Health Digital Transformation with Trusted Technology

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Managing Director, Health Industry, EMEA
Microsoft

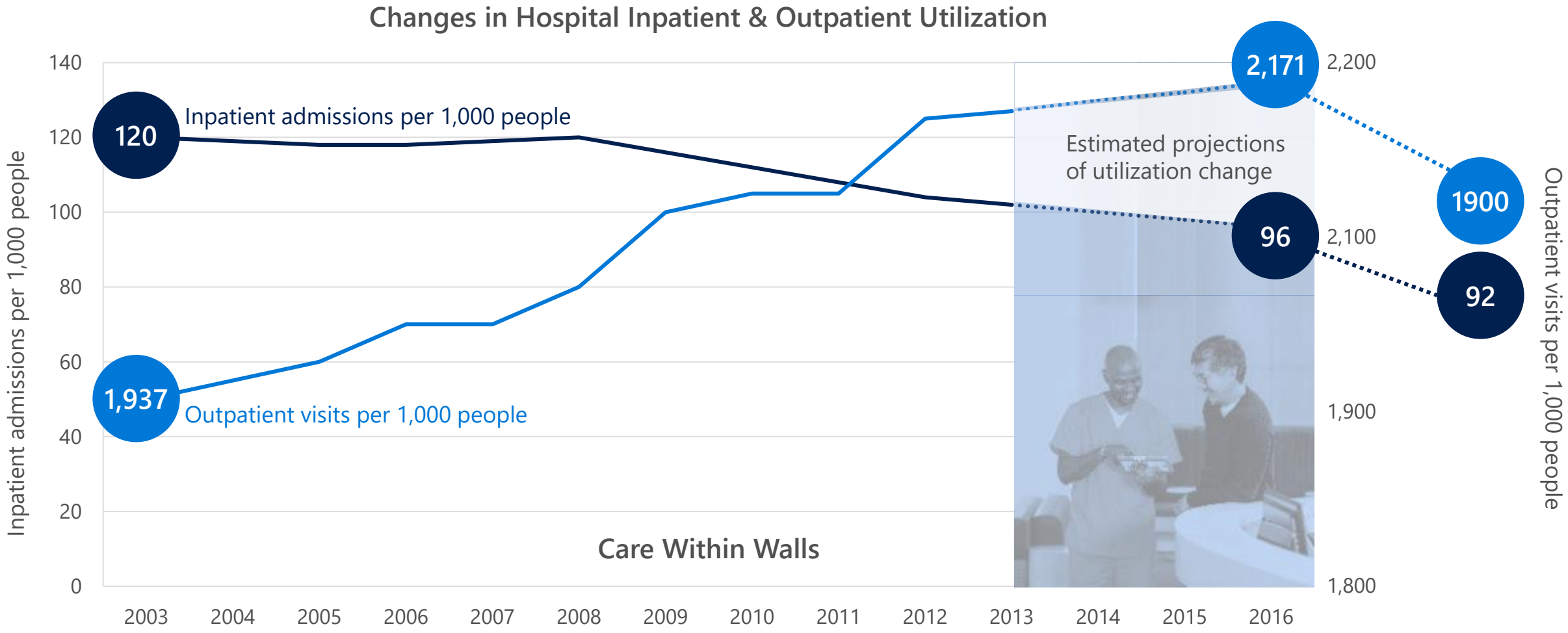
Microsoft

Towards value-based healthcare

An **invisible** revolution is coming

Transformation & Opportunity

Inpatient care volume on a rapid decline



Source: PwC Health Research Insights

Evolution of Health Solutions

Doctor*The Orthopedic department*

Menu

201600390098, Pieter Wycoff, 34 years

Clear | Lists

MY SHORTCUTS
- Schedule
- Planned activities
- Planning form
- Drugs
- My Overview
- Patient Overview

Keep windows

Adress: Oxford street 1
111 22 London
Telefon: 0087654321
Mobil:
Arbete:
E-post:
SkypeID: PieterWycoff

Skype Call History
- Pieter Wycoff 1/13/2016 — was that one good / yeah, that was pretty good. Though, I f...
- Pieter Wycoff 1/13/2016 — ok
- Pieter Wycoff 1/13/2016 — Video Call

Relative's Details
Given name: Diana
Family name: Wycoff
Phone no home:
Phone no work:
Comment:
Order: 1
Patient card

Cancel | Book...
source | Service

Pieter Wycoff
2 Participants
Pieter Wycoff

11:00 19 320722-9208 Johanna Jonasson - Hand ort - New visit*
12:00
13:00 19 320912-8606 Thomas Frisk - Hand ort - Follow-up*
19 320115-0004 Beatrice Lundh - Hand ort - Follow-up*
14:00 19 320319-9108 Pieter Wycoff - Hand ort - Follow-up*
15:00
16:00
17:00

19 320115-0004 Beatrice Lundh - Acute*
19 320319-9108 Pieter Wycoff - Acute*
19 320912-8606 Thomas Frisk - Doctor's visit*
19 321003-9123 Patricia Hornby - Doctor's visit* Membership: Stockholm*
19 320718-9204 Isobel Martin - Doctor's visit* Membership: Stockholm*

19 320319-9108, Pieter Wycoff
14:00 - 14:30

Print | Close

10:17 AM
7/12/2016

HEALTHVILLAGE.FI
TRANSFORM
THE CARE
CONTINUUM
INNOFACTOR
HUS

Why the other 95% matters

Provider has limited view of patients' health.

Patients interact with provider only when they are sick.

Same conversations and treatments reoccur.

Why the other 95% matters

Provider has limited view of patients' health.

Patients interact with provider only when they are sick.

Same conversations and treatments reoccur.

Provider has holistic view of patients' health and real-time data.

"Near perfect" map of the body, mind & wellness, genomics.

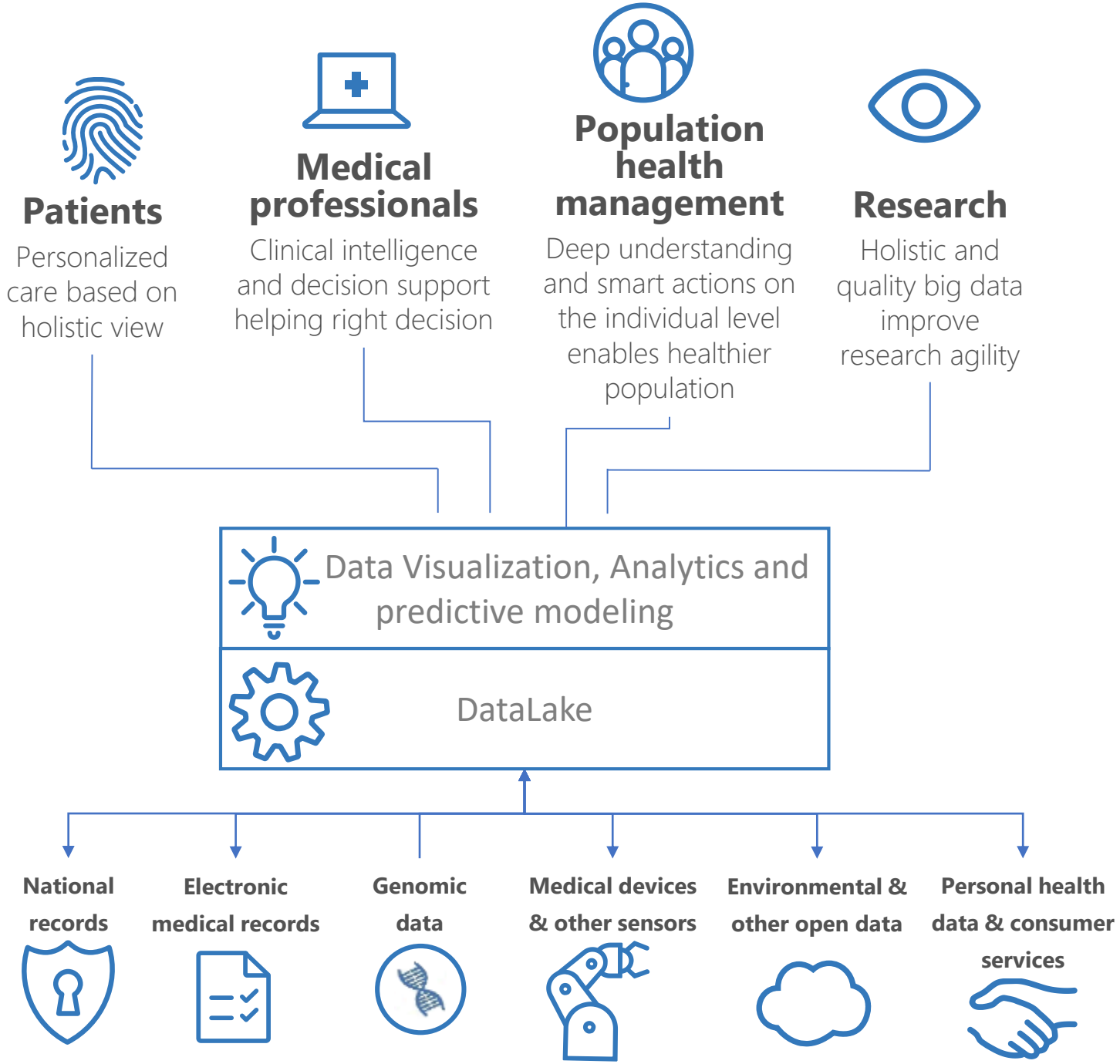
Ability to interact with patient as needed.

Analyze health data in one place

HealthVault Insights brings together data to give you better visibility into your patients' health. Data sources include apps and devices, via the Apple Health and Google Fit services, as well as patient medical records.

New Health Data Ecosystem

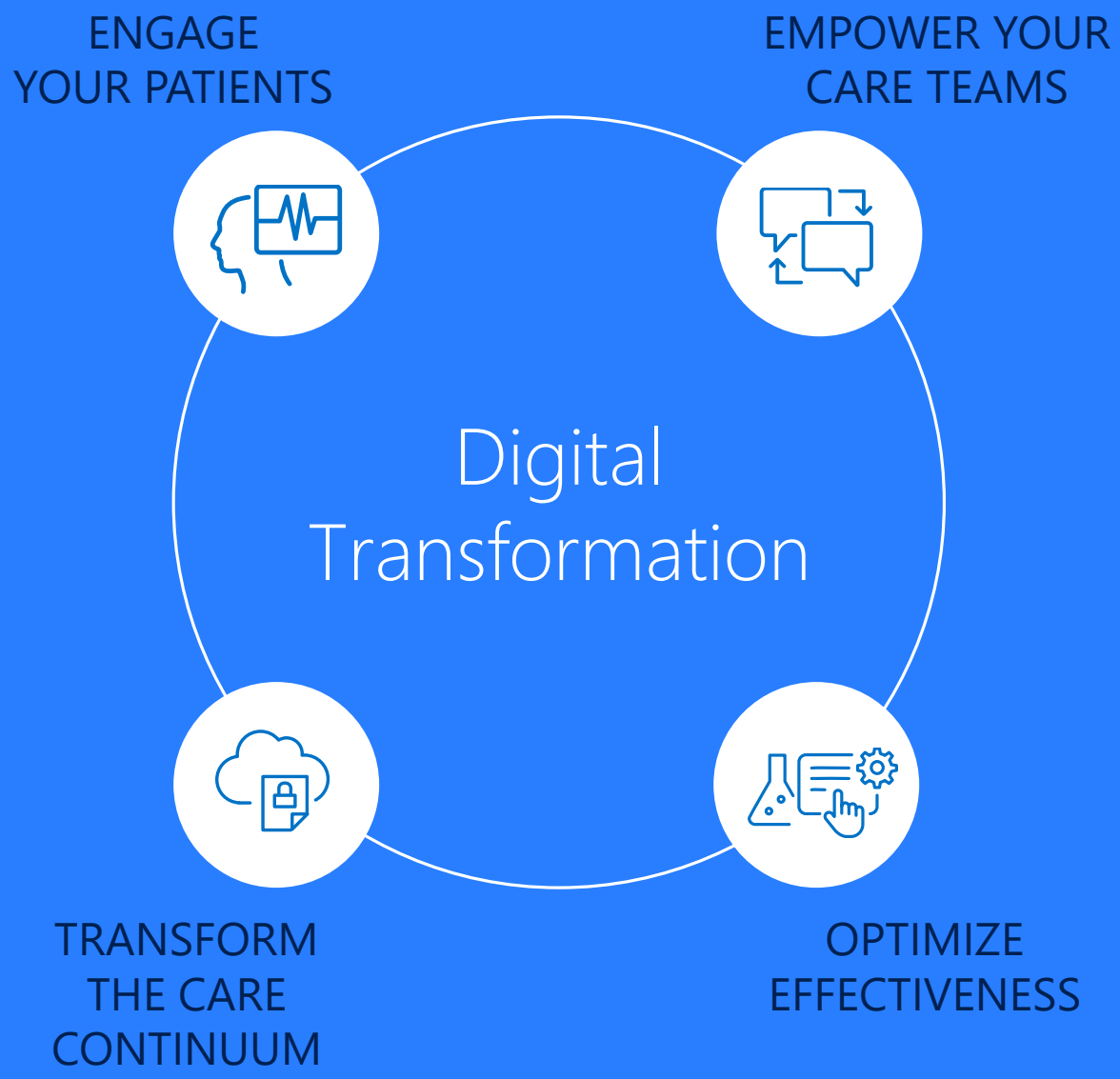
(open, interoperable, scalable)



Democratizing AI

" The ultimate aim is sharing the power of AI with the masses, allowing anyone and everyone to build the systems they need."

Satya Nadella, CEO, Microsoft
Davos - World Economic Forum 2017



Democratizing AI

For every person and every organization

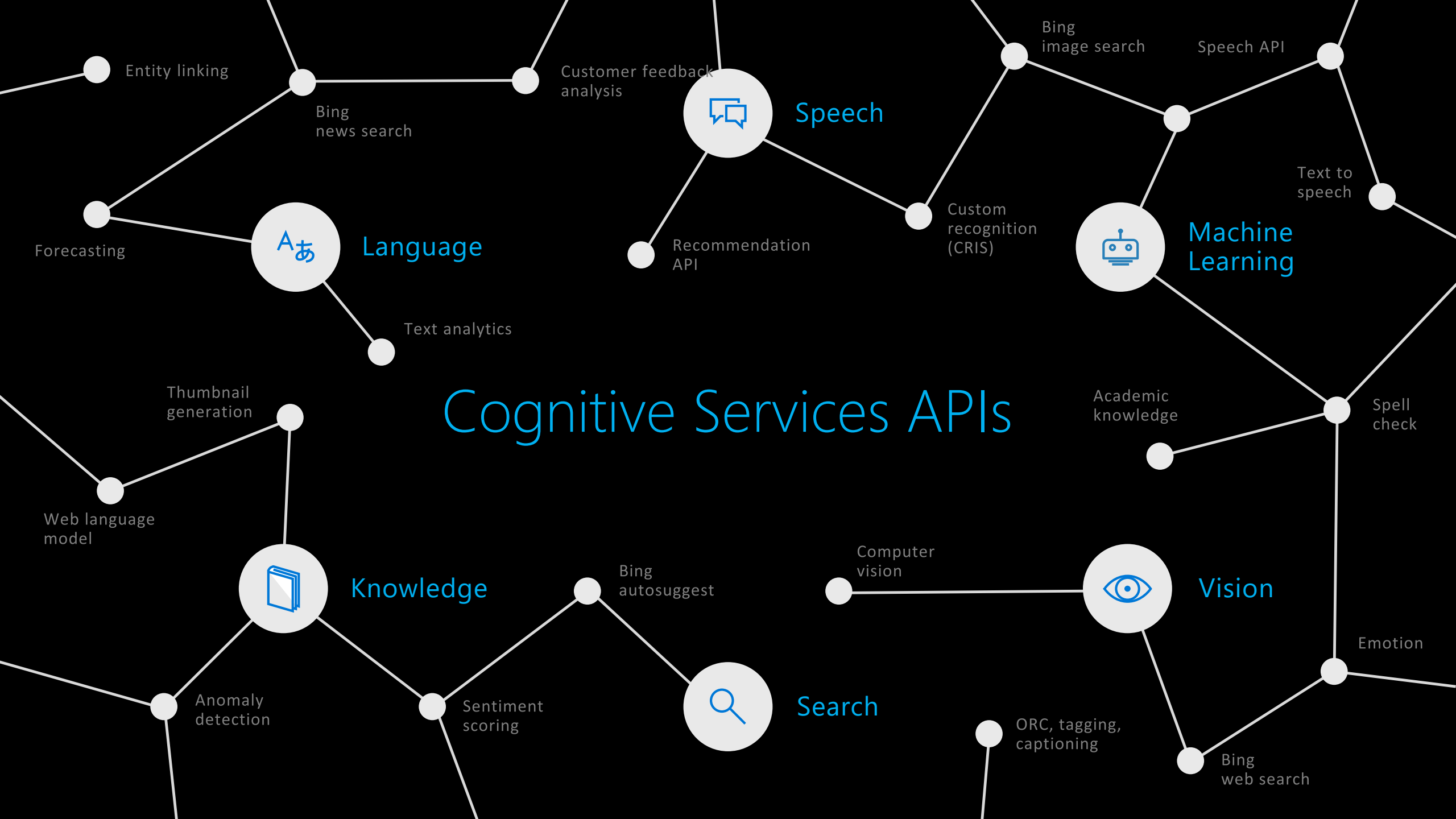
Agent

Applications

Services

Infrastructure

Cognitive Services APIs



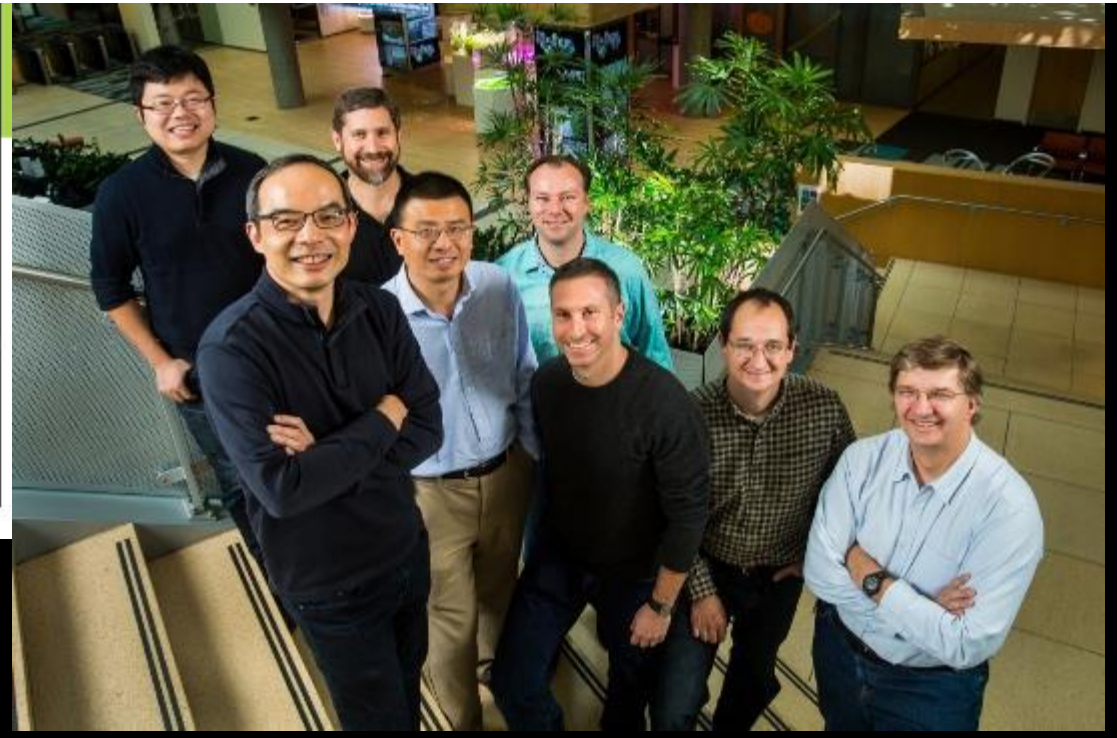
Microsoft Software Recognizes Images Better Than Humans Do

And it's a foundational step in the next wave of interaction.

Microsoft made speech recognition software that's as accurate as humans

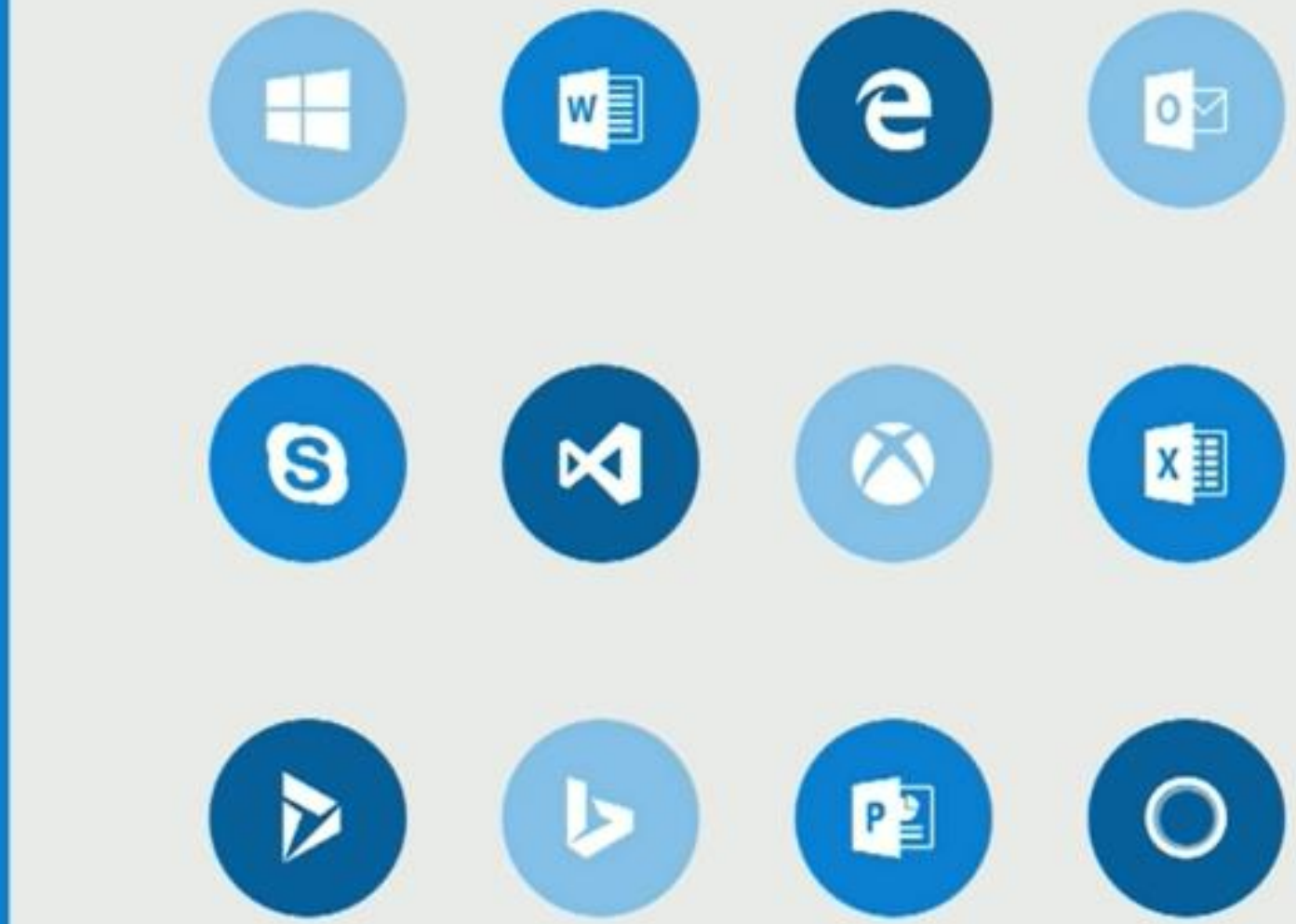
2.4k
SHARES

Share on Facebook | Share on Twitter | +



Pervasive AI

Redefining Microsoft with AI

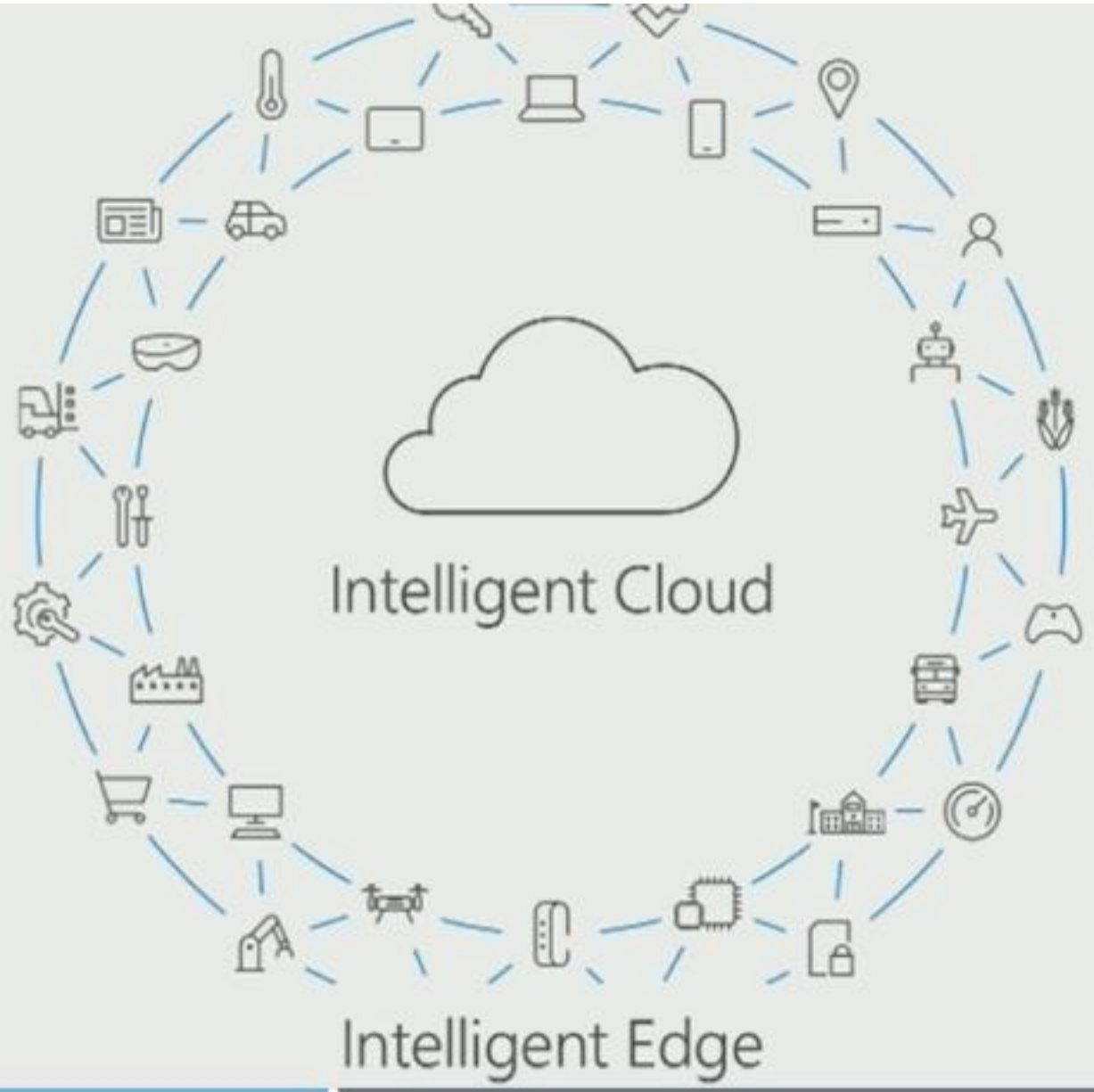


The Edge and the Cloud

Multi-device

Artificial Intelligence

Serverless



Digital Transformation in the Health Industry

ENGAGE YOUR PATIENTS

to improve experiences & outcomes

EMPOWER YOUR CARE TEAMS

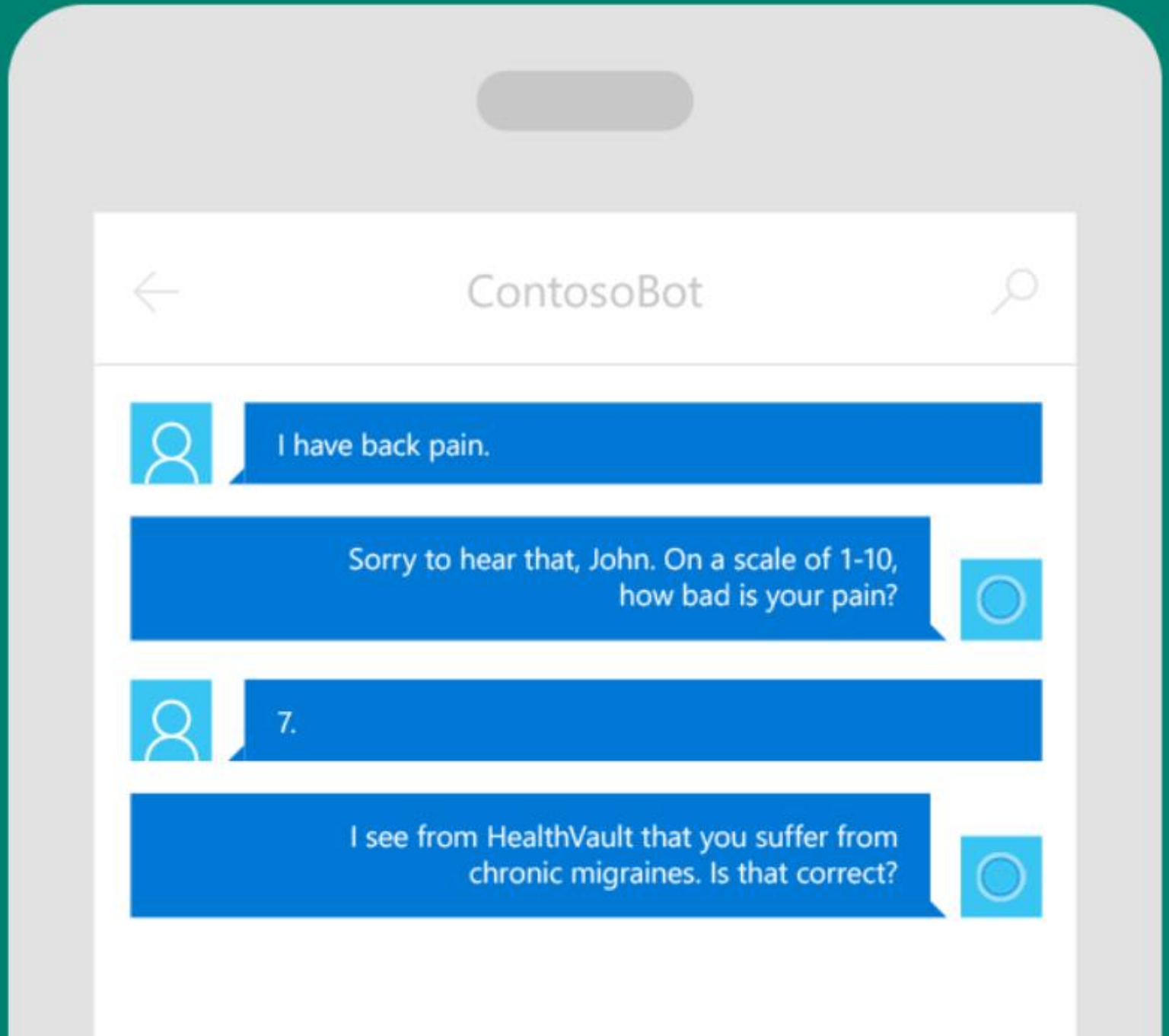
to be more productive & efficient

OPTIMIZE YOUR CLINICAL & OPERATIONAL EFFECTIVENESS

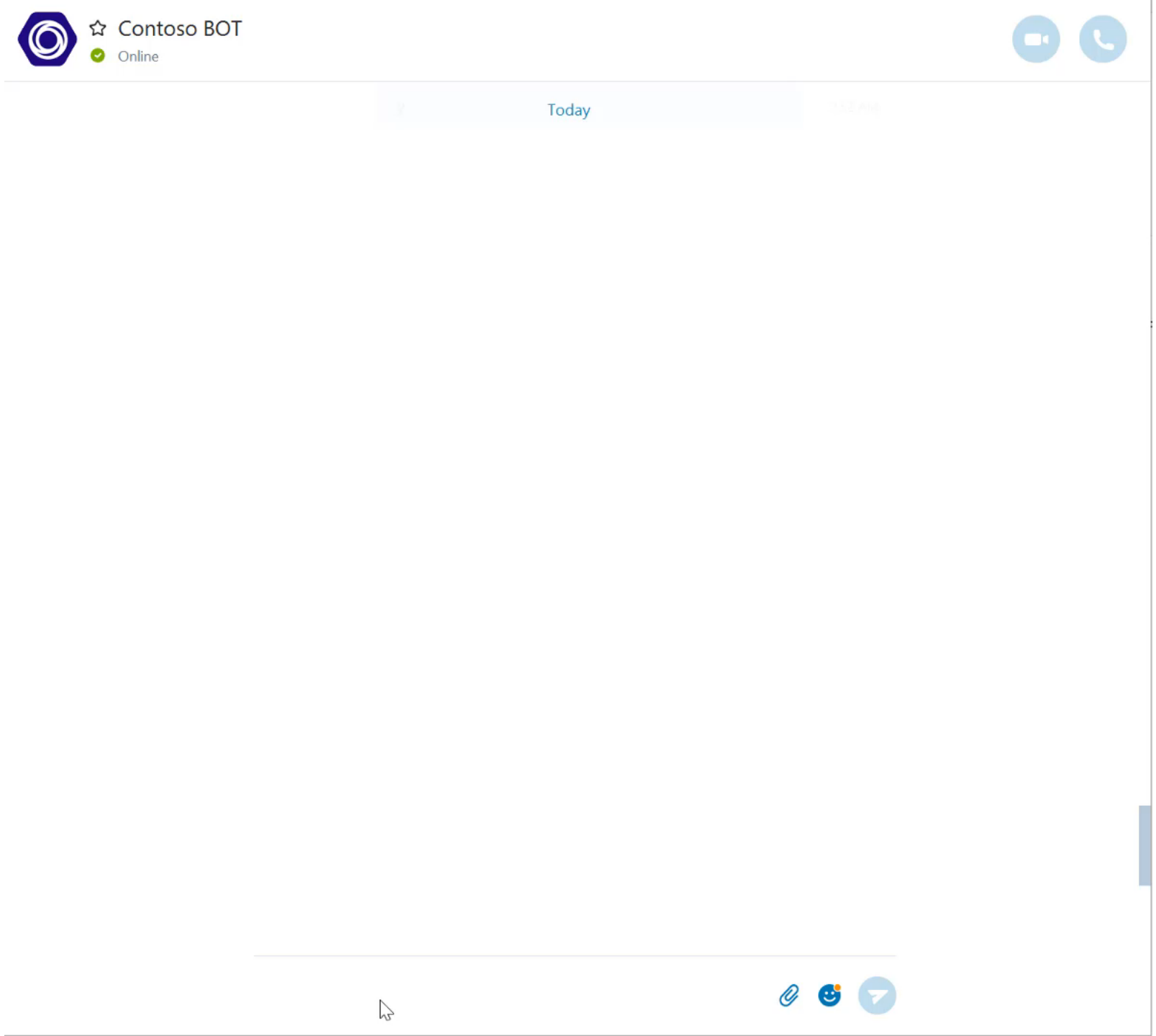
by using data analytics

TRANSFORM THE CARE CONTINUUM

by tapping intelligent devices



AI at work for your patients

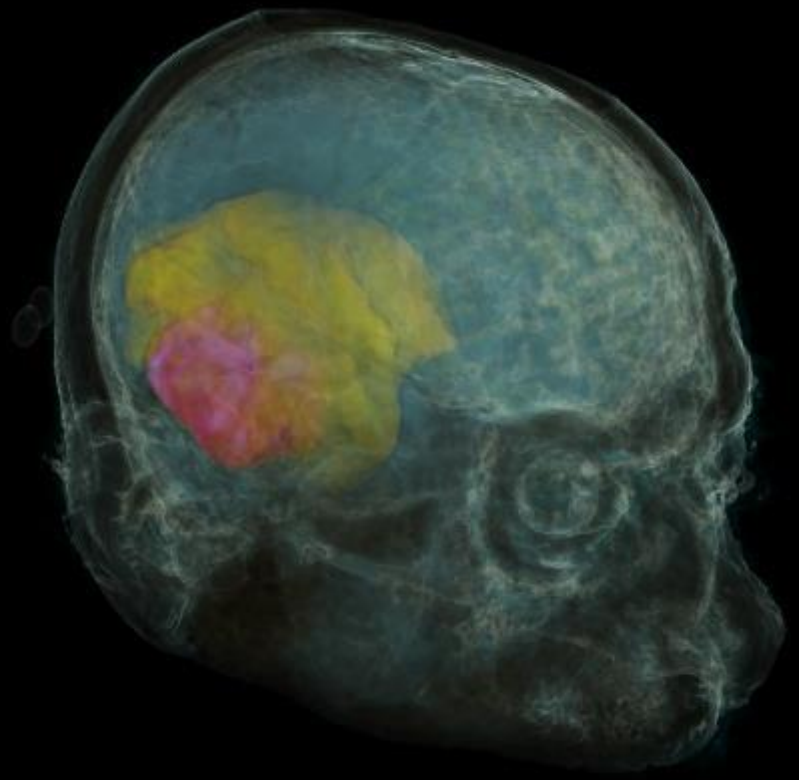

Contoso BOT
Online
Today

Half of us will be diagnosed with cancer

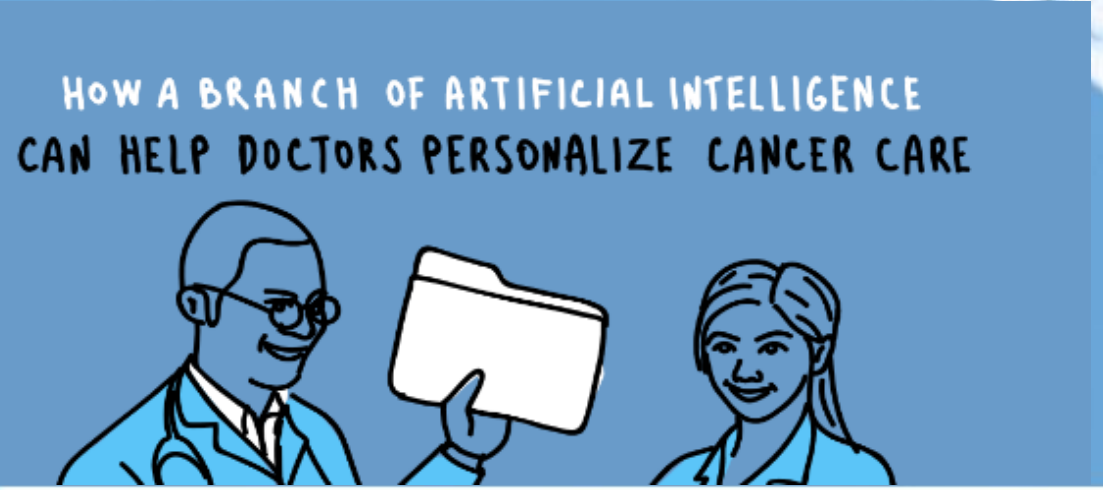
Half of those will need radiotherapy

It takes hours for each patient

How can AI help ?



NOT FOR CLINICAL USE
Send Feedback
Pointer
Scroll
Manual
Contour
Fix
Suggest
Undo
Clear
Redo
Explorer
UNKNOWN
Auto_Glioma_T1c.nii
New Contour
Auto_Glioma_T1.nii
New Contour
Auto_Kidney.nii
New Contour
Assist_Glioma_T1c.ni
New Contour
A
R
L
P
Axial
83
H
R
L
Coronal
F
63
H
A
P
Sagittal
F
69
100 %
251
UI
Contour
Window/ Level
Window/ Level Preset
Auto
Level (hounsfield units)
534
Window (hounsfield units)
1067
Layers
Display Brushes
Fill Contours
Inner Eye

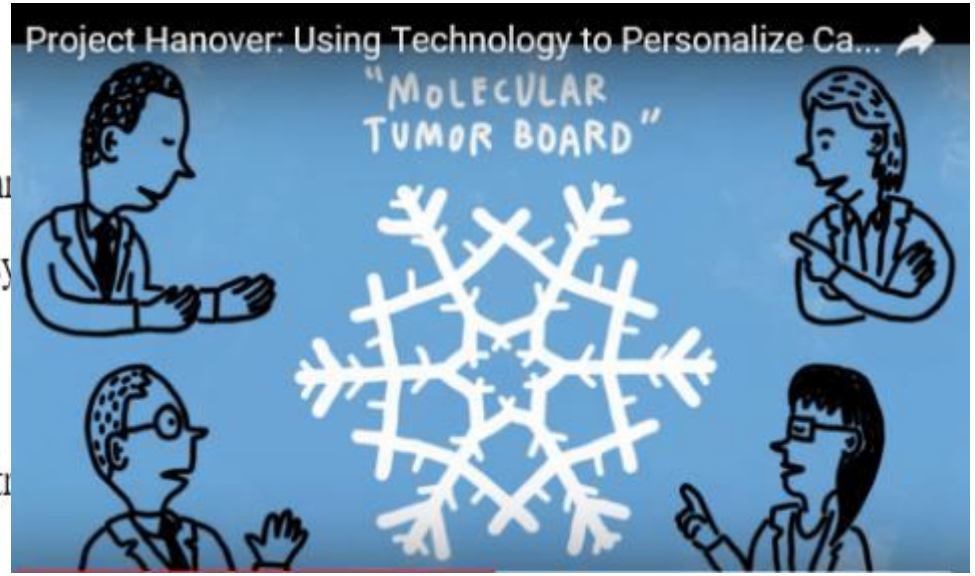


How Microsoft computer scientists and researchers are working to 'solve' cancer

Allison Linn

At Microsoft's research labs around the world, computer scientists, programm
trying to crack some of the computer industry's toughest problems, from sy
computing and data visualization.

A subset of those scientists, engineers and programmers have a different goal: They're t
one of the most complex and deadly challenges humans face: Cancer.



AI and Genomics

Microsoft

HEALTH

COMMENT

In First, Quick DNA Test Diagnoses a Boy's Illness

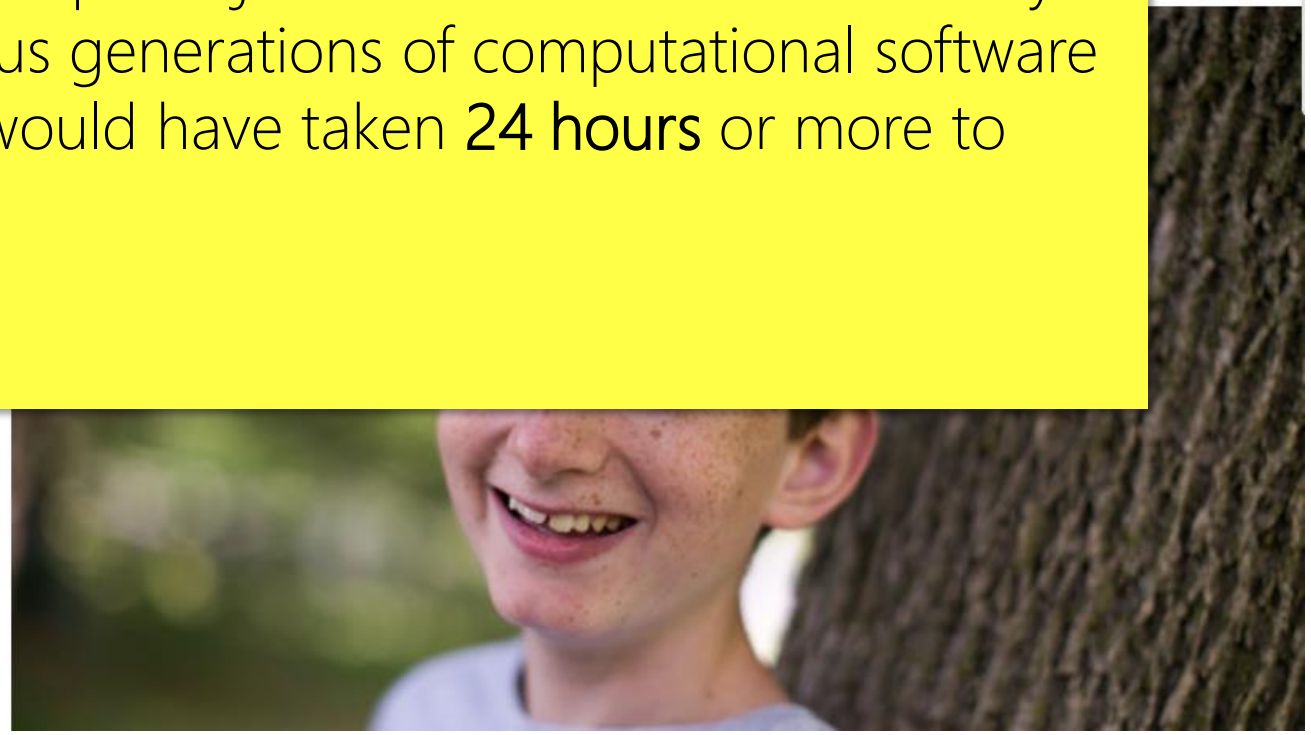
By CAR

"This analysis of DNA sequences required just **96 minutes**. A similar analysis conducted with the use of previous generations of computational software on the same hardware platform would have taken **24 hours** or more to complete, Chiu said."

Charles Chiu et al (UCSF)

CALVARY
AUGUST 1
WATCH TRAILER

and Julie, that they wanted to run one more test with an experimental new technology. Scientists would search Joshua's cerebrospinal fluid for pieces of DNA. Some of them might belong to the pathogen causing his



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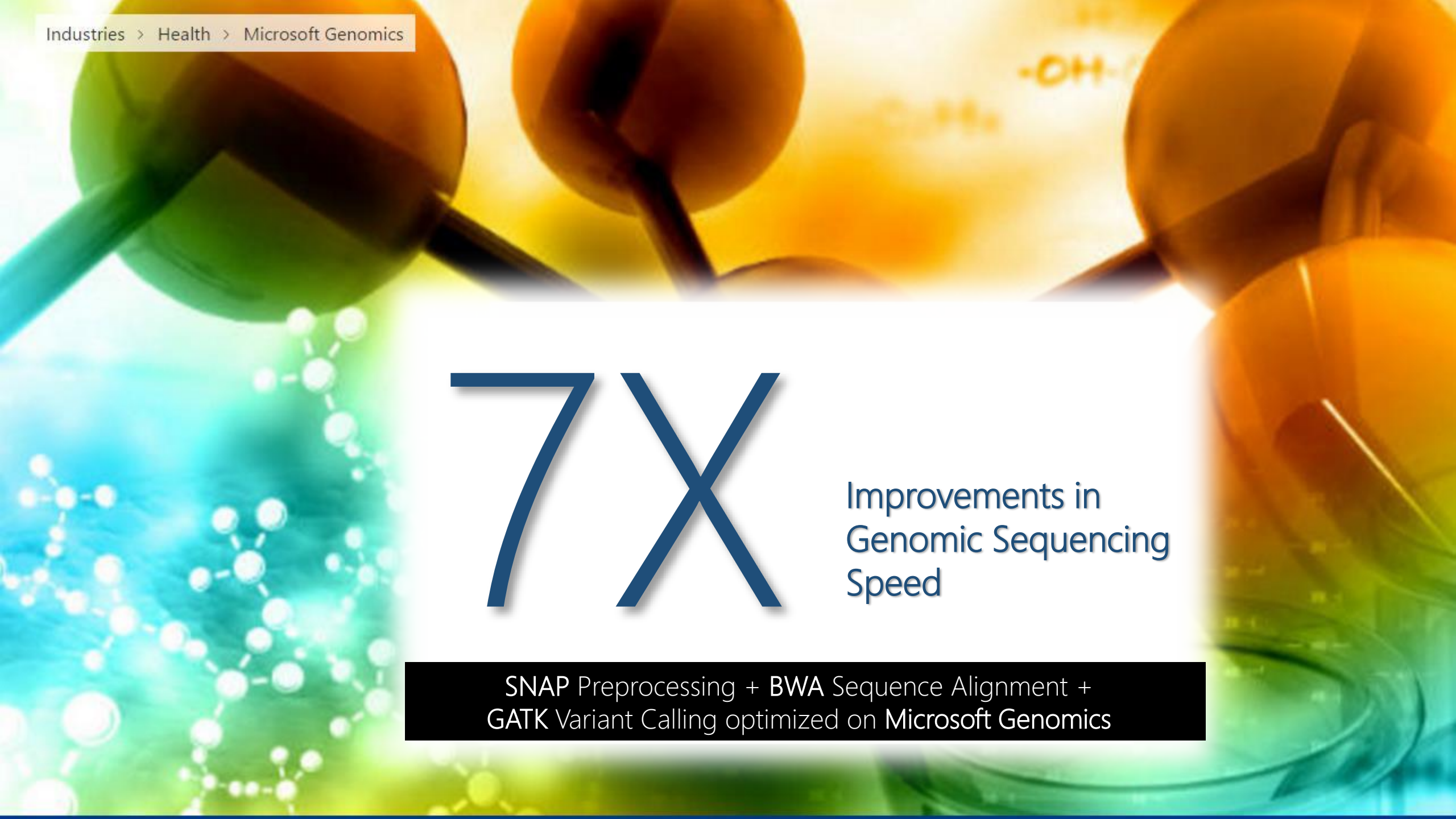

Industries › Health › Microsoft Genomics
7X
Improvements in Genomic Sequencing Speed
SNAP Preprocessing + BWA Sequence Alignment + GATK Variant Calling optimized on Microsoft Genomics

Getting From Samples to Answers

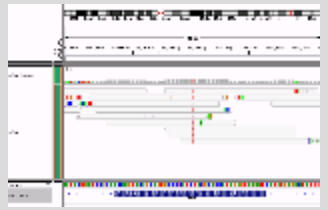
Extract, Purify
Blood, Saliva Sample

Sequencing

Raw, Unaligned
Sequence Data
(100-150 letters long)

BC Platforms

Azure Cloud



Knowledge Base
Lookups and
Understanding
Implications

Sequence Alignment and
"Diff" with Reference Gene

http://democratizing-ai-in-health.azurewebsites.net

Democratizing AI in Health

MENU

Empowering every person and every organization with systems of intelligence

Vision | Scenarios | Solutions | Approach | Alliance

Our approach rooted in Research, brought to market with Partners and supported by Trust

Realizing the promise of Artificial Intelligence through scalable solutions in market, today.

Clinical Effectiveness

Operational Effectiveness

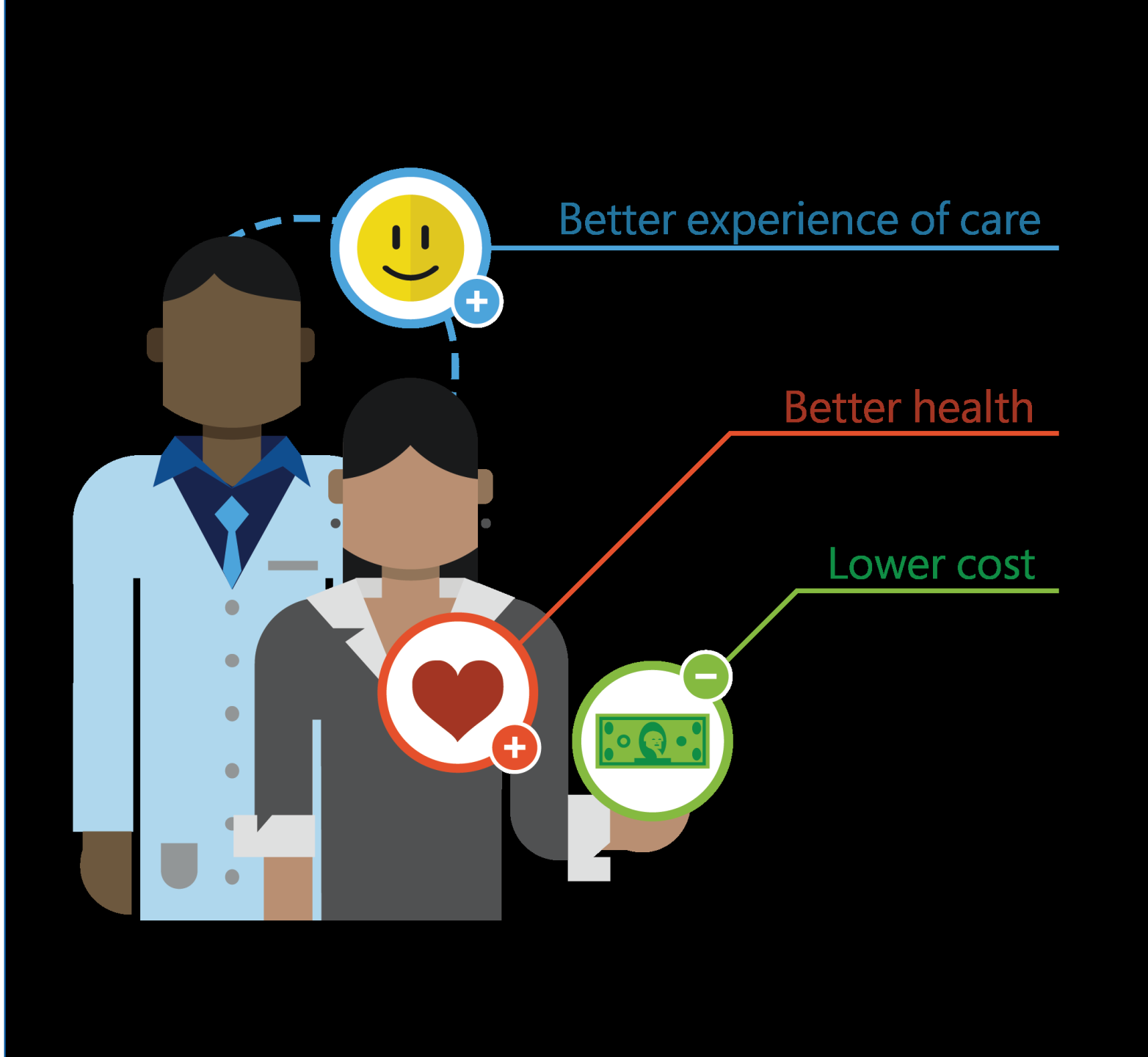
AI in Health Partners Alliance

- **Drive broad public awareness & thought leadership** on the benefits, the vision and AI scenarios in Health
- **Develop skills and capabilities** of partners developing AI solutions**.**
- **Accelerate Go To Market and joint co-selling in key markets**

aiflo
BC Platforms
bism@rt
Cambio Healthcare Systems
Epimed
INNOFACTOR
kanteron systems
KenSci
CAPITA
CGI
Crayon
devscope
MediSapiens
Mindpax.me
optolexia
Prologica
Shearwater Systems
SIGMA
SOFTplan
tieto
wexma

Health Digital Transformation:

Thank you

elenab@microsoft.com

Microsoft