



UI Health

Office of the CHIO



# Digital Health & Innovation

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# Agenda:

- The evolution of Technology
- The current state of Digital Health & innovation.
- Pre-COVID vs Post COVID
- New Healthcare Delivery methods and the role of Health IT & innovation.
- Right solution, Right place, Right time

# About:

- Board-Certified Internal Medicine physician.
- 2<sup>nd</sup> year Clinical Informatics Fellow at UIC.
- Member of the HIMSS Physician Committee
- Member of executive committee at ACIF.

Next →

- Primary Care Physician/Physician Informaticist at Oak Street Health (a CVS Company).
- Clinical Assistant Professor at UIC.



## DISPENSE WITH A HORSE



Price \$1,000. No Agents.

and save the expense, care and anxiety of keeping it. To run a motor carriage costs about  $\frac{1}{2}$  cent a mile.

THE WINTON MOTOR CARRIAGE

is the best vehicle of its kind that is made. It is handsomely, strongly and yet lightly constructed and elegantly finished. Easily managed. Speed from 3 to 20 miles an hour. The hydrocarbon motor is simple and powerful. No odor, no vibration. Suspension Wire Wheels. Pneumatic Tires. Ball Bearings.  Send for Catalogue.

THE WINTON MOTOR CARRIAGE CO., Cleveland, Ohio.



- 1880 there were at least 150,000 horses in the city.
- By 1912, cars outnumbered horses on the streets of NYC.
- 1917 the last horsecar was put out of commission

# Technology & Innovation always win!

Easter morning 1900: 5<sup>th</sup> Ave, New York City. Spot the automobile.



Source: IIS National Archives

Easter morning 1913: 5<sup>th</sup> Ave, New York City. Spot the horse.



Source: George Grantham Bain Collection.

# Technology moves fast!!



# Technology & Innovation always wins!



Credit: Forbes Magazine, 2007

# Forbes track record!




SVB  
@SVB\_Financial

Proud to be on @Forbes' annual ranking of America's Best Banks for the 5th straight year and to have also been named to the publication's inaugural Financial All-Stars list.

[bit.svb.com/3ZFxwyp](https://bit.svb.com/3ZFxwyp)

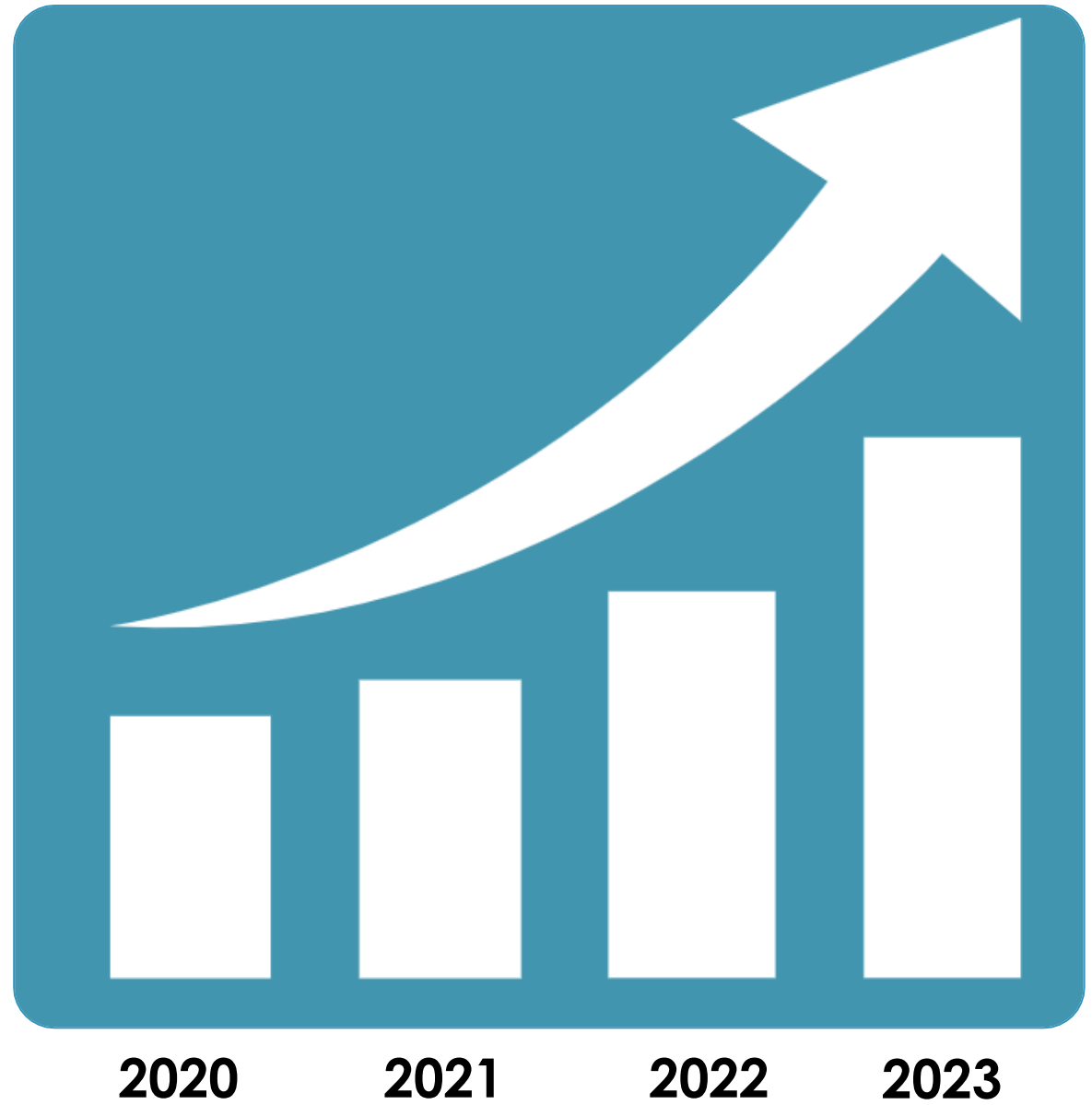
## Forbes 2023 AMERICA'S BEST BANKS





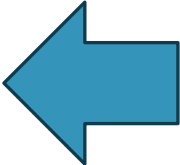
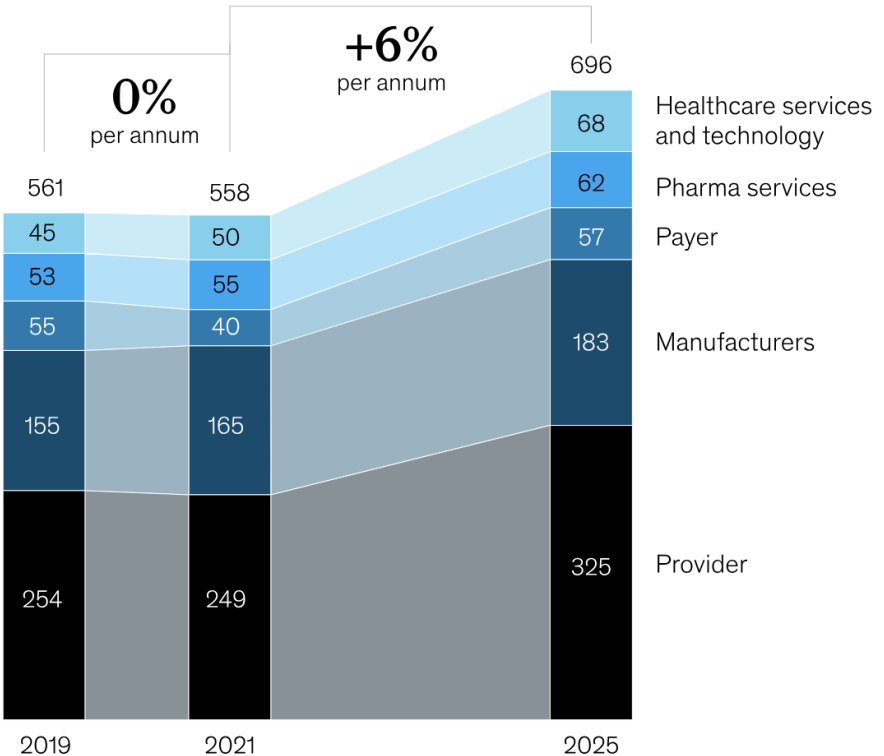
**How about Healthcare?**

**Exponential  
Growth!!**



**Healthcare profit pools are expected to show a strong recovery post-COVID-19, with payer and services segments growing fastest.**

**Projected healthcare EBITDA<sup>1</sup> across segments, 2019–25, \$ billion**



<sup>1</sup>Earnings before interest, taxes, depreciation, and amortization.  
Source: McKinsey Profit Pools Model

# Digital Health!



Digital technologies are now integral to daily life, and the world's population has never been more interconnected.

WHO is harnessing the power of digital technologies and health innovation to accelerate global attainment of health and the well-being



The broad scope of digital health includes categories such as mobile health (mHealth), health information technology (IT), wearable devices, telehealth and telemedicine, and personalized medicine.

Digital Health IS Health care?



# Pre & Post COVID-19

## Trends!



Accelerated growth and adoption of telehealth solutions.



Shift in care delivery models from hospital → Home.



Focus on interoperability and liquid data sharing.



Value-based care approach.



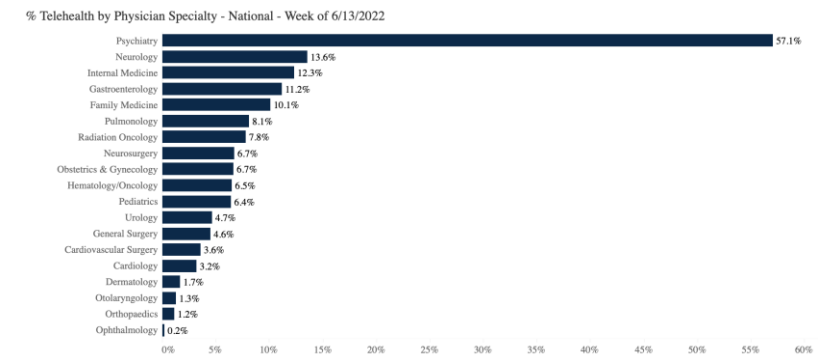
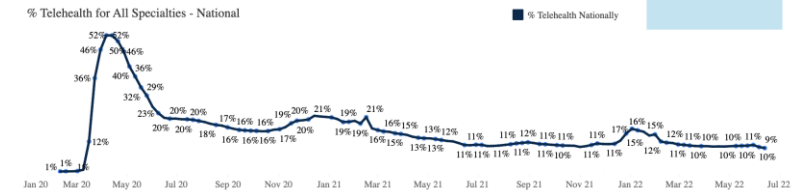
The Role of Artificial Intelligence.



The move towards Healthcare ecosystems.

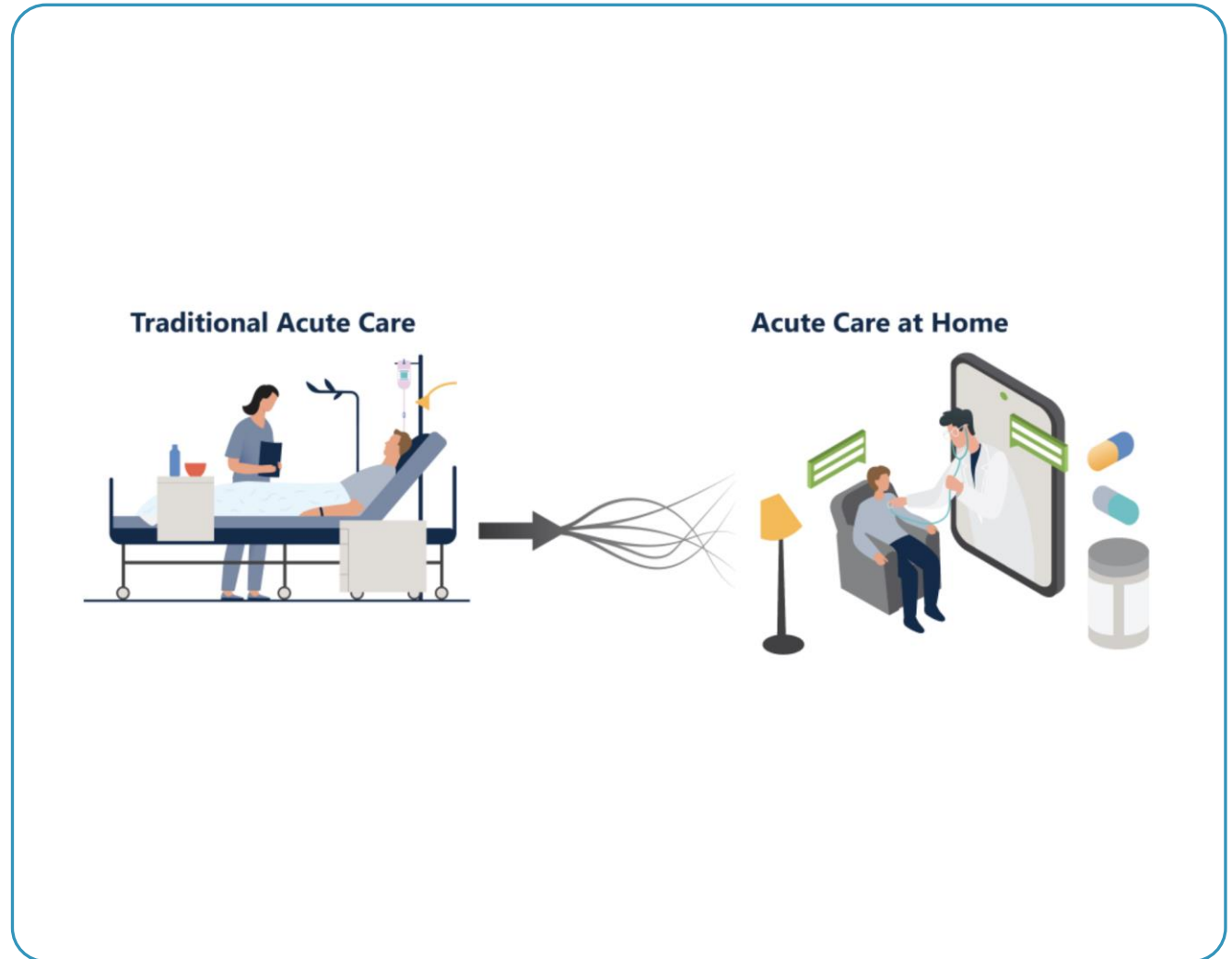
# Care Delivery Models: Telehealth

- Telehealth has established a prominent and lasting role in healthcare delivery across various geographies.
- Multiple startups and innovations have been developed to be an addition to the traditional care delivery model.
- Policy and regulations trying to catch up → Extension of Telehealth exemptions until end of 2024.



# Care Delivery Models: Hospital at Home

- Care-delivery services outside the hospital are the **fastest growing businesses** for providers, given the continued shift to the non-acute setting.
- Startups & Healthcare systems are trying to innovate and invest into this new care delivery model.
- Policy and regulations trying to catch up → Extension of CMS waiver until end of 2024.





## Extending care beyond hospital walls is a top priority for healthcare leaders<sup>1</sup>

Expanding out-of-hospital care could improve outcomes, reduce costs, and offer patients more convenience:



40%

of hospitals are expected to have shifted 20% of their beds to the patient's home by 2025<sup>2</sup>



60%

of patients find virtual care more convenient than in-person care<sup>3</sup>



80%

of patients are willing to seek care for minor illnesses at retail clinics<sup>4</sup>

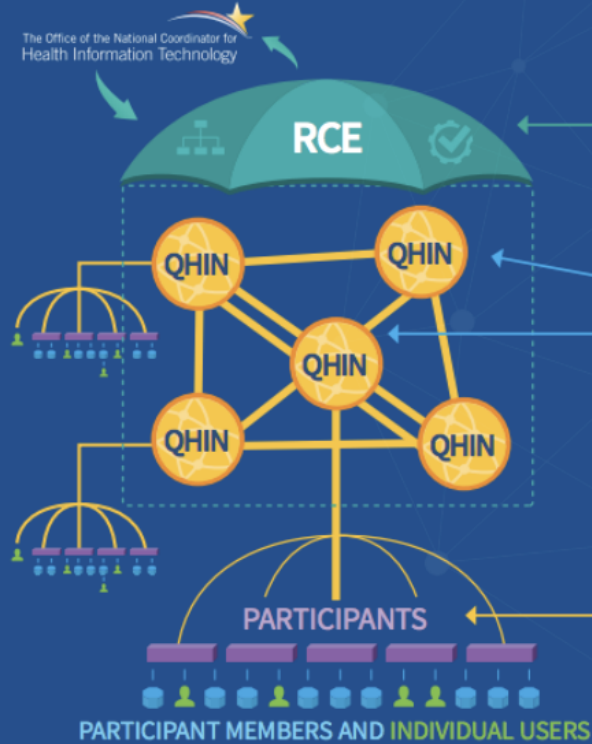
1. Ranked as the second-highest priority after staff retention and satisfaction in the 2022 Philips Future Health Index report

2. Gartner 2022

3. McKinsey survey 2022

4. McKinsey survey 2019

# How Will the Common Agreement Work?



RCE provides oversight and governance for QHINs.

QHINs connect directly to each other to facilitate nationwide interoperability.

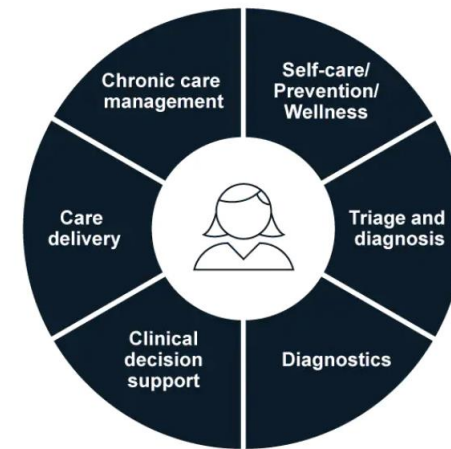
Each QHIN represents a variety of Participants that they connect together, serving a wide range of Participant Members and Individual Users.

# Interoperability: Data exchange

# Predictive Analytics & Generative AI

Exhibit 1

Areas of impact for AI in healthcare.



Improving population-health management

Improving operations

Strengthening innovation

McKinsey  
& Company

# Value Based Care Delivery Model

Increase in adoption in value-based care and related risk payments.

The marketplace has begun to address the patient's full health journey, leading to improved affordability, better quality, access, and patient experience.

Many value-based players could deliver lower costs and better outcomes as well as realize margins of more than 15 percent in primary care and specialty models.

Pharmacy players are scaling their primary-care businesses with acquisitions of physician and clinic assets, including value-based players. (CVS & Oak Street or Amazon & One Medical).

The continued rapid expansion of value-based care models is leading to realignment across the healthcare value chain. (Vertical Integration)

# What is ultimate care model? ROI?



# What is an ecosystem?

## Ecosystems have emerged across industries:

1. Address industry inefficiencies → optimizing underutilized assets/resources or eliminating friction in consumer experience.
2. Benefit from network effects.
3. Use the data generated in the ecosystem.
4. Reduce likelihood to switching due to ease of use or structural advantages gained or generated in the ecosystem.

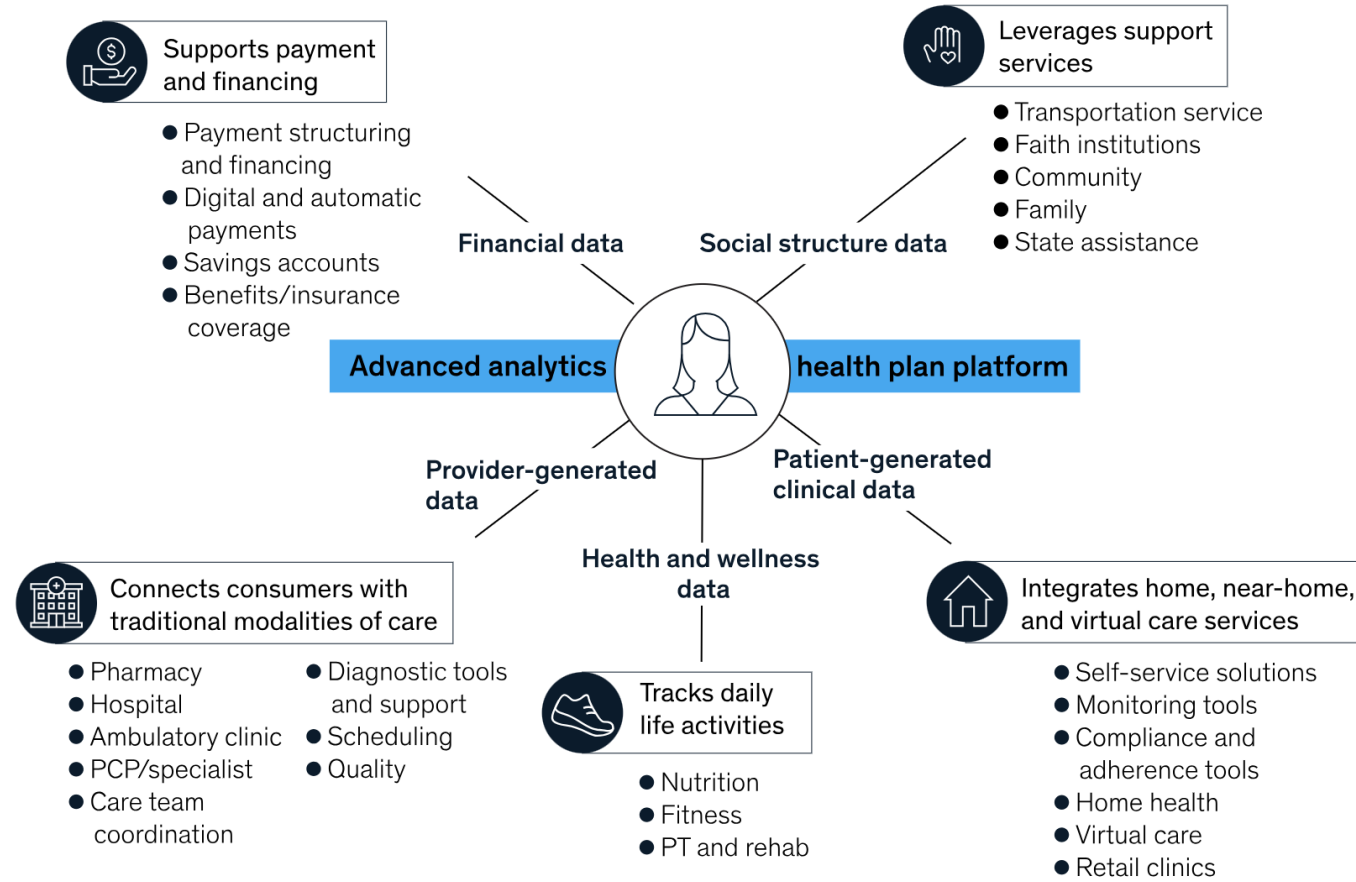


# Healthcare Ecosystem

Healthcare Ecosystems are built on three layers:

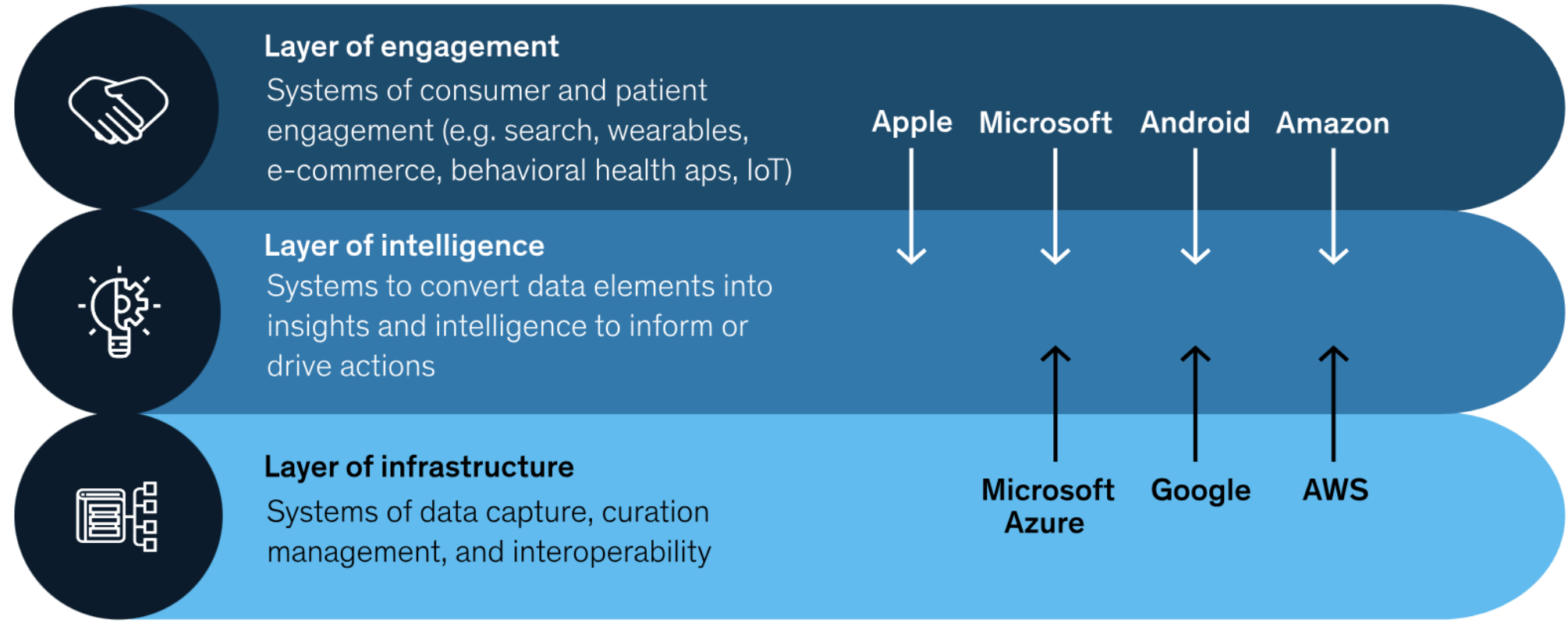
- Infrastructure of liquid data exchange.
- Intelligence and predictive analytics and AI.
- Patient Engagement with services built on the other two layers.

## Healthcare ecosystems of the future will be centered on the patient.

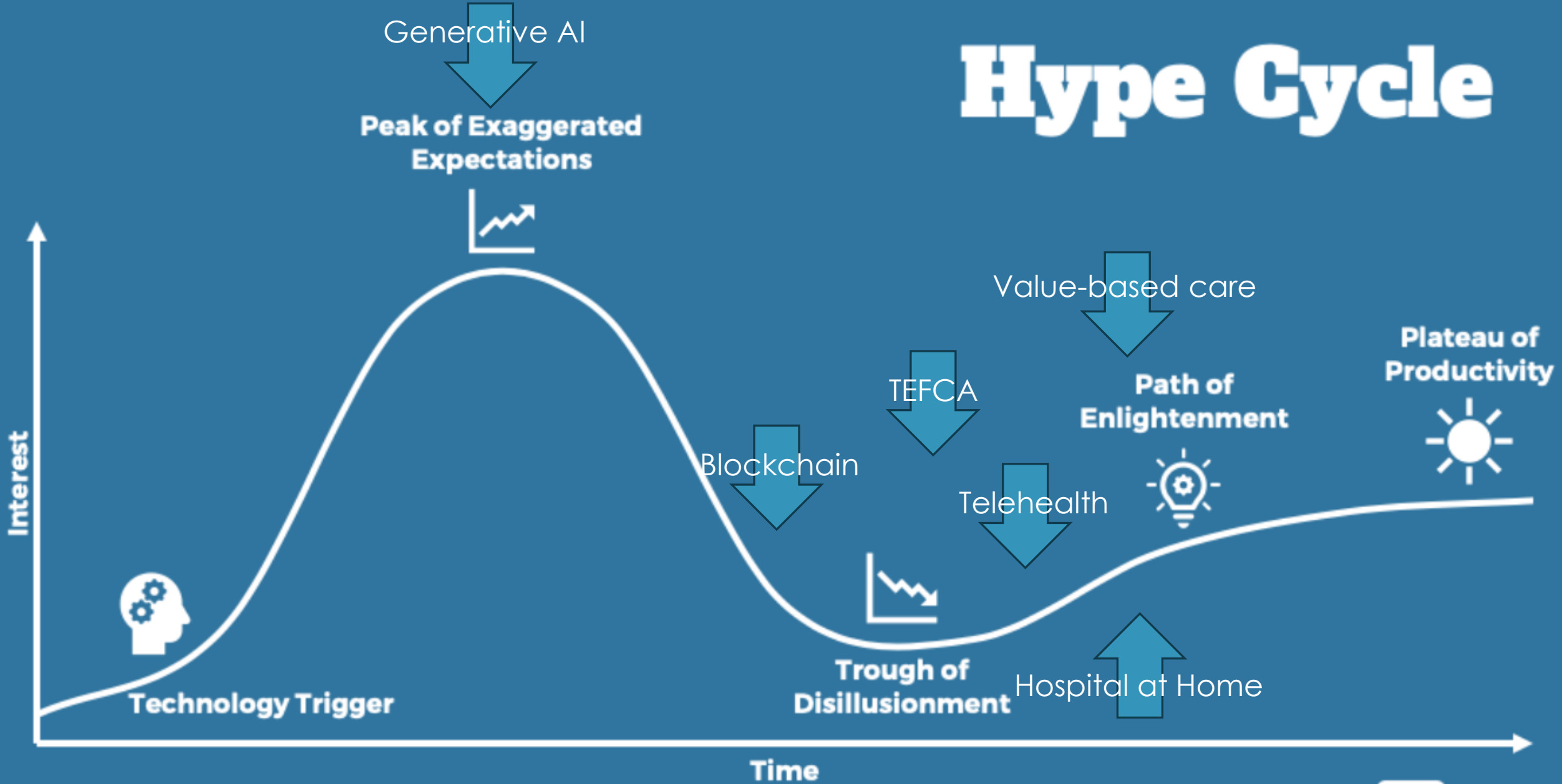




# Technology giants are investing in capabilities across the layers of healthcare ecosystems.



# Hype Cycle





**Right solution, right place, right time!**



**PEAR**  
THERAPEUTICS

**Example:**

# What is next?

It is an exciting time for innovation in healthcare!

