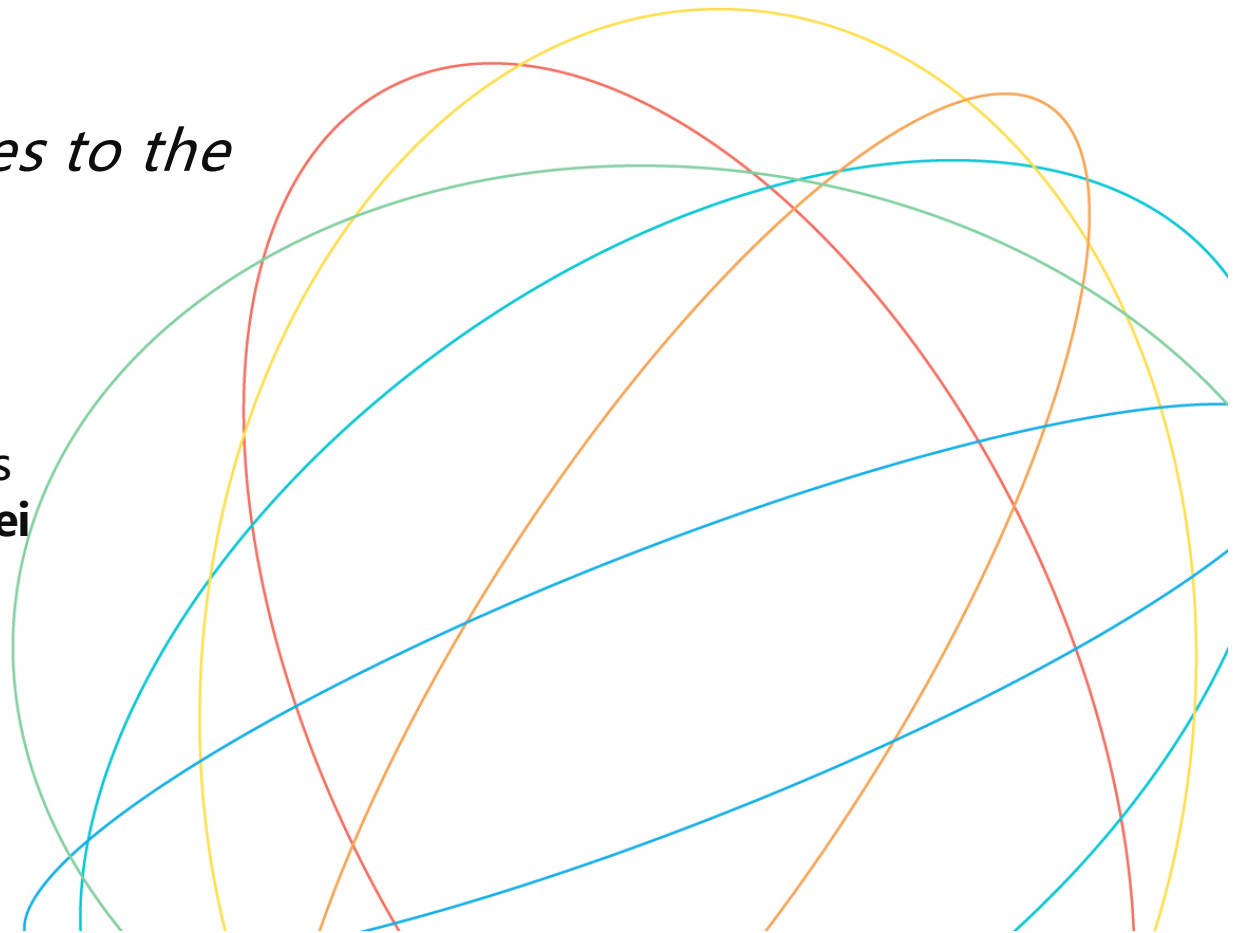


19th June, 2018

Cloud computing drives to the digital era

Ibrahim Dogan

Cloud and Data Center Business
Consultant, Central Asia, **Huawei**





Top Cloud Technology Trends

Cloud Security



ML & AI



Containers



Hybrid Cloud





Rapid growth in cloud adoption is driving the securing data, applications and workloads that now exist in cloud

Key findings for Cloud Security Services;

Common Services

- ✓ E-mail Security
- ✓ Web Security
- ✓ Identity and Access Management

Main Drivers¹

- ✓ Cloud Native
- ✓ Cost Savings
- ✓ Reduced effort
- ✓ Reduced footprint

Most Preferred Tech¹.

- ✓ Data Encryption
- ✓ Network Encryption
- ✓ SIEM

Source: SDxCentral

Security services from dedicated hardware solutions to cloud-based SaaS Model

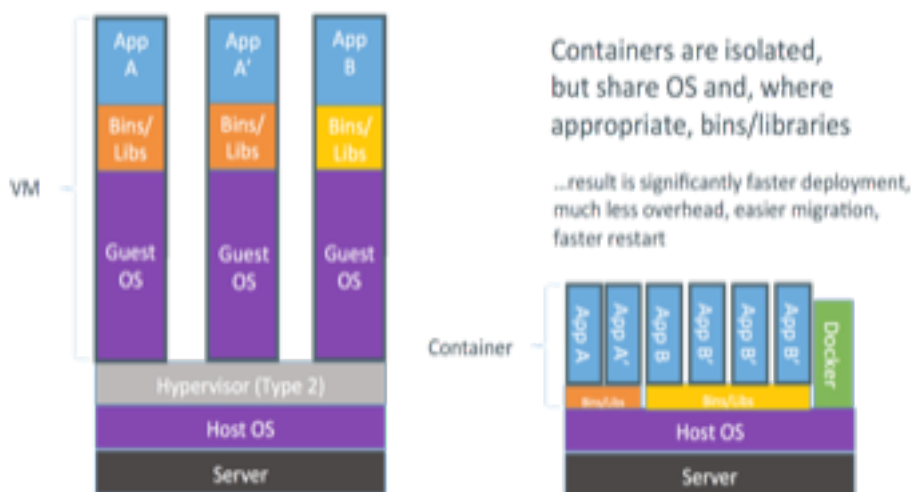
Cloud Security Service Marketplaces

The image shows a screenshot of the Windows Azure Marketplace interface. It features a grid of service cards for various cloud security solutions. At the top right, there is a banner for 'AWS Marketplace: One-stop shop for familiar tools'. The service cards include:

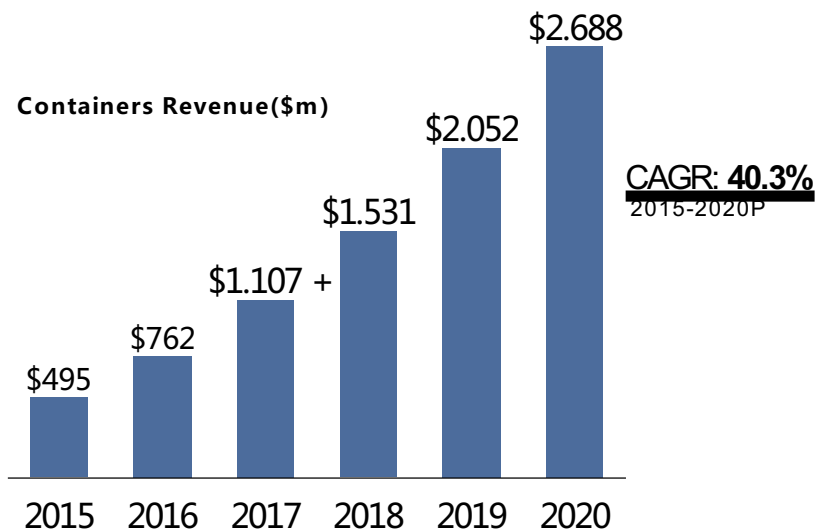
- BetterCloud**: 10,000,000+ users, 5 stars (263)
- GAT-CORE**: General Audit Tool - GAT Core, 4,963,704 users, 5 stars (7)
- SPINBACKUP**: Spinbackup - Security & Backup, 52,737 users, 5 stars (31)
- BITIUM**: SSO, Application & Access Management, 54,808 users, 5 stars (4)
- GApps Manager**: GApps Manager SSO, 40,341 users, 5 stars (3)
- Password Protect**: Password Protect, 414 users, 5 stars (30)
- ManagedMethods**: ManagedMethods, 5 stars (3)
- Palo Alto Networks VM-Series**: Palo Alto Networks VM-Series, Price varies, Get it now
- Cisco Adaptive Security Appliance virtual (ASAv)**: Cisco Adaptive Security Appliance virtual (ASAv), Price varies, Get it now
- FortiMail Secure Cloud Email**: FortiMail Secure Cloud Email, Price varies, Get it now
- Azure AD Identity Protection**: Azure AD Identity Protection, Get it now
- Multi-Factor Authentication**: Multi-Factor Authentication, Get it now
- Template deployment**: Template deployment, Get it now
- Alert Logic Threat Manager - BYOL**: Alert Logic Threat Manager for Azure, Get it now
- Azure AD Privileged Identity Management**: Azure AD Privileged Identity Management (PIM), Get it now
- Local Scanning Server**: Local Scanning Server, Get it now
- Azure AD Cloud App Discovery**: Azure AD Cloud App Discovery, Get it now



The continued rise of containers



Containers provide **flexibility** and **low cost** compared to VMs.



Application containers will be a **\$2.7bn market by 2020**, representing a small but **high-growth segment** of the Cloud-Enabling Technologies market

Source: sdxcentral.com

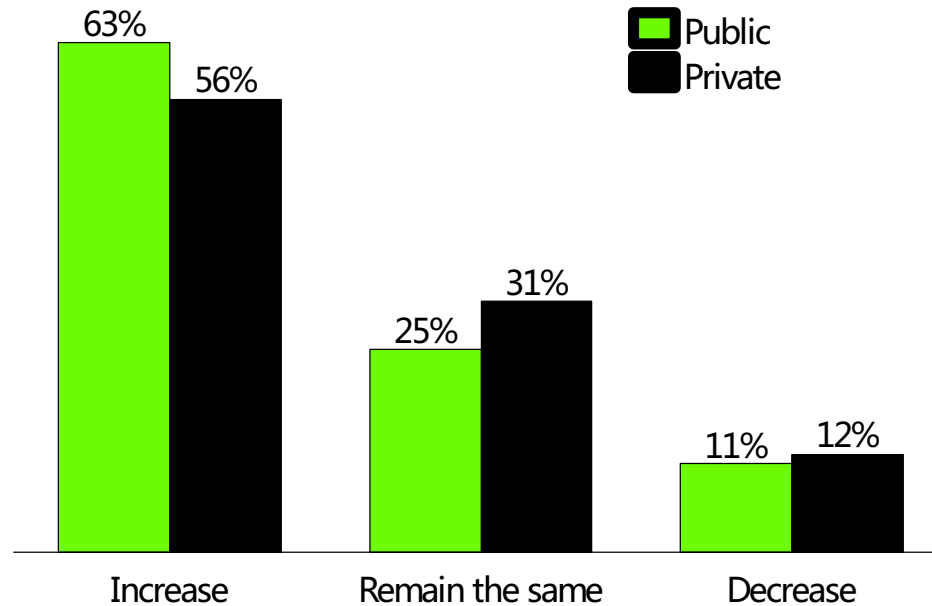
Source: 451 Research





Hybrid Cloud at the center stage of IT opportunities and growth

Investment Plan in Cloud Deployment Options



- ✓ **Private Cloud** still a priority for enterprises
- ✓ Both **Public** and **Private cloud** provides benefits to enterprises
- ✓ **Hybrid adoption** is now a reality for most enterprises

87% keep or increase for **Private Cloud**

VS

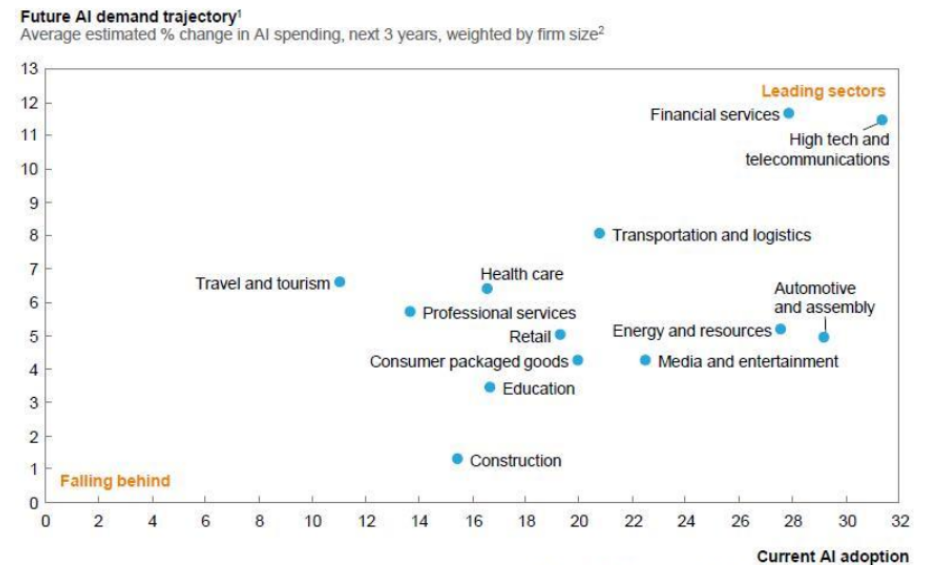
88% keep or increase for **Public Cloud**

Artificial Intelligence(AI) is building a Smarter Cloud

Current landscape of cloud AI technologies, two major groups:

- AI Cloud Services Offering:**
 - IBM WATSON
 - Microsoft Cognitive Services
 - Natural Language API 4
Google Cloud Platform
- Cloud Machine Learning (ML) Platforms:**
 - Microsoft Azure ML
 - Machine Learning
 - AWS
 - Cloud Machine Learning

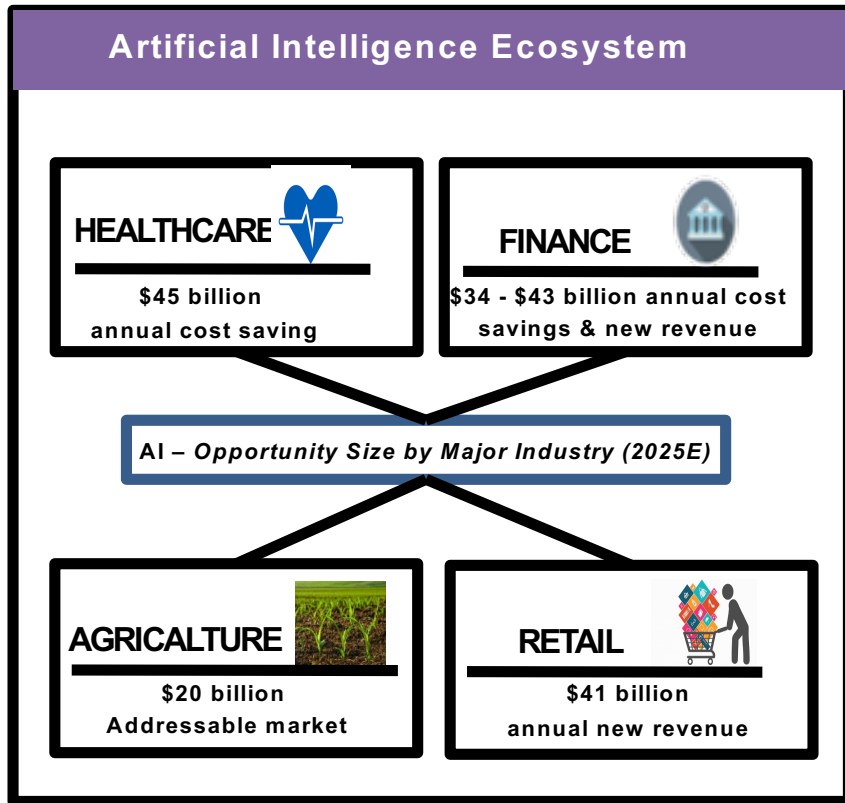
Larger companies and industries that adopted digital technologies in the past are more likely to adopt AI.



Banks, Financial services and healthcare are the leading non-core technology verticals that are adopting AI.



AI and ML applications have implications for benefits and disruption across every industry



Source: Goldman Sachs, "Profiles in Innovation: AI" (November 14, 2016).

AI Revenue, Top 10 Use Cases, World Markets – 2025(\$ in millions)



Source: Tractica, "Artificial Intelligence Market Forecasts" (September 2016).



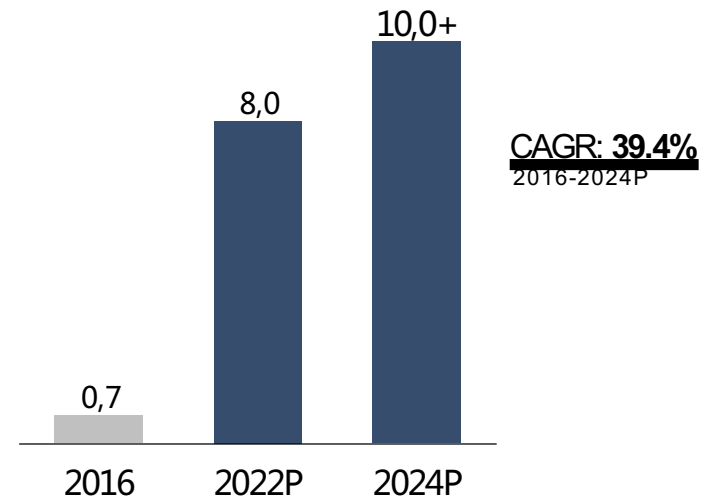
Health Value Chain is moving from a labor driven and technology enabled model to a digital driven and human enabled model

Key Growth Drivers in the Healthcare AI Market

- Adoption of AI in research areas
- Reduced workload and increased quality of care
- Growing demand for precision medicine
- Shortage of health workforce to meet patient demand
- Need to reduce increasing healthcare costs
- Growing number of cross-industry partnerships

- ✓ Global expenditures on healthcare: **9.0%** of total GDP in 2000 to **9.9%** in 2014
- ✓ The shift towards an **aging population** strains the current healthcare system

Global Healthcare AI Market Growth(Billion \$)



Global Market Insights, "Healthcare AI Market Size, Competitive Market Share & Forecast, 2024" (2017)

Source: Markets and Markets; Global Market Insights, Inc





Healthcare Analytics Use Cases

Healthcare Industry Participants →

	Hospitals	Clinics (GP & Specialists)	Allied Healthcare Providers	Health Insurance Companies	Pharmaceutical Companies	Consumers / Patients	Government
← Use Cases ↑	<ul style="list-style-type: none">1. Bed Capacity Planning (Across Hospital Network)2. Hospital Quality Investigator (Early Warning Signs / Detection)3. Decision Support System for Radiologists4. Hospital Clinical Research Platform	<ul style="list-style-type: none">5. Intelligent Assistant Service (for Doctors)	<ul style="list-style-type: none">6. Chronic Disease Management Decision Aids	<ul style="list-style-type: none">7. Insurance Cost Control	<ul style="list-style-type: none">8. Population Consumption Data for Rx Drugs9. Clinical Trial Data Collection & Analysis	<ul style="list-style-type: none">10. Patient Decision Aids for Triage, Self-Diagnosis, Treatment options. Intelligent Hospital / Clinic Guidance	<ul style="list-style-type: none">11. Government Healthcare Infrastructure Utilization & Cost Optimization12. Healthcare Access for Population13. Chronic Diseases Analysis and Management14. Drug Consumption & Price Controls

5. Intelligent Assistant Service (for Doctors)

Solution

01 Diagnosis Assistant

- ❖ According to *Symptoms* and *Exam*. results,
- ❖ Reasoning diagnosis results, warning rare disease based on Healthcare knowledgebase

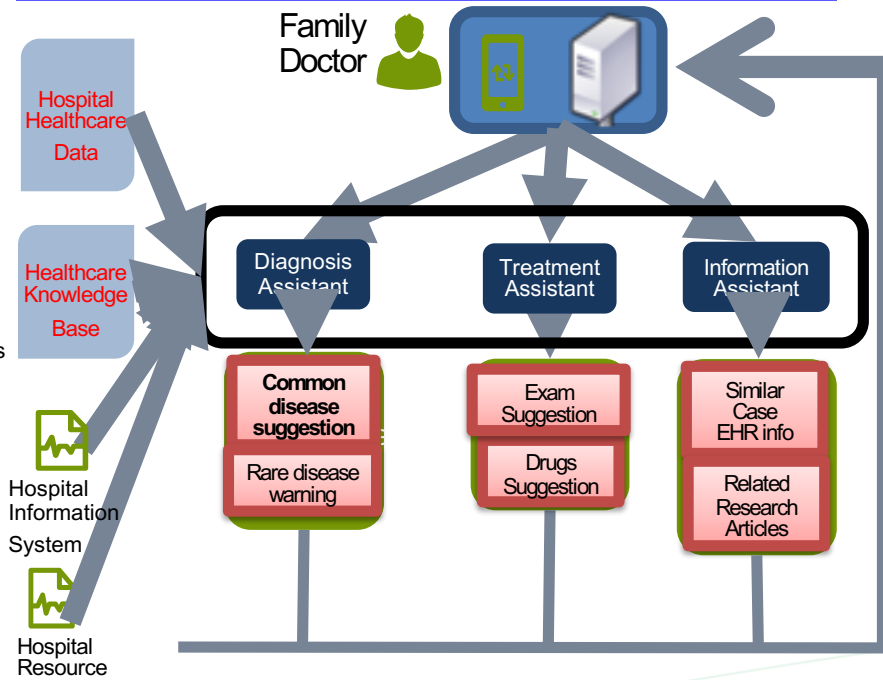
02 Treatment Assistant

- ❖ *Reasoning* exam. methods or possible drugs based on Healthcare Knowledge base and healthcare records
- ❖ Verifying medical orders

03 Information Assistant

- ❖ Compliant with *real-time* requirements
- ❖ Based on healthcare records of one patient, providing *similar EHR* Cases and related research *Articles*

Intelligent Assistant Service for Family Doctor



Benefits

01 Diagnosis Accuracy

- ❖ TOP1 diagnostic compliance rate > 70%
- ❖ TOP3 diagnostic compliance rate > 80%

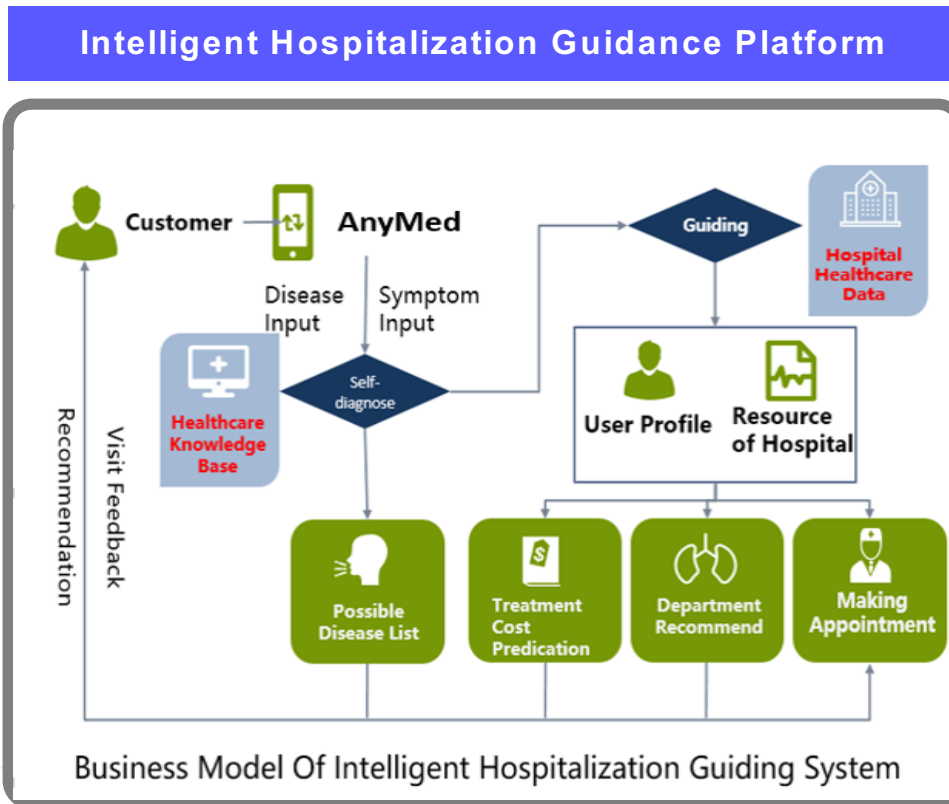
02 Diagnosis Efficiency

- ❖ Improve diagnosis *efficiency* by 40%

03 Treatment Normalization

- ❖ Reduce misdiagnosis rate by 20%

10. Patient decision aids for triage, self diagnosis



01 Self-diagnose

- ❖ According to the symptoms or disease inputted
- ❖ Based on the medical knowledgebase and specialized algorithms

02 Intelligent Hospitalization Guiding

- ❖ Recommend suitable departments according to the real state of the hospitals

03 Registration and feedback collection

- ❖ Seamless connectivity with third-party HIS, making appointment and registration according to the result of diagnosis
- ❖ Feedback collection of visits



Thank You.

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