



Connecting People Technology and Data as a Bridge to Integrated Care

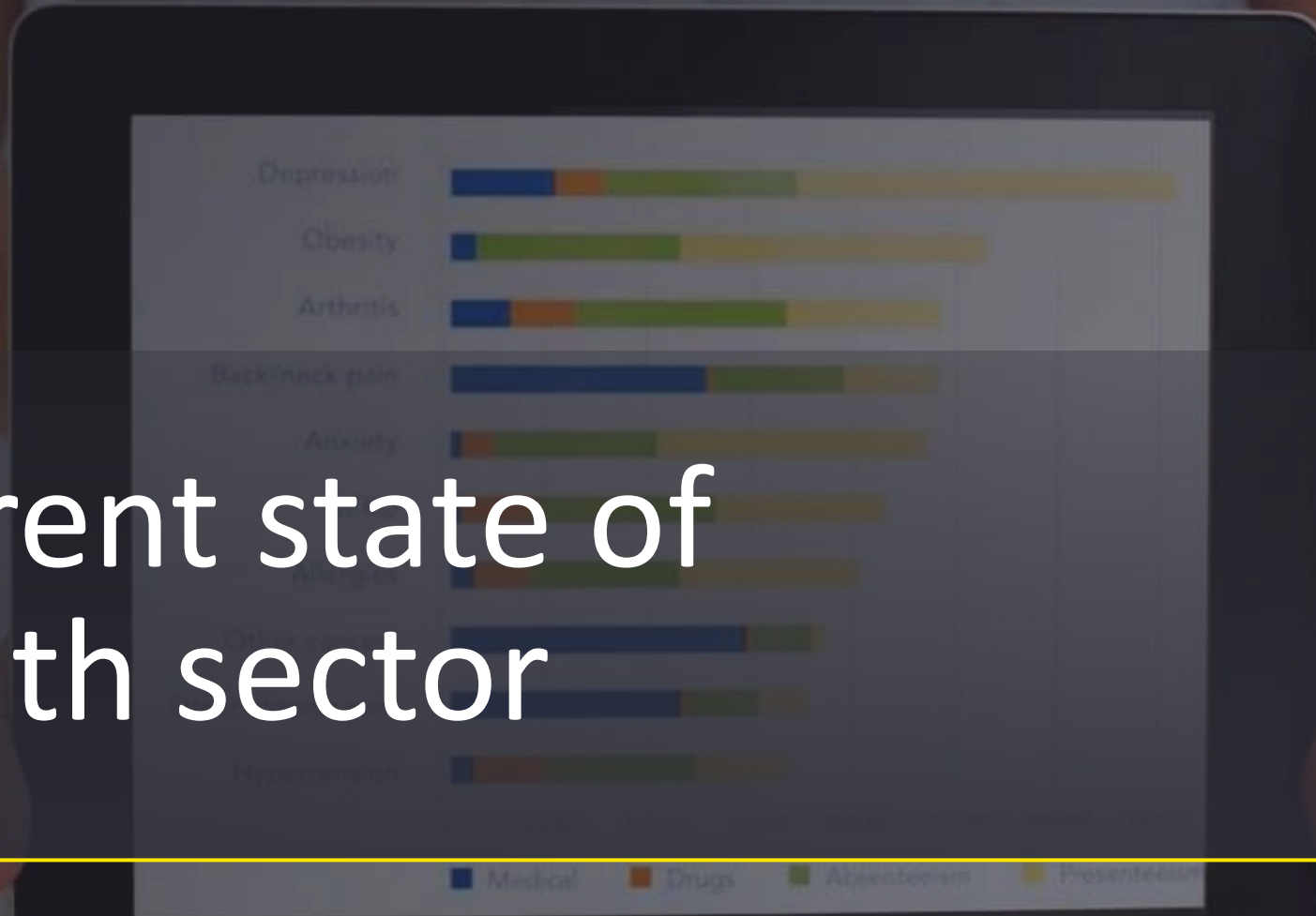
The 20th National Health Summit

7th February 2024

Alastair Allen

01

The current state of the health sector





EY Global Consumer Health Survey 2023

How to give health consumers the access and experience they value most

To better understand what consumers value in health care, in early 2023, EY researchers surveyed more than 6,000 consumers across six countries: the United States, Australia, Canada, Ireland, England and Germany. The EY Global Consumer Health Survey 2023 finds:

- ▶ Consumers prefer in-person care to virtual, meaning virtual experience should be refined to cater to consumer segments.
- ▶ Ease of using health care services, access and improving the health of the community are top drivers of health care performance, according to consumers.
- ▶ Consumers highly value access to care. However, they rated access to care below average (42%) across six surveyed countries.

Read the survey report for insights on five clear priorities for health executives:

1. Rethink how consumers access your system.
2. Empower consumers with digital tools and technology.
3. Design better consumer experiences with data insights about your populations and their preferences.
4. Improve the virtual experience and integrate it seamlessly where it makes sense.
5. Educate consumers on the value of data sharing and new technologies to improving health.



Read the executive summary of the EY Global Consumer Health Survey 2023 by visiting ey.com/ConsumerHealthSurvey23 or scanning the code at left.



Demographic and financial challenges mean that health systems must transform to remain sustainable

An aging population

3x

The number of **persons aged 80 years or above globally** is projected **to triple**, from 143m to 426m, between 2019 and 2050.

Historic demographic shifts

65 years+

Globally, this age group will outnumber those aged 15–24 by 2050.

Chronic disease burden

1 in 3

people across the globe suffer from multiple chronic conditions.

Increasing health care costs

- **14.2%** in Latin America
- **10.6%** in the Middle East and Africa
- **7.6%** in the US
- **7.6%** in Asia-Pacific
- **6.7%** in Europe

Clinician workforce shortage

18m

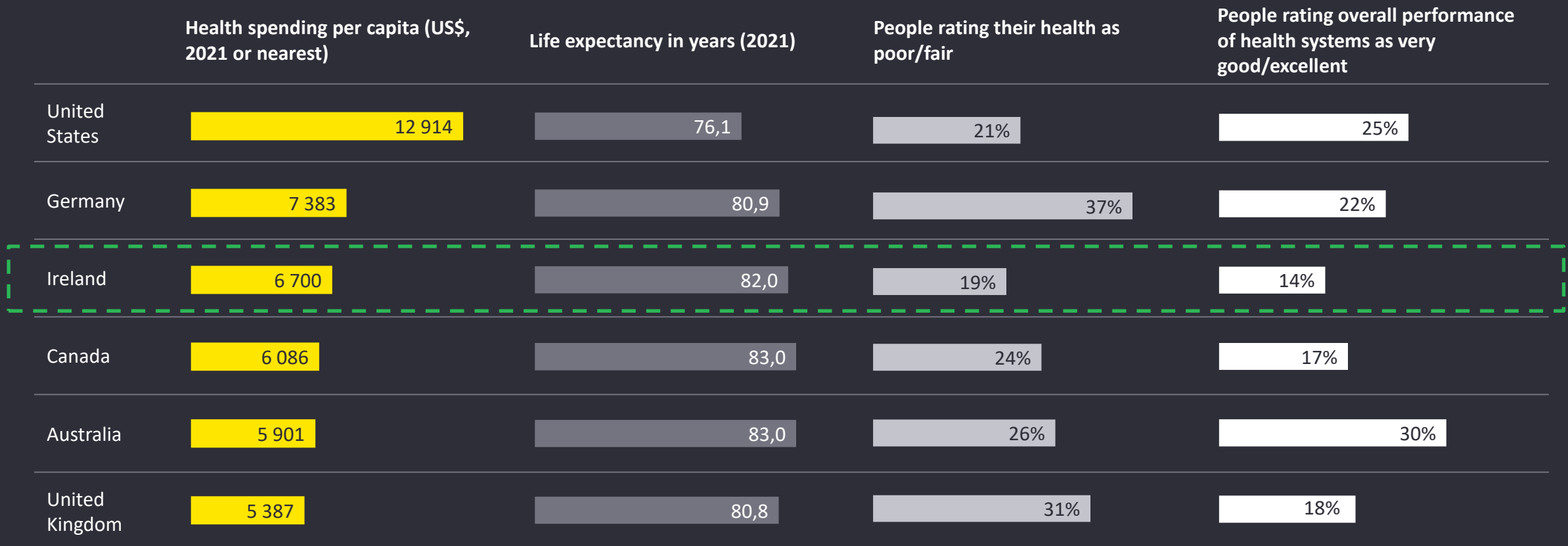
Estimated **global health care labor shortage** by 2030*

Sources: UN; NCBI; 2022 Global Medical Trends Survey report, Willis Towers Watson, EY Knowledge analysis.

* According to the WHO, this figure has been updated to be 10m. However, we do not believe that the revised figure adequately represents the current and most likely future workforce shortage.

Despite record spending on health, significant challenges still remain

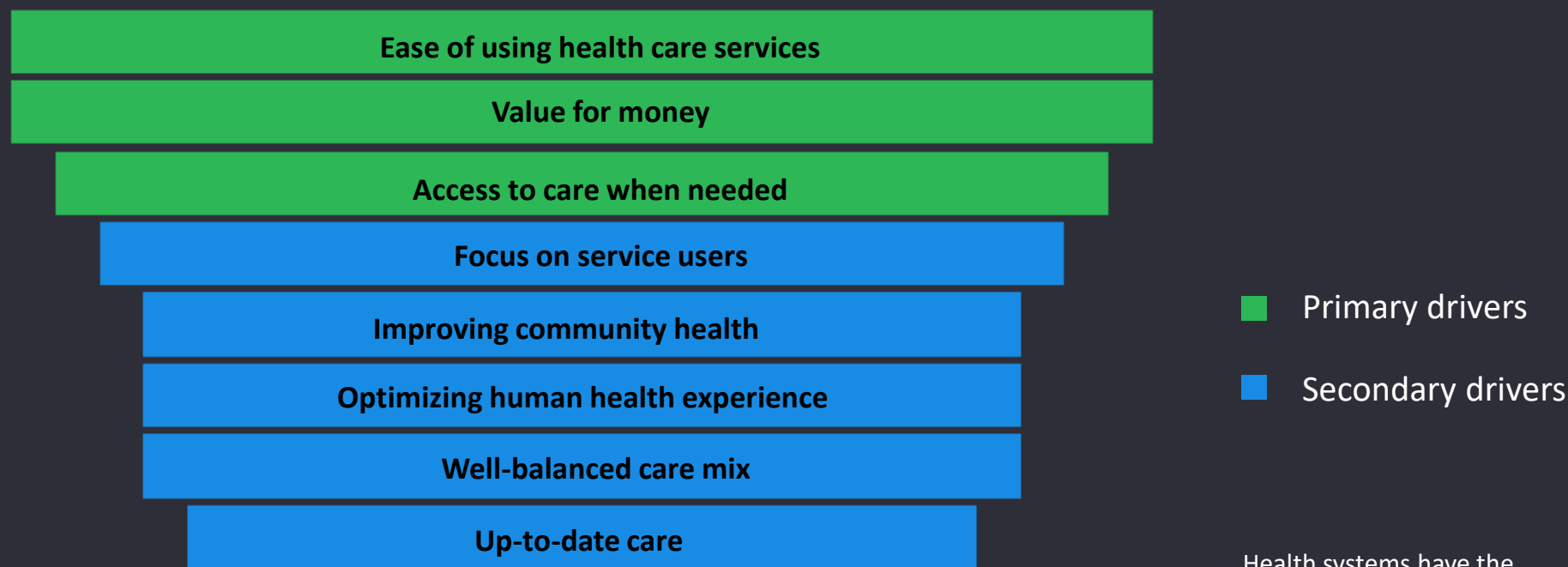
Respondents from the EY Global Consumer Health Survey 2023 reported **room for improvement in the performance of health systems** around the world, **highlighting the need for new care delivery models that can achieve better outcomes.**



Source: Peterson-KFF Health System Tracker, EY Global Consumer Health Survey 2023, World Bank, EY Knowledge analysis; Note: *Findings taken from EY's survey of 6,021 individuals from six countries.

Ease of using services, value for money and access to care are key factors for Irish service users.

To better understand what drives positive perceptions of the performance of health care systems, a driver analysis was undertaken that estimates the relative importance of different factors in determining the perceived performance of the health care system. The results were as follows:



Statistical interpretation: 13% of the total variance in the overall performance is explained by “ease of using health care services.”

Health systems have the opportunity to improve their performance in the eyes of their consumers by focusing on these drivers.

Consumers (n) = 1,016



02

Five learnings for integrated care

Five learnings for integrated care

Learn #1

Embed digital across all health and care settings

- Create the conditions for individual and collective health to flourish
- Transform to new care delivery models that are not centred around individual provider organisations

Learn #2

Adopt a person-centred approach to data

- Establish a core data “info-structure” based on open, vendor neutral healthcare standards
- Mix and match with existing systems to establish a smart health ecosystem

Learn #3

Provide intelligent services that are easy to use

- Shift from 1990’s style service to intelligent services that are intuitive and simple to use
- Accelerate and adopt new advances in technology that can enable earlier and more effective diagnoses

Learn #4

Provide personalised “health” care where and when it is needed

- Empower individuals to take greater personal control of and responsibility for their own health
- Leverage technology to deliver care out of the hospital and close to the home

Learn #5

Deliver user centred outcomes

- Understand the problem to be solved and engage with users to identify their needs
- Combine with good data and intelligent services to deliver improved outcomes



Learn 1: Embed digital across all health and care settings.

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Any organisation that designs a system will produce a design whose structure is a copy of the organisation's communication structure.

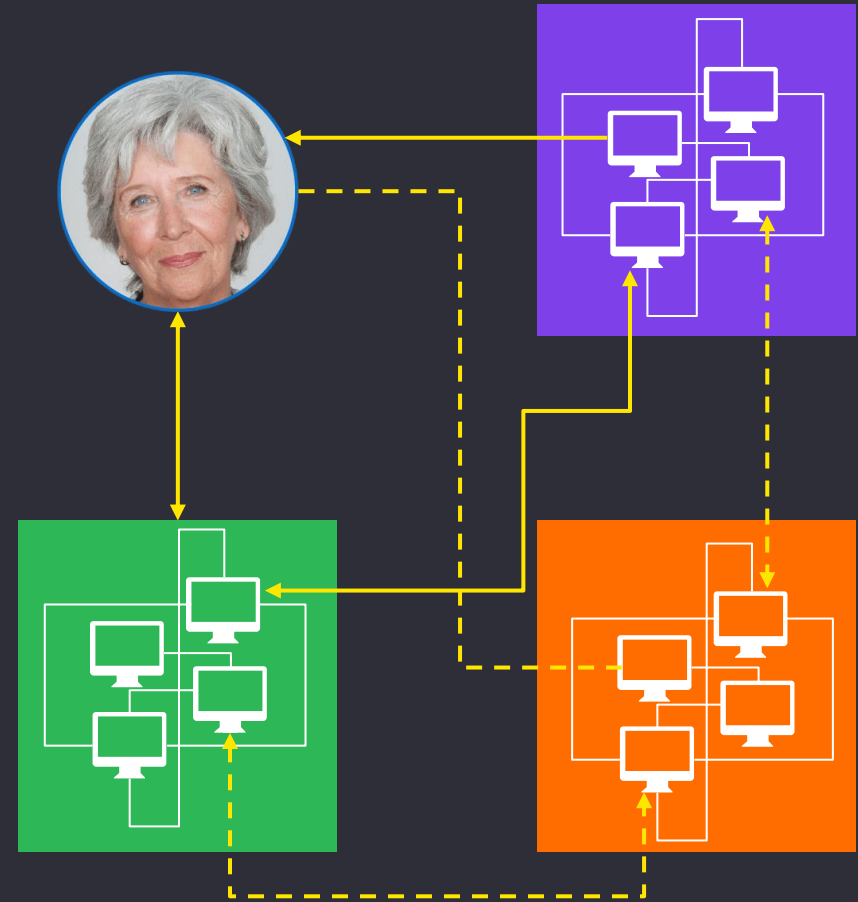
Melvin E. Conway



How health and care organisations communicate...



...reflects how information is used and shared by health IT



Learn 2: Adopt a person-centred approach to data

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The power to transform and personalise health care is limited because of fragmented health data

16 distinct EHRs

Hospitals had a multitude of EHRs on average, with 75% of hospitals having at least 10 EHRs in place, according to an HIMSS study of 571,045 providers affiliated with 4,023 hospitals.

Only 62% of hospitals in the US **could receive health info electronically from outside sources** in 2021 according to HealthIT. The number was **48% for rural hospitals**.

At least **21 different EMRs** that are

unable to effectively share information were being used in the NHS, according to the Institute of Global Health Innovation (IGHI) at Imperial College London

Fragmented data is stuck in silos

Hospital

Diagnostic

Surgery center

Primary care

Consumer

Imaging

SDOH

Urgent care

Due to different care settings using disparate systems and data standards to store data, aggregating consumer data remains a challenge.

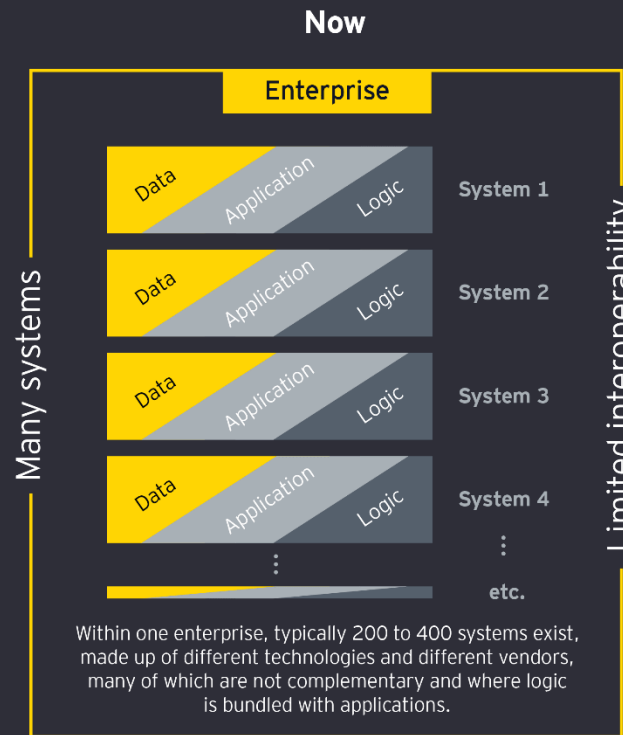
Source: News articles, blogs, reports, EY Knowledge analysis.

1 An architecture built in layers

The future health and care information platform we describe separates the architecture into different layers that organize transactions and interactions:

- The data layer
- The application layer and the logic layer

A new information architecture will shift from siloed vaults of data that don't talk to each other to a more harmonized arrangement of organized and complete data.



Present: Many systems all with intimately bound data logic and applications



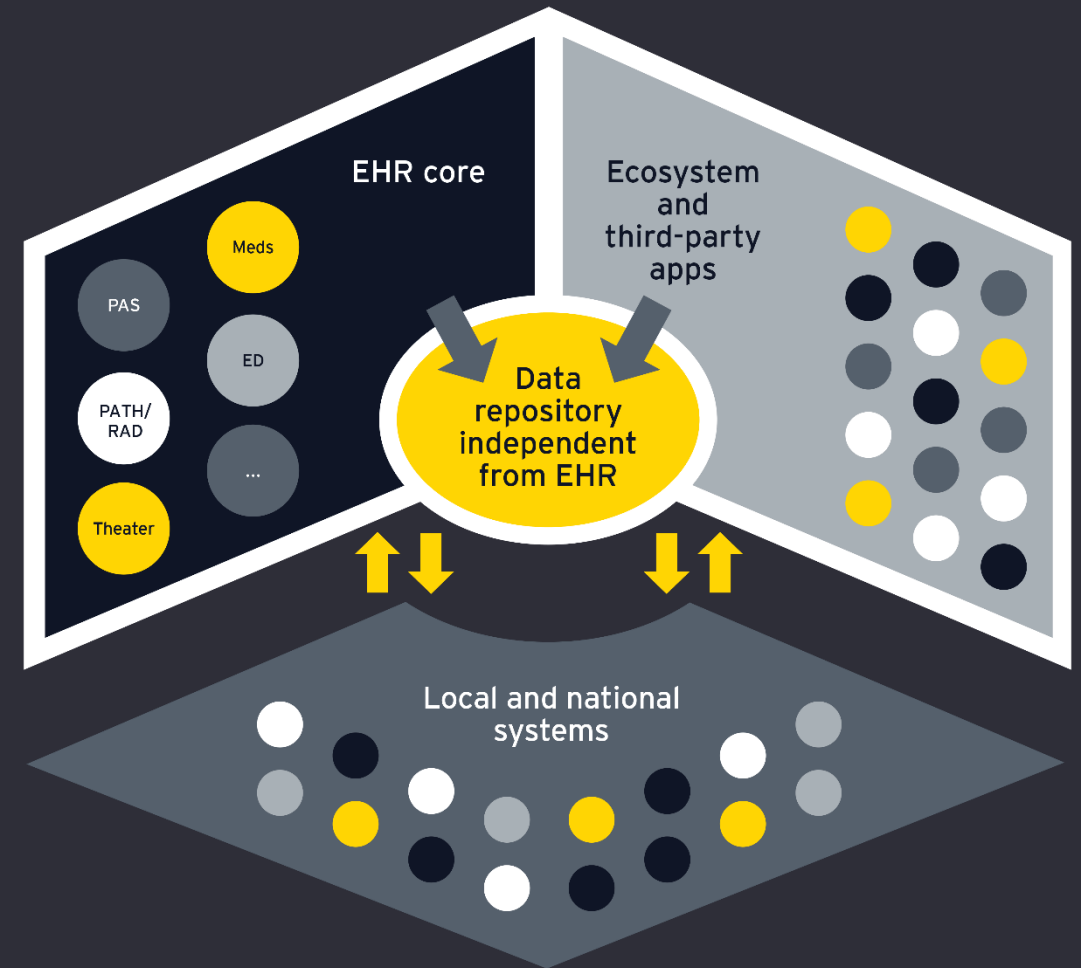
Future: A cohesive technology stack, giving a unified experience for clinicians, professionals and patients; unique data at the center accessed by applications in real time through micro-services

2 Mix and match with existing core systems

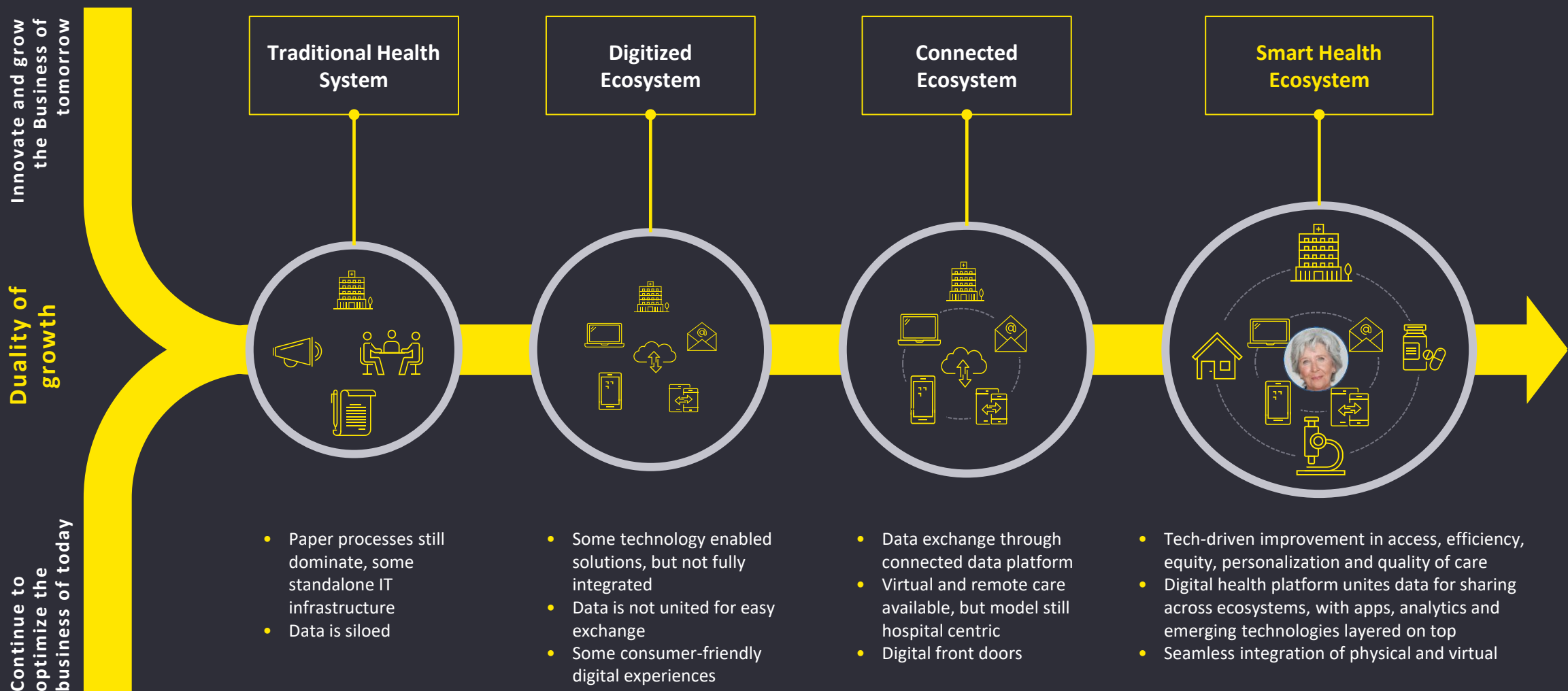
A more flexible, dynamic infrastructure will be built around existing systems, communicating through standard interfaces like Fast Healthcare Interoperability Resources (FHIR) and web application programming interfaces (APIs).

The APIs of today will not only inform the technical design of tomorrow, but also bridge the gap in data models and current absence of system-level design. In the future, systemically architected systems will mean that this bridging function will not be needed.

In the near term, platform-based systems and legacy EHRs will coexist by maintaining basic functionality in legacy systems while building and innovating in a platform-based environment.



3 To achieve a smart health vision, health systems need to be able to pull insights out of their ecosystem data



Source: News articles, blogs, reports; EY Knowledge analysis

Global health systems who are adopting a person-centred approach

London: NHS in London deployed the **openEHR platform** provided by Better across **five integrated care systems, 40 NHS trusts and 1,400 general practices** that will enable Londoners to have their care information shared digitally city-wide with health and care professionals.

Norway: Under its principle of “**One citizen-One health record,**” Norway implemented a unified, digitized health record integrating patient data and giving them access for their active involvement in their care process.

Nova Scotia: Implementing **One Person One Record (OPOR)** — an integrated electronic care record for 1 million citizens that will replace or **connect more than 80 systems** that health professionals are currently using.

Slovenia: Slovenia has deployed a **Clinical Data Repository (CDR)**, which collects patient data in an **open, structured and vendor-neutral format** connecting more than 2.1 million patients across **35 hospitals and 57 primary care centers.**

Catalonia: For providing integrated care, the National Health System of Spain is creating a **longitudinal electronic health record** on a platform based on **openEHR standards** covering eight million citizens and **60 hospitals.**

Source: News articles, blogs, reports; EY Knowledge analysis.



Learn 3: Provide intelligent services that are simple to use.



“

In my lifetime, I've seen two demonstrations of technology that struck me as revolutionary...the GUI and ChatGPT

Bill Gates

But digital health in 2024 is still built using 1990's GUI concepts



The impact of this is clear

Voices in Health Care 2023

“

Burnout is the thing that encompasses everything. There is a combination of loss of accomplishment, a loss of gratification, a loss of control and just feeling like I don't get the joy out of my work that I used to. I feel like it's not going to get any better.

Physician, US

“

Unless we build a system where less severe disease can be treated more cheaply via self-medication, hospitals cannot focus on patients who actually need treatments at hospitals.

Health executive, Japan

“

Unfortunately, in many cases, administrative activities have started to consume a significant part of a doctor's day, sometimes even up to 50%. This approach of burdening doctors, who are already expensive resources, with extensive administrative duties is organizational madness. The system often takes advantage of doctors' dedication to their work, adding more tasks until they reach their limits.

Physician, Germany

“

The medical workforce in the past was willing to do exceptional hours, long working hours, much more than standard 40-hour working weeks. The new generation of doctors is much more focused on work-life balance. So not only are there less doctors, the doctors that are there want to work less, so it's a double-edged sword.

Health executive, Australia

AI is perceived as critical to transforming care delivery and addressing key challenges

AI is transforming the way that health services are being delivered by automating repetitive tasks performed by physicians; enhancing supply chain efficiencies by forecasting demand; reducing unplanned hospital admissions and helping hospital administrators optimize performance, promote productivity and improve use of existing resources.

AI has the potential to improve patient outcomes by 30%-40% while reducing treatment costs by up to 50%.

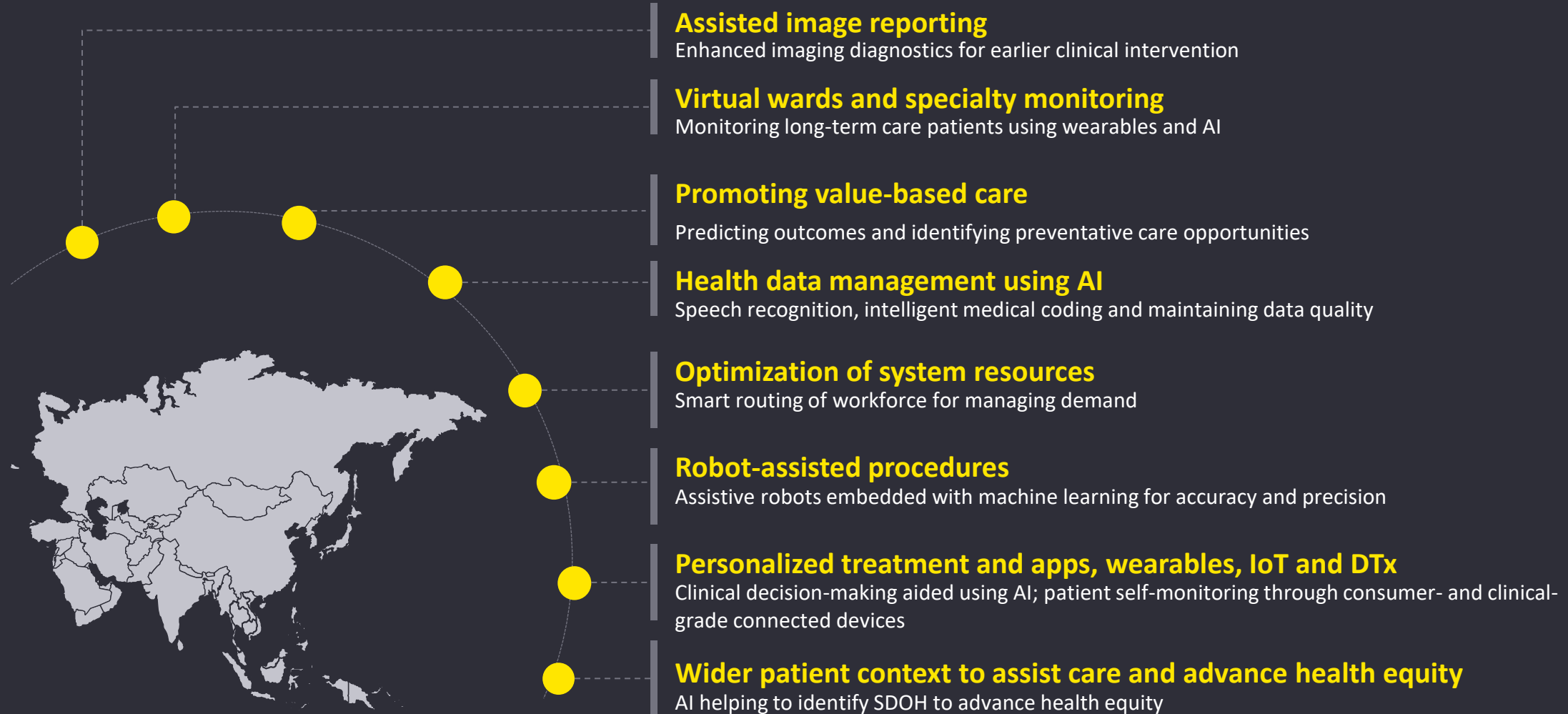
Ninety-eight percent of senior health care executives either have an AI strategy or are planning one, while 96% believe that AI will play an important role in targeting health equity.

In the EY Global Consumer Health Survey (2023) (n=6021), 52% of respondents stated that artificial intelligence technology will be commonly used in the health care industry in the next 10 years.

More than 1,500 health care AI vendors have entered the market, and more than half were founded within the last seven years.

Source: News articles, blogs, reports, EY Global Health Care Consumers and Value survey; EY Knowledge analysis.

For both the patient and clinician, AI can improve the experience



Source: News articles, blogs, reports; EY Knowledge analysis.

Generative AI will disrupt the future of care delivery

Waves of generative AI disruption



Now
Today

Automation of repetitive and
manual work

“**Collect & transcribe** voice data, metadata and combine with medical record/patient history to create a **dynamic health profile** including priority health concerns and possible course of action.”



Next
6 months

Personalisation of care **at scale**


“Refer to patient history, genetics, & current condition/diagnosis to **create a personalized treatment plan** for review by the attending medical professionals.”



Soon
24 months

“Disruption” of existing **care models**

“Incorporate patient **population/cohort data** as foundation model augmentation and refinement for specific generative healthcare applications.”

A close-up photograph of a hand holding a clear petri dish. The background is dark and out of focus, showing laboratory equipment. The petri dish is held in the center, and its reflection is visible on the surface below it.

Action 4: Provide personalised
“health” care where and when it is
needed.

Health systems must pivot to offer consumers what they value most: access to care

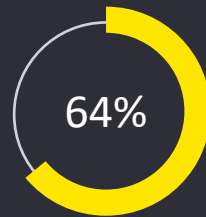
The EY Global Consumer Health Survey 2023 studied responses from 6,021 participants from six countries to understand perceptions of value and what matters most to consumers.

When asked what they value most from their health care system, ~60% respondents chose **access to care when needed** as being of value to them.

They also demonstrated openness to nontraditional care delivery. When asked about their willingness to be treated by new technologies, consumers confirm that they are prepared to:



Use **non-traditional channels** for routine care



Allow **wearables** to collect and transmit their data

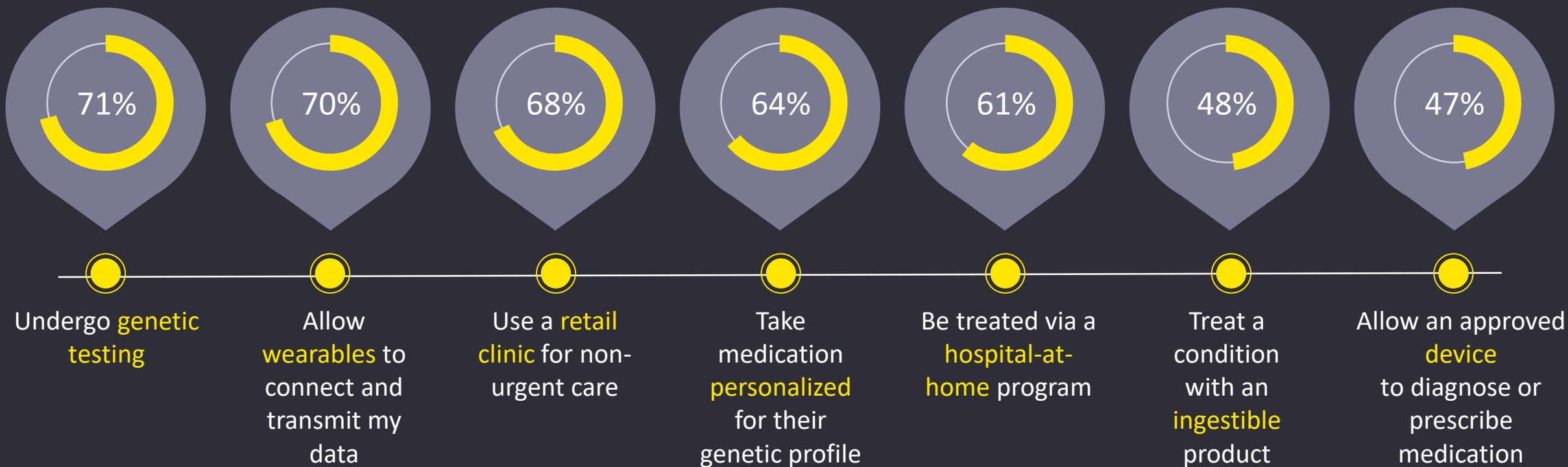


Be treated via a **hospital-at-home** program

Source: EY Global Consumer Health Survey 2023 Global findings; EY Knowledge analysis.

Irish service users are open to digitally enabled care, genetic testing, using -wearables and being treated at other non-traditional care locations.

When asked about their willingness to be treated by new technologies, consumers confirm they are prepared to:



Hospital-at-home is being adopted globally as it lowers readmission rates, costs and patient frustrations

Canada: Hospital-at-home program helped Island Health boost patient satisfaction. 86% of patients and 75% of caregivers rated their experience of Hospital at Home as 10 out of 10

Ireland: The CARE project, a Community Virtual Ward is reducing Hospital admissions for patients living with COPD in Donegal

The US: Orlando Health partnered with health-tech company Biofourmis to launch a hospital-at-home program for patients residing in Central Florida

India: Medtronic and Zydus Hospitals partnered to facilitate remote stroke care using AI

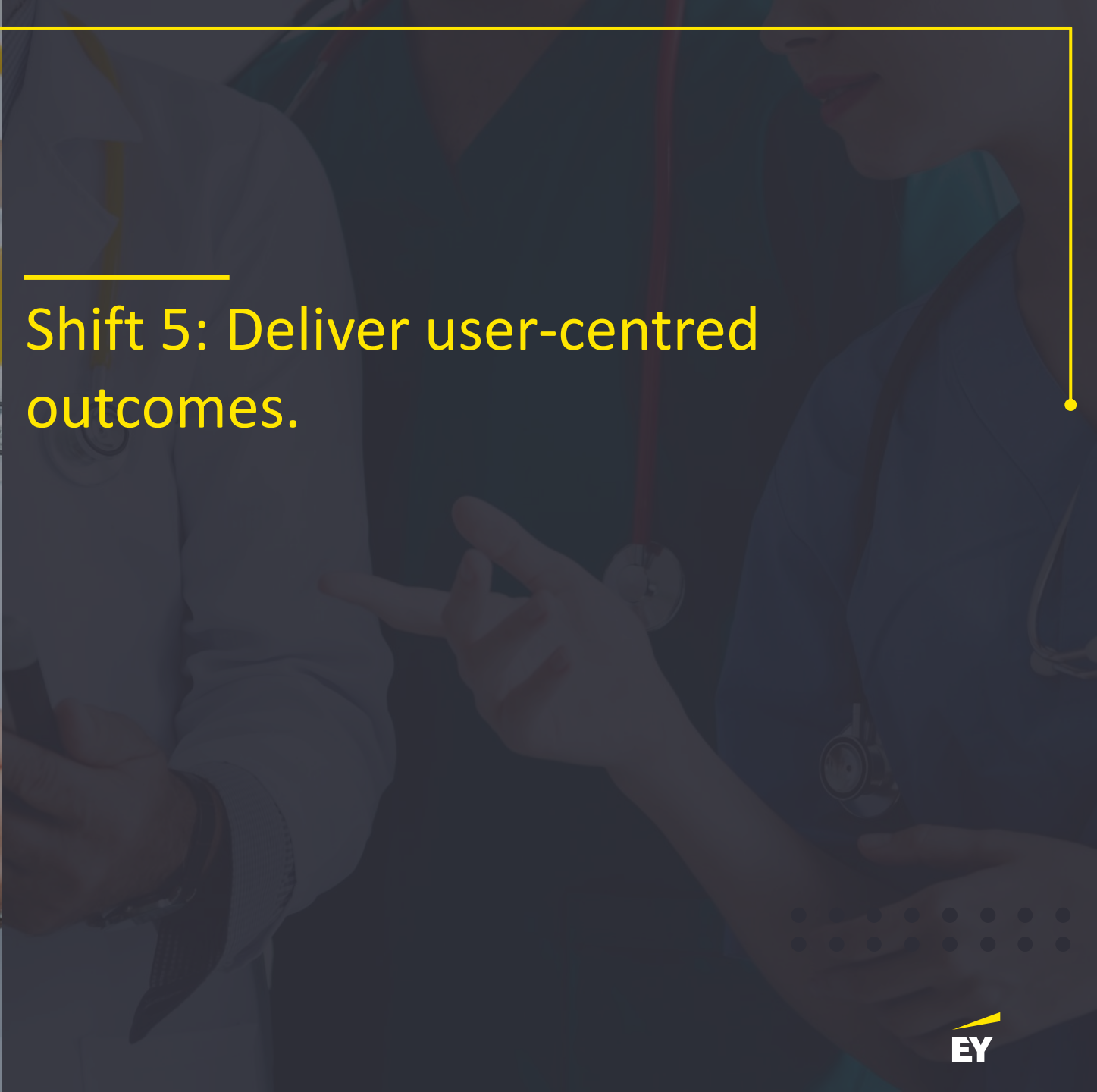
Indonesia: Rapid adoption of telehealth platforms- Halodoc, Alodokter and Good Doctor by Ministry of Health

Australia: South Australia launched 24-7 remote rural health monitoring

Source: News articles, blogs, reports, EY Knowledge analysis



Shift 5: Deliver user-centred outcomes.



Digital transformation

~~Digital~~ transformation

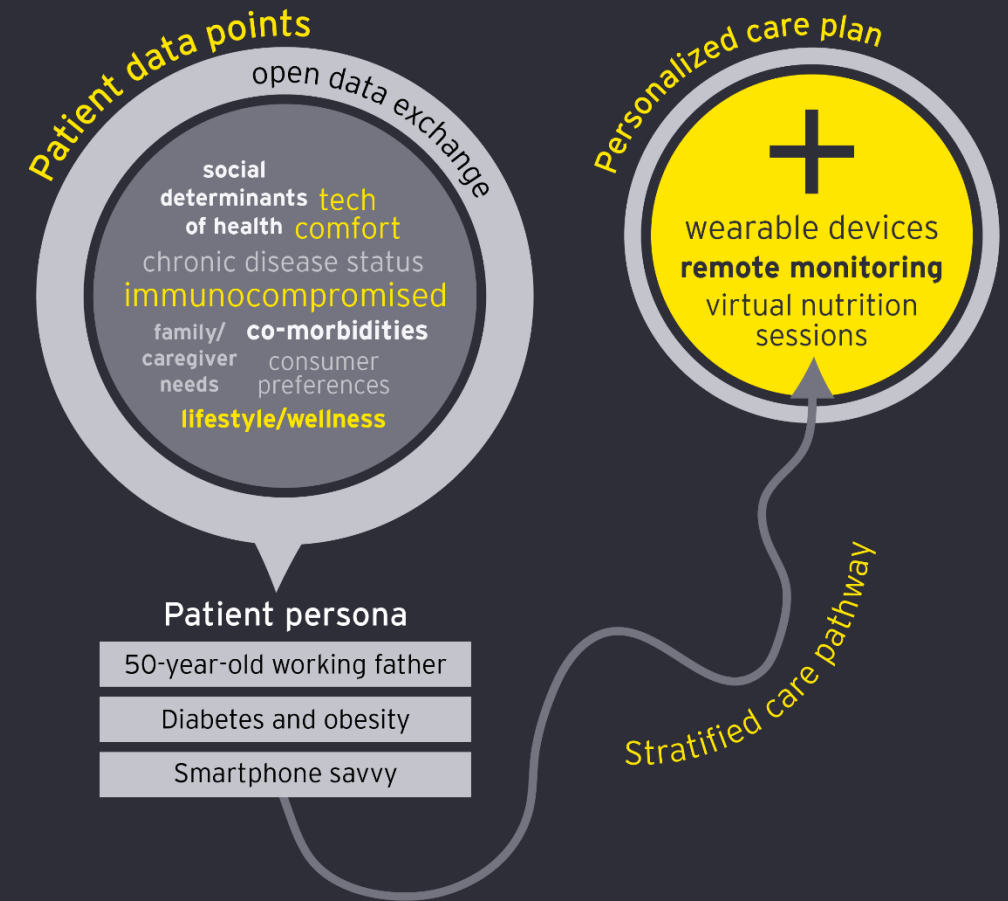
User needs

User needs
+
Intelligent Services
+
Person-centred Data

User needs
+
Intelligent Services = Transformation
+
Person-centred Data

Summary

- ▶ Built on **connected and open digital platforms** that unite data from across the ecosystem.
- ▶ Keeps patients **healthier at home longer** and prevents the progression of disease to crisis points.
- ▶ **Wearables and connected devices help care teams monitor important biometric data** in the home or anywhere.
- ▶ **Digital command centers** can alert the care team to act if certain readings warrant a virtual call or a home health visit.
- ▶ **Artificial intelligence (AI)** can be incorporated to flag changes in readings and escalate them to the staff.



Thank you!

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The most important conversation around the future of health care is not about the shift to digital. It is about people.

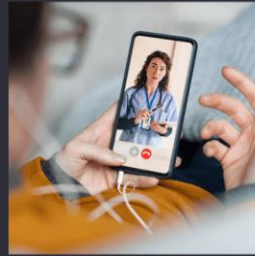
How EY can help



Connected Health
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Digital Health Foundations

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