Healthcare technology: From strategy to execution

PwC Advisory

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Introduction to healthcare technology

Recently, there has been an increasing demand for better and targeted healthcare services globally. To meet these immediate and long-term demand, healthcare providers (both private and public) are embracing newer business models and revamping their healthcare systems to improve patient care and customer experience and enable real-time information exchange. Currently, most healthcare organisations have a large amount of data which can be used to improve their business practices. However, they might lack the tools or expertise to generate actionable insights from this data. Newer technologies, like cloud, chatbots, artificial intelligence and machine learning can help healthcare organisations to uncover patterns in large amounts of data while making it more secure and easier to manage. Healthcare technology solutions like hospital information system (HIS), customer relationship management (CRM) etc. are helping industry leaders to improve performance, increase collaboration across departments and manage costs.

Healthcare technology can also streamline processes, automate tasks and improve workflows. The Government has also enabled the path for healthcare transformation and introduced targeted policies and measures to further accelerate the adoption of healthcare technology.

Key trends in healthcare

Focus on care delivery model	Increase virtual/ digital footprint	Connected and secured patient care journey	Interoperability of various systems and applications	Close collaboration between payer and provider

Initiatives by the Government of India

Aarogya Setu – an app for COVID-19 contact tracing, syndromic mapping and self assessment

Telemedicine practice guidelines – defining the means and methods to enhance healthcare, public health, health education delivery and support using telecommunication

National Health Stack (NHS) – provides foundation components for all health programmes in India

Increased healthcare spending – healthcare spend of GoI has increased by 73% in 2021-22

Ayushman Bharat Digital Mission (ABDM) – an initiative to connect countrywide digital health solutions of hospitals
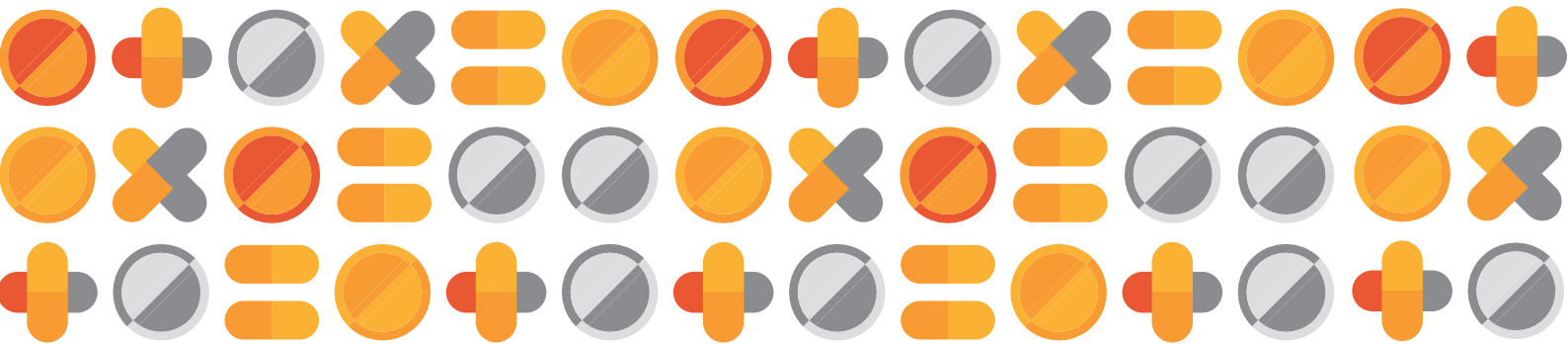
e-Sanjeevani – a free telemedicine platform integrated with NHA's ABDM

National e-Health Authority (NeHA) – enforces standards and ensures security and confidentiality of patients' health records

World's largest health insurance scheme (Ayushman Bharat) – aims to provide health insurance to the low-income segments

Source: Forbes

The concept of Digital Healthcare is based on the fundamental pillars which will help deliver and bring about a new care delivery model that is accessible, affordable and available for all.

1

Efficiency

Avoiding duplicate or unnecessary diagnostic or therapeutic interventions

2

Enhanced care quality

Allowing comparisons between different providers, for quality assurance, and directing patient streams to the best quality providers

3

Health information exchange

Enabling information exchange and communication in a standardised manner

4

Evidence based

E-health interventions efficiency proven by rigorous scientific evaluation

5

Education

Enabling physicians and consumers to continually educate themselves through online sources

6

Ethics

Related to online professional practice, informed consent, privacy

7

Equity

To make healthcare more equitable

8

Extension of scope

Scope of healthcare beyond its conventional boundaries and geographical presence

9

Empowerment

Enabling physicians and consumers to continually educate themselves through online sources

10

New relationships

Towards a true partnership, where decisions are made in a shared manner

11

Data driven care

Making healthcare processes lean and optimized for provider and patients

12

Secure patient records

Enabling effective diagnosis, reduced medical errors and reliable prescribing for the patients

Benefits of embracing healthcare technology across the healthcare ecosystem

Consumers and patients

- **Greater access** to care beyond geographical reach
- **Safer, higher-quality health services** enabled using personalised information
- **Timely preventive services**, improving quality of life
- **Enhanced financial access** through awareness about welfare schemes and treatment options
- **Cost saving** through avoidance of duplicate tests, provider comparison, e-visits, online appointment scheduling, prescription refills, etc.

Government and regulatory bodies

- **Enhanced/real-time visibility into the health ecosystem** for policy making and governance
- **Enabling creation of a supply master plan** to influence supply and bridging gaps through targeted interventions
- **Strengthening disease prevention** based on disease burden exercise
- Expanding **health education** opportunities
- **Enabling inter-sectorial coordination** (sanitation, nutrition, health) to address issues

Healthcare providers

- **Provide accurate information (electronic health records)** for better clinical decisions
- **Offer better care delivery** for transferred patients
- **Ensure cost-effectiveness** through large-scale healthcare technology assessment
- **Ensure significant cost efficiencies** through automation
- **Enable timely payments** through efficient reimbursement mechanisms
- Provide **online resources** to update physicians with new technologies and procedures

Healthcare payer

- **Improved customer** service (transactions and information)
- **Better risk management** through analytics on population's health, allowing product innovation
- **Reduced risk factors** through targeted wellness and preventive care
- **Reduction in fraudulent behaviour** by providers to form a true partnership

PwC's experienced healthcare team

01 PwC's healthcare team has over 40 years of healthcare experience across both public and private sectors, working with healthcare providers, payers, policymakers, governments, think tanks and health sciences organisations. This is combined with advisory experience of over 60 years, which includes a significant number of transformation, strategy and technology implementations.

02 We work with our clients to help them solve some of their key business problems with a focus on 'strategy to execution' while working as a trusted advisor. Our thought leaderships and extensive research provide our engagement teams access to competitive intelligence, perspectives on leading practices and analysis of trends affecting the healthcare industry.
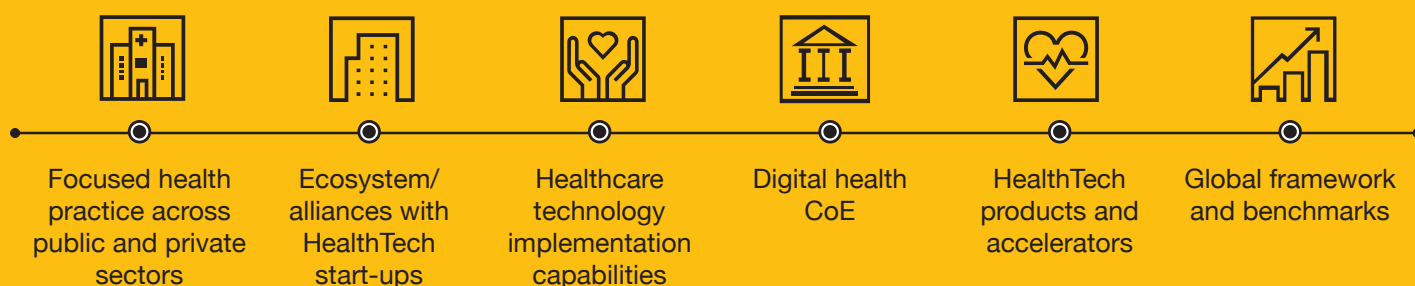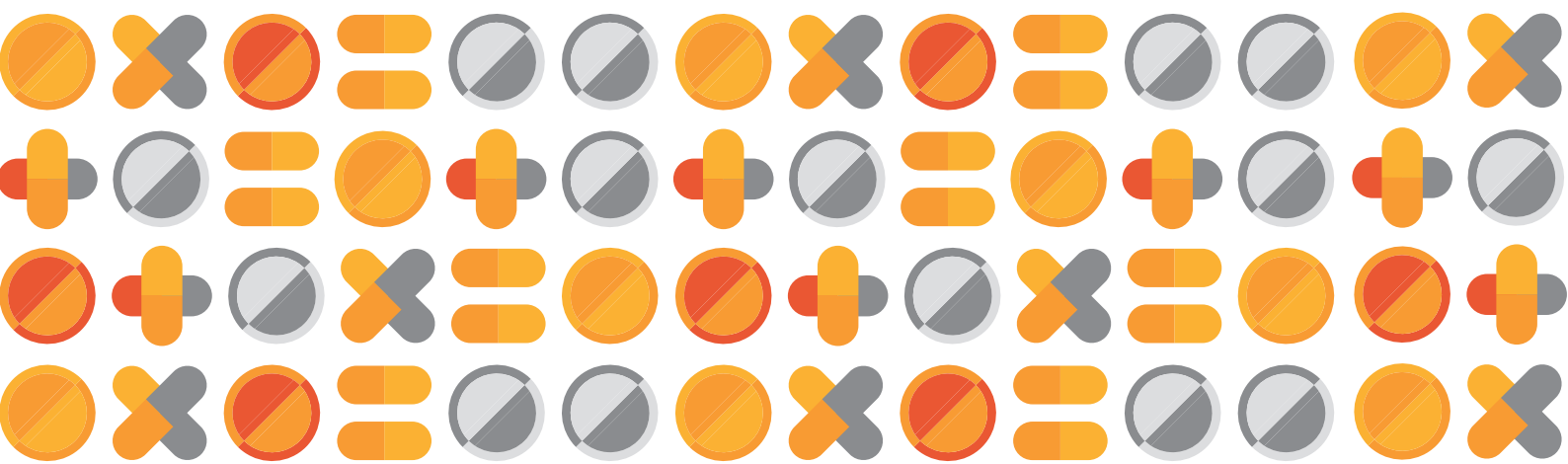
03 We are part of a global network of over 3,500 strategy professionals across 22 countries. Our global network of 10,000+ healthcare practitioners synthesises experience of assisting healthcare and life sciences business in developing and implementing strategy, aligning organisation and technology, and planning and executing digital transformation.

From a Healthcare Technology perspective, we bring forth a compelling proposition...

We have executed more than 200 HealthTech assignments across the healthcare ecosystem, with some key differentiators.

Our deep understanding of Indian and global healthcare systems

Our experiences of delivering digital healthcare transformation programmes

Our community of solvers – public health, clinicians and digital health technology experts

Focused health practice across public and private sectors · Ecosystem/alliances with HealthTech start-ups · Healthcare technology implementation capabilities · Digital health CoE · HealthTech products and accelerators · Global framework and benchmarks

… based on focused and experienced healthcare professionals

01
Community of solvers

- Clinicians (15+)
- Health analysts (10+)
- Public health specialists (8+)
- Digital health SMEs (10+)
- HealthTech implementation specialists (50+)

02
Long-standing experience of working with regulators/Government agencies

- Close collaboration with National Health Authority
- Implementation of digital health initiative for regulators and government agencies

03
From strategy to execution

- Enhanced patient experience through digital transformation of multiple healthcare setups
- Multiple value-led enterprise-wide ERP, data warehouse and data lake engagements for multiple healthcare chains
- Front-office transformation for large healthcare chains

04
Extensive experience with both public and private sector players

- **Public sector:** Multiple state governments
- **Private sector:** Large- and medium-size chains and large standalone hospitals

Stakeholders in the healthcare ecosystem

Provider
- Hospitals
- Healthcare specialists
- Retail clinics
- Diagnostic labs

Payer
- Third-party administrators (TPAs)
- Insurance companies
- State insurance corporations

Technology providers
- Aggregator platforms
- Healthcare technology solution providers
- Customer care platforms/IVRS

Pharmaceuticals and life sciences
- Drug manufacturers
- Pharmacies

Medical devices
- Medical devices manufacturers
- R&D centres

Regulators
- Insurance regulators
- Government digital health authority
- Medical research councils
- Health ministries
- Public and economic policy regulators

From a HealthTech point of view, we can help you achieve different aspects of digital transformation

From strategy development to execution, we will assist you in every step of your digital transformation journey.

Leverage emerging technologies to **differentiate from the competition**

Improve patients, staff and stakeholder **experience**

Standardise processes and achieve interoperability across units and with other entities

Rationalise or upgrade your application landscape

Define **future IT architecture or infrastructure requirements**

Programme management and implementation of tools, platforms and digital transformation initiatives

Our healthcare technology service offerings

Digital strategy

- Assesses digital maturity and develops growth strategy, IT strategy, enterprise architecture and implementation roadmaps
- Reviews IT Infrastructure, security, apps and platform requirement
- Analyses and recommends adoption of emerging technologies like IoT, AI/ML, RPA, AR/VR, etc.
- IT due diligence for mergers and acquisitions (M&A)

Sourcing

- Enables organisations to adopt mature products/platforms enabling productivity, optimised IT spends and infrastructure
- Assesses the right fit healthcare products and platforms for care delivery

Operating model

- Provides an overview of value streams and IT process model frameworks
- Transforms traditional operating models and increases alignment to emerging technology (cloud, robotic process automation, blockchain, etc.) with an overarching business strategy

Implementation

- Acts as the 'business integrator' to deliver technology-enabled transformation programmes
- Leverages the extended alliances and partnership ecosystem to implement HIS, CRM, ERP, LIMS, PACS, CDSS and CTMS products
- Facilitates front-office transformation programmes for hospital chains
- Acts as an enabler of enterprise-wide ERP and data management solutions

Project management

- Assists clients to keep track of large-scale technology transformation projects, keep the key stakeholders informed and minimise risks during implementation
- Aids running the healthcare CIO office
- Programme management
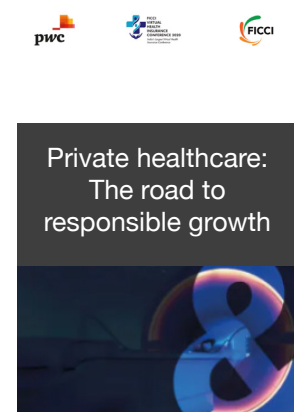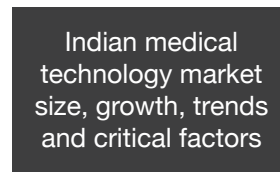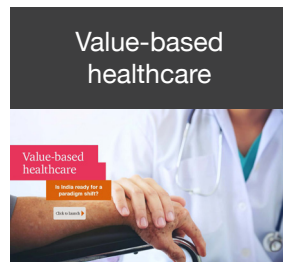- Change management
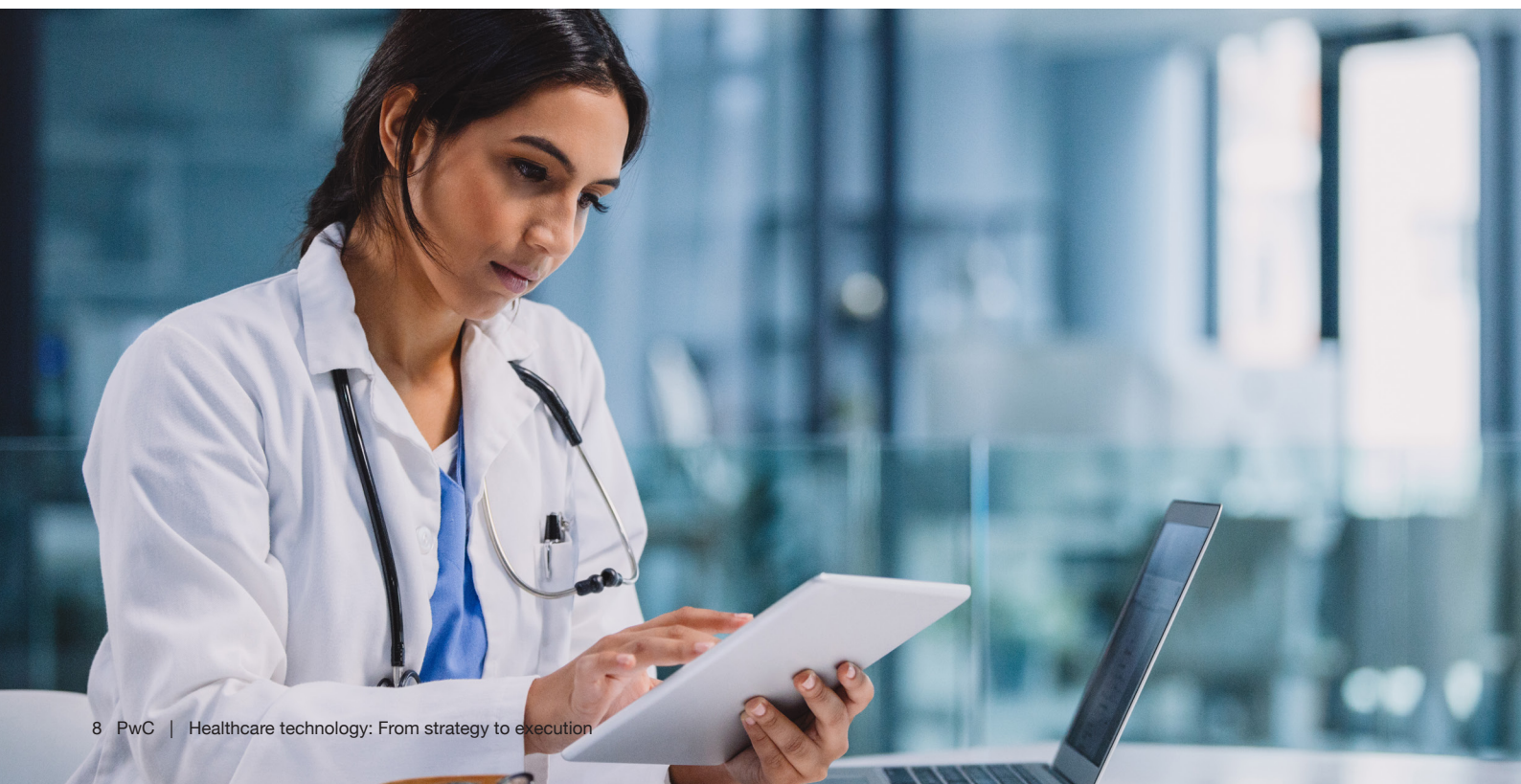
Our select healthcare technology citations

We have worked with some of the leading players in the healthcare industry and government organisations globally.

Digital strategy	Assisted a hospital chain to develop a strategic roadmap for the 'Hospital of the Future'. We identified opportunities for improvement and developed their implementation roadmap. We also identified the best practices for all functions and managed the implementation of the same.
	Assisted in the assessment of the adoption level, capabilities, coverage of business processes and limitations of current IT applications, and integrations.
Healthcare system design	Assisted the health department for an Indian state for the conceptualisation and design of their e-health strategy, implementation approach and roadmap.
	Assisted in developing e-health strategy for multiple countries based in Africa and Southeast Asia.
Strategic sourcing	Assisted the government trust of an Indian state to select a competent solution provider for implementing the selected IT solution.
Technology implementation	Assisted a hospital chain to implement a unified platform for patient life cycle management by enabling various internal departments, partner ecosystem, doctors and creating a Doctor360, Patient360 and agent portal.
	Assisted the health department of an Indian state to implement a state-of-the-art ICT-enabled HIMS.
	Assisted a hospital chain in implementation of business intelligence and analytics by providing a single source of truth and facilitating real-time data-driven decision making.

Our thought papers in collaboration with healthcare industry bodies

Global M&A industry trends in the health Industries

Value-based healthcare

Indian medical technology market size, growth, trends and critical factors

Revamping India's health insurance sector with blockchain and smart contracts

Ayushman Bharat – NHPM universal health to 500M

Reimagining the possible in the Indian healthcare ecosystem with emerging technologies

Digital Health Trends 2022

Private healthcare: The road to responsible growth

Financing and funding Indian healthcare

Future of health

Tech powered healthcare

Accelerating the health economy

About PwC

At PwC, our purpose is to build trust in society and solve important problems. We're a network of firms in 152 countries with over 328,000 people who are committed to delivering quality in assurance, advisory and tax services. Find out more and tell us what matters to you by visiting us at www.pwc.com.

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