



# *Revolutionizing Healthcare Through Innovation*

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# Tim Gray Chief Health Innovation Officer

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# Today's Reality...

Providence reports Q1 operating loss of \$345M

13 hospitals closing departments or ending services

23 hospitals, health systems cutting jobs

CommonSpirit posts \$1.4B operating loss

Healthcare job cuts up 85% from early 2022

**Health systems are buying less technology amid financial pressures**

Naomi Diaz - Wednesday, March 15th, 2023




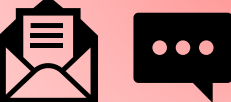


**Nurses Are Burned Out. Can Hospitals Change in Time to Keep Them?**

The pandemic has pushed already stressed nurses away from a demanding field. Does the job need to be rethought?

**Worker Burnout Is Even Worse Than at the Peak of the Pandemic**

Economic unrest, layoff fears and more stringent return-to-office policies are unsettling white-collar employees globally.

# And This...Generational Differences – Influencing Care delivery...

Characteristics	Traditionalists (pre-1945)	Boomers (1946-1965)	Gen X (1966-1980)	Gen Y (1981-2000)	Gen Z (2001- 2020)
Experiences	World War II Traditional gender roles Nuclear Family	Cold War Woodstock Youth Culture Moon Landing	Cable TV Latch-Key Kids Divorce 1 <sup>st</sup> Gen PC's	9/11 Video Games Reality TV Email	Global Focus All-Mobile iPad & iPhone Create & Post Always "ON" Supervised "Gig" Economy
% in Workforce		<ul style="list-style-type: none"> <li>• 55% of Gen Z do not have a primary care physician and prefer retail or urgent care models.</li> <li>• 59% of Gen Y patients say they would switch doctors for one with better online access</li> <li>• 100% of Baby Boomers will be over the age of 65 by 2030</li> </ul>			9%
Signature Technology					
Communication					

# What is driving our New Reality:

## *The Consumer, the Enterprise, & the Ecosystem*



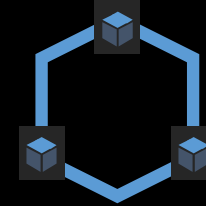
### The Consumerization of Care & the Experience Revolution

- 55% of Gen Z do not have a primary care physician and prefer retail or urgent care models.
- 59% of Gen Y patients say they would switch doctors for one with better online access
- 100% of Baby Boomers will be over the age of 65 by 2030



### Worker and Capital Optimization

"The moral distress of being unable to sufficiently care for their patients is among the worst hardships that health-care workers have been forced to endure." ~The Atlantic



### Redefining connections and the new age of the ecosystem & discovery

- 80%: Unstructured Data
- 62%: Disconnected Data
- 63%: Unable to unify customer data
- 47%: Lack means to extract data
- 86% Unified view of data

**Capture the individual—  
release the experience**

**Exploit & automate the data—  
reinvent the business**

**Bridge the gap—  
Extend the value**

Why?  
Costs are rising, demand is rising,  
supply is decreasing.  
New Care Models are non-negotiable.

Actionable data must be at the point of  
decision making & liberate hands from  
keyboard

Most data is not accessible or organized




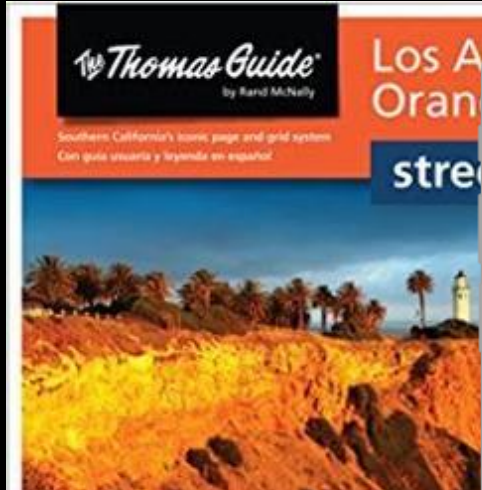
# Popular apps are raising user expectations

## Users now expect:

- Always available
- Fast and responsive
- Guaranteed security
- Real-time content and personalization
- Business/user data intelligence



# Innovation, AI are reshaping Industries.....




American Airlines

7:19

Cancel American Airlines Flight 438... Add

American	GATE A24	FLIGHT AA0438
PHX		SAN
GROUP 1	SEAT 3A	STATUS On Time
TERM 4	DEPARTS 8:35 AM	
PLATINUM PRO BARTO/JOHN C		PRIORITY First Class



FlightAware

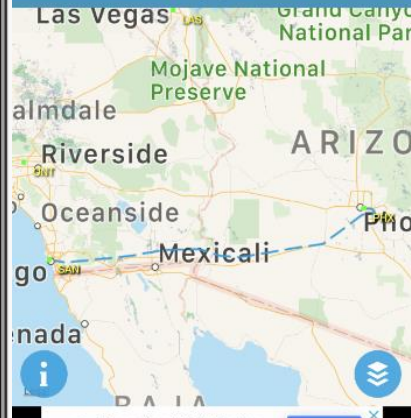
7:20

AAL438 B752

Scheduled (in 1 hours 14 minutes)

Where is my plane right now?

On Time 11/26/2018	On Time 11/26/2018
TERMINAL/GATE 4/A24	TERMINAL/GATE 2/31
08:54AM MST	08:47AM PST
PHX Phoenix, AZ Phoenix Sky Harbor Int	SAN San Diego, CA San Diego Int




Planes Live - Flight Tracker App Store

Uber Lyft

7:18

Trip Details



Today, 6:21 AM \$18.40 Add a tip

11901 S Warpaint Dr, Phoenix, AZ 85044, USA

Terminal 4, 3400 E Sky Harbor Blvd, Phoenix, AZ 8...

You rated Tammara ★★★★★

Help Receipt

I was involved in an accident

Review my fare or fees

I lost an item

My driver was unprofessional

My vehicle wasn't what I expected


Waze

9:10

9:38 27 min 25 mi.

To Rancho Bernardo, San Diego, CA

Via SR-163 N, I-15 N San Diego



Find the best time to leave

See more times

Add a stop

Routes & HOV Send ETA Overview

Stop Go now

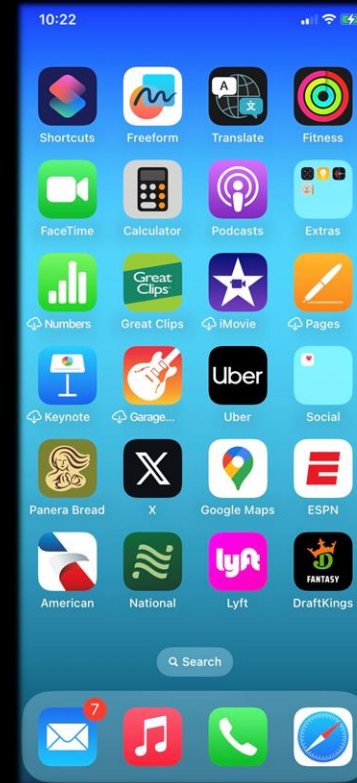


# And This...

# 2,617 *What does this number mean*

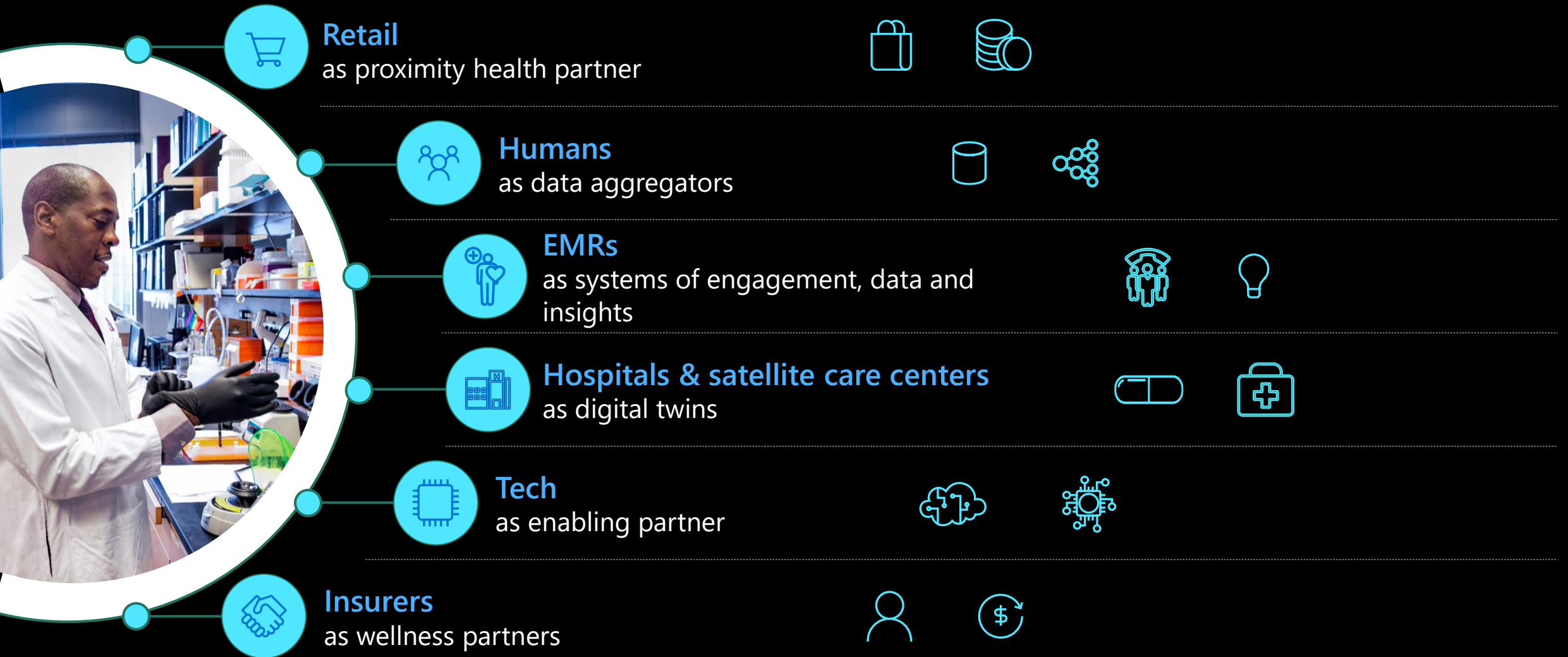
**We touch our phones 2,617 times a day, says study**

Feeling a peculiar pull towards your phone? You're not alone. An obsession to touch phones is rampant.





# Connected yet disrupted systems



# Pragmatic innovation drives transformation in health. Automation is key!

Technology enabled care, health promotion and disease prevention that advances the Quintuple Aim



**Better Health**

Improve  
population health



**Better Care**

Improve the  
patient experience



**Lower Cost**

Reduce the per  
capita cost of care



**Clinician  
Experience**

Improve clinician  
workflow efficiencies



**Health Equity**

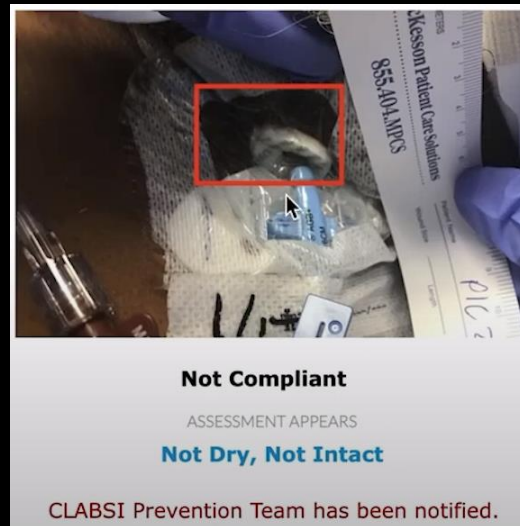
Understanding  
Social Determinants of  
Health and other impact  
to equity in HLS

JAMA. 2022;327(6):521-522. doi:10.1001/jama.2021.25181

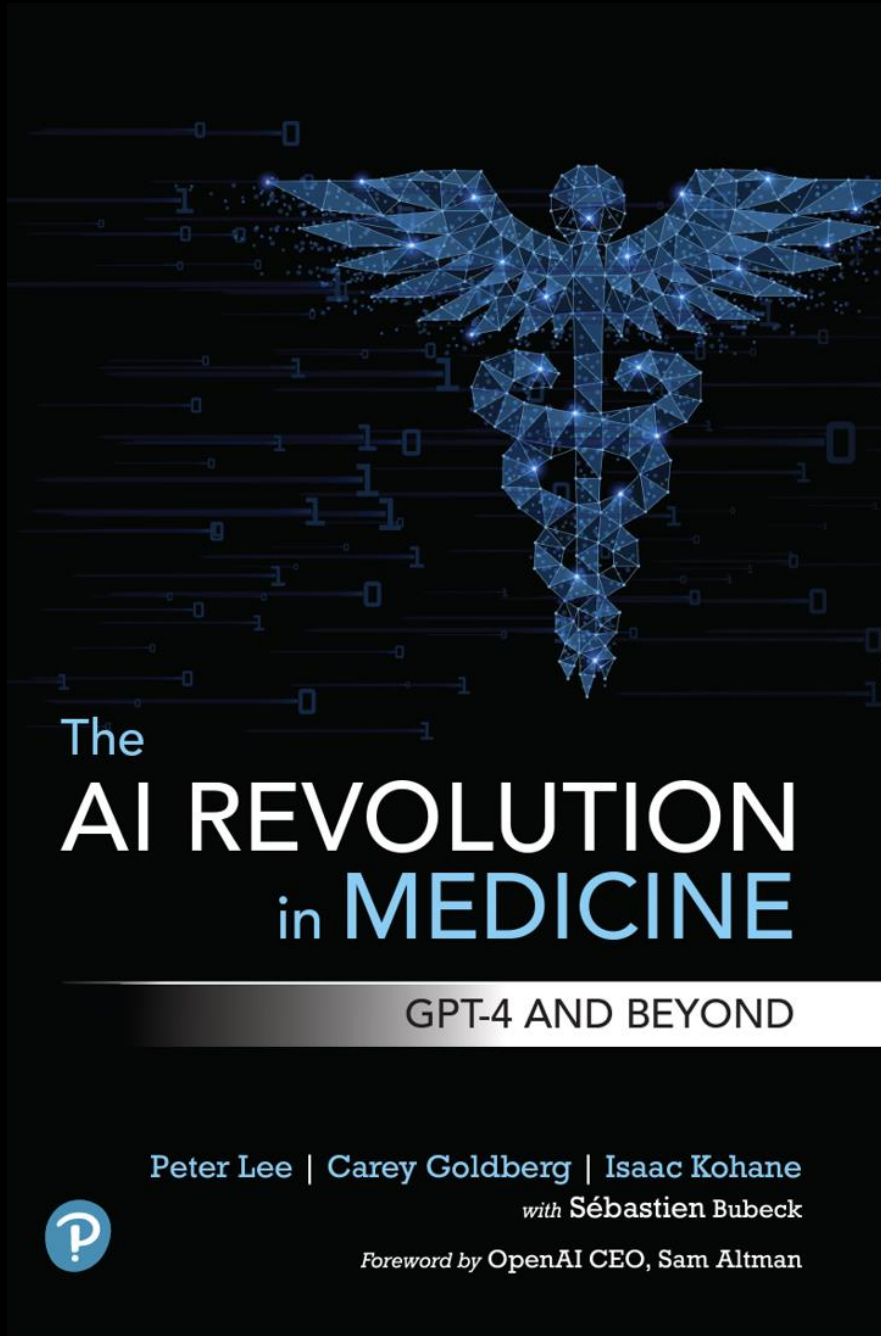
Bodenheimer, T. & Sinsky, C. "From Triple to Quadruple Aim: Care of the patient requires care of the provider" Ann Fam Med Nov/Dec 2014, vol. 12 no. 6 673-576

Itchhaporia, D. "The Evolution of the Quintuple Aim: Health Equity, Health Outcomes, and the Economy" Journal of the American College of Cardiology [Volume 78, Issue 22](#), 30 November 2021, Pages 2262-2264

# Data Enabled Healthcare Innovations Examples







# The NEW ENGLAND JOURNAL of MEDICINE

## Special Report

## Benefits, Limits, and Risks of GPT-4 as an AI Chatbot for Medicine

Peter Lee, Ph.D., Sebastien Bubeck, Ph.D., and Joseph Petro, M.S., M.Eng.



Artificial Intelligence

Machine Learning

Deep Learning

Generative AI



## Artificial Intelligence

The field of computer science that seeks to create intelligent machines that can replicate or exceed human intelligence

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## Machine Learning

Subset of AI that enables machines to learn from existing data and improve upon that data to make decisions or predictions

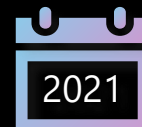
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## Deep Learning

A machine learning technique in which layers of neural networks are used to process data and make decisions

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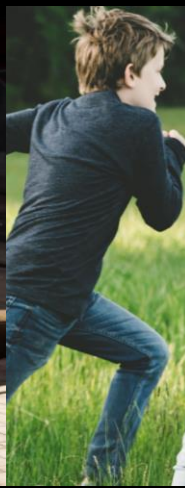
## Generative AI

Create new written, visual, and auditory content given prompts or existing data

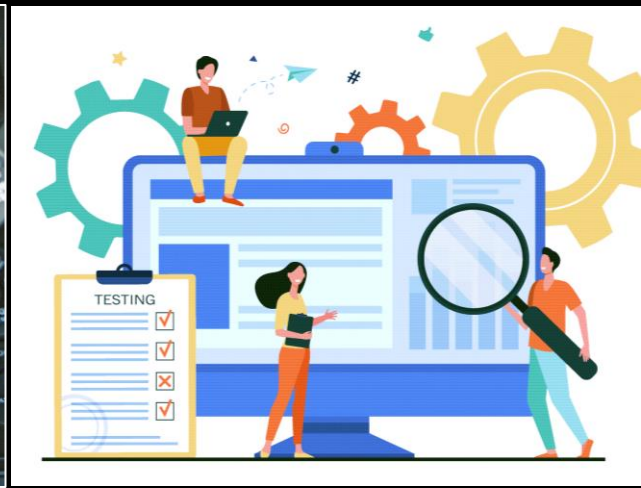
# Generative AI in Healthcare



Enterprise



Human + Copilot



Testing,  
validation of  
model



# AI in the “News”

- **UCLA Health** - AI to connect patients with a chatbot to ease clinicians' documentation burden in the EHR.
- **UCI Health** - AI to reduce the amount of time clinicians are spending in front of screens by using it to create automated transcripts of patient encounters.
- **UC San Diego Health**, **UW Health**, **Stanford Health Care**, and **UNC Health** are piloting generative AI.
- **BayCare** is partnering with health tech company to develop an AI-based platform that can help reduce hospital nurses' documentation burden.

# Real Value/Use Cases

## Contact/Call Center



- Abundance of Calls
- Transcribe the Encounter
- Negative Consumer Experience, Fatigued Agents

## Goals



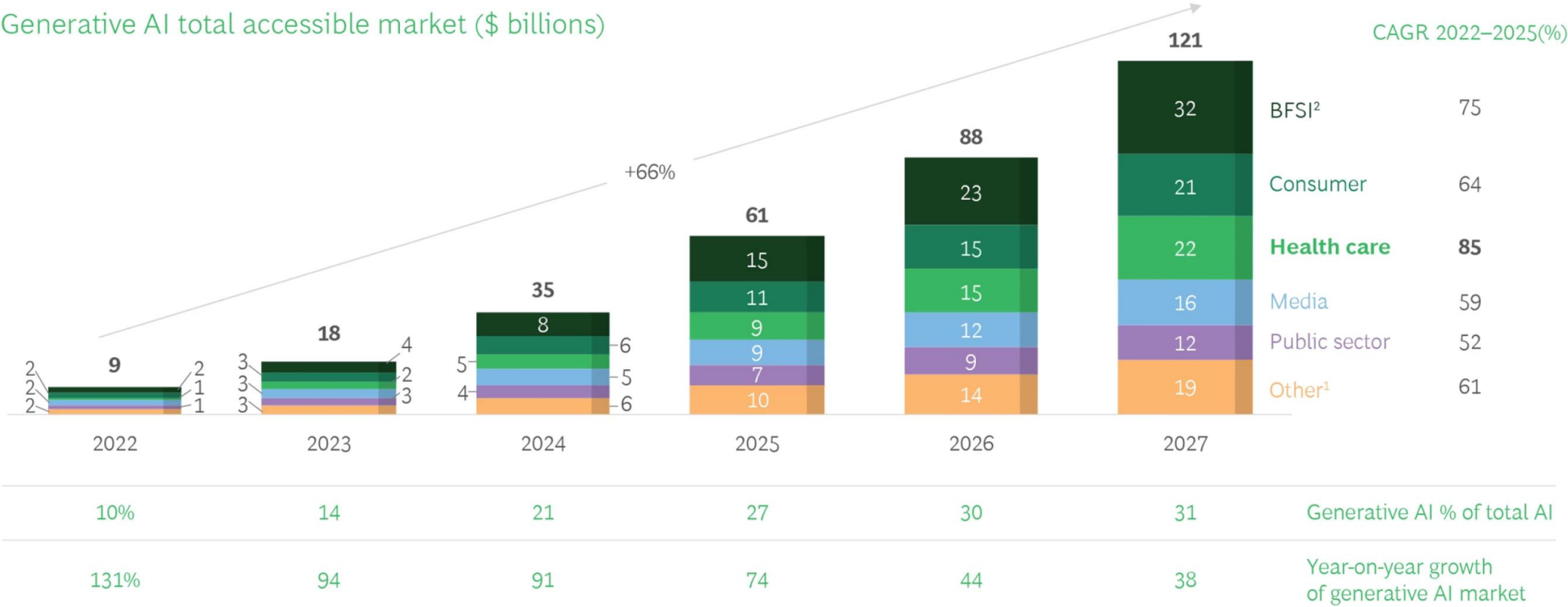
- Change the CX with Azure Open AI
- Ability to Scale
- Consistent Summaries
- Reduce Fatigue

## Outcomes



- Pilot completed
- 1500 Hours saved
- Full Deployment

# Exhibit 1 | Generative AI Is Projected to Grow Faster in Health Care Than in Other Industries



Source: AI TAM research; expert interviews; BCG analysis.

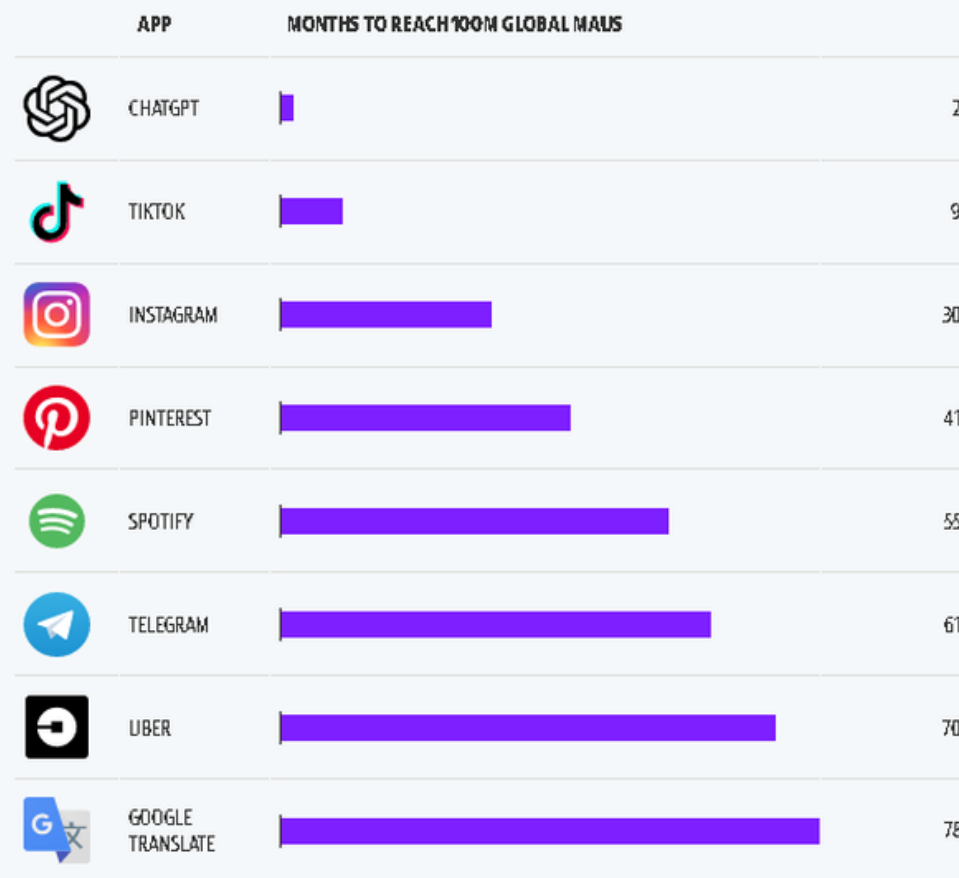
<sup>1</sup>Industries in the “Other” category include industrial goods, energy, telecom, and financial services (including retail and wholesale banking, asset and wealth management, insurance, and private equity).

<sup>2</sup>BFSI = banking, financial services, and insurance.



100 M MAU

## HOW LONG IT TOOK TOP APPS TO HIT 100M MONTHLY USERS



SOURCE: UBS


**yahoo!**  
finance

# The ask.....

Accelerate Innovation at your organization

Find areas of greatest impact aligned to your top priorities

Lean on your vendors and partners to help



Thank You and Enjoy  
Today's Event!

**HIMSS VIRGINIA CHAPTER**