



# Healthcare Services and Solutions

Helping organizations adopt the next generation  
technology for improved clinical outcomes



# About Accion Labs

**5500+**

Global Team  
Members

**1500+**

Projects  
Delivered

**25+**

IP  
Accelerators

**170+**

Clients  
(Long term relation)

## INDUSTRY CERTIFIED

**ISO**

9001:2015

**ISO**

27001:2013

**ISO**

27701:2019

**CMMI**

V2.0 Level3

**PCI DSS**

Compliant

**HIPAA**

Compliant

## HOW WE WORK

### Data at Heart

Accion Labs reimagines the possibilities for digital transformation from innovation to growth

### Digital in Thinking

Scalability, manageability, robustness, and efficiency are always their top priorities

### Innovation in Approach

Everything is planned to minute detail, ensuring high-quality deliveries to clients every time



## TECHNOLOGY PARTNERS



## OUR GROUP COMPANIES





# Our Global Talent Base

**5500+**  
Employees

**100+**  
Clients

**50+**  
Tools/IP

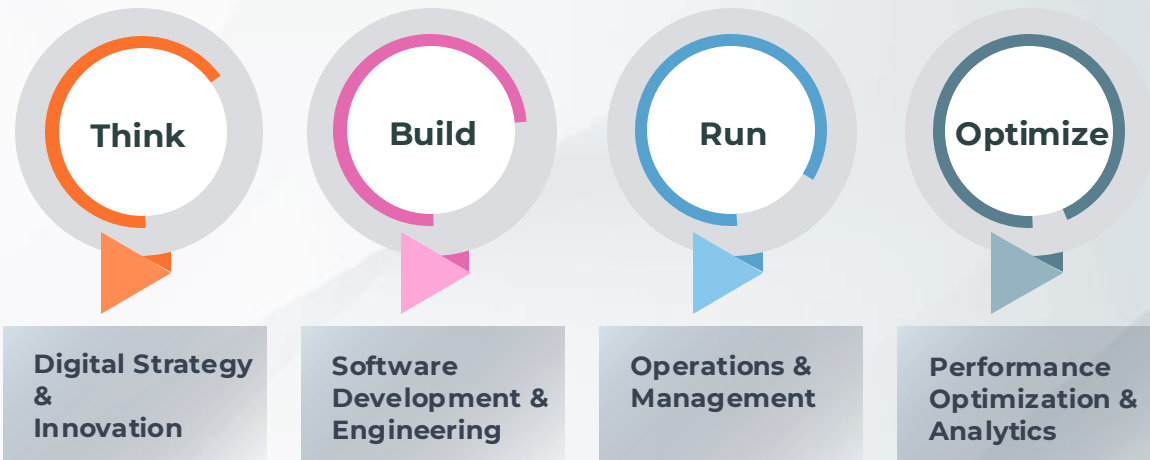
**21**  
Global Offices

**14**  
Delivery Centers



# Our Services

Drive rapid business growth through technology



## Enterprise Solutions & Consulting

Product Portfolio Rationalization

Legacy Modernization and Re-engineering

Data Strategy and AI Readiness

5P Agile Transformation

Enterprise Platform Implementation

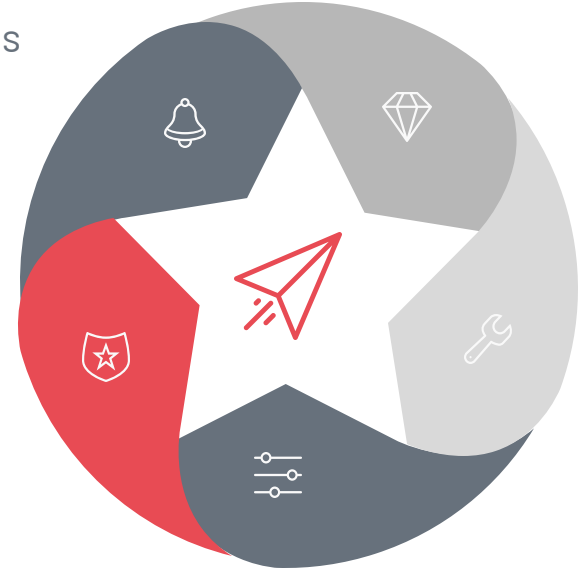
Application and Product Managed Services

Professional Services

# Partnership Models

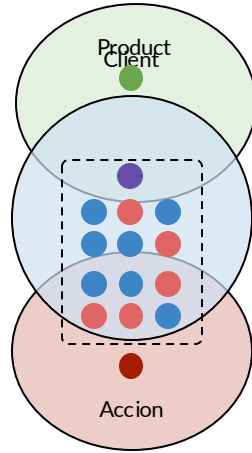
Flexible models designed to suit specific needs and gap areas

- Extended Delivery Center (EDC)
- Turn-key & Co-owned Project Services
- Specialized Pro-Staffing Services
- Extended Professional Services
- Co-IP development
- Build-Operate-Transfer Centers
- Offshore Joint-Venture



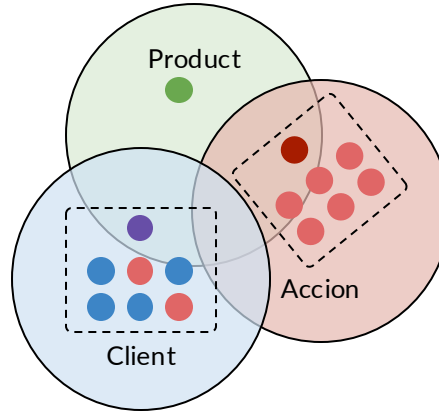
# Engagement Models

## Model A - Integrated Teams



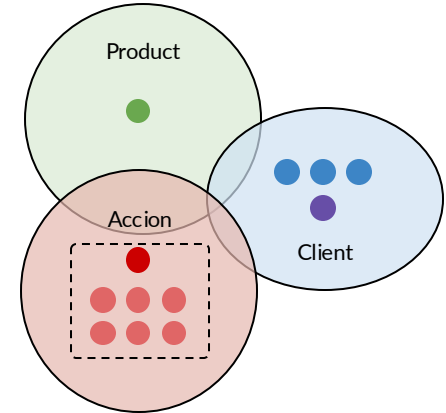
- Accion resources will work as individual contributors within the core SCRUM team of Client
- Accion provides a lean management team to manage individual performance

## Model B - Collaborative Teams



- Accion SCRUM teams and Client teams work collaboratively on the product
- Accion provides a full managerial team with Delivery Managers, Product Owners and SCRUM Masters
- Client provides support for infrastructure and deployment

## Model C - Lifecycle Ownership



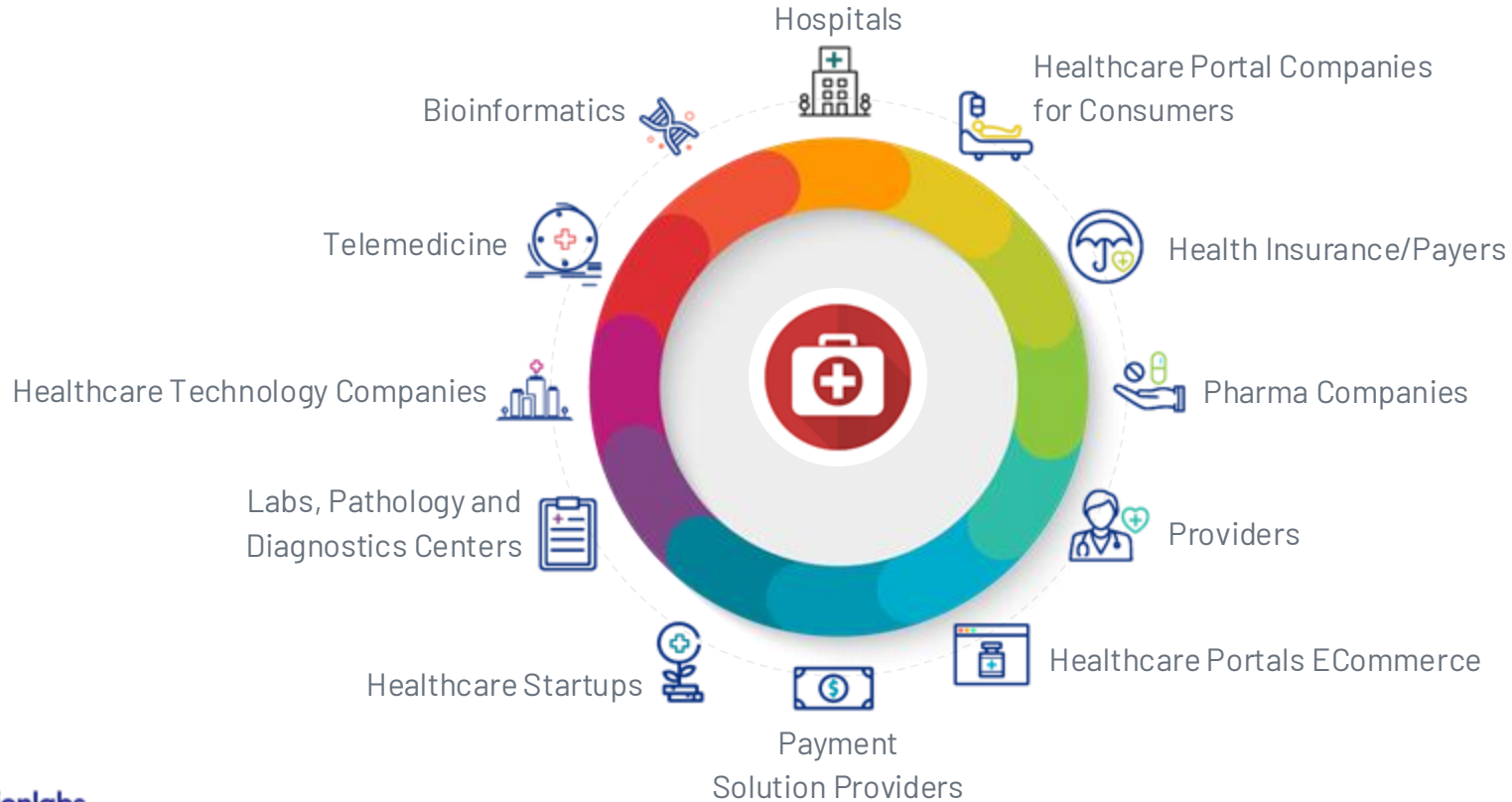
- Accion teams completely manage the product's development and support
- Accion will provide a full managerial team with Delivery Managers, Product Owners and SCRUM Masters
- Client provides support for infrastructure and deployment

# Technology Levers of Innovation





# Reimagining Healthcare







# Healthcare Products & Solution Engineering

A blend of healthcare + technology domain with scalable teams help you accelerate innovation

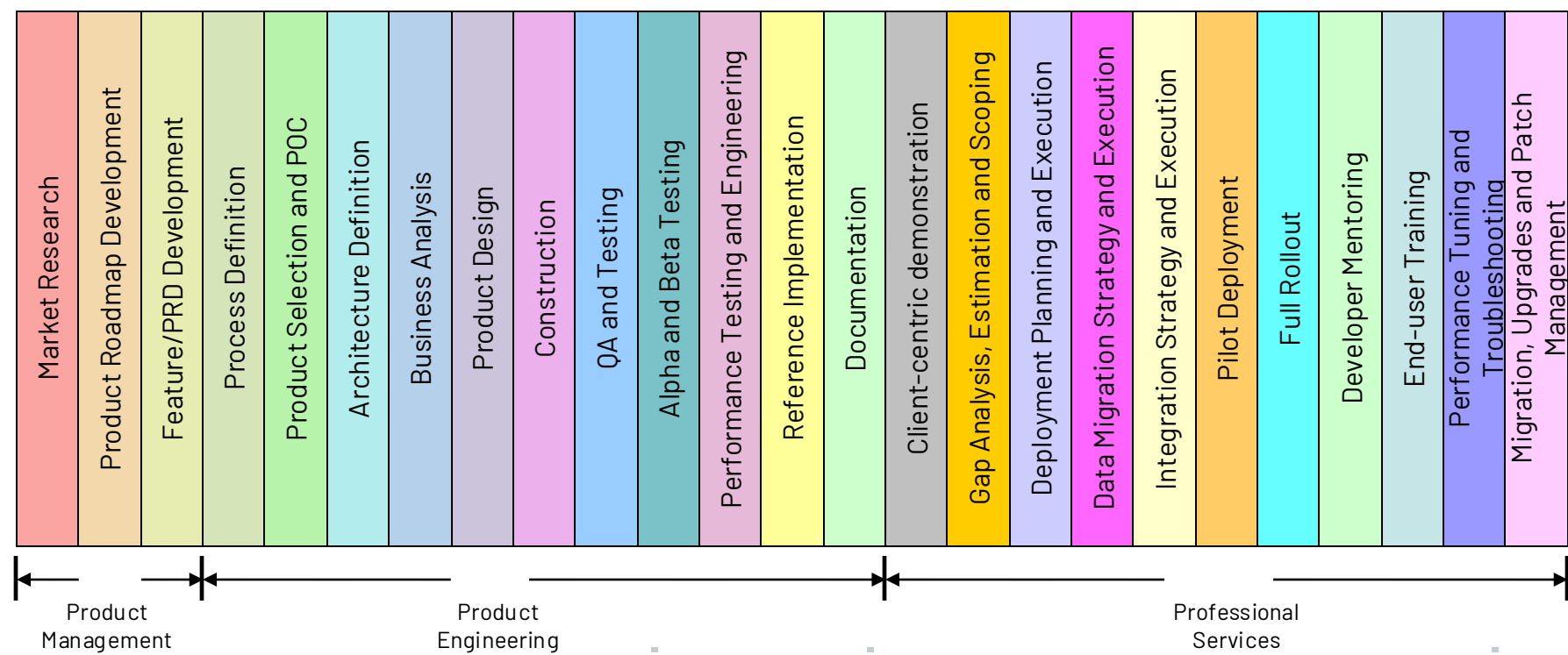


# Product Engineering

- Hands-on with new technology
- Full Product Lifecycle Services
- Collaborative and flexible engagement models
- Strong experience with Agile delivery and its real-life applications

<b>New Product Development</b>	Design, development, testing and support for new products with new tech such as NLP, Chatbots etc
<b>Platform Porting</b>	Amplify market reach by moving from legacy to new tech platforms and operating systems
<b>Product Re-engineering</b>	Modify any product for scalability & performance by adding new functionalities using emerging tech
<b>Technology Migration</b>	Migrate legacy to new technology stack in lesser time and minimal cost to gear up for new business cases
<b>Design User Experience</b>	Product strategy and user flows that can then be fleshed out into highly usable interfaces by the UI development teams

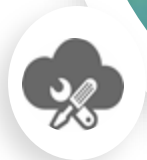
# Product Lifecycle Services





# Healthcare Cloud Services

Tools & accelerators that help you deliver modern apps and services for improved patient outcomes



# Cloud Computing

- Cloud Infrastructure & Frameworks
- Ready-to-Deploy Accelerators
- Wide Range of Cloud Services
- Cloud Consulting for higher ROI on your investments
- Compliance and auditing needs such as HIPAA, SOC etc

<b>Cloud Consulting</b>	In-depth assessment, planning, design and execution of cloud solutions
<b>Cloud Infrastructure</b>	Public cloud such as AWS, Google Cloud or Microsoft Azure; private cloud such as VMware and Hybrid cloud
<b>Cloud Engineering</b>	Designing and building healthcare products and applications on cloud, re-architecting applications , DevOps engineering
<b>Cloud Migration</b>	Migrate legacy healthcare applications to the cloud by iteratively reengineering
<b>Cloud Optimization &amp; Monitoring</b>	Capacity planning, optimization and monitoring of cloud infrastructure by a ITOM team



# Healthcare Application and Integration Services

A connected Healthcare system can deliver better care at lower cost



# Integration Development

- User Experience Transformation
- Re-engineer to Microservices
- Migration to New and Emerging Tech Platforms
- Deployment to Cloud
- Continuous Integration and Delivery (CI/CD)

<b>Microservices</b>	Each service is encapsulated in independently deployed containers with full ownership of their respective databases
<b>Data Integration</b>	Integration with third party HMS, EMR, Imaging data, health records, insurance applications and other ERP systems
<b>Interoperability</b>	Health Information Exchanges (HIE), Portal Electronic Health Records (EHR), Secure Personal Health Records (PHR)
<b>Wearable Integration</b>	Create insights and actionable outcomes using data from monitoring devices such as BGMs and other wearables
<b>Cloud Optimization &amp; Monitoring</b>	Capacity planning, optimization and monitoring of cloud infrastructure by a ITOM team





# Big Data Services & Solutions in Healthcare

Data Management and Data Analytics that unlocks hidden opportunities with a competitive edge



# Healthcare Data Management and Services

- Data Integration Architecture
- Healthcare Data Modeling
- Interoperability & Security
- Data Visualization & Analytics

<b>Data Warehousing and Data Lakes</b>	Data Modeling, Layered Architecture,DW - BI Testing from various clinical, operational or financial data sources
<b>Business Intelligence Tools</b>	Real-time data visualization as reports,dynamic dashboard, scorecard etc for info on patients, claims, billing etc
<b>Data Analytics</b>	Capture, analyse and recommend based on data trends for preventive care, early diagnosis, personalized care, claims analysis, regulatory and compliance support
<b>Machine Learning with NLP</b>	Statistical Analysis, Textual Search Analysis, Sentimental Analysis, Forecasting etc across healthcare data sources EHR, claims, patient data, IoT, medical devices, imaging, etc.
<b>Conversational UI /Chatbots /RPA</b>	A predictive, personalized, conversational interface for natural language queries, smart search, notifications & alerts, predefined automation of manual work, recommendation engine

# Our Customers

CHANGE  
HEALTHCARE

RLDatix™

CORVESTA

covetrus

HEALTHEDGE

Talix<sup>7</sup>  
An Edifecs Company

ECHO®

UPMC  
MAGEE-WOMENS  
HOSPITAL

Abbott

verily

unicef

World Health  
Organization

TeleMed2U

DocTalk

EXPERITY

THE DOCTORS  
COMPANY

TeleTracking

Thync

TELCARE

Alere™

VOYTHOS

DocuTAP

biomedion

CREDIBLE  
Behavioral Health Software

CANCER  
LIFE

Accionlabs  
HEALTHCARE+





# Healthcare Technology Case Studies





# Patient Engagement Case Studies



# Case Study #1 TeleMedicine Platform with integrated eRx, Labs, Clinical Notes and Ordering Capabilities

1

Patient identifies type of service and schedules visit

Talk to a Licensed doctor, therapist or medical specialist anywhere by phone or video.



Condition, procedure, doctor..



Select the type of visit

Select the payment type



**Dr. John Steward**

Endocrinologist  
Sunnyvale, CA

Thu Apr 29	Fri Apr 30	Sat May 1	Sun May 2	Mon May 3
---------------	---------------	--------------	--------------	--------------

8.00am	8.00am	8.00am	8.00am	8.00am
--------	--------	--------	--------	--------

10.00am	10.00am	10.00am	10.00am	10.00am
---------	---------	---------	---------	---------

01.00am	01.00am	01.00am	01.00am	01.00am
---------	---------	---------	---------	---------

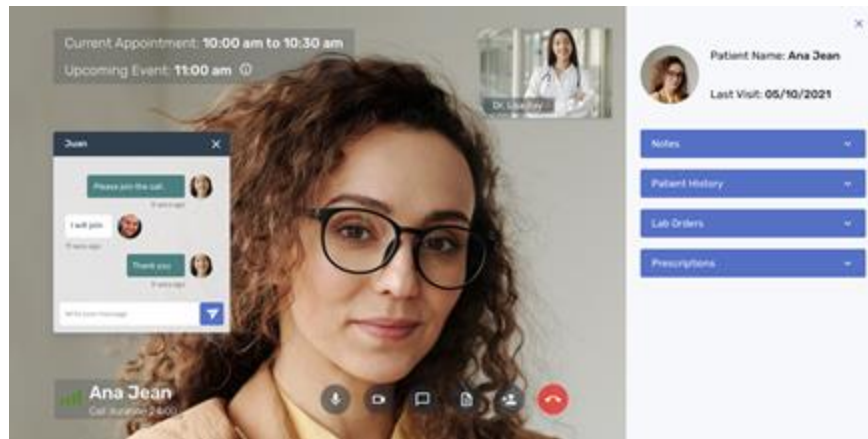
2

Platform sends reminders for televisit including payment reminders

Improved Customer retention and Physician productivity using a fully immersive audio and video **Teleconsultation**

3

Teleconsultation with a fully immersive experience for Provider and Patient



## Case Study #2

## A wearable device and mobile app that can alter your mood and cure Neurological disorders

1

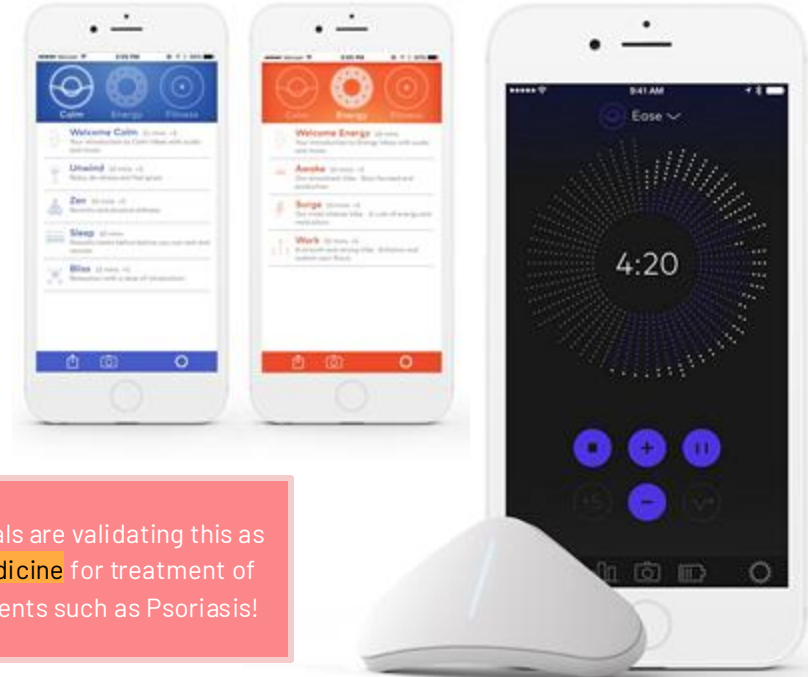
User wears the module on the forehead

2

Strips embedded with data and signature connected to module

3

Mobile App provides control system to control the “vibe”



Ongoing clinical trials are validating this as the first **Digital Medicine** for treatment of stress related ailments such as Psoriasis!



## Case Study #3

## World's first Cellular based Continuous Glucose Monitoring Product with companion app

Client was the world's first Cellular based Continuous Glucose Monitoring product



Connects and shares data with approved healthcare professionals, clinical services, educational resources, and patient's network of family and friends



Significant improvement in Diabetes Management and Adherence using Remote Patient Monitoring

Companion app provided multi-language support including Spanish and French

Integration with multiple third party applications including health portals for value based plans



## Case Study #4

# Care Platform for Cancer Patients to communicate with other patients, family and caregivers

Care Management platform for patients to stay connected with care providers, family members and other patients



Patients can create private networks based on type of Cancer/Region/Gender

**Social Media interactions** help improve Patient Engagement, Medication Adherence and Mental well-being by creating support groups of patients suffering from similar illness

Social media plugins including Facebook integration for extended network of cancer patients



### Technology Stack

Frontend - HTML5, CSS3, Javascript, AngularJS, Ionic  
Backend - PHP, MySQL  
Cloud - AWS

## Case Study #5

## Direct to Consumer eCommerce platform for a global Pharmaceutical company

### Challenge

Global giant Pharma company in generics and nutraceuticals launched flagship diabetes care product in EU markets, and wanted to establish D2C sales channel. Business need was to eliminate distribution/commission margins and provide health insurance reimbursements to patients.

### Transformation

Designed on an easy to use e-Commerce platform for the sale of this product with multiple payment methods and reimbursements corresponding to country-specific health insurance laws.

### Solution

- Integration with SAP for warehouse management, accounting & financial reporting
- User specific special price using machine learning algorithms
- Exclusive sub-stores for multiple brands within the platform
- Subscription orders and simultaneous description tabs
- Support for both cash pay and reimbursement orders in the system as a part of Pharmacy benefits offered to patient
- Ensured GDPR compliance by enhancing privacy features for the application which involved building consent forms, opt in opt outs, administrative reports
- PCI-DSS certified platform



**2000+** Orders processed daily for 1.5 million users

**Offline Orders** Feature for older patients ensuring high user adoption

**500+** Hours of manual work saved per month by automated Insurance handling process



# Healthcare Operations Management and Optimization Case Studies



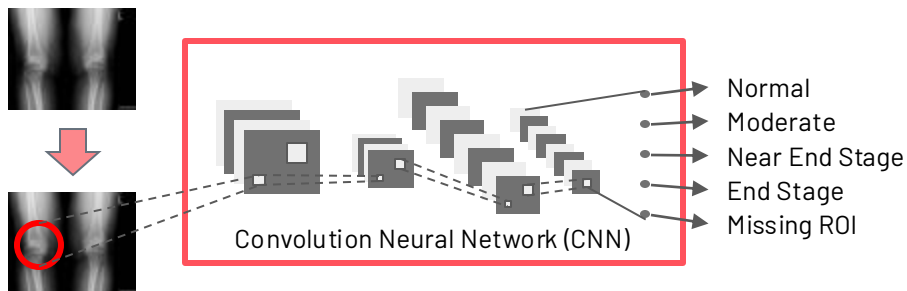
## Case Study #6

# Evaluation of Arthritis using Machine Learning based X-Ray Image Analysis

- 1 Bulk processing of X-rays to assess extent of Arthritis for chronic patients, saving crucial manual effort



- 2 Algorithm automatically identifies the region of interest (ROI) and uses Convolution Neural Network (CNN) models to classify extent of Arthritis



The system is capable of predicting osteoarthritis in all the different regions including knee (medial & lateral), kneecap and pelvis, and has so far provided over **95% accuracy** of analysis!

- 3 Doctors review results to validate the analysis.



## Case Study #7 Patient flow management & doctor scheduling application

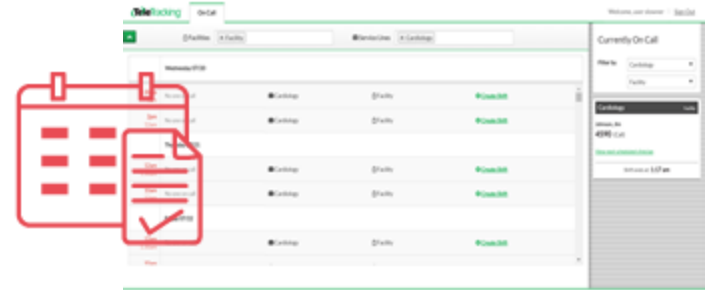
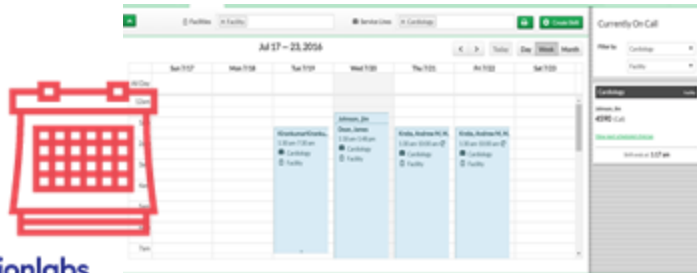
Developed Industry's first mobile applications to monitor and act upon patient flow problems



Client Hospitals saw a reduction of **22% in patient waiting time**, and 16% increase in hospital resource productivity including Nurse and Physician time

Automatic scheduling efficiency by identifying gaps in schedule and allocating continuous slots

Seamlessly integrate with Physician scheduling application (like Google Calendar)



# Case Study #8 Care Management Platform to help Payors transition from Traditional to Value Based Care plans

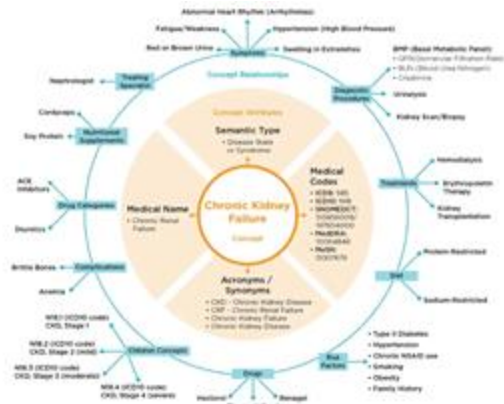
## Challenges/ Problem

Our client platform helps Payors transition from traditional “one size fits all” benefit plans to risk adjusted value based plans. This needs analysis of high volume of unstructured clinical data from a variety of documents including clinical progress notes, eRx and other handwritten notes to build patient risk profiles.

## Solution Delivered

Use OCR and NLP on documents to extract contextual content and terms  
Create ML pipelines to process blobs of text and map them to clinical codes  
Create patient risk profiles by combining related clinical codes (concepts)  
Use ML Algorithms that engage patients in personalized and targeted benefit plans based on their risk profiles

Client's Customers saw 15-20% improvement in RAF (Risk Adjustment Factor) and 19x Return on Investment





## Case Study #9

# Patent Research Repository for a leading Pharma company to consolidate data sources and speed up patent discovery and analysis

### Challenges/Problem

Build a patent search platform for the research division of a leading international pharmaceutical company



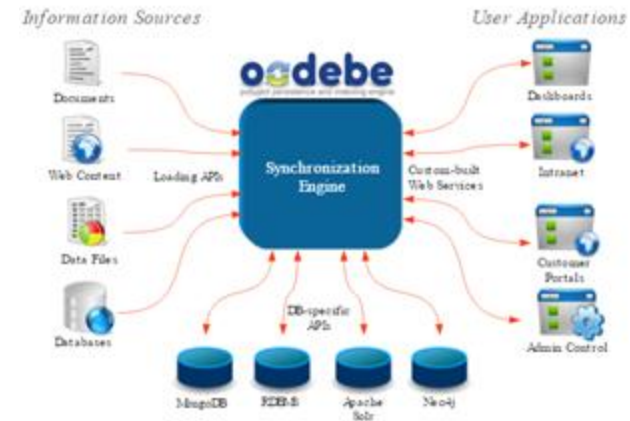
Platform needed to perform Advanced search operations, graph traversal operations and processing of large number of documents in different formats

Need to support guaranteed response times for several client applications that access the repository

Improved Patent discovery rates by 33% by adding additional sources seamlessly and reduced response time from 30 seconds to under 5 seconds

### Solution Delivered

Polyglot Persistence architecture using Oodebe Synchronisation Engine



Search and graph traversal queries to be performed using special purpose data engines, providing guaranteed performance for complex queries

## Case Study #10    Claims Data Processing for a Pharmacy Benefits Management system

### Challenges/Problem

Help a multi-billion dollar PBM:

- 1) Merge a recently acquired PBM claims adjudication platform and ensure consistency in claims processing
- 2) Enhance benefits plan management to improve patient experience and claims auto-adjudication rates

### Solution Approach

- 1) Big data blended with high speed comparison ML algorithms to process claims data and detect mismatches in processing in real-time
- 2) Optimize benefits plan configuration and recommendation engines to help identify the best plan

**200%** Improvement in identifying cluster of similar looking claims which have issues

**50%** Reduction in OPEX associated with parallel testing

**80%** Reduction in rework for the testing team



Claims Certification



Machine Learning



Duplicate Claims Data Detection

## Case Study #10 Claims Data Processing for a Pharmacy Benefits Management system

### Solution Steps

- Data analysis, Data cleansing, Master Data Management, Data auto-summarization, Cluster analysis
- Feature Selection - Identify the most important features causing the two systems mismatches.
- Machine Learning - Training/validation/ testing a Classifier (Ex: Decision Tree, Logistics Regression, Anomaly Detection).
- Feature Selection and Supervised Machine Learning Techniques leading to models
- Data Clustering - Unsupervised Machine Learning techniques

100 Million Transactions used for Certification testing and ML Analytics

250+ Parameter fields considered for Data Processing

1000+ Features mapped for anomaly and mismatch detection

50% Reduction in OPEX associated with Customer Onboarding

### Technology



# Case Study #11 Clinical Trial and Quality Management Platform for a European ISV

## Overview

Client is a European based ISV that offers a platform for the Pharma industry to manage their clinical trials, and to help different site users, investigators and reviewers collaborate & perform effective document management and quality control meant for clinical trial and audit process required by FDA.

## Challenge

- Client's existing framework was not scalable resulting in significant application latency as data volumes increased
- Enormous Capex and Opex for maintaining existing applications
- Licensing and vendor support issues for aging frameworks

## Transformation

Worked on a flexible and configurable framework called Neuron ESB for enterprise integration  
Framework allows users to design and develop new solutions and features faster  
Improved productivity and margins



**25+**  
Countries using solution



**>100**  
Employees Worldwide

# Case Study #11 Clinical Trial and Quality Management Platform for a European ISV

## Solution Steps

- Cloud-based document management system to facilitate any eTMF (electronic Trial Master File) business process.
- Cloud-based eQMS (electronic Quality Management System) to manage critical quality related documents, control their creation and manage their approval.
- Completely configurable and flexible eDMS within cloud and compliant with CFR 21 Part 11.
- XEVMPD/IDMP modules based on Microsoft SharePoint -for Planning, Controlling & Tracking all notifiable processes in the highly regulated Life Science industry.

50%+ Savings on Capex and 70% on Opex

100% Improvement in end-user experience resulted in significant growth

Fastest growing LifeScience tech provider Awarded to Client



The screenshot shows a document management interface with a left sidebar for navigation and a main area displaying a list of documents. The sidebar includes sections for 'Selected Items' and 'Documents'. The main area lists documents with columns for 'Document ID', 'Document Name', 'Status', 'Created By', and 'Created Date'.

Document ID	Document Name	Status	Created By	Created Date
00000001	Document 1	Draft	John Doe	2023-01-01
00000002	Document 2	In Progress	Jane Smith	2023-01-02
00000003	Document 3	Completed	John Doe	2023-01-03
00000004	Document 4	Archived	Jane Smith	2023-01-04
00000005	Document 5	Draft	John Doe	2023-01-05
00000006	Document 6	In Progress	Jane Smith	2023-01-06
00000007	Document 7	Completed	John Doe	2023-01-07
00000008	Document 8	Archived	Jane Smith	2023-01-08
00000009	Document 9	Draft	John Doe	2023-01-09
00000010	Document 10	In Progress	Jane Smith	2023-01-10

## Technology



# Data Interoperability Case Studies



## Case Study #12

## Secure Portal for Patients to access and share their diagnostic tests results

Client is a leading developer of rapid diagnostic products and services focused on infectious disease, cardio-metabolic disease and toxicology

Build secure portal to deliver reliable and actionable information from rapid diagnostic tests



Patient can access Lab results via a secure portal and share self reported data with Care Providers with one-click. This data is integrated with Cerner and Epic EMRs

Integration with multiple enterprise EMRs



### Solution Delivered

- Master Data Management of thousands of patients, doctors, nurses and health care providers
- Developed 60+ database tables, 20+ interfaces, 100+ screens
- Leverage open source libraries such as am Charts for visualization needs
- Reporting capabilities using SSRS / Reports development



## Case Study #13 Voice-assisted Physician Companion Platform

### Challenges/Problem

To reduce the burden for physicians to perform non-clinical administrative tasks including clinical notes and billing

### Solution Delivered

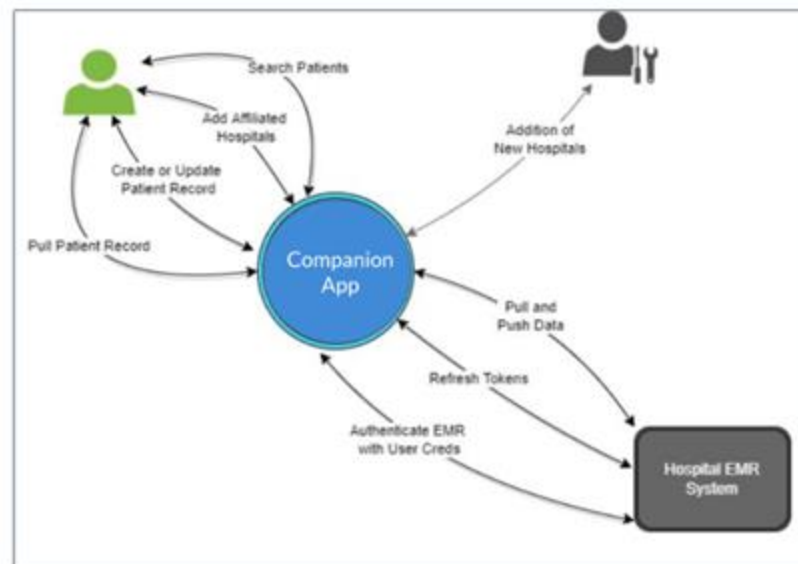
Mobile app that pulls patient history, vitals, orders and clinical notes from the hospital system EMR.

Built on FHIR R4 and built-in Integration with Cerner, Epic, eCW, Allscripts (additional EMRs in the pipeline)

Built on a conversation layer so Physicians can use voice prompts to navigate the app, just like Alexa/Siri

Ability to dictate orders and clinical notes and upload them to EMR with simple voice command e.g. create diet order for Mary Smith

The platform saves more than 15% of Physician's post-operative time for administrative tasks like billing and clinical notes



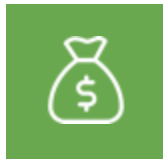
## Case Study #14 Connected Care Coordination platform for Belgium's Health Ecosystem

### Overview

Client is a Western European leader having 20+ different healthcare products for European market. The Client needed a partner to build a care coordination platform to connect providers, patients, payers and other stakeholders of country's healthcare ecosystem

### Solution Approach

- Built a cloud enabled connected care platform from the ground up
- Modern and Intuitive user experience with real-time data and insights
- Integrated Practice Management application to streamline Provider operations



**Part of 400 Million+**  
revenue group of multi national  
company listed in Brussels Stock  
Exchange



**40K+ Customers**  
From last 22+ years



**29+ Countries**  
ISV presence in 7 locations in  
Europe serving large healthcare  
population



**ISV having >385**  
Employees in Europe

## Case Study #14 Connected Care Coordination platform for Belgium's Health Ecosystem

### Solution Steps

- Built Patient Registration, Clinical history, Episode of care, ePrescription, Medication & Treatment Management,
- Integration with a centralized clinical document manager with audit trail support, and support for multiple clinical document formats like HL7, KMEHR
- Integration with central government registries of healthcare data
- Integration with eRx, LIS and RIS (Imaging)
- Certified Technology: Testing team went through the Homologation process

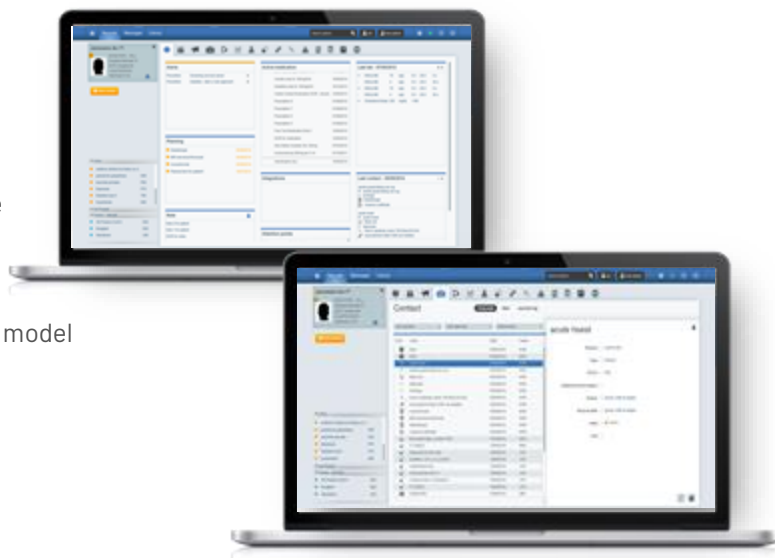
### Agile Execution

Executed the project using Scrum of Scrums approach to ensure flexible Iterative development and active stakeholder engagement

### Hybrid shore Delivery

Project team members worked onsite and away shore to hybrid delivery model

- Met the major business goal of bringing the solution up in record time of less than 6 months
- Helped streamlining of the national healthcare system which improved operational efficiency and patient experience by 10 times
- 50% boost in customer revenue as more and more providers were transitioning to the new platform



## Case Study #15 US based Mental Health EHR Platform

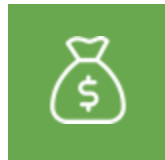
### Overview

Client is a North Carolina based ISV who built an Electronic Health Record for the mental health domain serving the needs of practices in US and Canada

- One of the fastest growing Behavioural Health EHR provider
- Streamlines office, enhances efficiency and reduces billing times
- 2014 - Edition ONC - ACB Meaningful Use Certified Technology

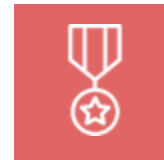
### Project Overview

Design, development and maintenance of an EHR platform specifically designed for Behavioral health



**\$1 Million+**

Net revenue from the mental health market



**50K+ Patients**

Over the past 10+ years



**100+**

Mental health clinics & Rehab centers



**>30**

Employees in the USA

## Case Study #15 US based Mental Health EHR Platform

### Features Developed

- User defined dashboard
- Client demographics
- E- Prescribe(e-RX) and tracking of Drug Drug interaction and medication allergies
- Medication tracking
- Progress notes
- Treatment Plans
- Appointments
- Track Vital Signs
- Track substance usage
- Alerts and reminders
- Customizable layouts and Reports
- Patient billing and payment tracking
- Insurance submission
- Document Tree
- Lab Integrations via HL7 files and custom reports
- Generate and export CCDs
- Transmit immunization records via HL7 files
- Patient portals that are responsive and works on multiple form factors



Significant improvement in User Experience and Overall design

Meeting HIPAA Compliance needs of the product

Implementing Value-driven payment against fee for service

## Case Study #16 Supply-Chain for one of the world's largest Covid-19 vaccine Programs

### Overview

Client is one of the world's largest humanitarian and developmental aid organization worldwide. Aim of the program was to help accelerate the development and manufacturing of COVID-19 vaccines and to guarantee fair and equitable access for every country in the world.

The Organization worked with manufacturers and partners on the procurement of COVID-19 vaccine doses, as well as storage and transportation

### Transformation

As Digital Data Engineering partner we created a platform to monitor the storage, distribution and vaccination data from over 189 countries.

### Technology

Azure, Azure Data Factory, Azure Functions, Synapse, Power BI



**21 Million**

Vaccines distributed around the world by end of 2021



**500 Million**

Syringes stockpiled by end of 2021



**189 Countries**

Support the program



# Product Engineering and Infrastructure Management Case Studies





## Case Study #17

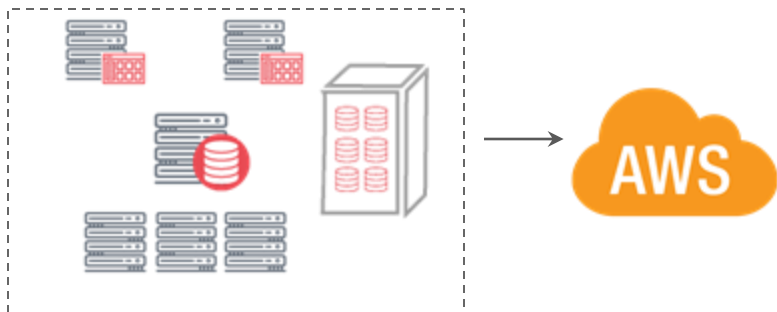
# Infrastructure migration from on-premise to AWS improves scalability, availability and reduces cost

### Challenges/Problem

Consolidate data centres to improve scalability and reduce overall costs by migrating application infrastructure to AWS

### On-Premise Data Center

Migrate all environments (Dev, QA, Staging & Prod) from on-premise data centres to AWS



### Solution Delivered

- End-to-end migration services covering phases including Application Analysis, Cloud Architecture Design, Infrastructure Automation and Application Deployment, Performance Testing to Training
- Assessment of AWS Sizing and Data migration efforts
- Rewriting of scripts in Powershell towards task automation
- Recommendation of Data Transfer mechanism using Tsunami (OSS) for high speed Data Transfer
- Developed Continuous Delivery pipelines for applications from Dev into Prod Env

Enable **PHI and HIPAA** compliance by encryption of data at rest and in transit



## Case Study #18    Managed Service for Infrastructure Administration for Fortune 10 Healthcare Payor

### Overview

Client was looking for remote administration services that includes;

- Business Intelligence Experts, DBA
- Level 1 remote monitoring of their IT infrastructure of more than 60 different kinds of application and database servers running on Windows & Linux
- Building dashboards for Power Users in order to control the employee productivity.

### Challenges/Problems

- Need to monitor infrastructure remotely
- Raise timely alerts and proactively identify issues to ensure SLAs
- Database Administration and performance tuning of various SQL Server and Oracle Databases
- Build dashboards for measuring the performance of the employees delivering services
- Building dashboards and visualization for C-Level Executives

100% Adherence to SLAs defined for monitoring the client infrastructure

>99% Reduction in time required for report building from 32 Hrs to Less than 15 Minutes

100% Improvement in ease of monitoring the service levels through an executive dashboard

## Case Study #18    Managed Service for Infrastructure Administration for Fortune 10 Healthcare Payor

### Solution Steps

- Deployed a process and team that remotely monitors the client network
- Defined the SLAs and kept a close watch on meeting the required SLAs
- Monthly reports showcasing service performance matrix was produced
- Leveraged Nagios for remote monitoring
- Well documented and scripted L1 troubleshooting – logging into management server to run specific scripts to restart services if needed
- DBA assigned to manage DB installations, performing upgrades, managing DB storage, user accounts, security policies, schema objects, tables, indexes, views
- Performing migration, backup and recovery of databases
- Monitoring and tuning performance of database

### Technology

Windows, Linux, VMWare, Nagios;

DBA: SQL Server Administration

Dashboard: QlikView



# Healthcare Payment Innovation Case Studies



## Case Study #19    Application Engineering for a Large Healthcare Payment Gateway Company

### BACKEND APPLICATIONS

- **Data Administration**  
Customer Service application for Data Management
- **Data Ingestion**  
Data Masking application
- **Banking**  
Finance Team tool for Payment Reports, Voiding payments
- **CRUD**  
Internal Application tool to perform DB Operations (like SSMS)
- **Security Platform**  
Centralized User Identity Provider
- **API Gateway**  
Enterprise Services
- **Payment HUB**  
Single Interface for all Payment Modalities
- **Portals**  
Single Sign On User Interface for all Applications

### CORE ENGINES

- **VCP**  
Virtual Card Payment Services
- **PayPlatform**  
Payments Data related to EChecks, Physical Checks, ACH, and vCard

### CUSTOMER FACING APPLICATIONS

- **B2B**  
Portal for processing payments between two businesses
- **PaySelect**  
Customized payment portal for business payments
- **Premium Payment Manager**  
Automated Reimbursement Payment system
- **VCP CSR**  
Customer Service Representative application
- **vCard**  
Provider facing application for Card Tracking, Optout option and Fraudulent transaction report



# Case Study #19    Application Engineering for a Large Healthcare Payment Gateway Company

## Back-End Applications

- Data Administration
  - Self Service CSR tool for faster service management
  - Features - Provider Data Mgmt, Fraud Prevention, Compliance, Audit, Live Tracking
- Data Ingestion:
  - Tool to anonymize (mask) PHI data from files and in data tables for HIPAA and PCI compliance
  - User defined Anonymization rules
- CRUD
  - Self Service search and data manipulation without using SSMS (SQL Server Management Studio)
  - Ability to execute stored procedures and functions and assign queries to different groups
- Banking
  - Single platform for all payment processing - review, clear, stop, adjustments and more
- Security
  - Centralized User Identity Provider that manages access across applications, TP-APIs, DBs etc
- Clearinghouse Portal
  - Self service enrollment management for providers, TPAs and other payment receivers
  - Outcome: 18K manual tickets reduced to 3.5K, 20% reduction in call volume

# Case Study #19    Application Engineering for a Large Healthcare Payment Gateway Company

## Core Engines

- Virtual Card Payment
  - Platform to generate Virtual cards for payments
  - Card service APIs to generate VCP through various card vendors
  - Integrated printing and faxing functions for Providers
  - Real-time card swipe transaction tracking and blocking
- PayPlatform
  - Platform that supports multiple modes of payment - ACH, Vcard, PaperCheck, and eCheck
  - Reduced Provider revenue cycle from 7+ days to 5 mins (for real-time payment options)
  - Cost effective by eliminating bank fees and printing charges

## Customer Facing Applications

- vCard Self Service
  - Providers can opt in and out of different payment methods
  - Report suspicious transactions and cancel/block the card
- VCP CSR
  - CSR portal to support Provider queries for transactions, opt-out, information update and more
- Premium Payment Manager
  - Platform for Employers to pay different carriers, plans and coverage each month for each individual employee
  - Employees can have their obligations recovered pre-tax through payroll deduction
- B2B
  - Payment processing from one Business (Payer) to another Business (Payee) for goods and services
  - Multiple payment options - ACH, Vcard, PaperCheck, and eCheck
- PaySelect (B2C platform)
  - Payment processing from one business (Payer) to a consumer (Payee) for goods and services
  - Payor branded portals to process claims of any insurer/Administrator and securely transfer the money to the concerned receiver in their preferred payment option

## Case Study #20

# Re-engineered physical check payment solution to web based paperless payments processing

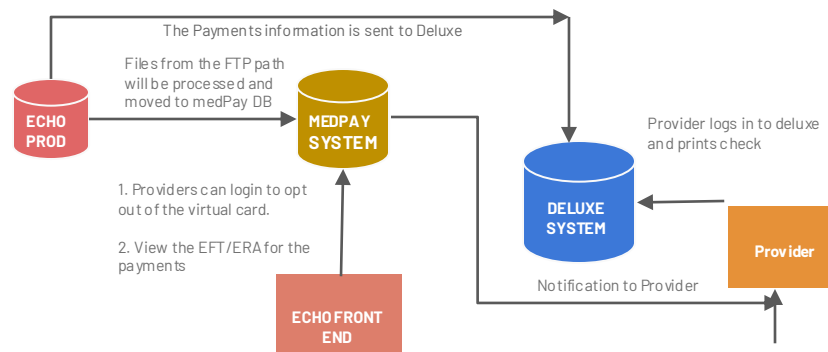
Manual paper based payment process was time consuming & error prone, leading to inordinate delays, taking 7+ days



Providers did not have bank account or refused to provide account details resulting in low adoption rates

Legacy application was built in VB6 had become difficult to maintain

New Platform improved maintainability and significantly reduced payment processing time from 7+ days to 5 minutes



.NET platform with web APIs to "Deluxe Payment Exchange", a 3<sup>rd</sup> party payment system for e-checks, virtual cards & ACH generation



# Thank You

