Vhi

Delivering Customer Value through Platform Architecture

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Today's Discussion

Technology Transformation

01 Market context

02 Vhi Context

03 Platform Architecture

04 How We Operate

05 Value Delivered

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Market Context

A New Reality

Executives are increasing finding that modernizing their technology stack to deliver customer value requires holistic change across people, process and technologies.

42%
of companies are challenged to fully achieve their cloud outcomes due to complexity of business and operational change and security and compliance risk.

69%
of executives believe their operating model is unable to continuously adapt to disruptive forces.

88%
of Business leaders say their customers are changing faster than they can change their business.

70%
enterprise transformation efforts fail to fully meet business leaders' expectations.

56%
of executives acknowledge data readiness is the top challenge to adopt AI.

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Tech Transformation:
A closer look at the levers of change

Strategy

Enable new performance frontiers through technology to drive top performance in your industry

Continuously optimize spend to fund innovative technology investments

Define business growth ambition and establish tech-enabled product innovation engine

Design operating model and technology architecture, to maximize use of talent and technology

Orchestrate transformation to accelerate value and minimize business risk

Digital Core

Establish strong digital core as a primary source for competitive advantage

Optimize enterprise platforms using diverse technology ecosystem and **composable integration** approaches

Implement verticalized, cloud-native **platforms** and applications

Create configurable **data** foundation ready to scale **AI** enterprise-wide

Build elastic **cloud infrastructure** across public, private and edge, using a hybrid, multi-**cloud control plane**

Embed **security** throughout the Digital Core, into technology and culture

Modern Practices

Evolve ways of working and optimize technology landscape for better customer and business alignment

Establish product-oriented, customer-centric teams and new ways of working, comprising agile and DevSecOps methods

Leverage hyper-automation and generative AI across the enterprise for greater resilience, efficiencies and speed

Reimagine the business with actionable insights, leveraging the power of data and AI

Measure success through business outcome-oriented KPIs

Reduce carbon footprint using sustainable cloud, infrastructure and IT lifecycle
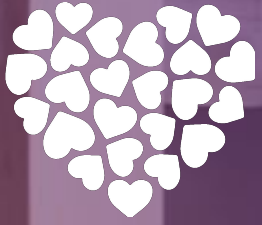
Talent

Build future-ready talent to enable a culture and capability for continuous reinvention

Establish a resilient and diverse digital workforce

Upskill/reskill talent continually to confidently work with modern technology

Activate the right people in the right roles at the right time through talent sourcing and mobility

Cultivate a strong culture of change enabled by collaboration, teamwork, growth mindset and customer-centricity

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Vhi Context

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MyVhi
Digital Portal

Customer Comms
Digital Redesign

Digital Factory
Operating Model
(Agile)

Snap & Send
Mobile Claiming

Customer
Identity & Access
Replatform &
Redesign

Patient Verification
Digital Portal &
eClaims (API)

Vhi.ie
Mobile Redesign &
eCommerce

CX
Strategy

Digital Tech
Platform
Engineering
Partner
(AWS & RedHat)

Vhi Mobile
App

MyVhi
Mobile Redesign

Digital Health
Strategy

Vhi Web
Cloud
Redesign

Digital Insights
(Google Analytics)

Provider Portal
Service Design
& PoC

2008

2010

2012

2015

2019

2006

2017

2018

2020

2022

Claims
Fraud Analytics

2014

2021

CRM
Modernisation
&
IT Consolidation

Healthcare
Provision Strategy

New IT
Strategy

Digital
Decoupling
Architecture

Claims
Transformation
(Inpatient)

Cloud
Strategy

Claims
Transformation
(Outpatient)

Claims System
Modernisation

API Strategy
&
Partner

Cloud Security
Strategy

Cloud Migration
Strategy

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● DIGITAL & CUSTOMER   ● IT & TECHNOLOGY

Vhi Context Challenges to Deliver Customer Value

Vhi Healthcare is Irelands largest health insurer with over 1.2 million customers & 1800+ employees
Vhi focuses on delivering personal and digital experience through a leading insurance proposition that provides access to a connected healthcare system supporting their customers to live longer, stronger, and healthier lives.

CUSTOMER EXPERIENCE FRAGMENTED

Systems and data are functional based, and services are not connected

UNDER-UTILISING DIGITAL CHANNELS

Under-utilisation of digital across insurance and health services

NOT COLLECTING / USING DATA

Not collecting or using our data effectively to inform sales, services & operations

SLOW PACE

There is a slow pace to market

MANUAL PROCESSES AND INTERFACES

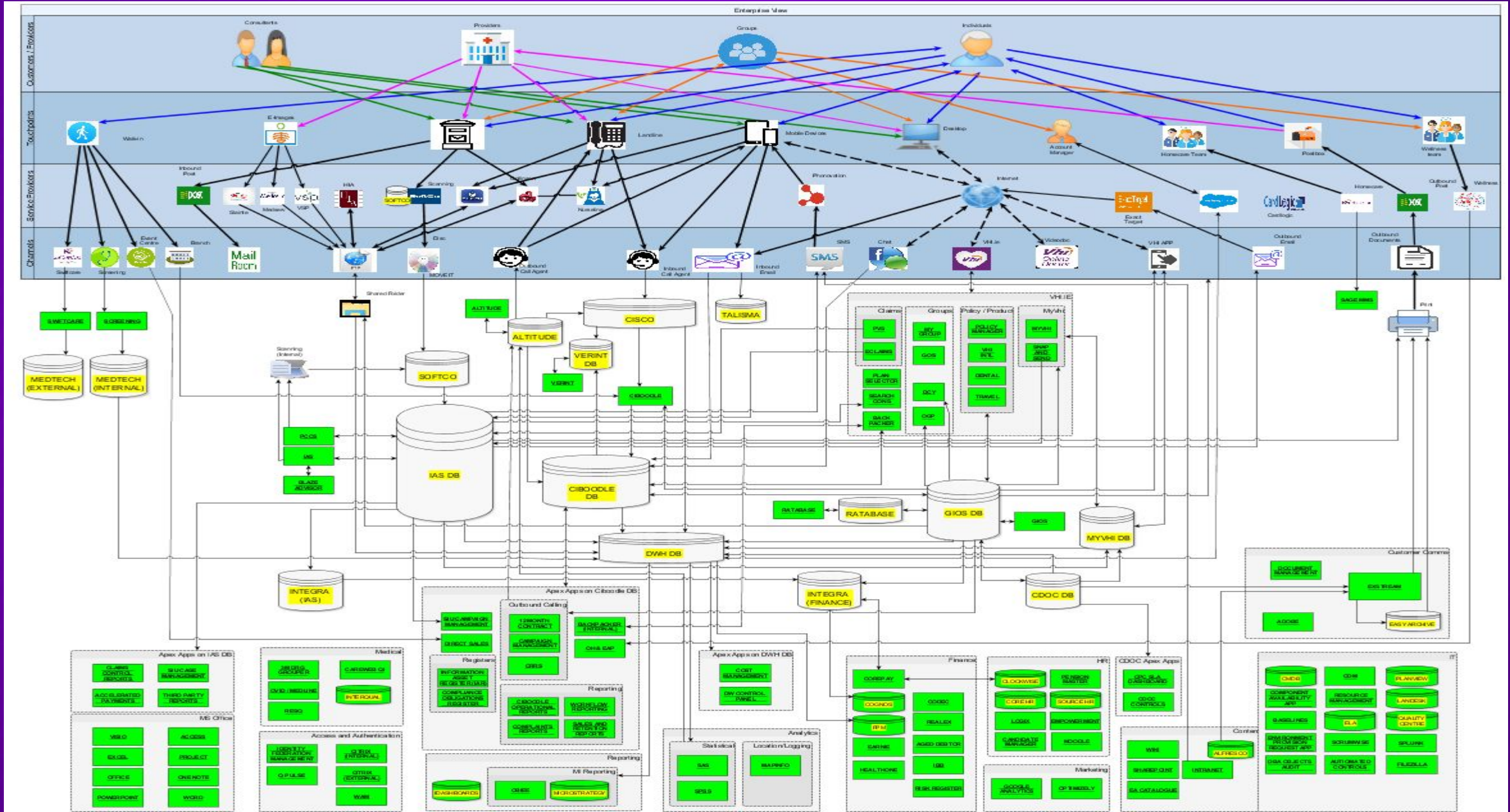Processes/interfaces with partners and customers overly manual/single sign on

LEGACY SYSTEMS

Legacy systems in health services – need to be replaced

Legacy Technologies

CHALLENGES

- Over 100+ systems underpinning the business & customer

- IT is centered around 4 legacy platforms / monoliths including including Policy, CRM, Claims & Web

- The applications applied leading technology at the point in which they were implemented (Pre 2010) including

  - Oracle Fusion Middleware (Forms & Batch)

  - MVC Monoliths (Spring, J2EE & Batch)

- 100% on premise architecture

- Spaghetti Integration Styles including DB Links

- Missing the core ingredients of modern architectures including Cloud, APIs, Modular Design, Contemporary Data Stores & DevOps

Systems Architecture
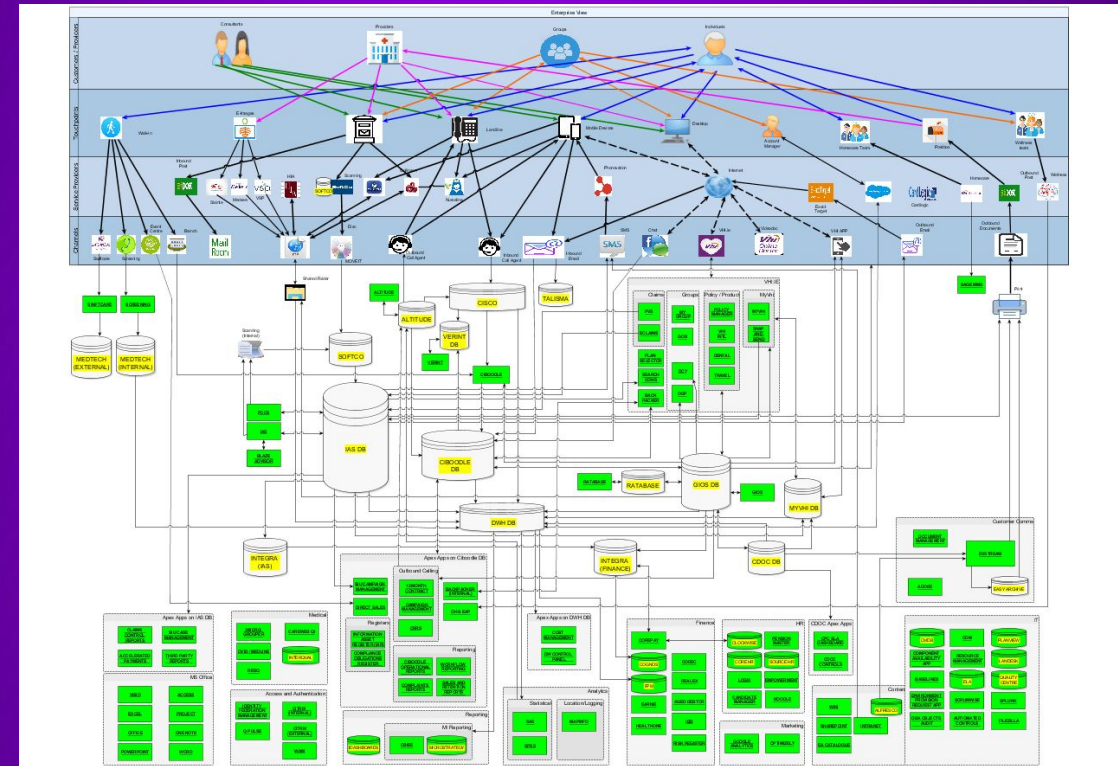
Establishing a Digital Technology Platform: Decoupling from Legacy

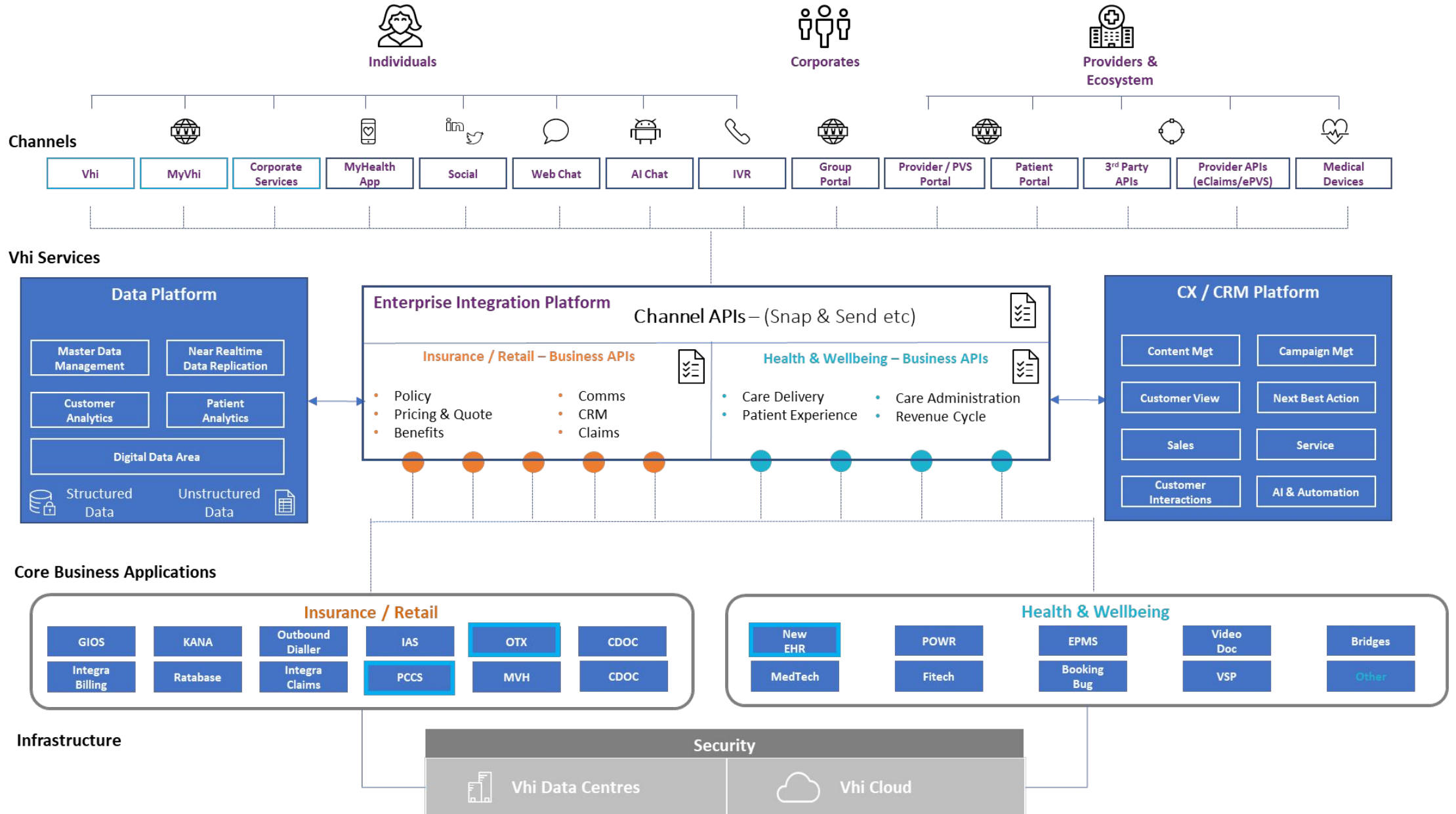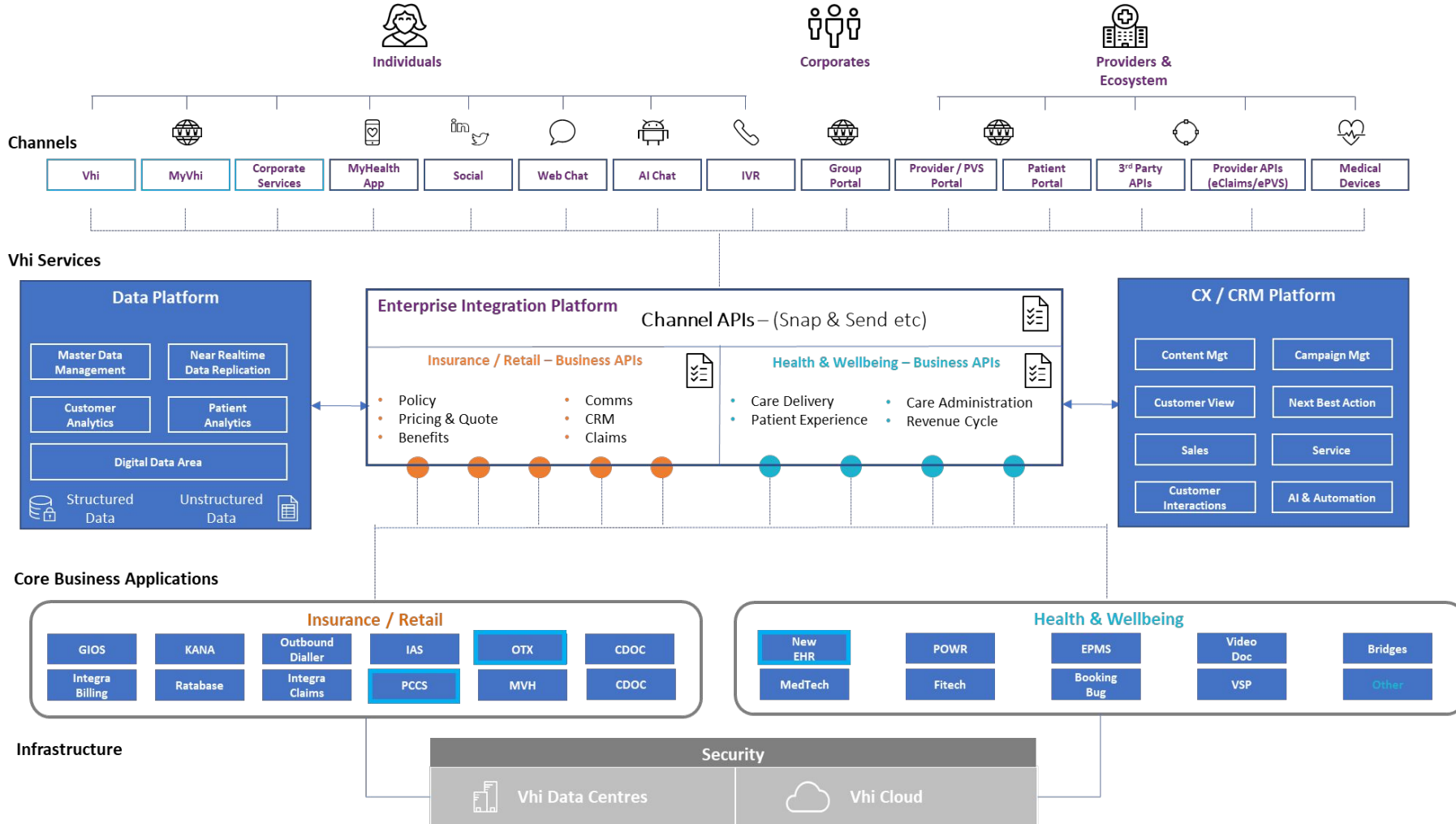The key objectives of Digital Decoupling is to facilitate **HARMONIZATION** between legacy **MONOLITHS** and contemporary **MODULAR** systems. Gradual **MIGRATION** from legacy systems contributes to challenging **DIGITAL NEWCOMERS** unburdened with **TECHNICAL DEBT**.

Digital

| API | Modular | Engineering Culture | Cloud | Data |

How to get There

Individuals   **Corporates**   **Providers & Ecosystem**

Channels

Vhi	MyVhi	Corporate Services	MyHealth App	Social	Web Chat	AI Chat	IVR	Group Portal	Provider / PVS Portal	Patient Portal	3rd Party APIs	Provider APIs (eClaims/ePVS)	Medical Devices

Vhi Services

Data Platform

Master Data Management	Near Realtime Data Replication
Customer Analytics	Patient Analytics

Digital Data Area

Structured Data   Unstructured Data

Enterprise Integration Platform

Channel APIs – (Snap & Send etc)

Insurance / Retail – Business APIs
- Policy
- Pricing & Quote
- Benefits
- Comms
- CRM
- Claims

Health & Wellbeing – Business APIs
- Care Delivery
- Patient Experience
- Care Administration
- Revenue Cycle

CX / CRM Platform

Content Mgt	Campaign Mgt
Customer View	Next Best Action
Sales	Service
Customer Interactions	AI & Automation

Core Business Applications

Insurance / Retail

GIOS	KANA	Outbound Dialler	IAS	OTX	CDOC
Integra Billing	Ratabase	Integra Claims	PCCS	MVH	CDOC

Health & Wellbeing

New EHR	POWR	EPMS	Video Doc	Bridges
MedTech	Fitech	Booking Bug	VSP	Other

Infrastructure

Security

Vhi Data Centres   Vhi Cloud

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Vhi Services

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Infrastructure

Security
| Vhi Data Centres | Vhi Cloud |

New Op Model
- Platform Team
- Agile Delivery

Build Infrastructure
- Hybrid Cloud
- OpenShift
- Legacy Systems - RHEL

Wrap our Legacy
- API

Re-write our Legacy
- Website
- CIAM

Decouple our Data
- CDC
- Event Streaming

Enable new Capabilities
- Patterns
- Governance

Platform Architecture

Vhi's Engineering Platform

"Fundamentally, the Vhi Engineering Platform is a technology environment built on top of Red Hat OpenShift and AWS which aims to provide a uniform development experience across technology projects."

The primary use case, thus far, has been custom development and to that end we have standard processes built around **three use cases:**

- **Node.js APIs**
- **Spring APIs**
- **React UIs**

Between Q3 of 2022 and Q1 of 2023 Vhi completely rebuilt its online customer journeys and sales funnels using modern engineering technologies and deployed them on CTP.

In Q1 and Q2 of 2023 Vhi deployed a solution to enable its connected health journeys across partner facilities.

In Q2 2023 Vhi deployed a digital decoupling solution to reduce legacy constraints to delivering new products using modern engineering.

Vhi and Accenture continue to work together to deliver additional functionality on the CTP as it evolves and more applications and workloads are onboarded

Platform Architecture
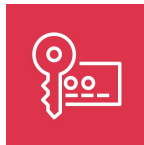
Platform Architecture: Accelerators
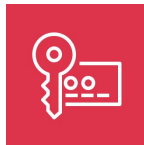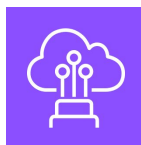
Platform Architecture: GitOps and Infrastructure-as-Code

GitOps is an operational framework that takes DevOps best practices used for application development such as version control, collaboration, compliance, and CI/CD, and applies them to infrastructure automation - GitLab

One of the most influential changes has been the adoption of GitOps. The Platform uses:

- Helm based YAML deployments to OpenShift

- Terraform Infrastructure as code (IaC) for AWS resources

Significant time and effort has been put into upskilling the Platform team in these technologies which has improved productivity across the development stack.

We also benefit from:

- Having a "single source of truth" for all deployments

- An easy way to deploy and manage multiple environments

By using ArgoCD we have a tool that provides a real time view of deployments across production and non-production and changes to deployments can be deployed to multiple environments with a single code change.

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Lessons Learned

Platform Lessons Learned

Difficult journey running old and new

- Business buy-in
- Staffing
- Finance

Don't build a business case on cost

- No KPI's for the old, KPI's now include:
  - Speed to Market
  - Kwh
  - Applications & Servers migrated or retired
- Focus on value over cost. Hard to commit to nominal savings

Use your Partners

- Directional Business Case
- Cloud 6Rs

Data Centre close to hyper-scaler

- Low latency, allows to consolidate API Gateway

Managed Services

- Removing on-prem allows us to move from OCP Self-Managed to ROSA

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Delivering Customer Value

Customer Value Delivered

The new platform architecture has enabled the business to increase time to market for new benefit offerings.

Vhi customers are now able to Find a Plan that suits their needs and those of their family.

Vhi have also been able to add new benefits to

The improved benefits include, but are not limited to,

- Neurodiversity support

- Vhi Positive Mind

- Improving and broadening fertility benefits

Vhi Positive Mind

Support for mild to moderate emotional or psychological issues which can impact your quality of life, relationships or ability to cope.

VHI 360 HEALTH CENTRE

With a multi-disciplinary approach to care, you can access a range of services including Urgent care, Paediatrics, Physio and Diagnostics.

Vhi Women's Health Clinic

Designed specifically to support women dealing with perimenopause and menopause.

#1
Health Insurance Customer Experience 2022 Cxi

#7
Company in Ireland 2022 Cxi, up 18 spots since 2021

17%
Reduction in Customer Drop Off of Digital Channels