Infosys Topaz | AI in Healthcare

HARMONIZING HEALTHCARE WITH AI

#BeingAIFirst | #HarmonyInHealthcare

Infosys®
Navigate your next

AI REVOLUTION: TRANSFORMING HEALTHCARE'S DATA DELUGE INTO OPPORTUNITY:

As healthcare grapples with enormous data and evolving consumer expectations, AI is unlocking new paths for innovation, efficiency, and patient care.

With the current trends favoring digital savvy healthcare consumers, in addition to increasing data volumes and complex regulations, the healthcare industry is forced to alter its modus operandi. These challenges are not just driving a powerful shift towards AI-based solutions for redefining healthcare delivery, but also becoming a stepping stone for innovation and better patient care.

Let us start by understanding how it affects the Payer business

Key Driving Forces behind AI Adoption in healthcare payer | **Top Business Imperatives of AI-First transformations in healthcare**

Increasing Complexity & Data Volume

Cost intensive complex highly regulated processes

Increasing digital adoption in consumers

Enabling Operational Excellence

Streamline regulated operations, unifying systems

Improving Care Efficiency

Proactive health interventions, Member centric coordinated care

Transforming Stakeholder Experience

Digital user experience, personalized plans and touchpoints

Addressing critical challenges with AI-driven Transformation:

The healthcare industry is navigating complex challenges, from improving patient outcomes to optimizing operational efficiency, all while meeting critical business imperatives. AI and GenAI are key enablers in reimagining healthcare processes and experiences. These technologies offer scalable solutions that are driving transformation in care delivery, patient engagement, and operational workflows, ultimately paving the way for more personalized, efficient and impactful healthcare services.

Big Bets, Bigger Impacts

Our Vision for Healthcare's Revolutionary Future

To transform healthcare, we're taking bold steps that push the limits of innovation. By tackling the toughest challenges, we aim to make care better and more accessible, while creating lasting value for both patients and the industry. Our goal is to make a real difference in people's lives by embracing change and staying ahead of the curve.

Ox.Ai

Enabling Operational Excellence

- Offers Personalised Plan Recommendations via Provider Lifecycle Management & Reimagined Member Enrolment

- Offers Claims Anomaly detection & intelligent audits via Claims Payment Integrity & Fraud Management

Care.Ai

Improving Care Efficiency

- Offers Clinical recommendation engines and intelligent routing and content management via Rapid Prior-Auth process with intelligent workflows

- Offers Health Risk Predications and insights driven care plan automation and care alerts via Remote Patient Monitoring & Care Plan Generation

Cx.Ai

Transforming Stakeholder experience

- Offers Intelligent coverage & provider information search engines, AI & personalized videos, Call Summary generation, virtual assistants sentiment analysis via Improving Customer Experience with care accessibility & member advocacy

Prospective Business Impacts

Improved claims process efficiency through:

- Automating workflows
- Standardizing procedures
- Leveraging data analytics

Reduced revenue leakage through:

- Implementing robust monitoring
- Systems optimizing processes
- Capturing all potential income accurately

Improved Customer Experience through:

- Reduced prior-auth processing time by ~50-60%
- Reduced hospital admissions by 25-30%
- Improved Care efficiency further by ~ 20%

Improved NPS score of members through:

- Personalizing member experiences
- Active soliciting feedback
- Prompt address of pain points

Reduced customer service operations costs through:

- Providing self-service options
- Automating basic inquiries with AI chatbots
- Optimizing workforce management

In this journey, we believe that every challenge presents an opportunity for growth and improvement. By prioritizing innovation and collaboration, we are committed to not only enhancing patient care but also fostering a healthier future for all. Together, we can pave the way for a more effective and equitable healthcare system, where quality care is accessible to everyone.

INTRODUCING Infosys topaz | AI in Healthcare

An AI-first offering that facilitates accelerated business value while addressing the myriad concerns in the healthcare industry.

Pre-trained AI models; 10+ platforms

10,000+ AI-First specialists and data strategists

'Responsible by design' approach to ethics, trust, privacy, security and compliance

Adopting GenAI at Scale

KICK-STARTING YOUR AI/GEN AI journey

How do we do that?

A comprehensive process to guide organizations beginning or enhancing their AI and GenAI initiatives.

ENVISION

Define the problem, scope the PoC, outline desired output and evaluation criteria. Prioritize use cases by impact, value, effort, and risk. Address ethical and legal considerations.

DESIGN

Identify data sources, collect, cleanse and validate data, research and select models. Choose development tools, libraries, and frameworks while defining security guardrails.

DEVELOP & VALIDATE

Develop the solution iteratively to prove the hypothesis and PoC objectives, including prompt engineering, refinement, and model fine-tuning as needed.

ENVISION

Deploy the solution and fine-tuned model, implement monitoring and feedback loops, and validate and test model performance.

SCALING YOUR JOURNEY WITH AI/GEN AI

For existing AI users, we provide foundational elements and actionable guidance to help them seamlessly navigate challenges and unlock the full potential of GenAI

To address foundational elements and provide actionable guidance

To seamlessly navigate challenges and minimise risks

Eventually unlocking full potential of Gen AI

OUR PRE-BUILT FRAMEWORKS ACCELERATE TIME TO VALUE DELIVERED

Our frameworks are based on a Phased approach

Establish

- AI Canvas / Discovery Framework
- AI Risk Assessment Framework

Experiment

- Infosys GenAI Labs
- Narrow Transformers

Adopt

- Infosys Transformer Studio
- Infosys Responsible AI Moderation Layer

Scale

- Poly-AI Reference Architecture
- Infosys Applied AI Platform

Addressing fundamental elements amplifying success prospects

Articulate Gen AI Strategy to realize	Enterprise Architecture, Governance, Define Responsible AI Framework, Ethical Constraints	Team Onboarding	Scale & Industrialize successful POCs
Talent Skills Mapping & Alignment, Talent Strategy – Hiring, Partner Consultants Alignment on Operating Model	Align on scope of POC and no. of POCs and document success criteria for each POC	Deliver POC 1	Org Change Management & Business Alignment
Tools, H/W & S/W Setup, Training & Development, KM & Collaboration		Measure value delivered and report	Continue experimentation & POCs
		Deliver POC 2	
		Measure value delivered and report	

INFOSYS RESPONSIBLE AI (RAI) FRAMEWORK FOR HEALTHCARE

Enable your journey towards building LIVE ENTERPRISE by ensuring Infosys Responsible AI-First Solutions

Advisory Council & AI Set up Services

AI Governance Strategy

Operating Model & RAI Office Set Up

Policies & Regulation Set up & Baselining

IT Strategy for RAI - Technology Stack, Tools and Control Identification

Change Management

Health Industry Light house

Assessment Consulting Offerings

AI Solution Assessments for Risk, Guardrails and Regulatory Compliances

Gap analysis & Remediation recommendations

Guardrail implementation strategy and roadmap

Functional design of RAI APIs

TOPAZ RAI Engineering & Integration Services

Tool based RAI Guardrails Engineering

Model Agnostic RAI Guardrail APIs

Integration with AI Solutions

Implementation Services

Telemetry Dashboard

Business Validation Services

Business Validation Strategy

Compliance Validation Services

Integration Testing Services

Key Levers to Build a Live Enterprise with Infosys' Responsible AI-First Approach

1. Infosys Process and Technical Guardrails:
Establishes technical standards and operational protocols for AI implementation. Ensures AI is deployed in a way that aligns with both ethical standards and healthcare industry regulations.

2. Healthcare RAI (Responsible AI) Assessment Framework:
Specialized framework designed to assess AI models used in healthcare for ethical compliance, transparency, and effectiveness.

3. Policies & Regulation Setup and Baseline:
Establishes the foundational policies for AI usage and regulatory compliance, tailored to meet global and regional healthcare laws and standards.

4. RAI Engineering Toolkit:
A set of tools and resources that enable developers to embed responsible AI principles into the development lifecycle, from data preparation to model deployment.

5. Infosys GenAI Guardrails:
Specific guidelines for the use of GenAI in healthcare, focused on maintaining patient safety, data integrity, and ethical boundaries.

THESE OFFERINGS FOR RESPONSIBLE BY DESIGN AI-FIRST IMPLEMENTATION FRAMEWORK ARE BASED ON CERTAIN KEY PRINCIPLES:

Human + AI
AI implementation for augmenting human capability while ensuring Human-in-the-loop

Data Safety & Privacy
Patient Consent Management and ensuring HIPAA, GDPR and other mandates' compliance across the globe

Regulatory Compliance
Authenticating the AI content while abiding by ethical principles and regulatory compliance requirements (e.g., AMA aug mented AI, HTI Rule)

Fairness, Inclusivity and Equal Access
Democratization of AI solution for to ensure equal access to care via unbiased treatment/recommendation

Security
Protecting AI models against malicious attacks & ensuring cybersecurity

Transparency and Explainability
Building Trust through understandable explanation of AI-led decisions

RAI Governance
Establishing Governance Framework to develop, deploy, and manage AI solutions ethically

Key considerations for Infosys Responsible AI Framework in healthcare to ensure explainable results and build trust among healthcare providers and patients:

1. Patient Safety & Data Privacy (PHI, PII Protection)

2. Ensuring ethical & legally compliant AI-led clinical decisions & operations

3. HealthEquity & fair access to care

4. Accuracy in care decisions & information with human touch for care

5. Patient and Provider empowerment and rights protection

Success Stories showcasing our impact on Healthcare Efficiency

Our Case Studies highlight how our strategic innovations and interventions are boosting efficiencies and transforming outcomes across the healthcare value stream.

	Call Center/ Customer Service Operations	Member Engagement, Enrolment & Billing	Medical Management
Problem Statements	• Increased handing time to answer Member queries because of multiple data sources • Member dissatisfaction	Manual Documentation analysis and time-consuming manual data filing of enrolment data in the AEE application.	• Long turn-around times for processing authorization requests due to manual processes of drafting & reviewing requests
Business Solution	• AI powered Member inquiries Management • GenAI powered platform to assist them to retrieve and synthesize information from various data sources relevant to members' queries • Automated pipeline to ingest content on a one-time basis • AI assistant for IVR users	• Implemented automated data extraction solution for enrolment • Azure Form Recognizer to automate the data entry process for faxes • Form Recognizer service will auto populate the Data Entry form	• ML based decision support system to improve efficient processing of • pre-authorization requests. Automated and expedited approval of pre-authorization requests. • Detailed recommendations of steps to implement, continuously train, test and improve model performance.
Business Benefits	• Reduced Average Handling Time (AHT) & Silent time by 30% • Improved First Call • Resolution(FCR) • Improved member experience	Manual Efforts of savings per year Faster Enrolment Completion with • streamlined workflows • Improvement in Data Quality	• 60% Automated approval of 60% of Pre-Auth requests with prediction • 30% Assisted approval of 30% of Auth requests with specific dimensions helping prediction • 80% Reducing the overall timeframe by 80%

Let's Harmonize Healthcare Together with AI

Infosys Topaz AI in Healthcare is uniquely placed to deliver complex end-to-end digitization smarter and faster, empowering every AI-first journey in the healthcare ecosystem. Contact us to learn how we can help you connect streamlined healthcare journeys, patient outcomes and business value with AI.

Infosys Topaz is an AI—first set of services, solutions and platforms generative AI technologies. It amplifies the potential of humans, enterprises, and communities to create value. With 12,000+ AI assets, 150+ pre-trained AI models, 10+ AI platforms steered by AI-first specialists and data strategists, and a 'responsible by design' approach, Infosys Topaz helps enterprises accelerate growth, unlock efficiencies at scale and build connected ecosystems. Connect with us at **infosystopaz@infosys.com**.

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Navigate your next

For more information, contact askus@infosys.com

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