# KPMG

# A new era of medicine enabled by Digital Health Platforms

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## A convergence of digital technologies to enhance delivery of healthcare that empowers both the patient and clinician with real-time data and connections that improves outcomes.

Digital health is a cultural transformation of traditional healthcare resulting in a paradigm shift to improve patient outcomes, Consumers are demanding self-care solutions where individuals use electronic devices and software technologies like mobile and IoT, to collect, process and display a wide range of personal data to help them monitor and manage their personal health. This results in ever-rising costs and the increasing demand to use disruptive digital innovations. Digital health platforms enable life sciences companies to communicate directly with consumers, securely gather and mine patient data and improve operations ranging from drug discovery, manufacturing, marketing, tailored therapy, and continuous management to provide value based care for the patient.
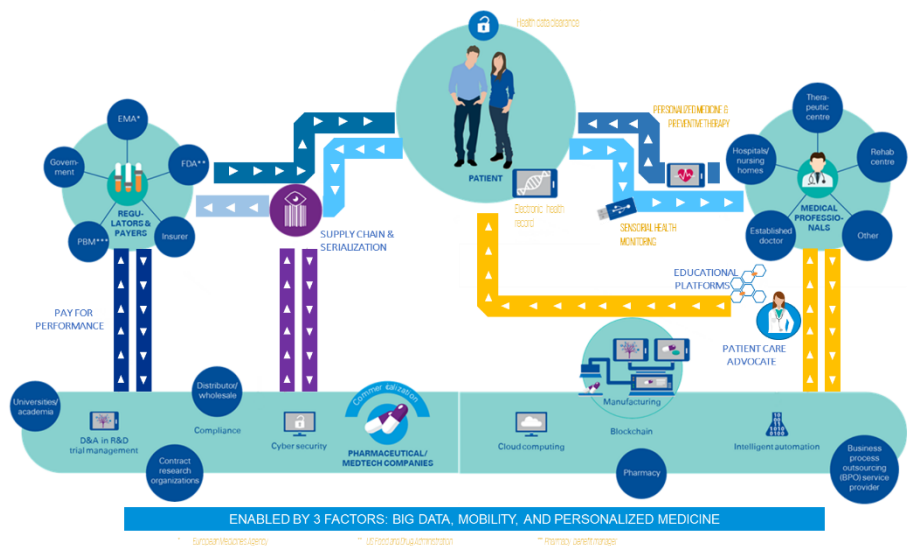


### Client challenges

Life sciences companies and clinicians face several challenges when providing the best outcomes for the patient:

1. The healthcare continues to skyrocket with the increasing prevalence of chronic diseases, such as diabetes and heart disease, common non-compliance of patients in their treatments, and change in government policies impacting overall costs and revenue.

2. Ensuring patient data privacy is a continuous struggle as consumers demand more and easier access to their data and cyberattacks are becoming more sophisticated.

3. Due to stringent regulatory requirements, life sciences companies struggle with implementing the required technology to successfully implement a platform that effectively meets the goals of a self-care solution. This often leads to multiple disjointed platforms and unstandardized data that can difficult to mine and utilize to manage a patient's healthcare.

4. Even with the FDA and EU Commission advocating the use of digital health platforms, industry is still unclear how regulators will evaluate compliance to ensure the safety and effectiveness of the software as a medical device is maintained.

## KPMG's solution

Our Digital Health Platform offerings are to deliver a single or end to end digital health platform solutions based on KPMG's architecture to address client challenges.

| Self-care enablement solutions offerings |
|---|



**1) Digital enablement**
- Deployment multiple patient apps for therapies
- Direct-to-patient insights
- Create apps to enable patients to make data-driven decisions
- Secure data collection from med devices using IoT and other technologies
- Integrations with various medical systems and databases

**2) Analytic services**
- Reference infrastructure and data architectures
- Ready-to-deploy D&A solutions
- Machine Learning & Artificial Intelligence learning models
- Potential for real-time analytics and closed-loop control of therapy and dosing

**3) Compliance framework**
- Implementation of NIST 800.53 security control framework
- Compliance w/ HIPAA, GxP, CFR 21CFR Part 11, GDPR
- Attestation & audit roadmaps
- Cloud-first operations model & associated processes

## KPMG's solution offerings

**Architecture**
- Detailed design for over 25 Azure components and services
- Secure cloud-native reference architecture

**Pre-built roadmap**

**Security controls**
- Aligned to NIST 800.53 Rev. 4 Standard (moderate) + HIPAA (18 high)
- 271 technical and operational security controls – compliant environment not the same as a secure environment

**Deep security architecture**

**Operational and governance models**
- Operational and governance models to support environment operations
- Shared responsibility model (cloud provider/client/advisor) perspective

**Roles and responsibilities**

**Automated deployment scripts**
- Quick, automated deployment of end-to-end environment
- Ability to scale to meet the Cloud needs of any Healthcare business

**Speed and scale**

## Why KPMG?

With extensive industry experience, KPMG helps life sciences companies develop digital health solutions in an increasingly complex environment. Our insights are derived through advanced analytics and deep compliance knowledge, helping clients to build solutions that will empower patients and clinicians achieve their healthcare goals through the use of advanced technology and data. Our professionals are trusted partners that understand the complex regulatory challenges including GxP, GDPR, HIPAA, Cybersecurity requirements that can implement the platforms needed for life sciences companies to be successful in today's marketplace.

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