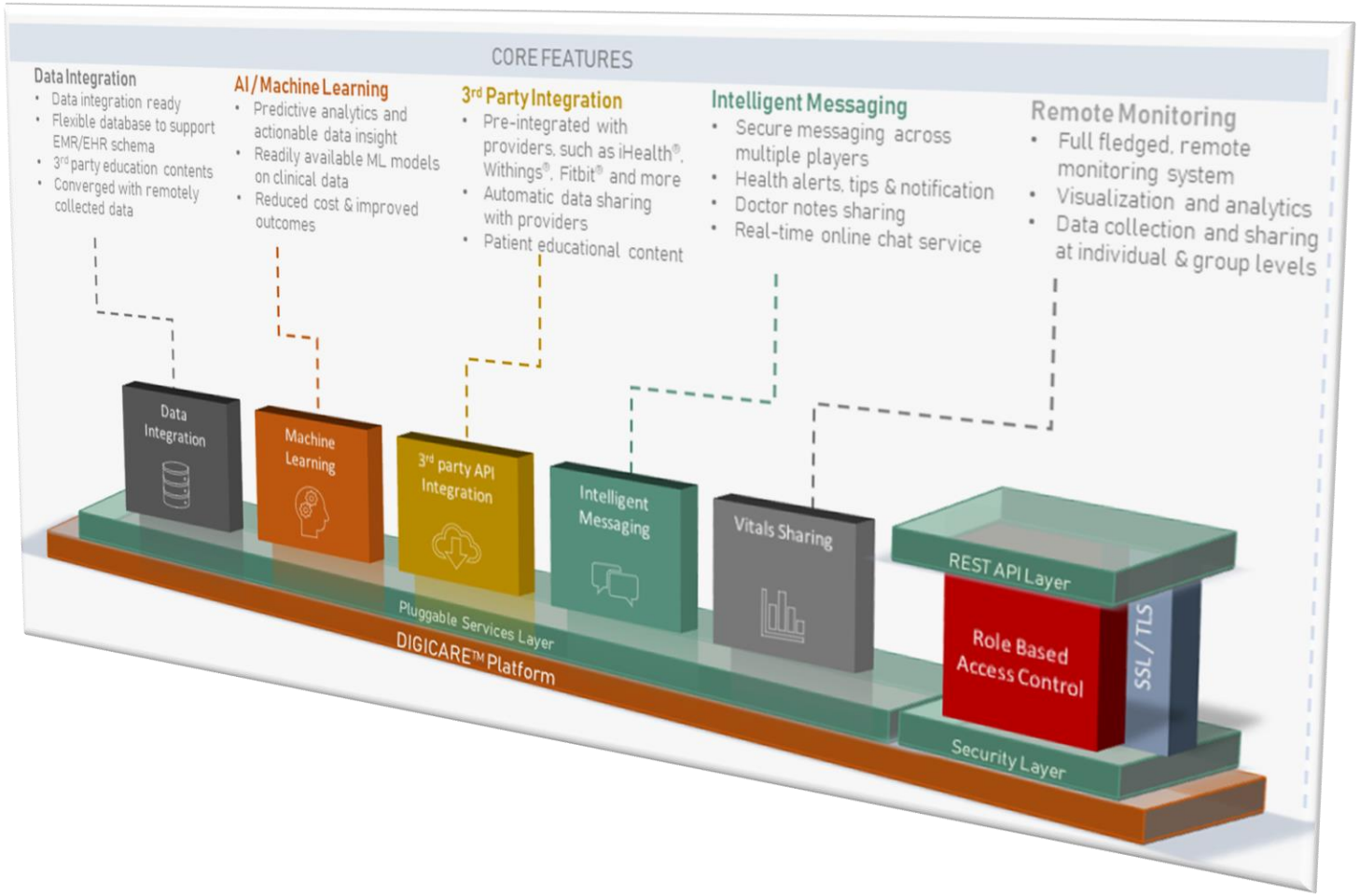


- ✓ A Typical scenario showing fully connected and secure care continuum
- ✓ Eco-system layers connected via secure OAuth2 / OpenID Connect
- ✓ Automation to achieve higher quality of customer care and improved outcomes
- ✓ AI driven chatbot to support customer service and care delivery

Digital Health Products

DigiCare Platform

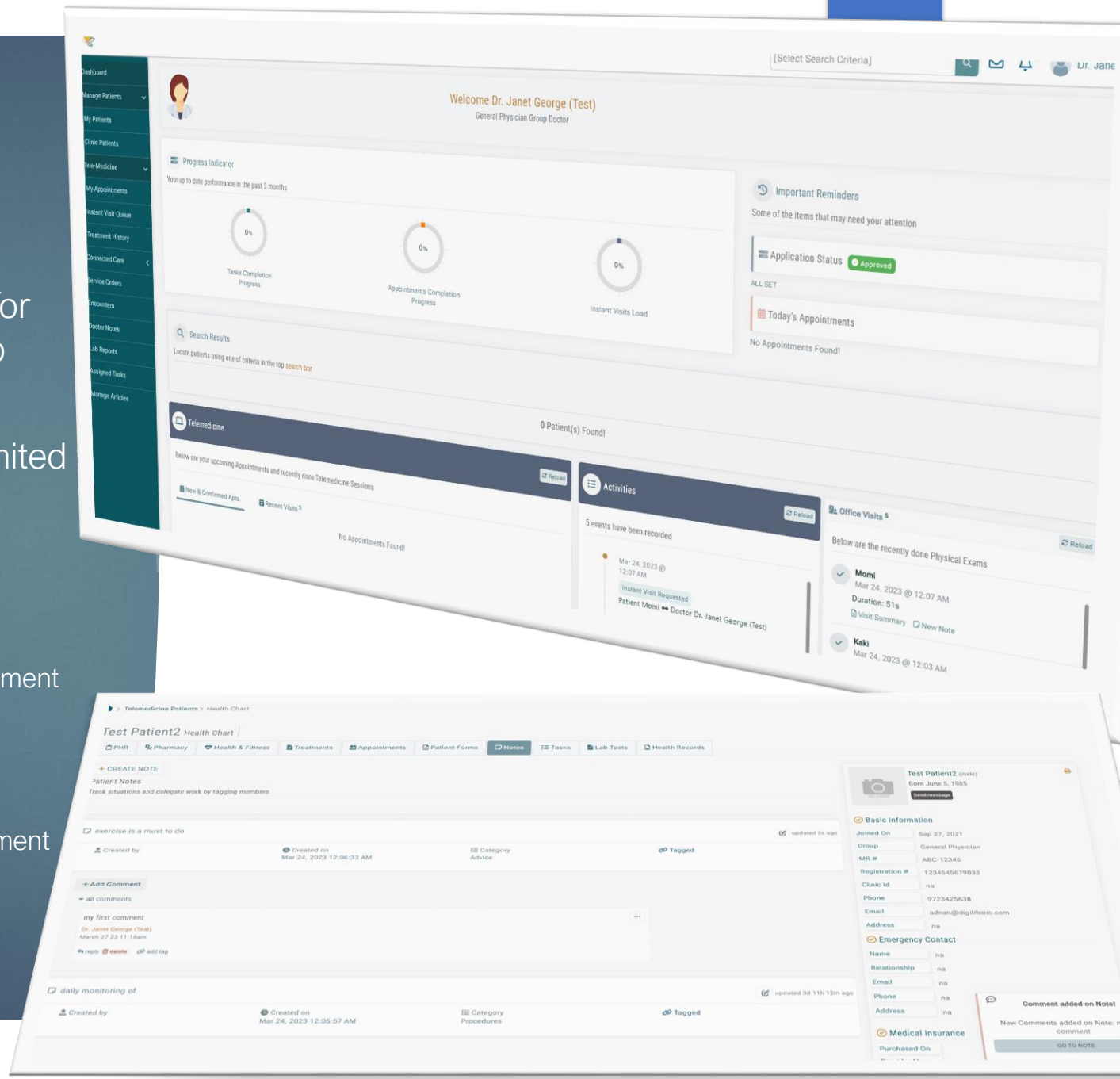
- A secure, modern, connected-care platform built with a vision to create flexible healthcare use cases for patients and providers.
- Offers flexibility for quickly pivoting and developing integrated apps for the health eco-system players.
- Availability of Health API for OEM to perform B2B Integration.
- HIPPA Compliant.



DigiCare EHR

Salient Features

- An EHR and a Practice Management product for Clinics, Doctors, Nurses Practitioners, and Lab Admins.
- A comprehensive solution including (but not limited
  - Patient/Doctor Portals
  - Patient Records and Health Charts
  - Patient Engagement via Smart Alerts, Feedback loops
  - Doctor Notes, Appointments and Prescriptions management
  - Staff Productivity and Patient Cases management
  - Physical and Virtual visits
  - Customizable Forms and Educational material management
  - Reminders and Secure Messaging
  - Payment Processing and Finance module
  - Reports and Statistics

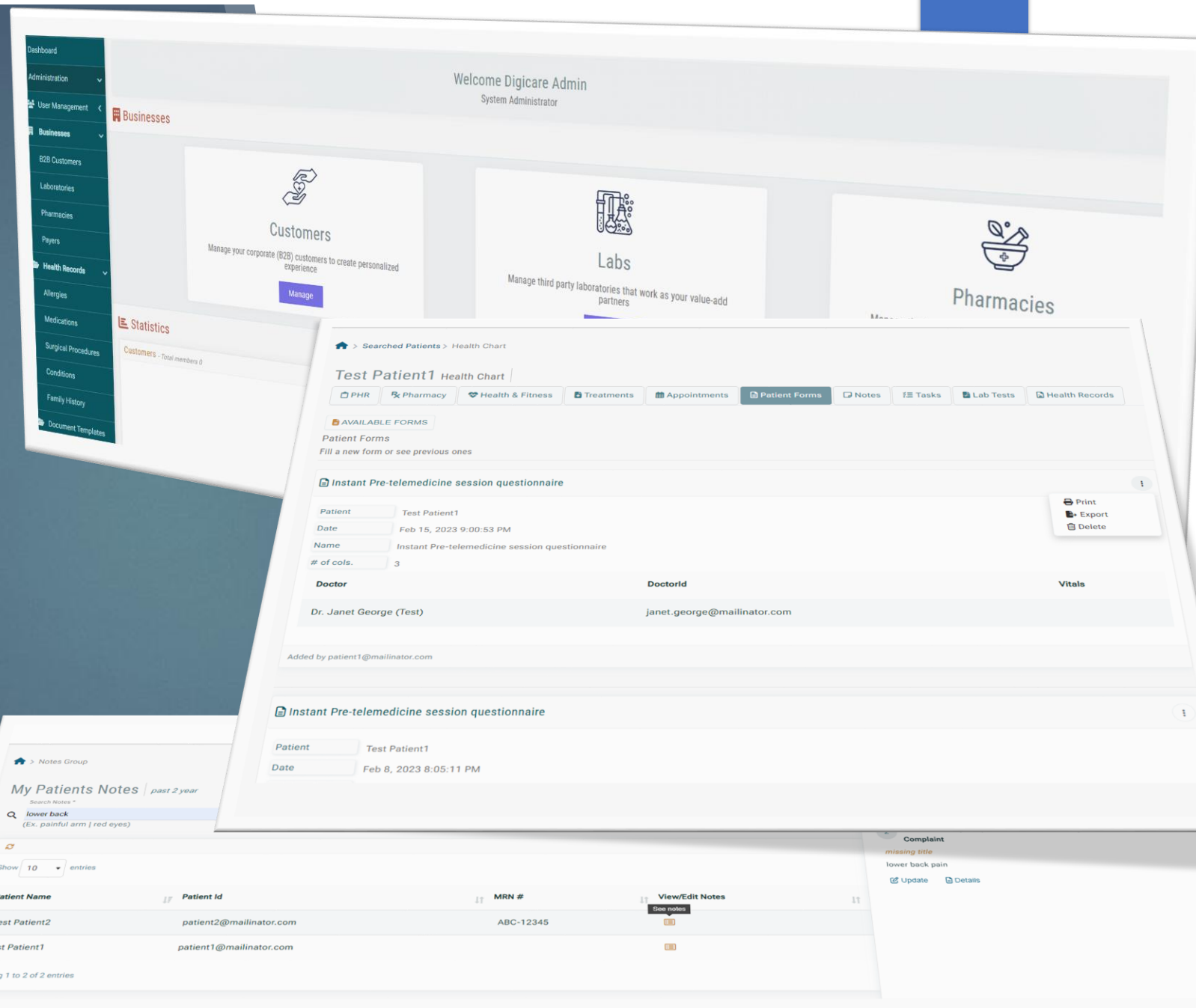


DigiCare EHR

Salient Features

- ✓ Interoperable with several integration points:
  - ✓ Messaging platforms - WhatsApp and Slack
  - ✓ Payment gateways – Strip, Gpay and Abhipay (local gateway)
  - ✓ Pharmacies & Labs – Email or API (where supported)
  - ✓ FHIR (STU3) - Epic, Cerner*
  - ✓ Benefits verification – Truepill*
  - ✓ Claims management – Pega* or similar
- ✓ HIPPA compliant cloud-based or on-prem offerings.

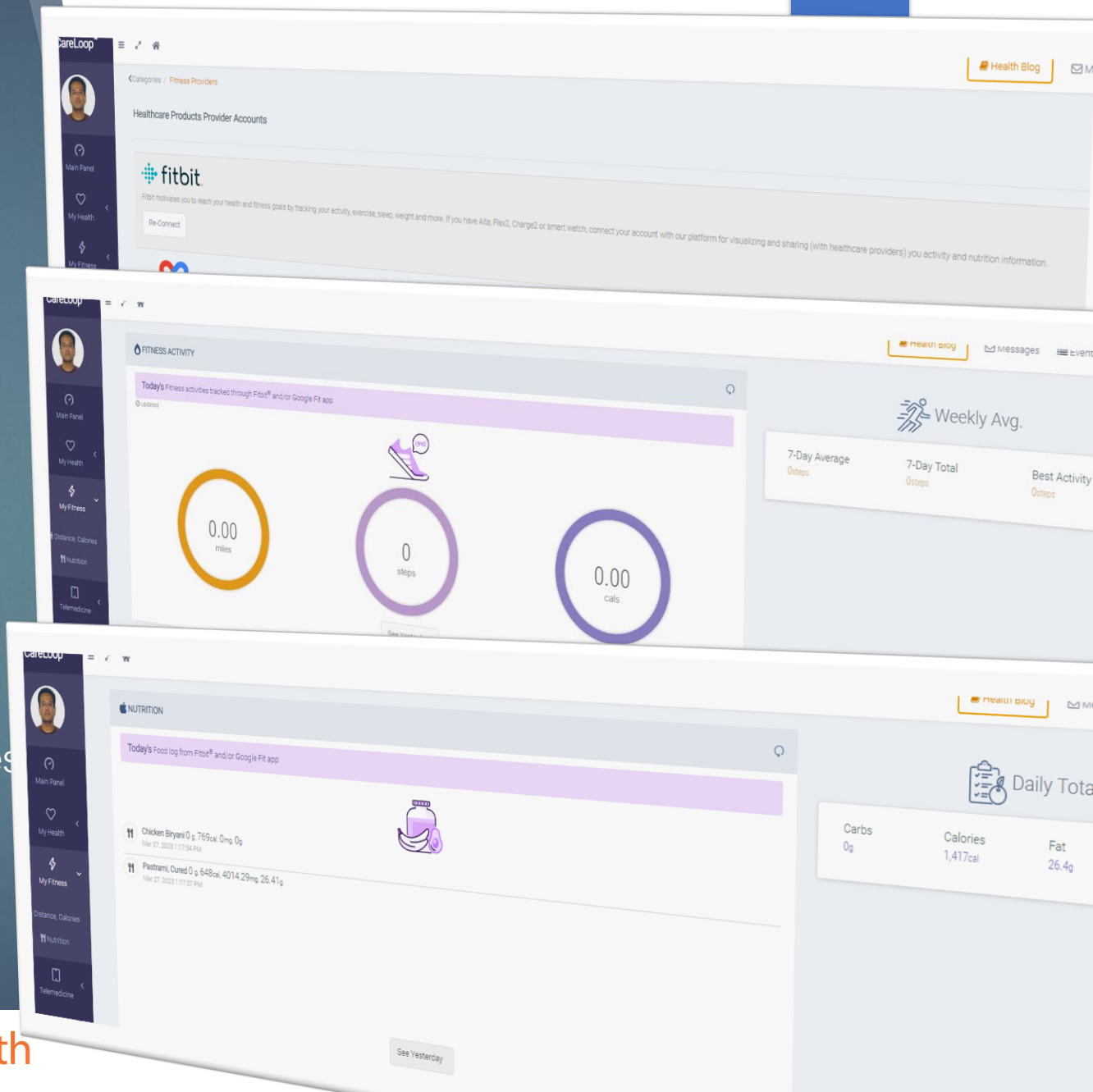
* Future targets



CareLoop
Salient Features

- ✓ Enabler for integrating 3rd party businesses with multiple health platforms and apps, such as:
  - ✓ Google Fit, Fitbit
  - ✓ Apple HealthKit*
  - ✓ Withings, Omron and iHealth
- ✓ API based integration to business offering connected care solutions to their users.
- ✓ Secure, reliable and easily pluggable, supporting REST, TLS v1.3, OAuth2 and relevant technologies
- ✓ Maintains integrated view from multiple sources (devices), such as, Fitbit, Xiaomi (Mi), etc.

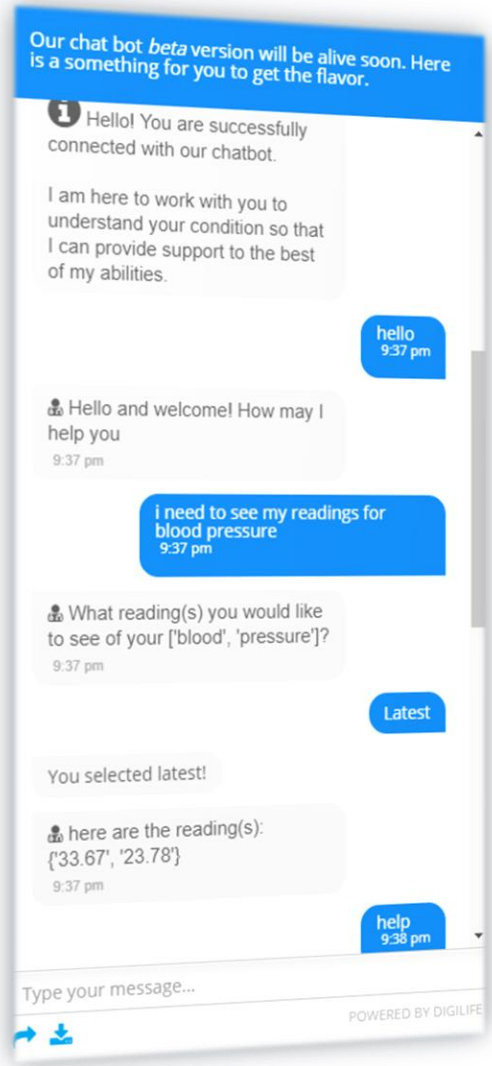
* Future target

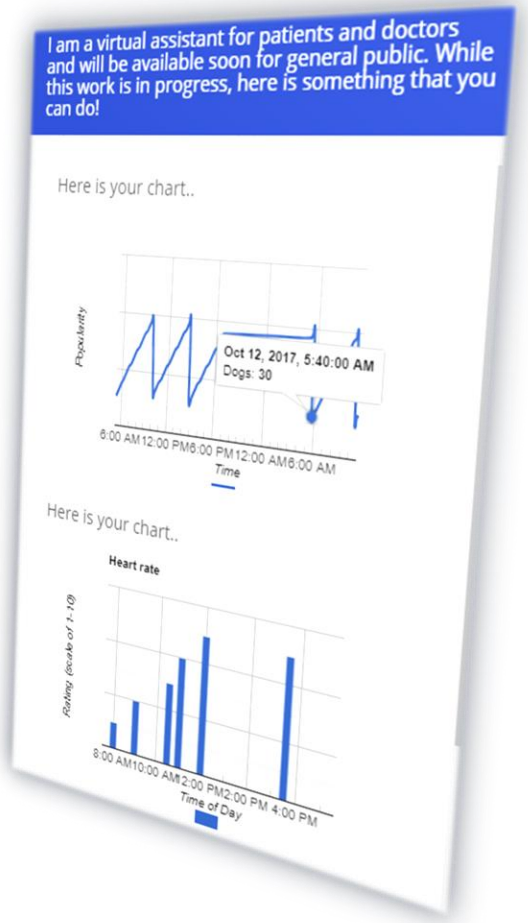


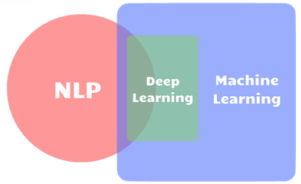
OMRON Withings fitbit Epic on FHIR iHealth

AI / ML
Chatbot

- ✓ Create on-the-fly charts from EHR records
- ✓ Robotic Process Automation (RPA)
- ✓ Customized Dialog Flow to fit your organizational workflows

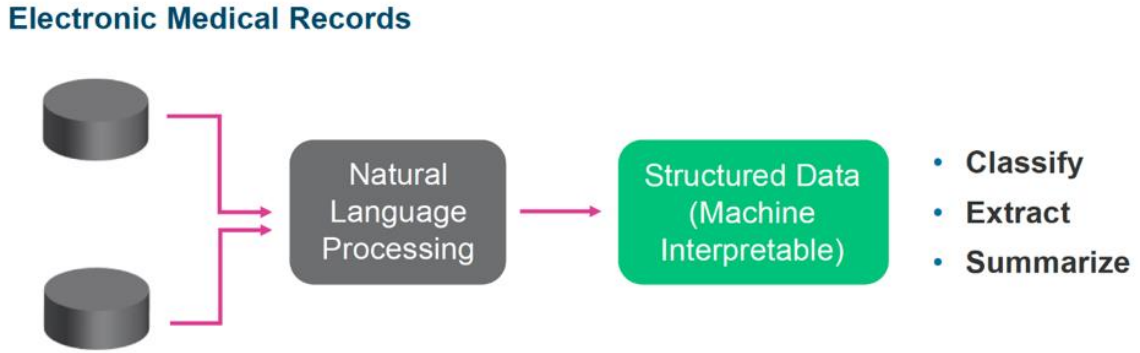


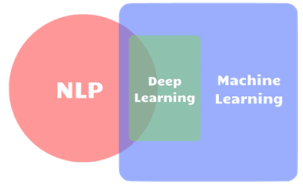




AI / ML
Clinical Documentation (Concept stage)

- ✓ NLP can help in transforming raw data into meaningful insights to improve healthcare outcomes.
- ✓ NLP classifies, extracts, and summarizes unstructured text. Processes unstructured data from different sources (EMRs, literature, etc.) for analytics systems.
- ✓ Some example are patient report status, past and present medical history, symptoms, and diagnoses.





Virtual Clinics

1. Virtual visits is a new norm. Safe and Sustainable.
2. Speedy, Effective and Hassle-free.
3. Integrated EHR, patient engagement, improved chronic care management

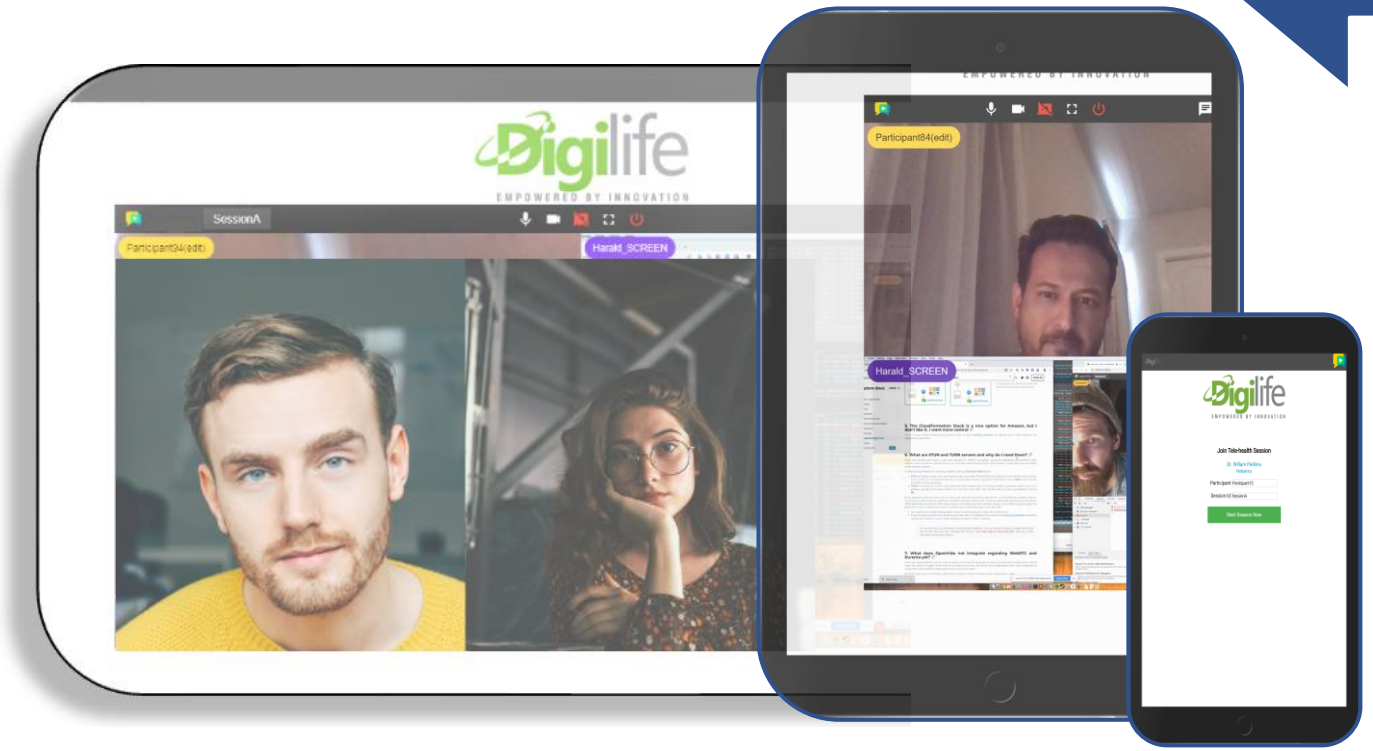
DigiCare Live

Receive care for common illnesses and chronic diseases, schedule your annual wellness check-up, or even get a prescription refill.

Patients

Treat patients safely while limiting the risk of getting exposed to diseases like COVID-19. Effective way to perform regular checkups, post-acute and chronic care.

Providers



Thank You

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