

# Session 1: Financial Framework and Funding Models for Digital Health

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European Observatory on Health Systems and Policies

THCS WP10 Shared Learning Event

31 October 2024

European  
**Observatory**   
on Health Systems and Policies  
a partnership hosted by WHO

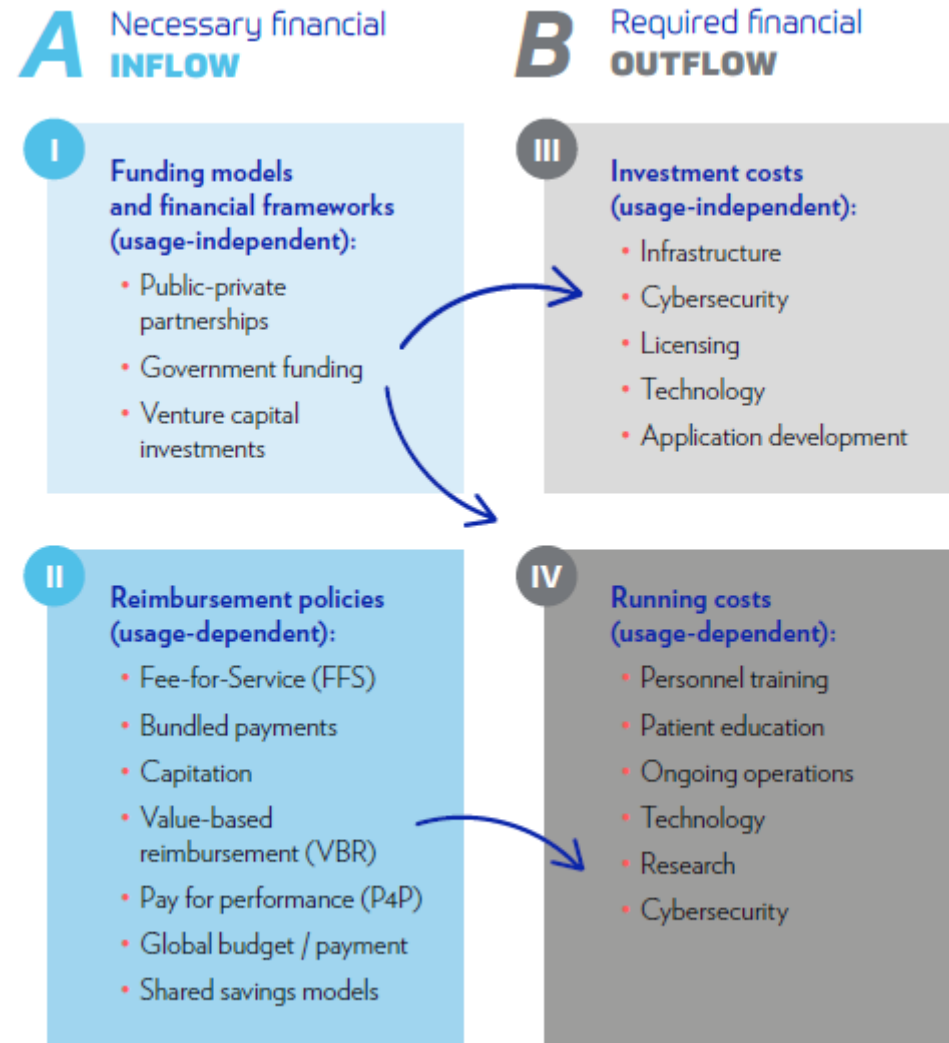
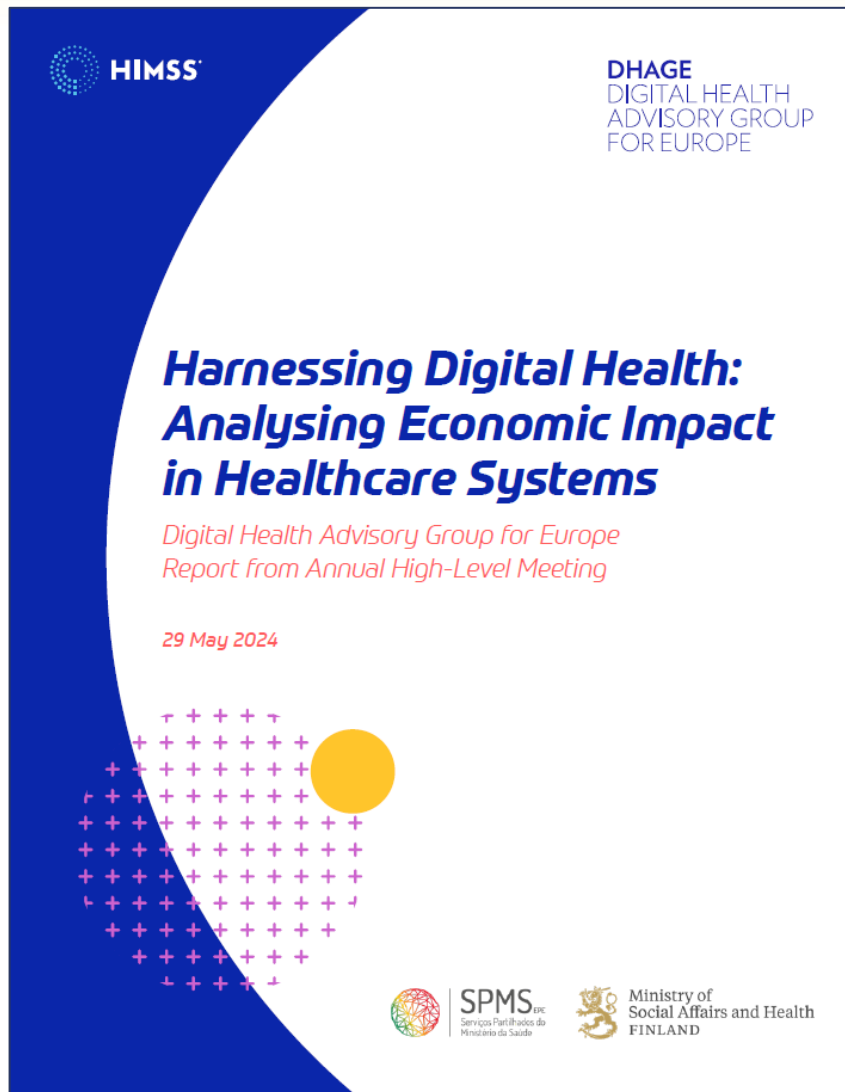
# Why is it important to consider funding for digital transformation in health?

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- Sufficient funding is crucial for transformation in healthcare.
- For the implementation of digital health in particular, a number of different cost types need to be considered, and providers need to be properly resourced.
- Financial frameworks that address both infrastructure and service delivery and include clear and effective reimbursement strategies can support the adoption and sustained use of digital health innovations.
- The heterogeneity of digital health applications requires a combination of funding sources and adaptable, flexible reimbursement policies.
- Understanding the availability and implications of different options is key for policymakers.



# Inflow and outflow of funds for digital health at the facility level



# Funding sources: different depending on the type of DH application

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Remote monitoring

Remote consultation

Patient-facing apps

## 1 Public-private partnerships (PPPs)

In Estonia, PPPs have yielded different eHealth interventions, e.g., Hoia, a track and trace mobile app to prevent the spread of COVID-19.

## 2 Government funding

The national “Digital Uzbekistan-2030” strategy was approved in 2020 and aims to strengthen digital governance structures and create reliable integrated platforms for the development of information systems, as well as the necessary broadband network infrastructure. The strategy includes a five-year action plan for the digital transformation of the healthcare system, covering health data governance, health information system architecture, and digital health initiatives. Further, in February 2021, the Ministry of Health formed a limited liability company (referred to as IT-Med (LLC203)) for the digitalization of the health sector in Uzbekistan.

## 3 Venture capital investments

KRY, an European leader in digital healthcare, offers video consultation technology amongst other services, connecting patients and healthcare professionals. KRY secured over 262 million Euro (€) of funding in 2021 to expand across Europe.

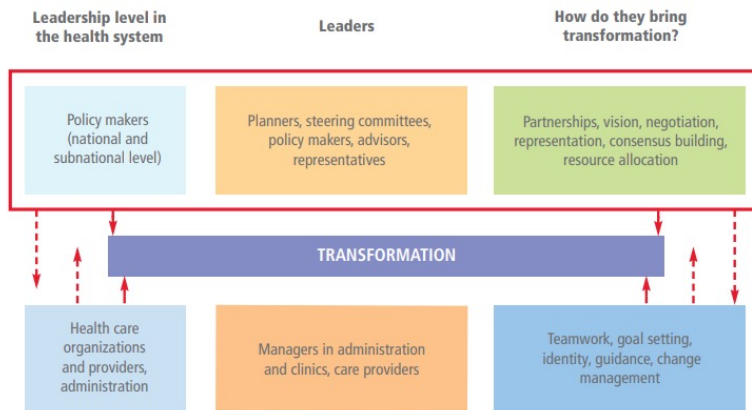


# Funding sources: different depending on the type of DH application

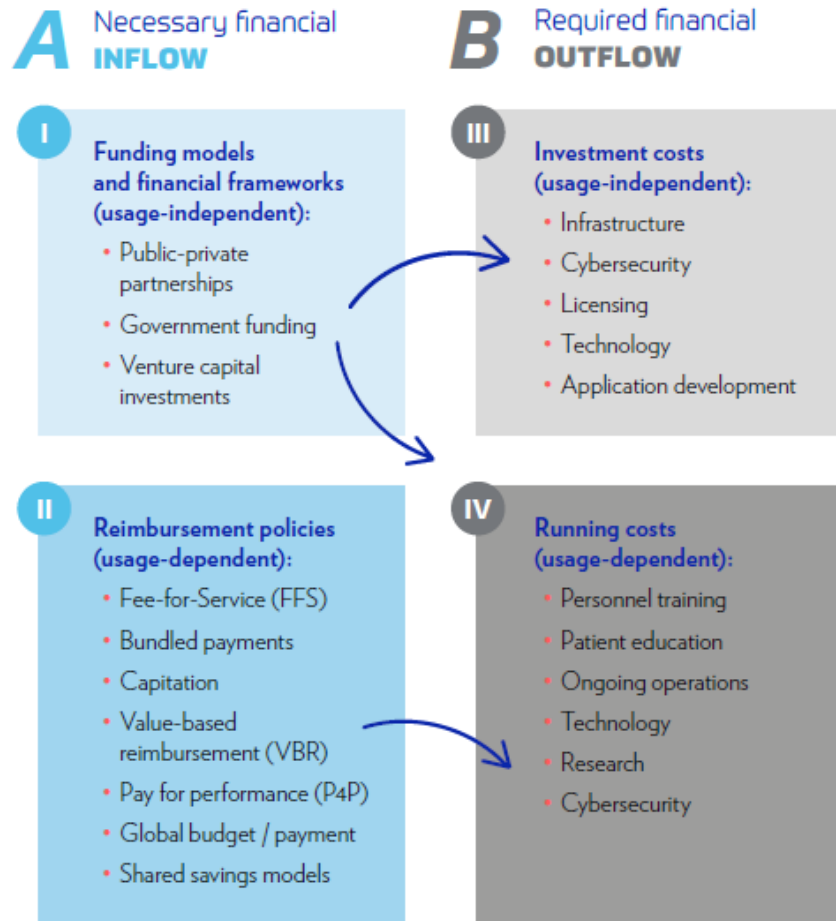
	Remote monitoring	Remote consultation	Patient-facing apps
1 Fee-for-Service (FFS)		Statutory health Insurances cover video consultations, e.g., Germany and France	
2 Bundled payments	Chronic disease management is reimbursed as part of bundled payments, e.g., Netherlands		
3 Capitation	Telemedicine services have been integrated as part of the overall patient care and are not billed separately; telemedicine service is reimbursed under the same terms as if 'normal' or in-person service was provided, e.g., Netherlands, Italy and Estonia		
4 Value-based reimbursement (VBR), including pay for performance (P4P)	Patient-relevant benefits, e.g., access to care and more regular patient monitoring, are pricing criteria to be considered in particular, e.g., Sweden and Germany		Remote consultations can contribute to meeting performance targets, e.g., UK
5 Global budget / payment	Healthcare is provided free of charge as long as certain criteria are met and telemedicine is provided in the same way as other medical service, e.g., UK		
6 Shared savings models	Shared savings models have been tested in healthcare systems through various pilot projects, e.g. France		



# Fueling the transformation of healthcare delivery: a political choice?



# Questions for the breakout sessions



1. Consider what the cost types (column B in Figure 1) look like for different types of digital health applications and who typically carries these costs:
  - a) roll-out of a new electronic health record;
  - b) a patient-facing mHealth app for diabetes management;
  - c) a video consultation between a specialist and a patient;
  - d) a provider-to-provider teleconsultation.
2. For the examples above, discuss how the costs are funded (categories in column A in Figure 1). Can you think of specific examples from your setting?
3. Given your discussions under questions 1 & 2, what to-do list would you give to your national and/or local decision-makers to improve on the current situation in your setting?



# Thank you!

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# Economics of digitalisation of health systems

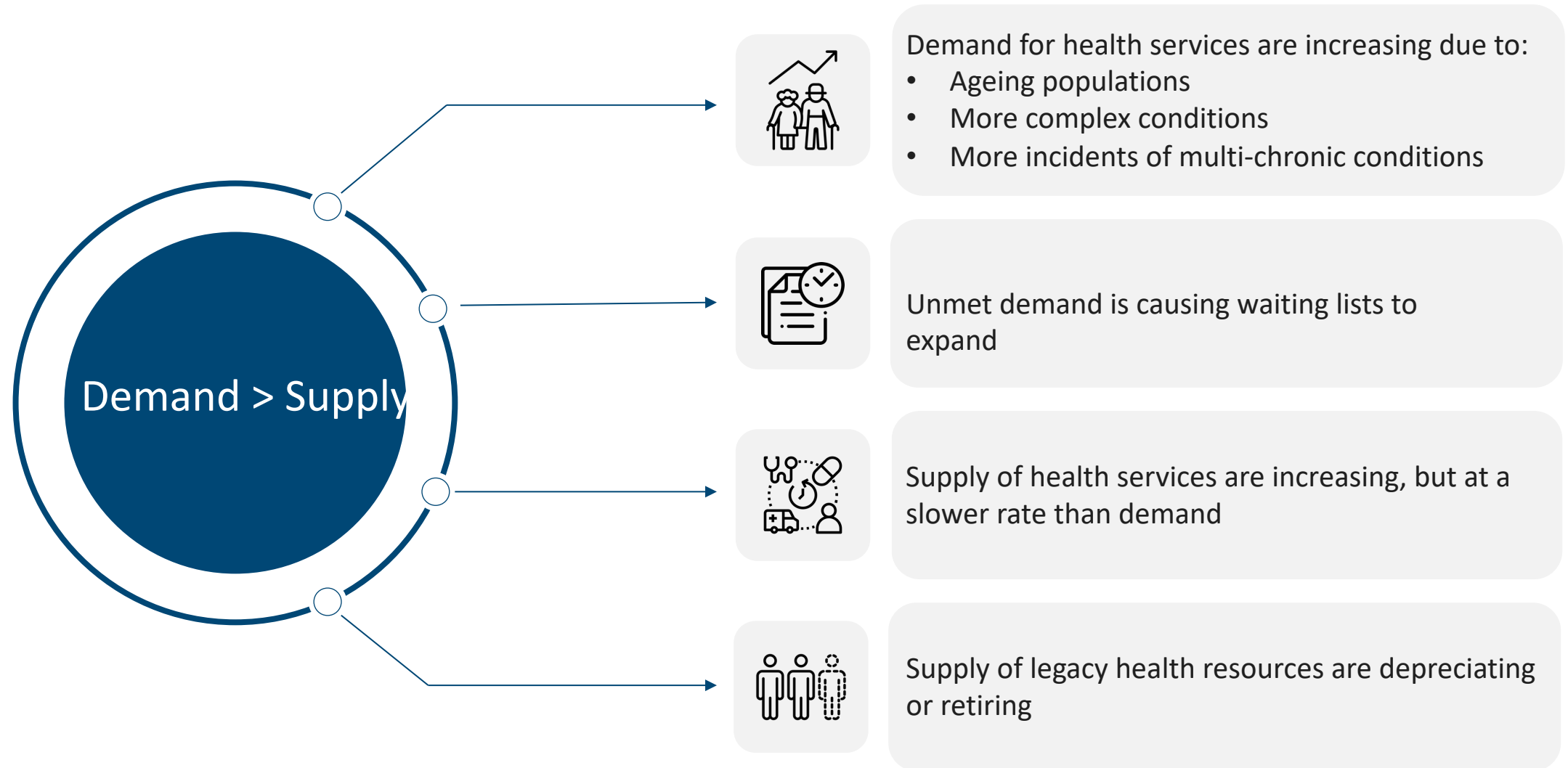
## Challenges and opportunities

Eric Sutherland

Transforming Healthcare Systems, 31 October 2024



# Refining digital health indicators: Lessons learnt



## What we want ...

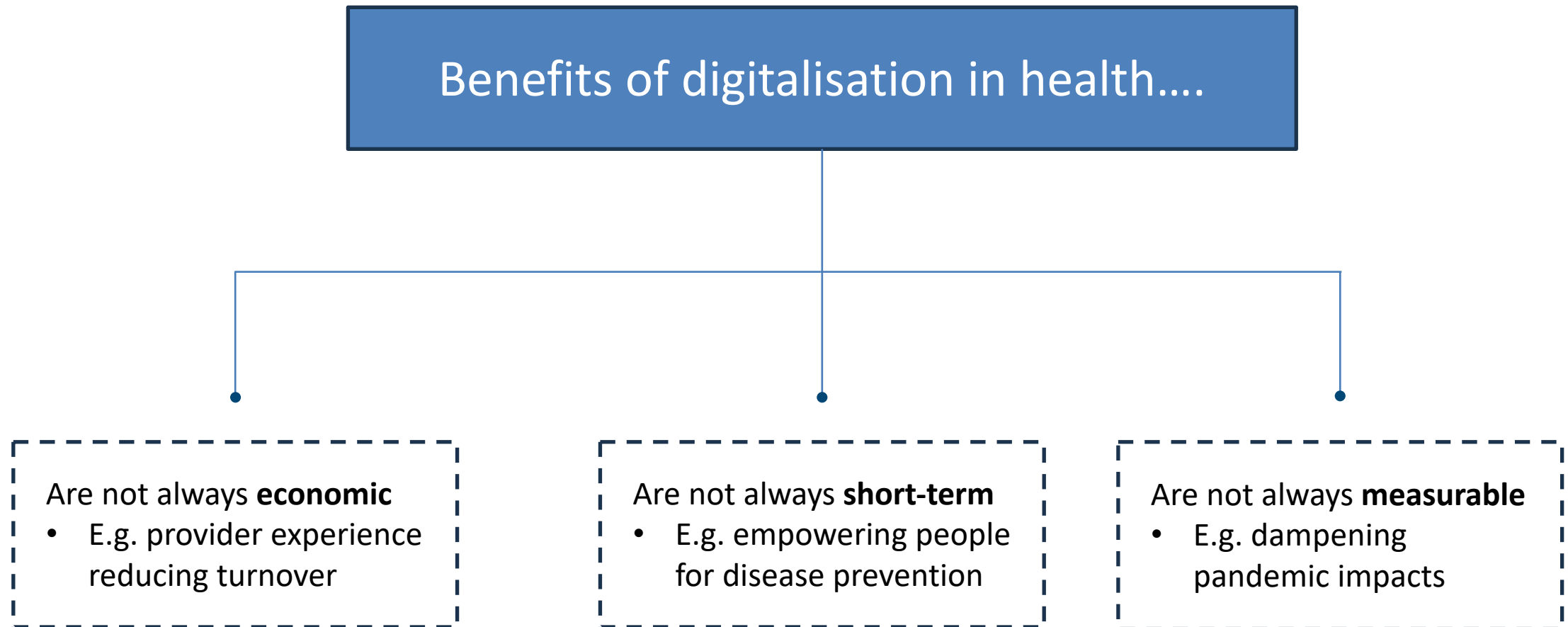
Tool to estimate value of digitalisation of health  
(NOT what is the value of digital health)



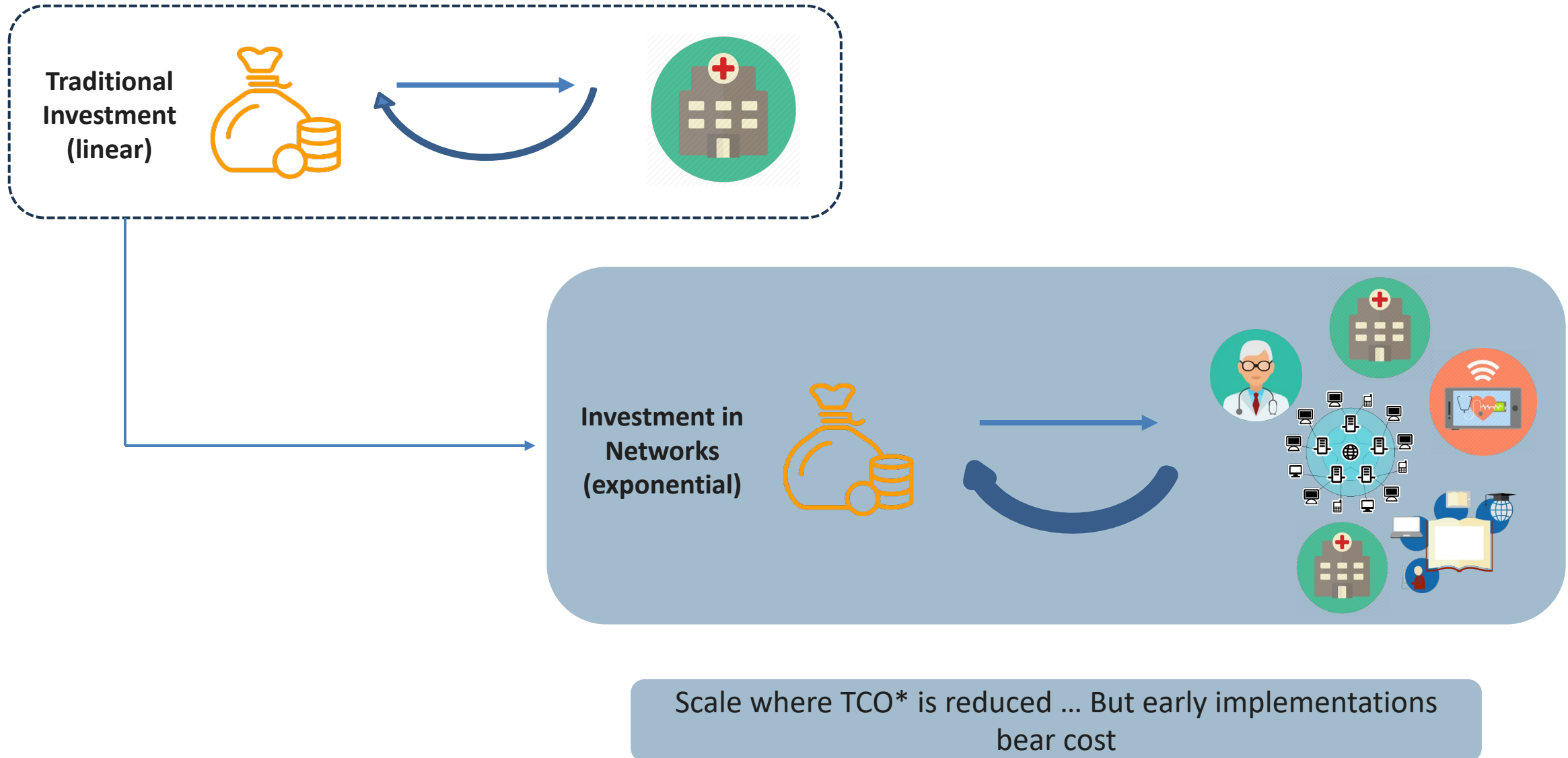
Based on “Theory of Change”



## ... And it is hard to get what we want

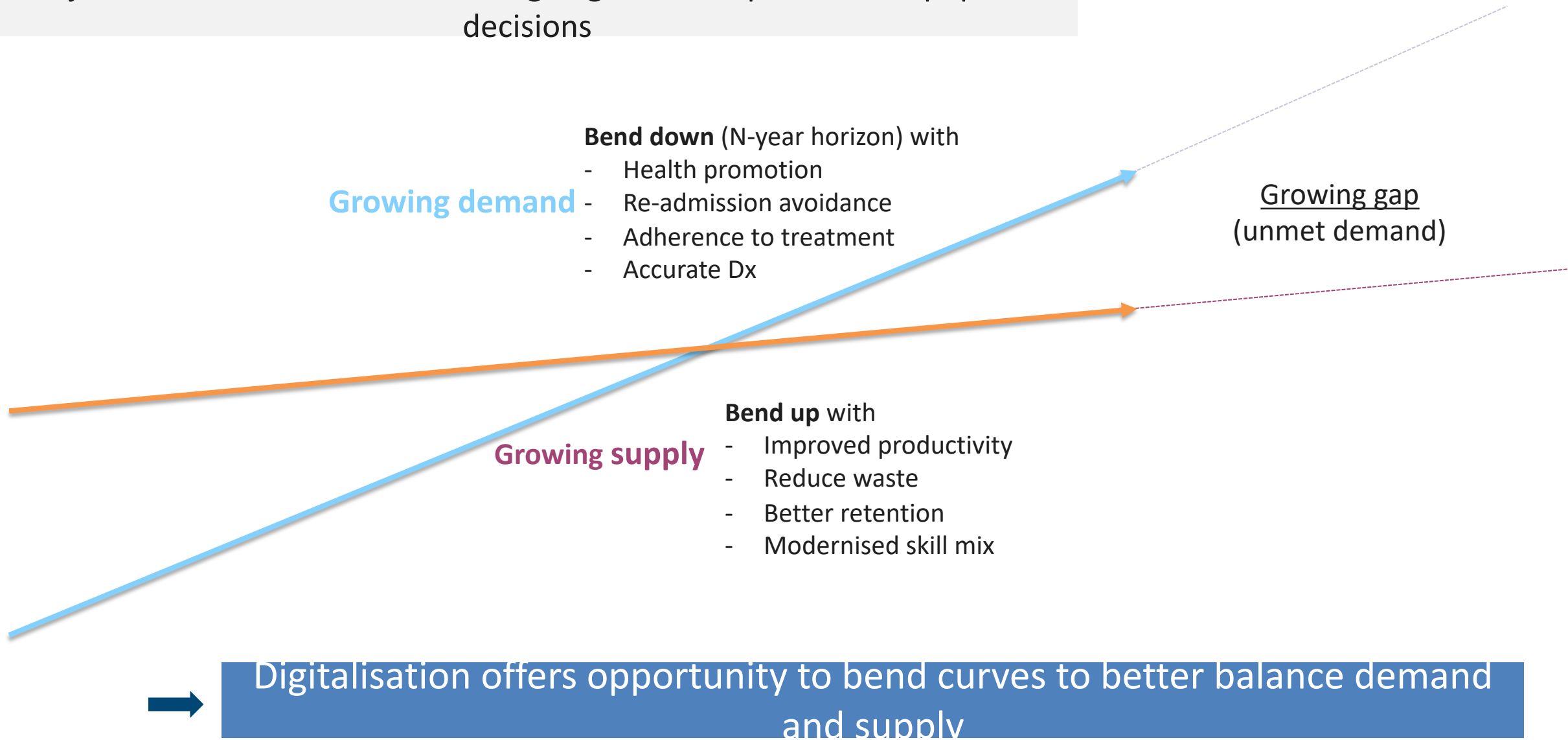


# An economic model for digitalisation of health must consider the value of networks ...



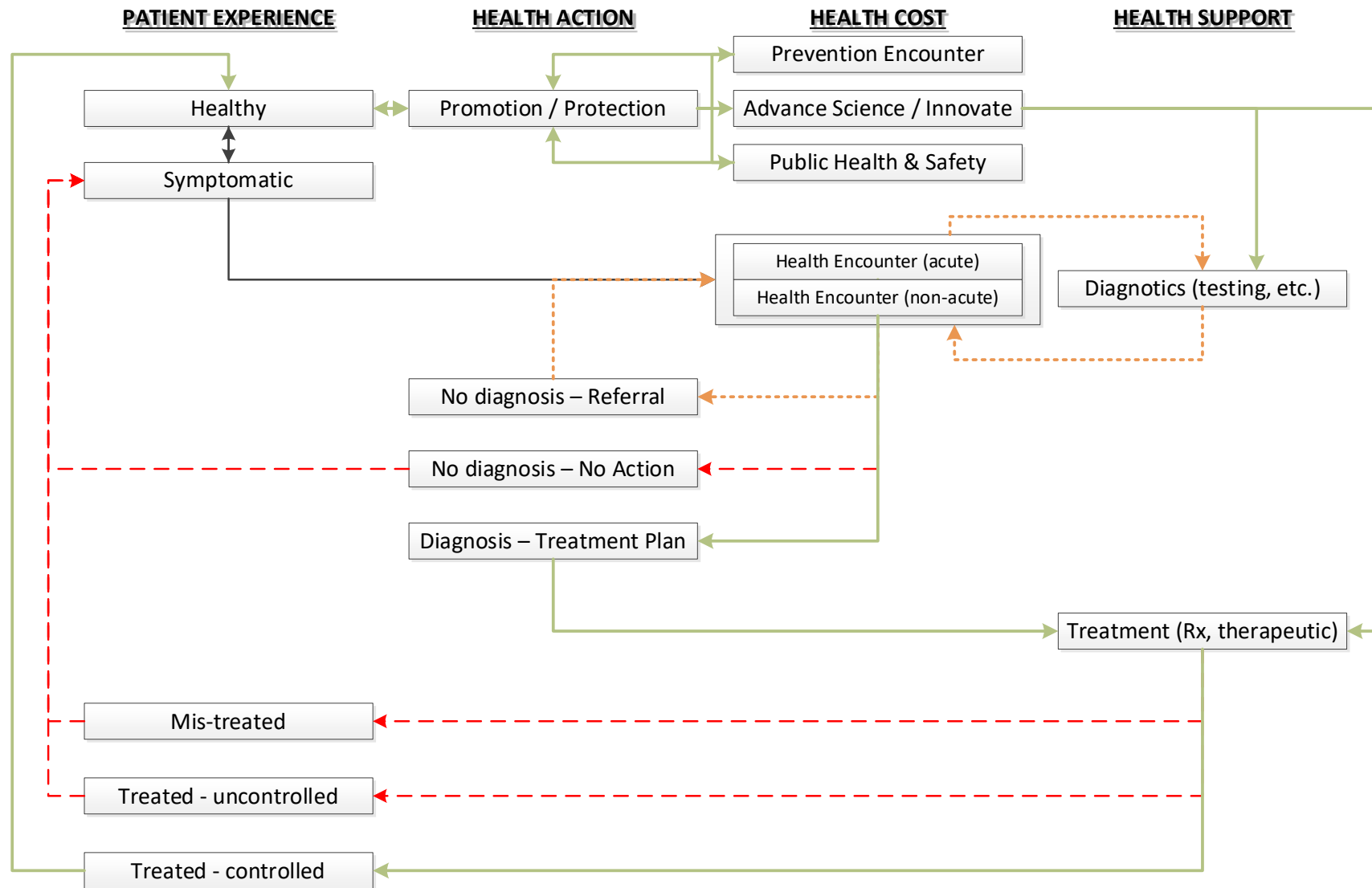
# ... while acknowledging the expanding supply-(unmet) demand gap

Projections show that countries are going to bankrupt or face unpopular decisions





# A step-wise view of health toward integrated person-centred learning health systems



How does digitalisation benefit health encounters by

- growing **equitable outcomes**
- minimising **wasteful loops**
- avoiding **poor outcomes**

Changes in input (digitalisation) create outputs (e.g., timeliness) that generate outcomes (e.g., better diagnosis)

## Levers for Demand

1. Improve timeliness of access to data and insights
  - Better accuracy of diagnosis
  - Better effectiveness of treatments
2. Implement impactful public health programs
  - Reduce population complexity (multi-chronic) / disease prevalence
3. Improve access to and trust in digital tools
  - Empower and engage people to achieve their health aims
  - Improve adherence to appropriate treatment

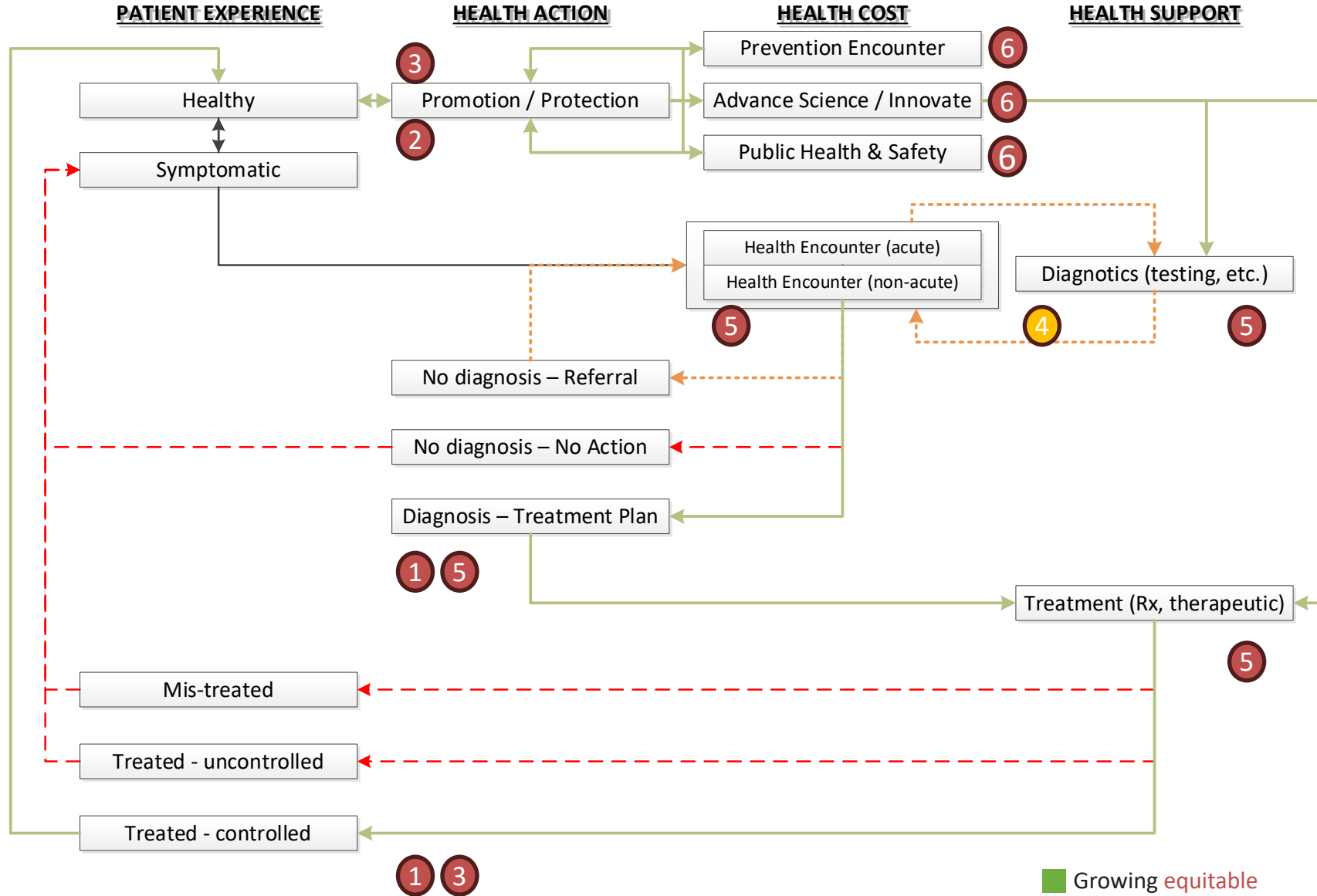
## Levers for Supply

4. Improve accessibility of quality diagnostic information and services
  - Reduction of 'wasteful loops'
5. Co-design new solutions with health providers
  - Improve adoption of tools
  - Optimise use of human resources (productivity)
  - Improve retention of health providers
6. Improve accessibility of quality data
  - Accelerate innovation for improved Dx / treatment

Collectively, these impact the **quintuple aim for healthcare**:

Patient reported outcomes; patient reported experience; provider experience; cost; equity; (+ sustainability?)

# Digitalisation of health systems can bend demand and supply curves



## Lower DEMAND

1. Access to data for diagnosis
2. Public health programs
3. Access to and trust in digital tools

## Increase SUPPLY

4. Access to diagnostics and services
5. Design tools for adoption
6. Access to data for innovation

# Understanding Context of Barriers of Digital Health

## Data infrastructure

- Policies for access and protection (providers, people, extended circle of care)
- Policies for integration across networks
- Standards for interoperability (data / consent)
- Practices for data quality and data stewardship

## Scalable systems and regulation

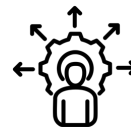
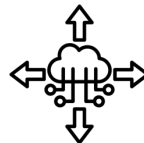
- Human capacity to use digital tools
- Human capacity to evolve digital tools
- Tools that optimise use of human resources
- Technical capacity to use data across networks

## Sufficient capacity

- Human capacity to use digital tools
- Human capacity to evolve digital tools
- Tools that optimise use of human resources
- Technical capacity to use data across networks

## Fostered trust

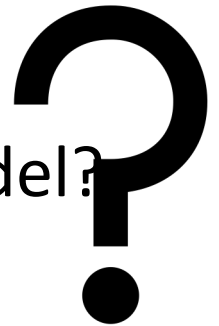
- Public reported experience and outcomes
- Provider reported experience
- Measurement
  - Equitability
  - Readiness, Usage, Impact, Cost



## DISCUSSION ...

### > Starter questions

- > What is missing from the step-wise view of health systems?
- > What is missing from the impact of digitalisation on supply / demand?
- > What is missing from the success factors for digitalisation that benefit outcomes?
- > What could be next steps to parameterise / build out this model?



# Thank you

Eric Sutherland ([eric.sutherland@oecd.org](mailto:eric.sutherland@oecd.org))

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WHO-Europe HIMSS

# Grand Challenge

- Body Level One
  - Body Level Two
    - Body Level Three
      - Body Level Four
        - Body Level Five

**Digital Health Investment Framework for health equity in the Europe Region**



# Session Objectives

WHO Europe/HIMSS Grand Challenge Background and status update

Discussion of Grand Challenge Intent

Discussion of Case Study Framework

Seek Volunteers for Pilot Use Cases

# Investing in digital health



**Enhance  
Capacity**



**Build  
Networks**



**Set  
Norms**



**Scale up  
solutions**

# Objectives



COMMUNITY CHALLENGE

**WHO + HIMSS  
& Countries**



Knowledge exchange and collaboration across Member States around DH investment and outcomes



Library of validated use cases measured against agreed criteria



Profile opportunities to scale innovative solutions nationally



Future framework for investment in DH for health equity

# Timeline of Proposed Process

- Body Level One

## YEAR 1

- Body Level Two

- Body Level Three

WHO-HIMSS Senior Leader Meeting – grand challenge concept and scope

Regional design thinking seminars to refine the criteria for MS use cases

Publish use case criteria

## YEAR 2

## YEAR 3

Generate an outcomes framework from use case examples and country experiences

Pilot framework in selected countries

# Digital health action plan for WHO Euro Region 2023–2030



OBJECTIVE

## HORIZON SCANNING AND SCALE UP

Landscape analysis to identify solutions that are patient-centered and can be scaled up

2030

Develop approaches to the management of health at the population level

Monitor developments and trends of digital solutions

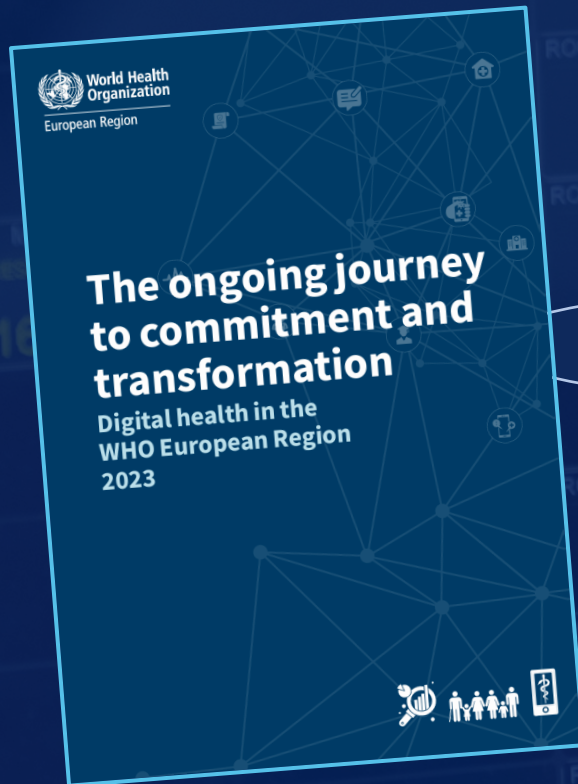
People-centered approach for building trust and adoption

Facilitate implementation, evaluation and scale up of digital technologies

Grand Challenge Focus.

# WHO Europe Current State

“Member States should strengthen collaborations between the public and private sectors, enabling funding barriers to be overcome and the acceleration of the acceptance and implementation of digital health strategies”



**100%**

**52 / 52 COUNTRIES**  
Public funding for digital health

**39%**

**20 / 52 COUNTRIES**  
Public-private partnerships

**40%**

**21 / 52 COUNTRIES**  
Donor financial funding

**35%**

**18 / 52 COUNTRIES**  
Private or commercial funding

**14%**

**7 / 52 COUNTRIES**  
National health expenditure allocated to DH is 1% – 7%

# Survey Findings & Recommendations

Sustainable funding should be allocated for the development and maintenance of EHR systems

RECOMMENDATION



EHRs

37%

19 / 52 COUNTRIES rated funding as a very or extremely important

**BARRIER**

**GOVERNANCE**  
 Create sustainable financing strategies for the continued development and implementation of digital health



TELEHEALTH

77%

39 / 51 COUNTRIES rated funding as the most important barrier

**BARRIER**

RECOMMENDATION

Prioritize telehealth funding and reimbursement to strengthen and sustain the national initiatives

# WHO European Region: digital health country profiles

52 COUNTRIES



Gov  
DH Funding  
Initiatives

- 1 Digital Health Foundations
- 2 Electronic Health Records
- 3 Nationals DH Patient Portals
- 4 Telehealth Programmes
- 5 mHealth Services and Programmes
- 6 Health-related Mobile Applications
- 7 Big Data and Advanced Analytics

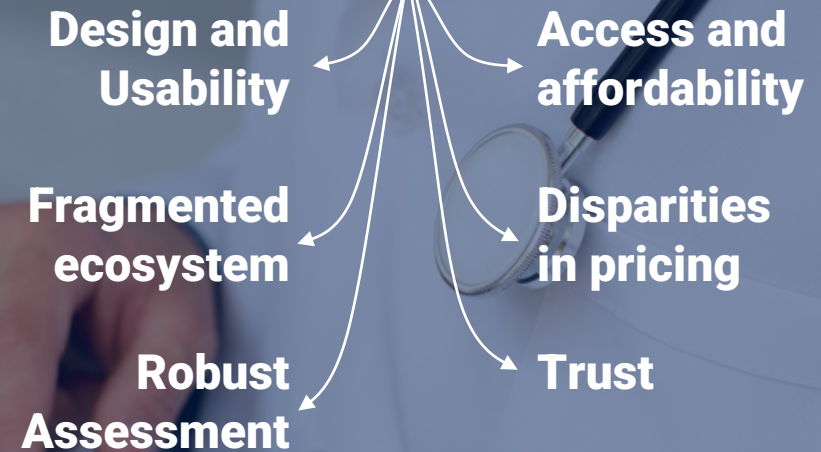
# Digital Health Reimbursement

STRATEGIES OF  
8 European Countries and Israel

## Scoping Review and Policy Mapping

<https://pmc.ncbi.nlm.nih.gov/articles/PMC10576236/>

### FINDINGS



### RECOMMENDATIONS

Developing a comprehensive, value-based framework for the assessment of digital health solutions

# HIMSS Insights Survey: Health System Leaders

Jan - Feb 2024  
260 healthcare leaders

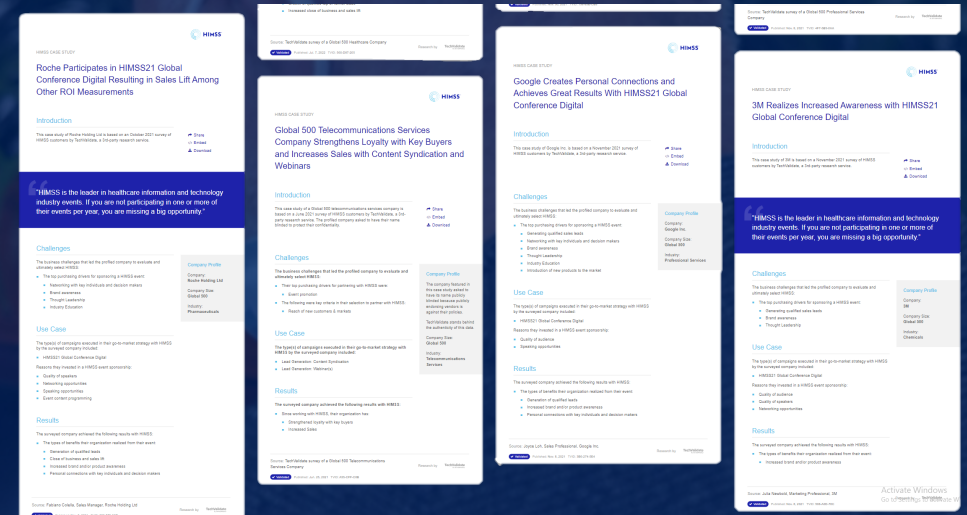
Preparation for future disasters

Issues facing healthcare organizations post-pandemic and plans to address them

Usage of technologies as solutions

Top trends in digital health over the next 12 months

Services included in home care delivery models



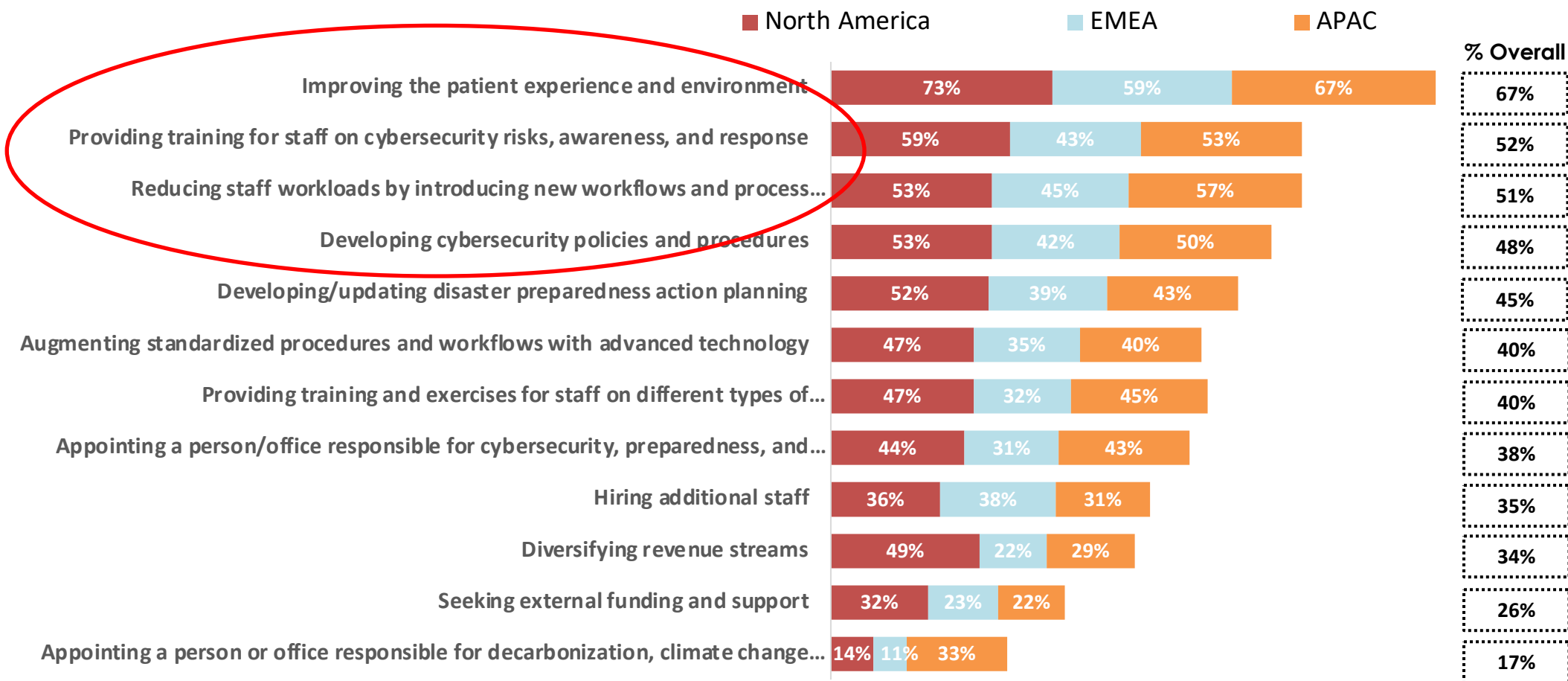
IT/Technology leaders  
executive or senior clinical leaders  
non-clinical executive or senior leaders  
clinicians or operations

# Top Issues Facing Healthcare Organizations in 2024



All regions ranked staffing as the highest priority among the list of top issues

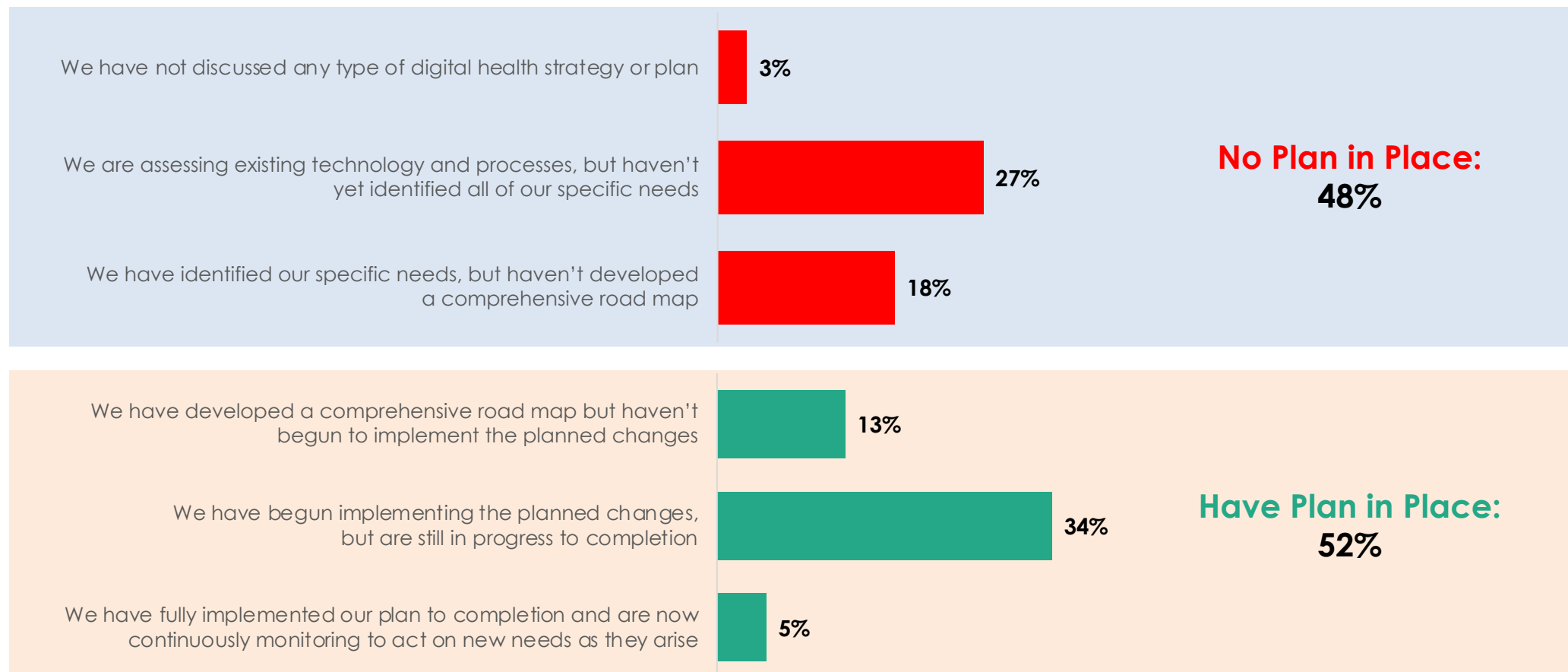
# Leader Priorities: Patients and Workforce



More than half of organizations are addressing top issues by improving the patient experience, providing cybersecurity training for staff, and reducing staff workloads by utilizing technology for new workflows and processes

# 2024 Leader Survey: Nearly half of healthcare organizations do not have set digital health strategies in place

How would you best describe your organization's status towards achieving digital health transformation?



S5. Digital health transformation is the shift towards an ecosystem of digital tools – where patients are still at the center, but the ripple effects make interacting with the care system better for everyone. How would you best describe your organization's status towards achieving this transformation?  
Base: Total Respondents; n = 100

# Digital Capacity (DHI Scores) of Health Systems By Region



# Discussion

## Will the Grand Challenge produce value for MS?

- Key Drivers & Maturity Level
- Measurement of Success
- Common Barriers
- Accelerators



# Case Profile: Advances in Digital Health

## Types of Cases

Data and IT Infrastructure

Governance

Workforce

Person Centered Health

Advanced Analytics

Scaling Innovation

## Content of Case Studies

- **Measures, outcomes, and performance** to strengthen health system performance
- **Strategic objectives and actionable outcomes** that advance digital health transformation.
- Intended and unintended **outcomes** (lessons learned).
- **Dependencies** to scale outcomes (policy; funding)

# DH Strategy - Enablers and Disablers

National digital health strategy  
strengthening health system  
performance and improving health  
equity

What are the key aspects of a DH strategy focused use case category that would demonstrate value and ensure equity?

What are the criteria that should be captured in this category to demonstrate success?

# Data and Information Infrastructure - Interoperational

Data, digital and standards infrastructure advancing digital transformation and improving health information access and exchange

What are the key aspects of a data, Information Infrastructure focused use case category that would demonstrate value and ensure equity?

What are the criteria that should be captured in this category to demonstrate success?

# Governance Frameworks - Policy Incentives, Disincentives

Governance frameworks and policy  
levers advancing public health  
goals and population health  
outcomes

What are the key aspects of  
a governance focused use  
case category that would  
demonstrate value and  
ensure equity?

What are the criteria that  
should be captured in this  
category to demonstrate  
success?

# Workforce Capacity - Strengthening and Optimization

Digitally enabled strategies to reduce burden and optimize quality and safety of work environments.

What are the key aspects of a workforce focused use case category that would demonstrate value and ensure equity?

What are the criteria that should be captured in this category to demonstrate success?

# Person Centred Digital Health – Health System Engagement

Digital health strategies and initiatives that support equitable personalized care delivery and proactive management of health risks for people.

What are the key aspects of a person centred focused use case category that would demonstrate value and ensure equity?

What are the criteria that should be captured in this category to demonstrate success?

# Advanced Analytics – Enabling Decision Making

Strategies that mobilize and analyze data to inform decisions, and advance data driven decision making

What are the key aspects of an advanced analytics strategy focused use case category that would demonstrate value and ensure equity?

What are the criteria that should be captured in this category to demonstrate success?

# Scaling Innovation

Key outcomes of digital transformation that will support and advance the next phase of digital transformation.

What are the key aspects of a scaling innovation focused use case category that would demonstrate value and ensure equity?

What are the criteria that should be captured in this category to demonstrate success?

# Discussion

## Use Case Categories and Criteria Value Proposition

- Priority Use Cases
- Missing Use Cases
- Key Outcomes
- Key Criteria



# Next Steps

Design thinking exercise outputs will be analyzed for development of use case criteria data entry tool

Pilot testers are needed for tool testing in Dec/Jan timeframe

- At least one use case needed for each category

# Thank you

For more information, please contact:

Data and Digital Health Unit  
*Division of Country Health Policies and Systems*  
**World Health Organization, regional office for  
Europe**



catonpetersh@who.int

Relevant links:

- [Regional digital health action plan for the WHO European Region 2023–2030](#)
- Resolution “[Leveraging digital transformation for better health in Europe](#)”.