Healthcare technology: From strategy to execution

PwC Advisory
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 personalized 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.

### 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

### 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 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

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2 PwC | Healthcare technology: From strategy to execution
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
... 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

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**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
- Define future IT architecture or infrastructure requirements
- Standardise processes and achieve interoperability across units and with other entities
- Improve patients, staff and stakeholder experience
- Rationalise or upgrade your application landscape
- 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.

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<tr>
<th>Focus area</th>
<th>Project overview</th>
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<tr>
<td><strong>Digital strategy</strong></td>
<td>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.</td>
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<td>Assisted in the assessment of the adoption level, capabilities, coverage of business processes and limitations of current IT applications, and integrations.</td>
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<td><strong>Healthcare system design</strong></td>
<td>Assisted the health department for an Indian state for the conceptualisation and design of their e-health strategy, implementation approach and roadmap.</td>
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<td>Assisted in developing e-health strategy for multiple countries based in Africa and Southeast Asia.</td>
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<td><strong>Strategic sourcing</strong></td>
<td>Assisted the government trust of an Indian state to select a competent solution provider for implementing the selected IT solution.</td>
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<td>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.</td>
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<td><strong>Technology implementation</strong></td>
<td>Assisted the health department of an Indian state to implement a state-of-the-art ICT-enabled HIMS.</td>
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<td>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.</td>
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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
- Financing and funding Indian healthcare
- Digital Health Trends 2022
- Private healthcare: The road to responsible growth
- Future of health
- Accelerating the health economy
- Tech powered healthcare
About PwC

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To discuss how PwC can help you with your healthcare technology transformation, please contact the team below.

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