



# The Special Nature of the Digitalization of the Health Industry

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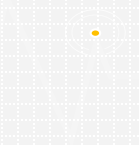
**Progress and costs in medicine and digital healthcare in China over the years**

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**Progress and costs in medicine and digital  
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# 01 Progress and costs in medicine and digital healthcare in China over the years

## Progress in application scenarios

### 01 Apps for medical resource allocation

- Hospital appointments
- Automated drug dispensing

### 02 Information integration and sharing between hospital departments and medical complexes



### 03 Remote diagnosis and support in medical imaging

### 04 Consultation and drug purchases on mobile devices



# 01 Progress and costs in medicine and digital healthcare in China over the years

05

Reduced hardware costs and increased healthcare precision brought by manufacturing of enhanced software

- Robotic surgery



06

Health detection modules embedded in consumer electronics

- Wearable devices

07

Information collected from home medical appliances connected to the internet



# 01 Progress and costs in medicine and digital healthcare in China over the years

## Underdeveloped or still unfeasible cost-intensive applications

01 Artificial Intelligence for medical diagnosis and treatment



02 So-called "remote diagnosis" from online hospitals



03 Auxiliary solutions in data-supported clinical diagnosis and treatment

# 01 Progress and costs in medicine and digital healthcare in China over the years

04 Consumer health profiles and in-depth development



05 High-quality medical resources distributed by digital means



06 Reliability and predictability of physiological parameter modules in consumer electronics

These applications are what interest digital health practitioners and investors the most, but...

# 01 Progress and costs in medicine and digital healthcare in China over the years



## In general

Healthcare is the most sought-after industry among investors in the drive towards digital transformation, but in recent years its progress has been slower than that of other industries. A significant amount of sunk costs have been invested, both in time and money.





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## Problems and the future

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# 02

## Problems and the future

### Problems facing the digitalization of medicine and healthcare:



The conservatism of practitioners and audiences in the healthcare sector means that tolerance for error is low.



The healthcare industry relies on extensive experience, which algorithms are unable to provide.



## 02 Problems and the future



In terms of talent supply, few people are knowledgeable in both healthcare and digitalization. It is difficult to ensure the quality and quantity of data cleaning and analysis.



Ethics impacts healthcare more than it does other industries, and the business and payment models of healthcare are more complex.



## 02 Problems and the future



Given the strictness and reliability requirements of evidence-based medicine, the efficiency brought by digitalization is not a big advantage in healthcare. Many concepts in consumer electronics do not apply to the healthcare industry.

## 02 Problems and the future

**Breakthroughs in digital medicine and healthcare are not only global trends. They are strongly needed in China as well:**

- Inadequate medical resources per capita will remain a reality in China for several decades to come. Population aging is an imminent threat, and the country will become old before it becomes rich.



- Facing these challenges, medical and healthcare services in China need to be more efficient. Health services and management need to be more accessible with higher penetration. Digitalization is an important means for this.

## 02 Problems and the future

### What are the current barriers to digitalization in healthcare?

1. Hardware is unreliable. Physiological monitoring data is not accepted by the mainstream medical community because of repetition and lack of consistency.

2. The use environment lacks control. Incorrect use and uncalibrated equipment are common.

3. Without introducing digital pathology files, it is difficult to provide comprehensive diagnosis and adjust management plans.

4. Traditional experience and regulatory issues

5. Business models and payment methods



## 02 Problems and the future

- ✓ Requirements are higher for hardware operated by non-health professionals. Required equipment is not simply extensions of products used in hospitals. Innovative design ideas are needed, and redundancies need to be avoided.

**which means...**

- ✓ The invention of new digital products needs to take into account compliance factors for digital health management and diagnosis. Disease-specific daily management standards and liability exemption need to be explored.

**which means...**

- ✓ Community physicians need to intervene in digital health management, and the payment reform process needs to be advanced.



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## Basic architecture for the digital health industry

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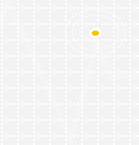
# 03 Basic architecture needed for digital healthcare



Improved digitization capabilities of medical workers and health management professionals, and practice-based digitalization for ensuring that digitalization is compatible with medical logics.



Development of reliable and applicable hardware, followed by establishment of data application and management paths and consensus.



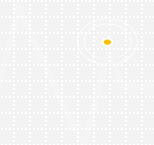


# 03 Basic architecture needed for digital healthcare

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Fundamentally speaking, healthcare digitalization is a comprehensive endeavor. It involves efficiency and fairness, trial and error and potential consequences, medical ethics and privacy, and resource allocation, all of which are much more complicated than digitalization of most other industries. More in-depth investigations and patience are needed before digital healthcare can become a consensus. This will be a step-by-step process.





**Thanks.**