



arkenea

PROFILE + CASE STUDIES

| 14+ Years of Digital Health Focus

Dedicated Healthcare Focus: Our sole focus on healthcare technology means we understand the complexities and challenges of the industry better than generalist software developers.

Proven Track Record: With over a decade of experience, we've successfully delivered custom software solutions to hospitals, clinics, and healthcare startups, significantly improving their operations and patient care.

Expert Team: Our team comprises healthcare technology specialists with deep knowledge of medical regulations, patient care processes, and the latest technological innovations.

Innovation and Quality: We're committed to leveraging cutting-edge technology to develop high-quality, innovative solutions that meet the evolving needs of the healthcare industry.

"I've worked with outsourcing firms for the last 22 years, and Arkenea has been the best one so far,"

John Fox

CTO, Formulary Insights Inc



Arkenea is here to help you navigate the ever-changing landscape of healthcare technology. Whether you're looking to optimize your existing software solutions, or you're in the process of selecting a new software vendor, our team has the expertise to guide you every step of the way.

70%+



2023

More than 70% of our Top 20 clients in the year 2023 have been clients for the past 8 years.

200+

Projects delivered in the past 14+ years.

20%

Turnover invested in R&D to service your business better.

1

Industry focus for effective solutions.

50+

Technology partnerships to bring you the right solution.



OUR EXPERTISE



CUSTOM HEALTHCARE SOFTWARE DEVELOPMENT

Specializing in bespoke software solutions tailored to the unique needs of healthcare providers.



COMPLIANCE & REGULATORY EXPERTISE

Ensuring all our solutions meet HIPAA, FDA, and other relevant regulations to protect patient data and comply with industry standards.



DATA SECURITY & PATIENT PRIVACY

Implementing advanced security measures to safeguard patient information against unauthorized access and breaches.

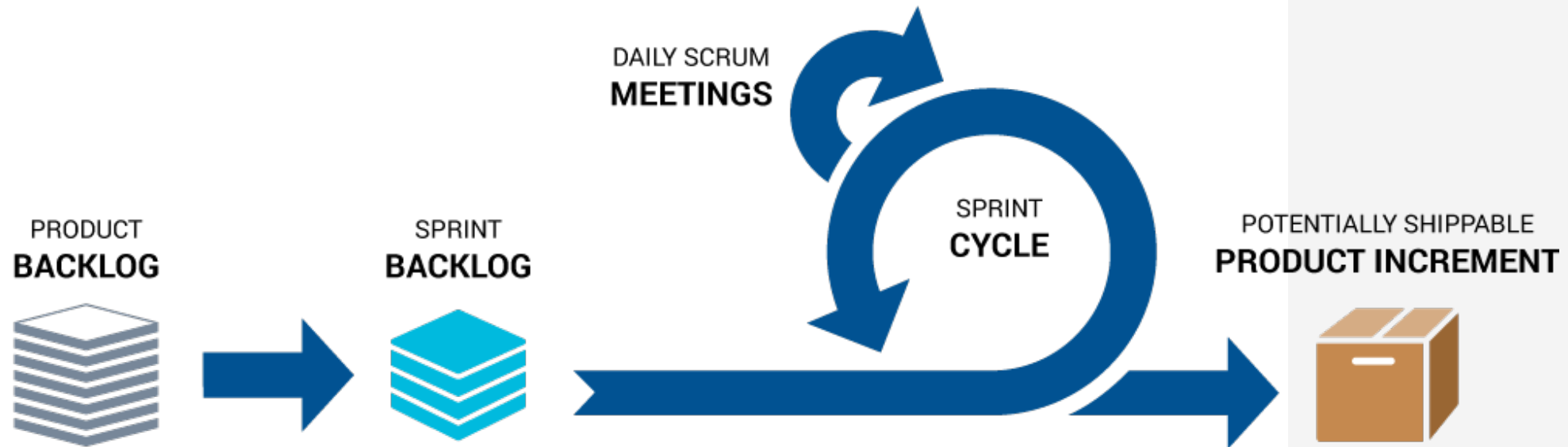


INTEGRATION CAPABILITIES

Seamlessly integrating with healthcare systems to enhance functionality and improve UX without disrupting existing workflows.

ENGINEERING PROCESS

- Internal agile/scrum methodologies
- Facilitate interaction of all business and technical stakeholders
- Iterative, responsive to change and issues
- Fast results when all good; fast corrections when required



EXPERIENCED LEADERSHIP



Rahul Varshneya
President

A serial entrepreneur who's built and scaled two technology product companies, prior to leading Arkenea for 14+ years.



Karthik Krishnaraj
Director

Over three decades of experience across healthcare product management and UI/UX.



Ashwin Datye
CTO

30+ years of core experience delivering healthcare software solutions from startups to enterprises.



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CASE STUDIES

NOVO NORDISK

Novo Nordisk is a Multinational pharmaceutical company ranking in the Fortune 500, headquartered in Denmark.

THE CHALLENGE

In order to improve the access to physicians and their reach, the company decided that they wanted to go digital and use technology to engage with physicians more effectively, in a more productive and cost-effective manner.

SOLUTION

After several brainstorming sessions and whiteboard discussions about understanding of MR visit cycles, the product portfolio of Novo Nordisk and the challenges faced by the diabetes drug industry, we formulated a strategy to streamline the physician-MR interaction.

KEY HIGHLIGHTS

- ▶ Enhanced and interactive product presentations.
- ▶ Real-time drug development and research updates.
- ▶ Data and analytics on physician engagement with Novo Nordisk's products.
- ▶ One-tap sharing of information with physicians.

“Our 7 years and ongoing relationship with Arkenea is in itself a great testimony to their quality and timeliness of the work delivered,”

Dr Lalit Dabholkar
Marketing Manager, Novo
Nordisk

AI DEVELOPMENT – Automated Documentation

This feature relies on voice recognition and natural language processing (NLP). NLP is being used to transcribe the spoken word into written text and understand the context to populate the EHR appropriately.

To build this:

- ▶ We leveraged a speech recognition system integrated within our workflows. This was done using deep learning models, which are trained on large datasets of spoken language to understand a wide range of accents and dialects.
- ▶ Used NLP to understand the context, medical terminology, and intent of the spoken words. This involved training machine learning models on large datasets of medical text.
- ▶ Implemented a system to map the transcribed text to the correct fields in the EHR. This involved creating rules and training the machine learning model to understand the structure of the EHR system.

UNITED MEDICAL GROUP

The UMG telemedicine platform provides patients with affordable and expert care with access to quality network providers in other specialties for ambulatory visits.

THE CHALLENGE

United Medical Group has aspirations to provide affordable medical care to patients across the country, but limited by presence and geographical reach.

SOLUTION

The telemedicine platform with a built-in EMR was developed to help UMG expand their presence across the country via physician contractors.

KEY HIGHLIGHTS

- ▶ Live video consultation.
- ▶ Integration with Surescripts to facilitate ePrescriptions.
- ▶ Use of PQRST pain assessment method.
- ▶ Doctors can take SOAP notes during video session and fetch patient's medical history via the integration of EHR/EMRs.
- ▶ Creating profile for minors and family members and booking appointment for them.

“Arkenea delivers on what they promise without any delays or pushback. They’re open and flexible and keep the project on schedule and within budget,”

Dr Teja Surapaneni
Founder, United Medical
Group

AI DEVELOPMENT – Patient Data Summarization

This feature involved analyzing a patient's medical history and summarizing it in a concise format.

To build this:

- ▶ We developed NLP models that understand and extract relevant information from medical text. This involved training models on EHR data to identify important pieces of information (e.g., diagnoses, treatments, test results).
- ▶ Implemented a system to generate a summary based on the extracted information. This involved creating rules and training the machine learning model to structure the summary in a way that is useful for our client.

KETHAN SOLUTIONS

This AI-first iOS application helps medical professionals to easily identify the implants that show up on x-rays of patients. This helps in saving time, resources and human error associated with manual identification and verification.

THE CHALLENGE

It's tough for surgeons to correctly identify an implant from an x-ray image, causing confusion and delay in surgical procedures. We had to design an AI-application to provide quick and accurate information to the surgeons.

SOLUTION

After several brainstorming sessions and whiteboard discussions, a solution roadmap was developed to accurately identify the implants. The application enables medical professionals to identify the implant and its attributes, such as manufacturer name, so that the users can easily identify relevant information about the implant.

KEY HIGHLIGHTS

- ▶ Use of AI technology to detect the implant in an x-ray
- ▶ Correctly match uploaded implant, irrespective of image orientation
- ▶ Enable users to easily add an implant information for a consolidated database

“Arkenea produces quality work and are very process-oriented. They take their time developing the frontend to ensure the documentation, design, and functionality are top-notch,”

Brian Murray
Founder, Kethan Solutions
LLC

HAMILTON PHYSICAL THERAPY

Hamilton Physical Therapy is a PT practice with 8 locations across Montana that utilizes an off-the-shelf, popular PT EHR.

THE CHALLENGE

Challenged by the complex workflows and tedious UI of existing EHR and their physicians spent considerable time in documentation.

SOLUTION

We conducted a detailed analysis of the user flow and processes to design and build an EHR that is customized to their needs, reduced physician documentation time and made it significantly intuitive for entire staff to use the EHR.

KEY HIGHLIGHTS

- ▶ Create a new EHR from ground up, with renewed user experience
- ▶ Connects to an existing billing software
- ▶ Reduced physician documentation time, significantly increasing their topline
- ▶ Developed a cloud EHR that is flexible and scalable to their evolving and growing needs.

“Their expertise in healthcare software development, commitment to excellence, and genuine care for our needs have been instrumental in enhancing our operational efficiency and patient care,”

Doug Hamilton,
Founder, Hamilton PT

AI DEVELOPMENT – Patient Engagement

This feature involved analyzing EHR data to provide personalized health recommendations to patients.

To build this:

- ▶ We developed machine learning models that can predict health behaviors or outcomes based on a patient's EHR data. This involved training models on historical patient data, with the behavior or outcome of interest (e.g., medication adherence, appointment attendance) as the target variable.
- ▶ Implemented a system to send personalized recommendations to patients. This involved integrating the model into the patient portal and mobile app and setting up a system to send notifications based on the model's predictions.

NPHUB

NPHub is a clinical rotations placement platform to connect Nurse Practitioner students with preceptors and clinical sites.

THE CHALLENGE

- ▶ To build a website that would ease out the process of matching NP students with suitable preceptors since NP students would find it most difficult to find a preceptor on time which would in turn delay their graduation.
- ▶ The design objective was to create a highly intuitive platform for nurses to find rotations online – a user segment that is not used to finding opportunities online.

SOLUTION

Keeping in mind the users of the website, the platform had to be designed in a manner that was intuitive and easy to use without any learning curve.

KEY HIGHLIGHTS

- ▶ Online matchmaking website for students to filter for available educators by location preferences and medical specialty
- ▶ Simplified preceptor booking functionality
- ▶ Easy marking of availability for up to 6 seasons for preceptors
- ▶ Data and analytics on student engagement on the platform

“Arkenea is able to guide decisions toward what you truly need instead of simply delivering a misguided product,”

Abhi Golhar

Cofounder, NPHub

WELGO

Welgo is US based state licensed drug distributor providing prescription and non-prescription drugs to physician practice groups of all specialties and sizes.

THE CHALLENGE

Their existing web application was poorly executed, developed and architected and was leading to physician dissatisfaction, as technical difficulties kept the physicians from utilizing the platform to its maximum potential.

SOLUTION

The website was rebuilt, making it a streamlined physician dispensing software that is simple to use and highly efficient.

KEY HIGHLIGHTS

- ▶ Dispensed prescription email tracking
- ▶ Using OCR to prefill document
- ▶ Adding Wacom connection for doctor signature
- ▶ Integration with surescript for electronic prescription
- ▶ Built a Tablet app for auto insurance check-up and prescription

“I'm very impressed by how quickly the process is going; their team is on top of it,”

Michael Lion

Founder, Welgo

TELEMEDHOME

This HIPAA-compliant iOS application empowers patients, families, medical providers and health care organizations to collaboratively manage chronic medical conditions at home, with telemedicine functionalities.

THE CHALLENGE

The physician-led company witnessed a high rate of hospital admissions, morbidity and early mortality rates for the lack a collaborative platform between patients, care givers and family members.

SOLUTION

With a view to develop patient-centric application, TeleMedHome is built with a clutter-free design and highly intuitive interface to help users focus on keeping track of their health with timely reminders, and remotely monitor high risk patients with chronic diseases.

KEY HIGHLIGHTS

- ▶ Timely reminders of appointments, daily medications and tasks
- ▶ Easy 2-way communication between patient and providers
- ▶ Secure HIPAA compliant text/image/video exchange
- ▶ Track progress of patient care plan by all the involved user types
- ▶ Instant video calling with users not present on the application

“Arkenea has done what they can to make each iteration more seamless than the previous one,”

Dr Adrian Pieleanu
Founder, TeleMedHome

FORMULARY ACADEMY

Formulary Academy web application quickly and accurately populates drug monographs with real-time content from PubMed, NIH and the FDA via an affordable, subscription-based app.

THE CHALLENGE

In order to more closely manage pharmacy plans, insurers were required to complete drug class reviews to provide clinical support to such decisions. This was a tedious process requiring the manual collection and assembly of disparate information from numerous different online sources.

SOLUTION

To solve the problem, a user-friendly, subscription-based web application was developed, allowing clinical pharmacists to focus on the critical evaluation of drugs rather than monotonous data entry.

KEY HIGHLIGHTS

- ▶ To automatically populate monographs with current and accurate content from reputable sources
- ▶ Customizable monographs to fit an organization's needs
- ▶ Easy to retrieve and update monographs for future reviews

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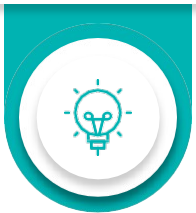
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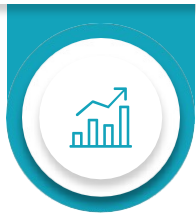
THE ARKENEA PROMISE

Whether you're a startup or a venture-backed, fast-growing company, our promise is to deliver unmatched quality with the same focus and speed across projects.



UNMATCHED QUALITY

Uncompromised quality irrespective of project size and significance.



SPEED AND CLARITY

Focus on speed and clarity of project execution.



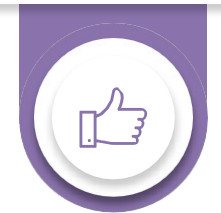
RESOURCE ALLOCATION

No area of the project will have over or under-qualified resources.



VALUE ADDED ARCHITECTURE

Every project is backed by a solutions architect as a value add.



INTELLECTUAL PROPERTY

Client retains ownership and control over all IP and assets.

We look forward
to working with
you on your
project!



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arkenea

Digital Health Consulting and Custom
Software Development Services
