Building a healthier future for Ireland

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EY
Building a better
working world

Socio-demographic Change

Care will continue to take an ever larger share of GDP as obesity, chronic disease, aging populations and health disparities increase ... will require a greater proof of value

Workforce Shortages

18m shortfall in global workforce by 2030 - requires a strategic approach to workforce planning

Key drivers of change in the Irish healthcare system

Patient and User Experience

Conversion to multimodal care across a variety of platforms... will require reframing of healthcare challenges as end-to-end user experience problems

Climate Change

... will require us to build a culture of sustainability

Demographic and Socioeconomic Forces

Population growth

- 9% increase (400K)
- First time >5m since 1851
- **Further increase ~500,000 expected by 2035**

Population ageing

- 35% increase age ≥65 years
  - vs 16% across Europe
- Increasing demand for home & residential care
- Dependency ratio set to change dramatically

Chronic Disease & Multimorbidity

- Challenge = Need to increase healthy life expectancy
- 1m people- Diabetes, Asthma, COPD or CVD
- TILDA - 74% people ≥58 live with **co-morbidity**
- Demand for **therapy services** set to increase by ~2/3s

Existing models of care are not sustainable

Workforce

12%	Turnover increasing	3,000	900	600
HSE employees likely to retire within 5 years	**2021: 7.7%** Medical and Dental: 9.4%	shortfall home care workers	consultant posts vacant or filled on temporary basis	GPs to retire ≤5 years – just **1 in 5** practices can take new GMS pts

By 2030

18m	US	Europe	Acute Sector	Sláintecare	Capacity review
global *shortfall* 2030	shortfall of 134,000 doctors by 2034	projected need for 18.2m HCWs (8.6m today)	2% p/a growth to 2035 - **+32%** versus 2019	Requirement for additional 7,000 community-based staff	40% increase in demand for practice nurse appointments
				NDTP: 42% increase consultants over next 5 years	

Single biggest issue facing health services in Ireland and globally

Sustainability: Climate

Health sector is responsible for

5% of all global emissions
and

>double
the emissions of the aviation sector

Typical hospital >3 times energy use of a commercial building of similar size

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7 hours of anaesthesia with desflurane emits as much as a return car journey from Dublin to New Delhi

In England, health and social care services generate

5% of all road traffic

NHS England – First health service to commit to

net zero by 2045

Quick wins are possible

A recent analysis by EY of 33 hospitals in Switzerland found that around half of the hospitals could **double** their environmental efficiency **without reducing their output**

The rise of the citizen first operating model

| Patient **expectations** higher than ever | **User experience** will increasingly drive models of care and innovation | Conversation will need to move from one focused on technology to one **focused on people** |

Winning characteristics	Amazon	AirBnB	Netflix	Uber
Convenience	Easy ordering, cost-competitive, rapid delivery	Single interface for all activities	Easy selection/can view on any device	Simple mobile booking and payment
Seamless trading exchange	Wide range of suppliers in network	Network of available properties for rent	Single point to access content from different media producers	Anytime, anywhere access
Predictive and personalised	Recommendations based on user history	Search algorithm based on user profile	Recommendations based on past viewing	Recommendations to improve travel time
High consumer choice	Buying options (used versus new)	Wide range of accommodations	Vast and expanding content library	Tiered options based on cost and service
Transparency	Responsive, accountable customer service	Customised interactions between parties	Flat-rate subscription model	Real-time tracking of mobility options

Health systems will increasingly have to think about the challenges they face as end-to-end user experience problems
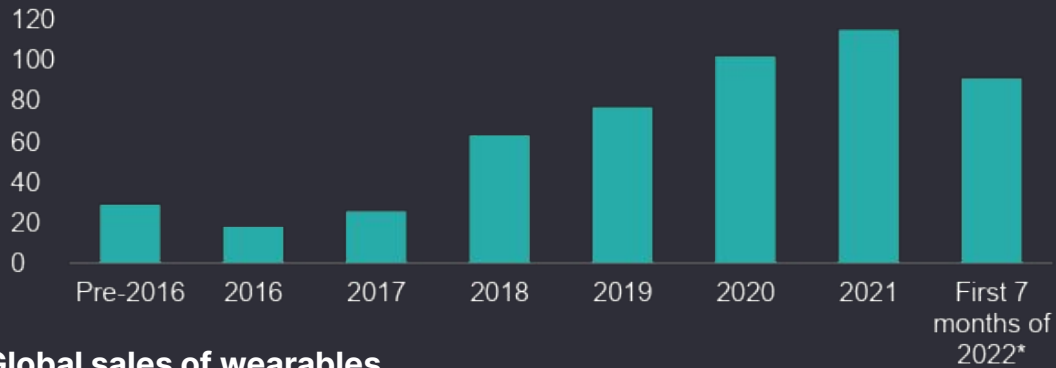
The Digital Revolution

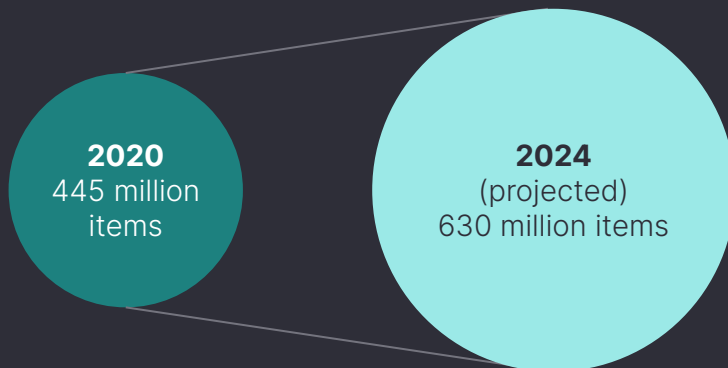We are on the cusp of the fifth great wave of public health advancement

① **②** **③** **④** **⑤**

Structural
Clean water,
Sanitation

Biomedical
Antibiotics,
Early vaccines

Clinical
Lifestyle related
diseases

Social
Social determinants
of health

Digital
Will drive 8 key changes in the traditional model of
care

- ▶ Point of care
- ▶ Data ownership: 'Institutions' to 'Consumers'
- ▶ Reference point: 'Group' to 'Individual'
- ▶ Professional role: 'Authority' to 'Guide'
- ▶ Data interrogation: 'Separated' to integrated'
- ▶ Interactions: 'Physical' to 'Virtual'
- ▶ Access cycle times: 'Available' to 'On Demand'
- ▶ Collaboration: 'Structured' to 'Fluid access'

New technologies will increasingly influence the
creation of entirely new models of care

Increasing proliferation of digital technologies in health

FDA Approved Artificial Intelligence and Machine Learning (AI/ML)-Enabled Medical Devices
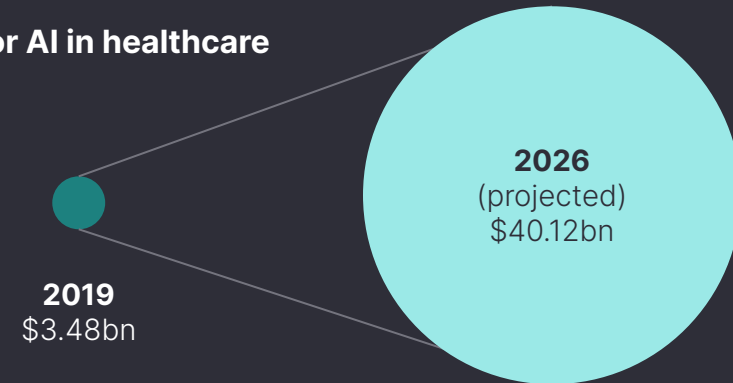

Bar chart with categories: Pre-2016, 2016, 2017, 2018, 2019, 2020, 2021, First 7 months of 2022*. Y-axis from 0 to 120.

Global sales of wearables

2020
445 million items

2024
(projected)
630 million items

Source: Authors. Data: IDC 2020, IDC 2021, Bertelsmann Stiftung

Market for AI in healthcare

2019
$3.48bn

2026
(projected)
$40.12bn

Source: Authors. Data: Medgadget, Bertelsmann Stiftung

Global market of virtual assistants

2020
$5.82bn

2028
(projected)
$51.9bn
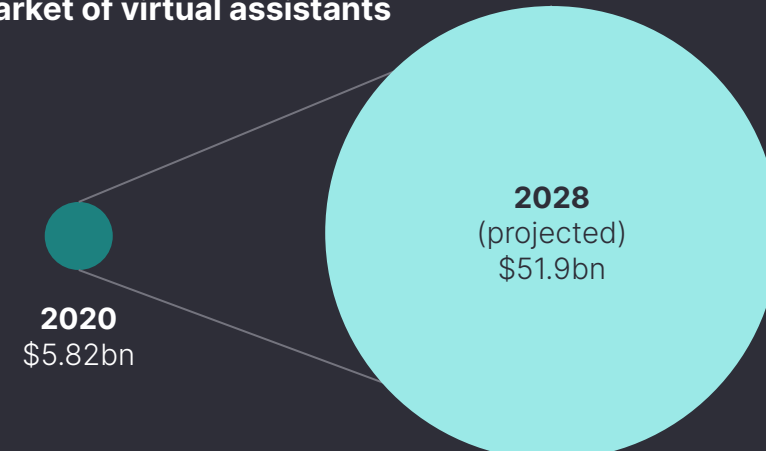
Source: Authors. Data: Grand View Research 2021, Bertelsmann Stiftung

A digital health decade in Europe

By 2025,

European Health Data Space established

By 2030,

100%

of citizens should have secure access to their medical records

Easy

to use eID services

Simple

Common consent form

Researchers and innovators should:

Have a

single access point

for secondary use of data.

This will require:

► All EU countries to have a central health data authority

► An EU-level entity for secondary use of health data

PERSIST

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PERSIS

Population Based, Person Centred Approach

Use technology to:

► Tackle disparities in wellbeing, access and outcomes

► Move away from once-off, transactional, condition-specific approaches to care

► Increase focus on prevention – stop or delay progression to avoidable complexity, frailty or disability

PERSIST

Ethics by Design

- ► Blurring of the lines
- ► Ethical and privacy challenges; Consent, Autonomy, Fairness
- ► Prevent issues from arising in the first place

PE **R** SIS
T

Risk and Patient Safety

- ► Inextricably linked to digital transformation
- ► Regulatory safeguards
- ► Standards
- ► Guidance and training

P E R S I S T

Digital Skills

Risk of digital divide
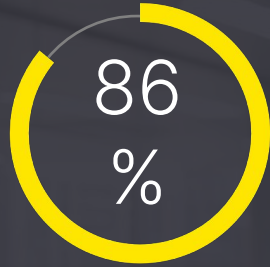
1 in 2
adults lack basic digital skills

1 in 10
adults have never used the internet

Digital transformation needs to be clinically led

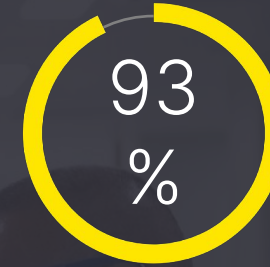Majority of workforce are
self-taught
in using digital technologies

Up to **70%**
of health professionals report **not** using digital solutions due to gaps in knowledge and data skills

86%

All HCPs involved in care should have access to their digital record

94%
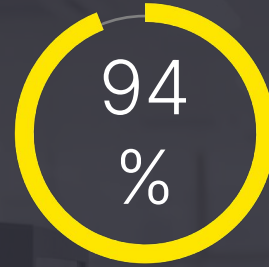
health information should be used to improve the quality of care

93%

health information should be used to plan services

P E R S I S T

Infostructure with interoperability by default

▶ Health systems will have to change to revolve around the individual – public and workforce

▶ Individuals entitled to access their own data and to have a say over how their data is being used

▶ Seamless flow of data within and between systems

▶ Enable 'bottom up' innovation and 'top down' standardisation of approach

Can health technologies deliver greater efficiency?
Yes

Can they make healthcare more affordable?
Yes

Can they make healthcare systems more resilient?
Yes

Will they come cheap?
No

We will need to **spend to save**

P E R S I S T

S

Spend, scale and sustain

▶ Need to invest in foundation stones of our digital architecture

▶ Align with strategic priorities

▶ Long term commitment

▶ Implement what is right for the Irish health system

All about
people

Prepare
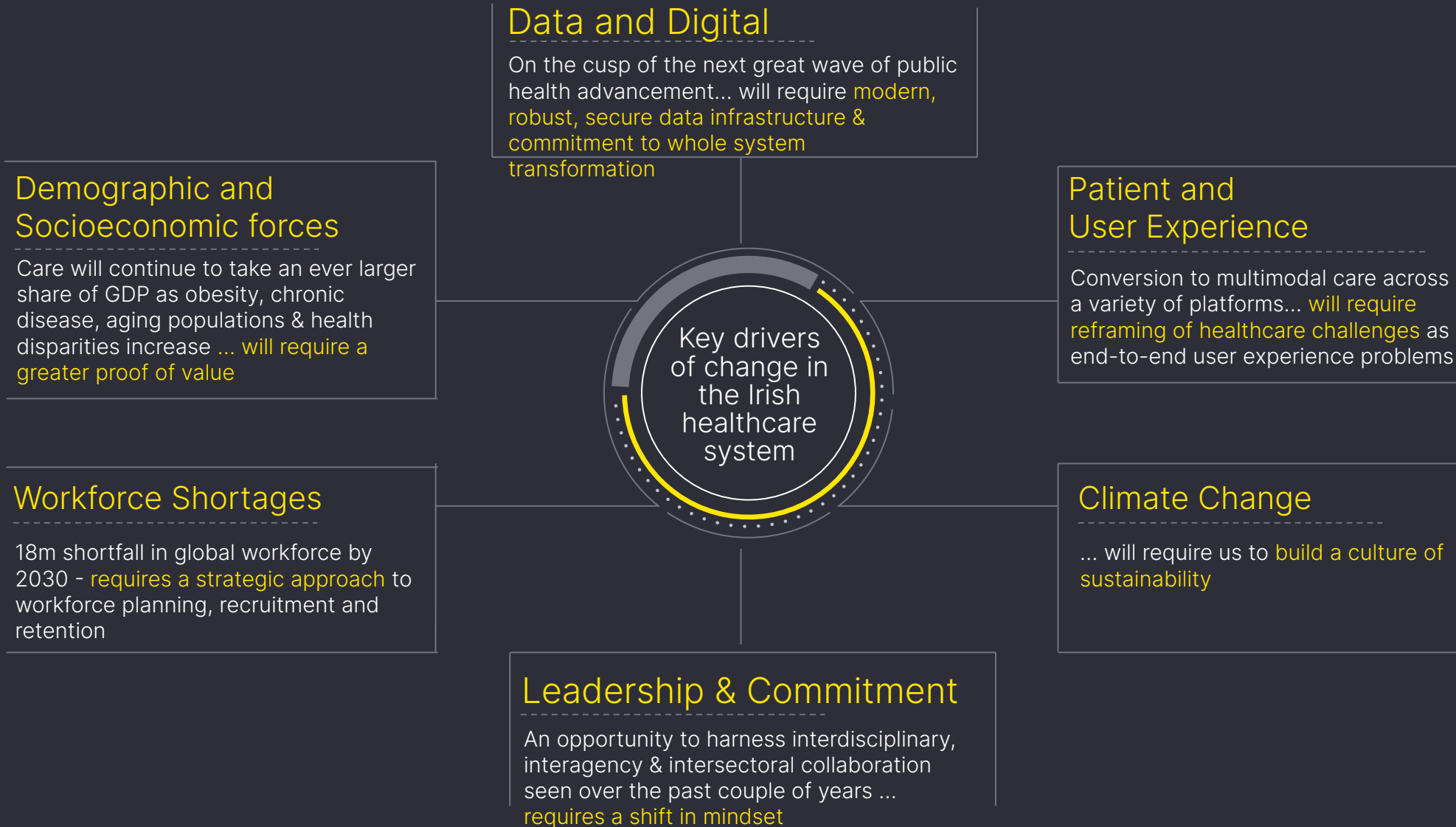for uncertainty

Be
Honest
– no panacea

P E R S I S

T

Trust at the core

Ensure
value
assessment

Recognise
limitations
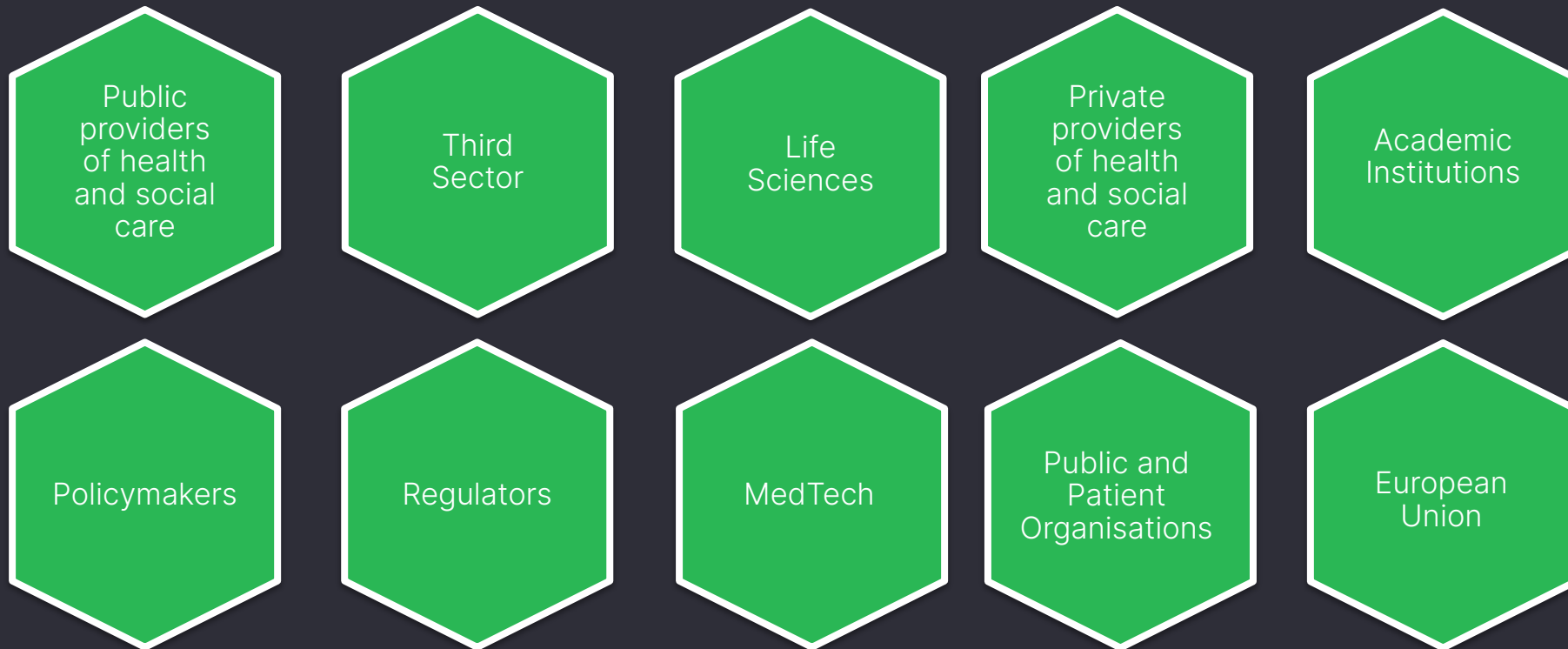of technology

Promote all forms of
innovation

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Data and Digital

On the cusp of the next great wave of public health advancement... will require modern, robust, secure data infrastructure & commitment to whole system transformation

Demographic and Socioeconomic forces

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Patient and User Experience

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Climate Change

... will require us to build a culture of sustainability

Leadership & Commitment

An opportunity to harness interdisciplinary, interagency & intersectoral collaboration seen over the past couple of years ... requires a shift in mindset

Building a Healthier Future for Ireland

Leadership and Commitment

Many elements of healthcare will be delivered in ways that are fundamentally different from today

Successful digital transformation will amount to a health system-wide reorganisation

Shift to an ecosystem mindset, harness relationships and improve health for all

Public providers of health and social care

Third Sector

Life Sciences

Private providers of health and social care

Academic Institutions

Policymakers

Regulators

MedTech

Public and Patient Organisations

European Union

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Thank you

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