#Imagining2029

EHTEL

Collaborating for Digital Health and Care in Europe

Deep diving into health data ecosystems for integrated care: sustainability and governance

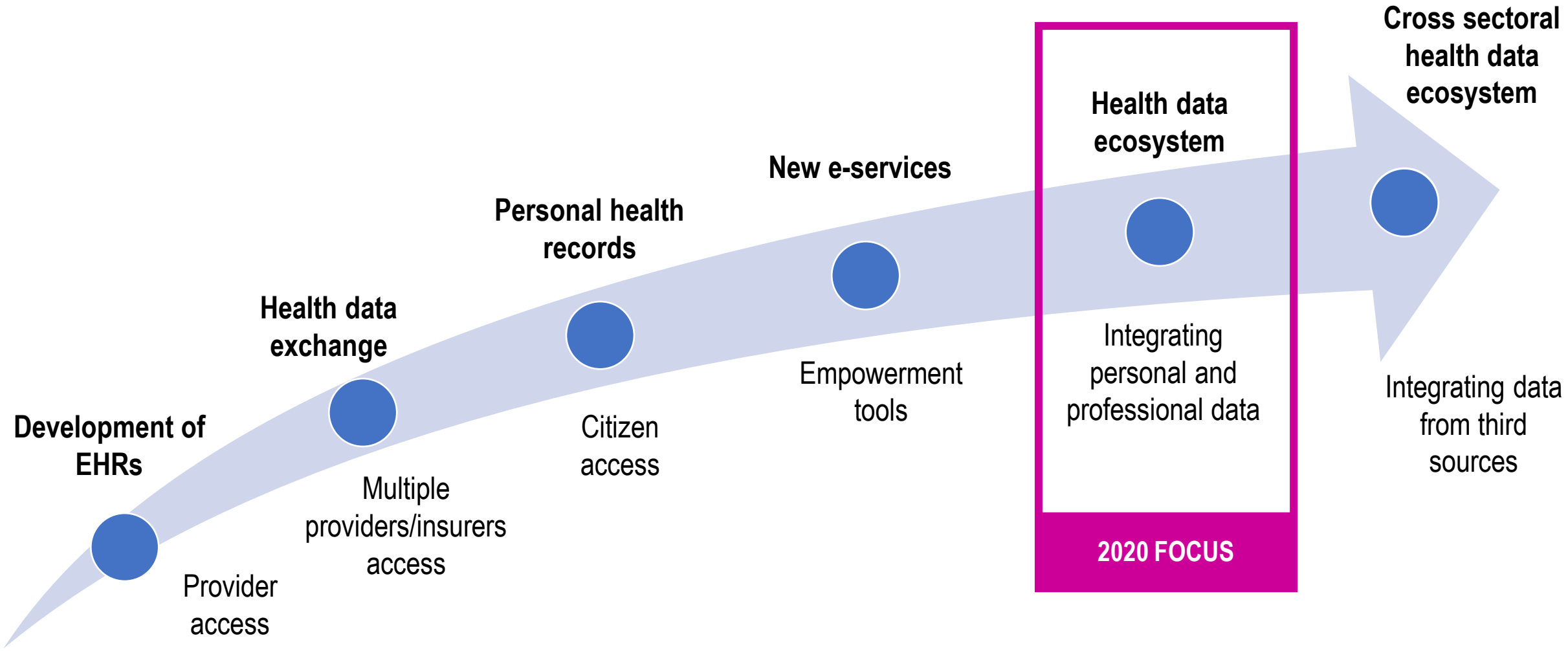
Digital Integrated Care Task Force Virtual Workshop No.2

30/09/2020

@ehtel_ehealth

Welcome and introduction

BUILDING HEALTH DATA ECOSYSTEMS FOR INTEGRATED CARE

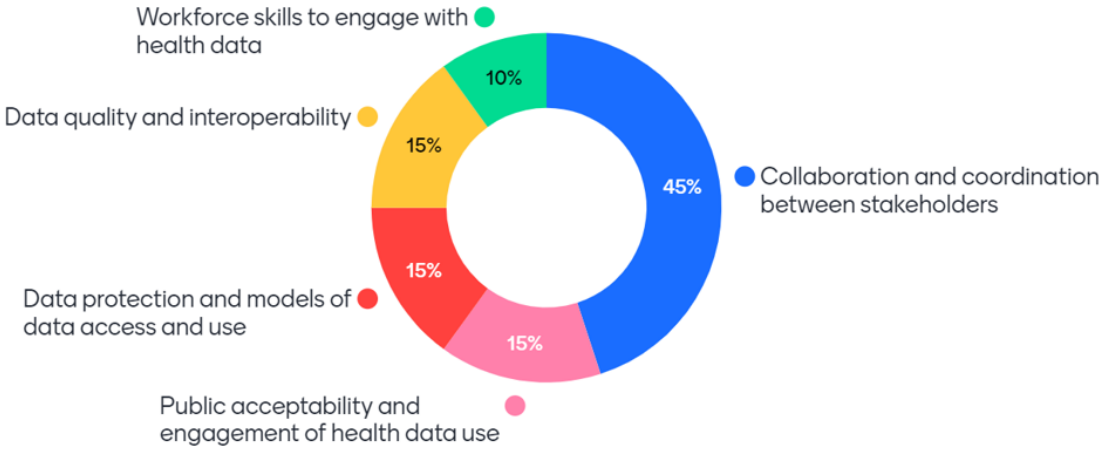


In the 22 June 2020 workshop

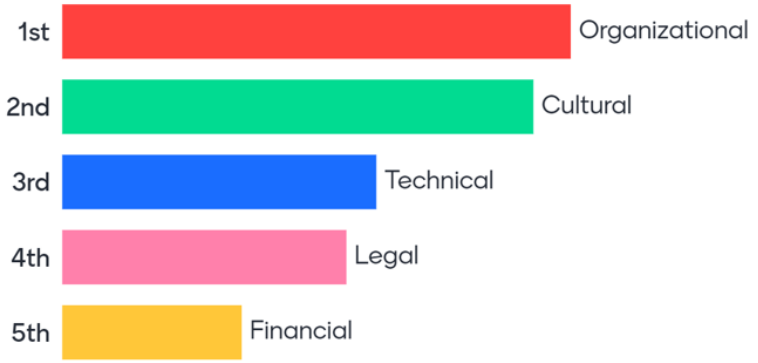
- We defined **health data ecosystems** and explored the benefits of fair data principles for further developing health and care integration.
- We discussed about the **challenges** of developing health data ecosystems illustrated by three examples from Israel.
- We identified areas for further analysis and discussion such as **types of ecosystems** (open vs closed, multiple vs single organisations), supportive **governance models**, and sustainable **business models**.

Blue ocean (80%) | Red ocean (20%)

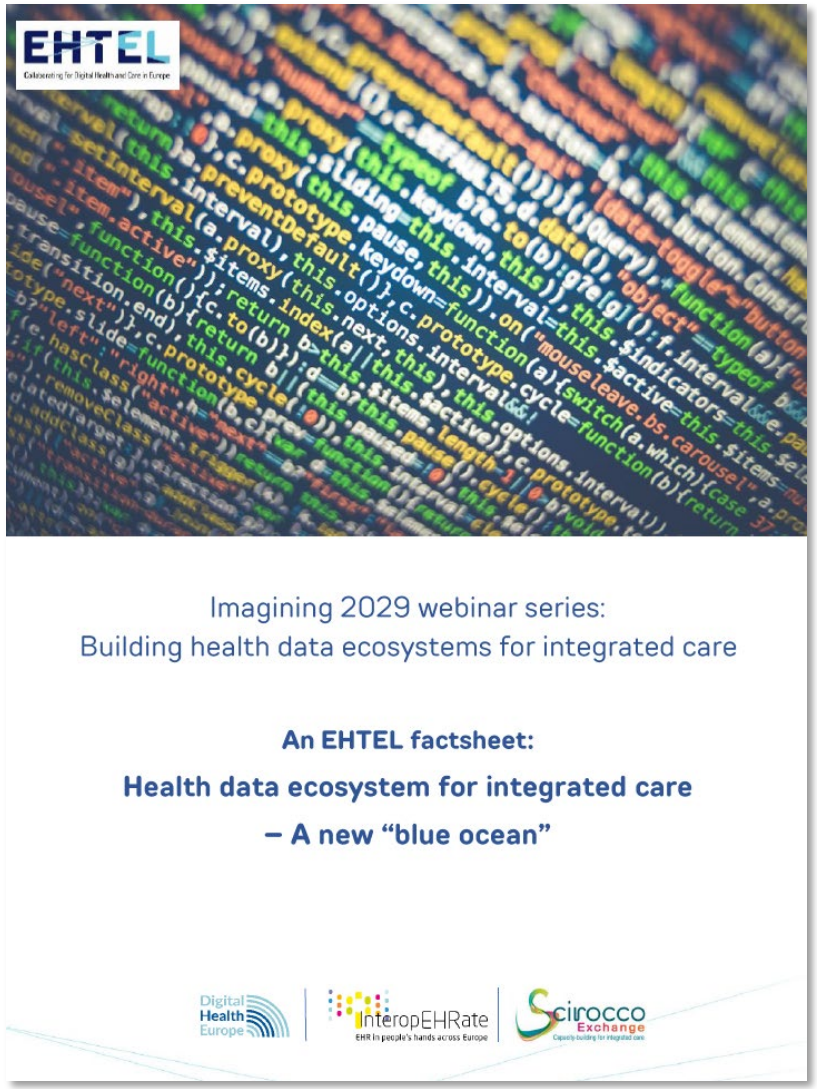
What is the core element to develop a health data ecosystem for integrated care?



What are the main obstacles to combining data produced by health professionals with data produced by citizens?



Who will be the key mobiliser to develop health data ecosystems for integrated care?

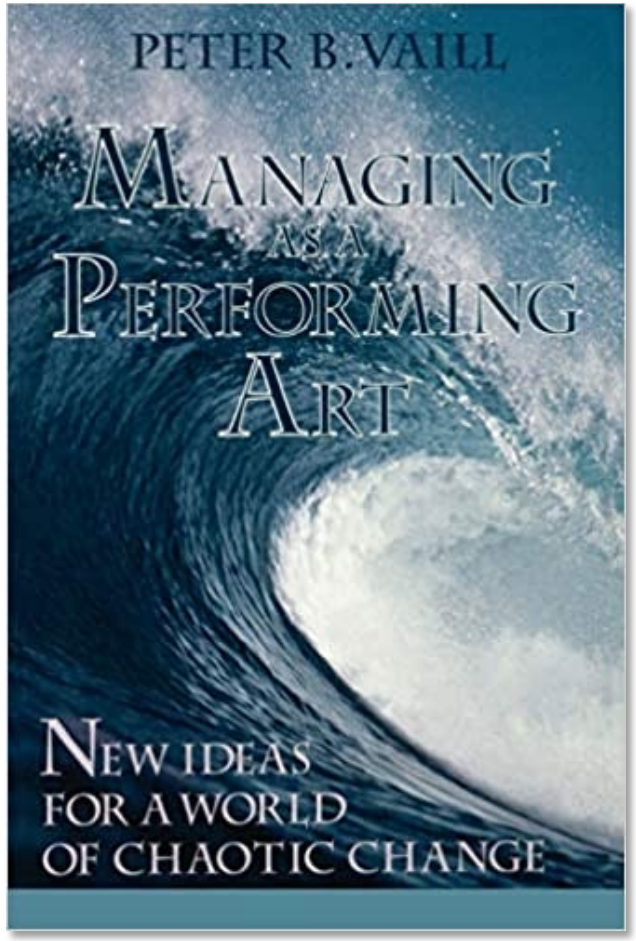


Factsheet

Health data ecosystem for integrated care – A new "blue ocean"

Available to download at:
https://www.ehtel.eu/activities/webinars/health-data-ecosystems-for-integrated-care-a-new-blue-ocean.html

From “blue oceans” to “permanent white water”



“Most managers are taught to think of themselves as paddling their canoes on calm, still lakes. . . .

They’re led to believe that they should be pretty much able to go where they want, when they want, using means that are under their control.

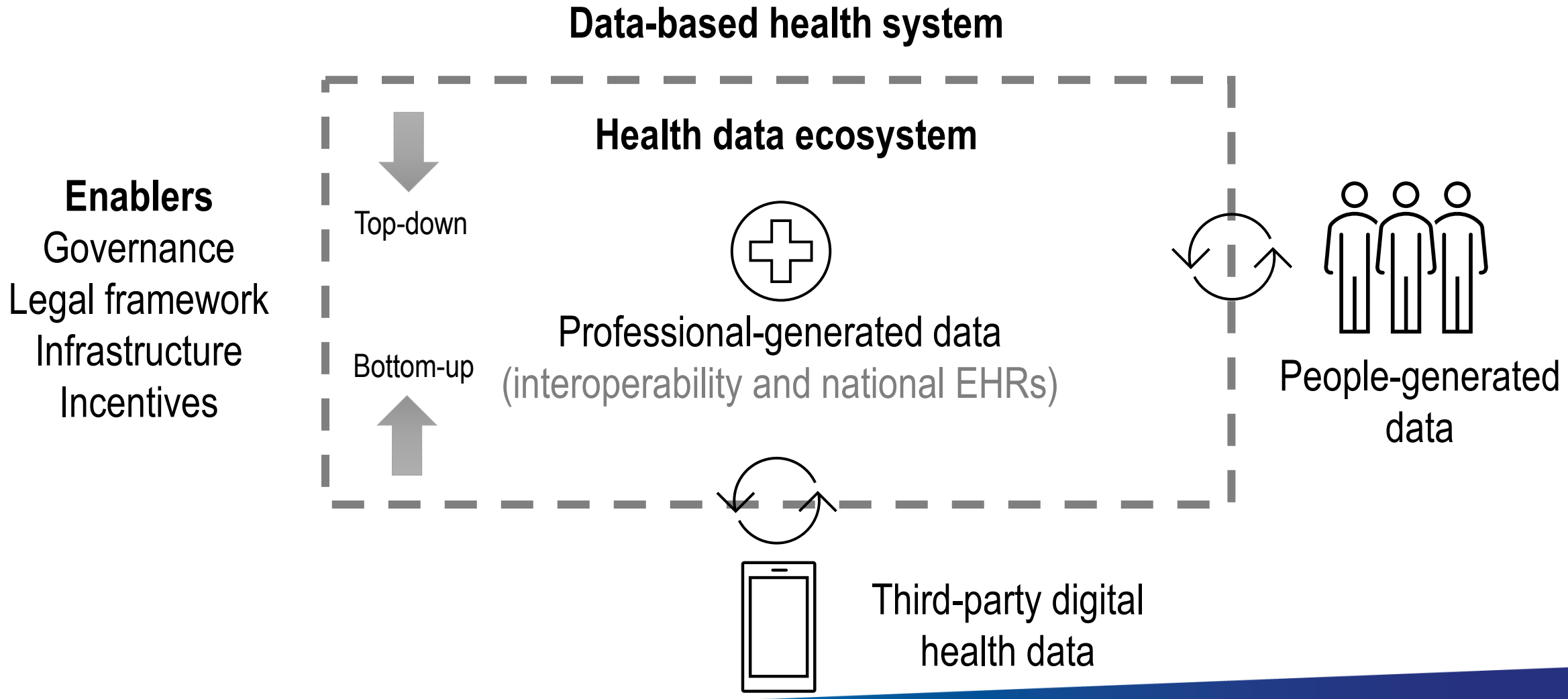
Sure there will be temporary disruptions during changes of various sorts–periods when they’ll have to shoot the rapids in their canoes–but the disruptions will be temporary, and when things settle back down, they’ll be back in the calm, still lake mode.

But it has been my experience . . . that ***you never get out of the rapids…***

The feeling is one of continuous upset and chaos*”*

- Peter B. Vaill

Setting the scene



Goals of this workshop

- Learn how health IT and health data ecosystems are **shaped at country level**
- **Explore governance** principles and functions to drive implementation of digital health and development of health data ecosystems
- **Review national strategies** to make them sustainable and open to innovation to increase health and care integration

Agenda

Welcome and introduction
Presenter: Tino Martí and Diane Whitehouse (EHTEL)
Time: 10 minutes

Digital Health and Care in Scotland: sustainability and governance
Presenter: Nessa Barry (Scottish Government)
Time: 15 minutes

Israeli Health Data Ecosystem: Building "grass-roots" from the bottom-up
Presenter: Rachelle Kaye (Assuta Medical Centers)
Time: 15 minutes

Preparing for discussion
Live poll
Time: 5 minutes

Discussion
Front row:
Time: 40 minutes

Conclusions
Key messages of the workshop and announcement of next session.
Time: 5 minutes

Digital Health and Care in Scotland: sustainability and governance

Nessa Barry – Scottish Government

Scottish context for a health data ecosystem

Population 5.4m
Health Budget 13.4bn.
2018/19

14 Regional Health Boards

7 Special Health Boards. 1 Public Health Body. 900+ General Practices.

32 Local Authorities

Scottish Parliament est. 1999
Health is an area of devolved responsibility.

Health and Care Integration
Telehealth and Telecare

Approximately 140,000 people are employed by NHS Scotland across all Health Boards.

Strong sense of citizen ownership of health and care services.

In Scotland...

The Cabinet Secretary for Health and Sport is responsible for:

- NHS performance, staff and pay
- Health care and social integration
- Patient services and patient safety
- Primary care, acute services elective centres
- Implementing the national clinical strategy, Quality Strategy and Service planning
- Allied Healthcare services
- Carers, adult care and support
- Child and maternal health
- Dentistry
- Medical records, health improvement and protection

Public Health priorities:

- healthy places and communities
- early years
- mental wellbeing
- harmful substances
- poverty and inequality
- healthy weight and physical activity.

Characteristics of the Scottish health data ecosystem

Scotland can be seen as an example of a Top Down ecosystem in terms of Digital Health and Care implementation.

- Consistent Government and a recognition of the role of ICTs in health.
- Since 2008, regular reinforcement from Digital Health and Care strategies.
- Embedding digital solutions in policy recommendations and actions.

- Committed funding for digital health and care initiatives which target key policy objectives, for example:
  - Support digitally enabling integrated health and care
  - Support for improving access to services e.g. mental health
  - Support for digital tools and services which helping people to remain supported at home and in their own communities

Timeline

2001 NHS 24 – National Out of Hours health information and advice.

2005 onwards – key policy and strategy documents providing continued support for ICTs in Health and Care

Early 2000's - the Scottish Care Information (SCI) system to exchange information between primary and secondary care.

2006 - roll out nationally of the Emergency Care Summary (ECS).

2006 - dedicated funding to scale up Telecare in citizens homes.

2010 - Electronic Palliative Care Summary and the Key Information Summary (KIS) in 2013.

2013 - Incremental implementation of Computerised Cognitive Behavioural Therapy – now all Health Boards.

2010 - onwards Test and implementation of Home and Mobile Health Monitoring.

2016 - new national procurement & model of implementation of video consultation

2018 - Scotland's National Digital Service (NDS) to create a new National Digital Platform.

Governance - features

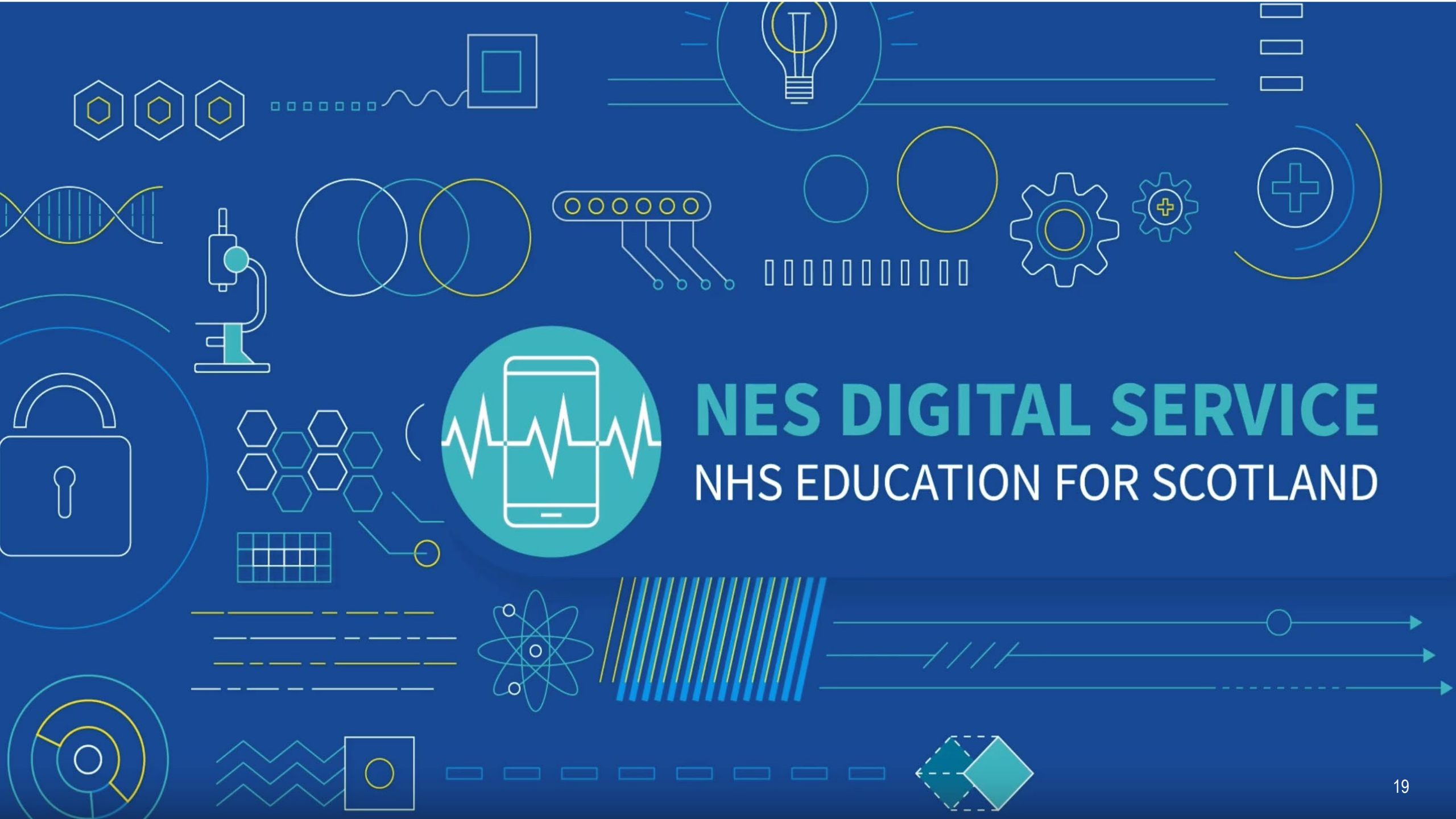
- Service developments aligned with strategy.
- Clarity about responsible actor and how support can be accessed.
- Healthcare Quality Strategy (2010) principles to provide a healthcare system which is Safe, Effective and Person Centred are evident across all policies.
- Use of Quality Improvement Methodology is an established approach.
- Leadership and partnerships working across health and care settings – with strong ethos of building leadership skills.
- Health and care integration as a driver for digitally enabled services and citizen participation.
- The Scottish Approach to Service Design seeks to build services with the user perspective and insights leads to more sustainable service delivery.

Current (2018) Digital Health and Care Strategy

6 Key Areas of Focus (Domains)

National direction and leadership	A national Board and supporting governance mechanisms to rationalise and clarify decision making processes for investment, prioritisation and policy setting.
Information governance, assurance and cyber security	New national arrangements to support appropriate information sharing for delivery of care, research & innovation, give people choices in how they access and manage their information and maintain trust that information is used and managed safely and securely
Service transformation	**New processes to support the spread and adoption at scale of proven digital technologies within services and the promotion of methodologies that support local service change and redesign as part of pathways of care**
Workforce capability	A programme of work to promote leadership and workforce development in digital skills and capabilities in order to underpin the successful uptake and use of digital technologies
Digital Platform	The development at a national level of a digital platform that facilitates the availability and exchange of information and interoperability of existing and new health and care systems and applications
Transition process	Agreeing a roadmap over time to rationalise different local, regional and national systems to converge on to the digital platform, without impacting existing service provision and delivery of care

Next steps


NES DIGITAL SERVICE
NHS EDUCATION FOR SCOTLAND


SCOTLAND CAN DO
IT'S TIME TO MAKE HISTORY
TEC Technology Enabled Care
Digital Health & Care Scotland
SCOTTISH DEVELOPMENT INTERNATIONAL
Highland Clinical Research Facility
NES Digital
Digital Scotland
Healthcare Improvement Scotland
CivTech® {beta}
CHIEF SCIENTIST OFFICE
NHS SCOTLAND
Ecosystem
Stratified Medicine Scotland.
SMS Making a Reality of Stratified Medicine
HIE
Scottish Health Technologies Group
Scottish Government
Riaghaltas na h-Alba
gov.scot
Health Innovation Assessment Portal
THE DATA LAB
value from data
Medical Devices Unit
Scottish Enterprise
THE UNIVERSITY OF EDINBURGH
Innovation Centres
AHSP
Academic Health Science Partnership in Tayside
HERIOT WATT UNIVERSITY
edinburgh bioQuarter
Translating medical innovation
University of Strathclyde Glasgow
SHIL
Farr
The Farr Institute of Health Informatics Research
Golden Jubilee Innovation Centre
Patients at the heart of progress

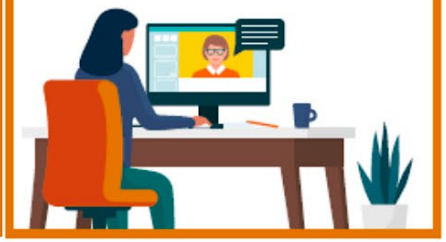
Scotland's Programme for Government 2020-21

Promoting lifelong health and wellbeing

- **Scale up the use of digital health services** – both physical and mental – to ensure more people can get the care they need in a way that suits them

More than 16,000 Near Me video health consultations per week

Enabling up to 30,000 people to access digital Cognitive Behavioural Therapy



Publish a Mental Health Transition and Recovery Plan

- Put a clear focus on **mental health and wellbeing** and the specific impacts the virus has had **on existing health inequalities**

A fundamental independent review of adult social care by January 2021

- Establish an **independent review to reform adult social care** – including consideration of a National Care Service

Key messages

- Important to maintain **momentum** and listen to **all users** to develop adaptive services.
- Communication with **senior stakeholders** is vital. Do not underestimate time required to build trust and relationships.
- Understanding what citizen's require and how their insights can impact services – **takes time and effort**.
- **Digitally enabled workforce** is a key building block underpinning all this work.
- **Knowledge and information** sharing is as important as data sharing.
- Governance is **supportive** not restrictive.

Israeli Health Data Ecosystem: Building “grass-roots” from the bottom-up

Rachelle Kaye – Assuta Medical Centers

Israel's health data ecosystem

537
innovative Digital Health companies

Over 25
years of digitalized accumulated EMR

Market players:
4 HMOs,
servicing the entire ~9M population

~100
active investors in the sector with an Israeli presence

Multinationals:
32
with exposure to Digital Health

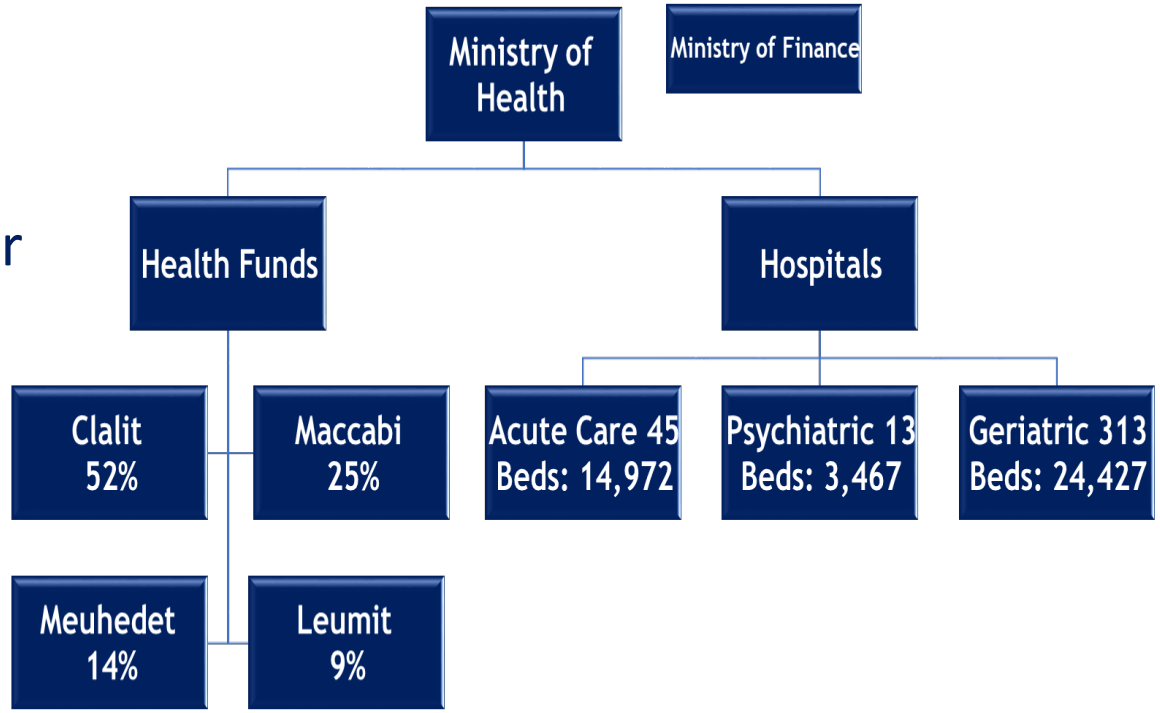
Hubs, including hospitals & HMOs innovation platforms:
23 Digital Health hubs, including 11 accelerators

Incubators:
4
industry focused

Government:
~$300M National Digital Health Plan supports industry development

Israeli Context for Health Data Ecosystem

- National Health Insurance System
- Israeli HMOs both Insurers and Providers
- Israeli HMOs accountable for the health of their members as well as healthcare expenditures
- **Relative Autonomy of Israeli HMOs -** one of the defining features of the Israeli healthcare system
- Strong **competition** among the four HMOs



State of Israel
Ministry of Health
משרד הבריאות

Characteristics of the Israel Health Data Ecosystem

Health IT in Israel was and is HMO-driven:

- Four competing nationwide HMOs on digital excellence
- Implementation of comprehensive, shared organization-wide Electronic Medical Records in all HMOs by the mid 1990's
- Computerization and integration of all clinical and management systems, patient portals, telehealth, virtual care – the entire health data ecosystem at the HMO level by 2000
- Initiatives at the HMO and hospital level continue to be the main drivers for innovation in digital health, rather than national government

Maccabi's health data ecosystem supports Integrated Care

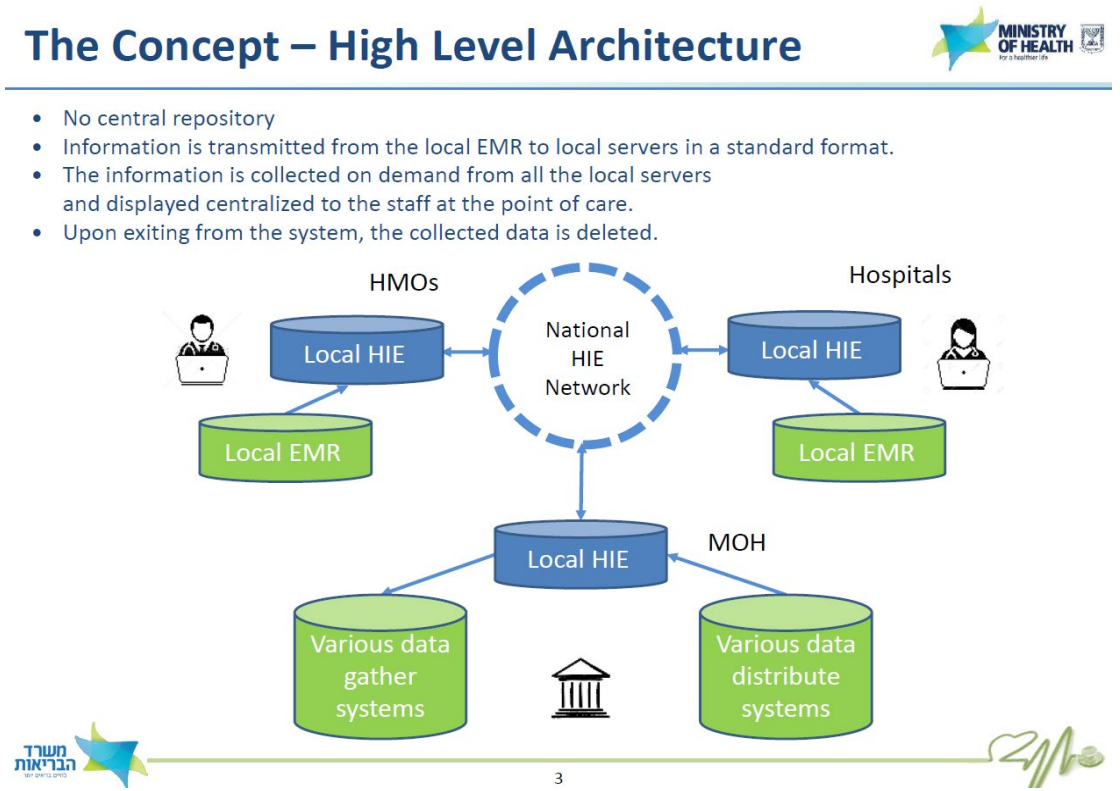
- Central Electronic Medical Record – since early 90's
- Every transaction computerized
- Every provider uses the Maccabi Electronic Medical Record
- Maccabi EMR includes the whole patient record
- E - Laboratory
- E - Prescription
- E - Consultation
- E - visits
- Decision support - Alerts and Reminders
- Registries
- Physician Portal on web and mobile
- Patient Website also on mobile
- PHR - interaction with doctors, alerts, reminders, appointments

Israeli Context for Health Data Ecosystem

During the past decade, the Ministry of Health has assumed increasing leadership, at the national level:

- Development & implementation of a National EHR Exchange
- Articulation of a national strategy for digital health

Structure of EHR exchange reflects local autonomy of HMO and hospital Data Systems



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State of Israel
Ministry of Health
משרד הבריאות

Evolution of the Health Data ecosystem
Begin at the Beginning

Stage 1 – Initiation and Establishing the Foundation

Stage 2 – Ongoing Management and Continuous Development

Stage 3 – Building the Future – Assuring Sustainability

Getting Started
The example of Maccabi – EMR Implementation

Stage 1

- Visionary CEO – strategy and “hands on”
- Health IT Steering Committees
- Joint decision with Independent Doctors on EMR
- Cross-Sector Implementation Management Team
- EMR supported workflow, reduced bureaucracy
- Guaranteed payment
- Doctors designed the EMR User Interface
- First implementers volunteered
- Financial incentives – EMR doctors more NIS/patient
- Critical Mass – EMR became mandatory
- Dedicated mandatory workshops, one-on-one

Maccabi Healthcare Services

Getting Started - Governance Principles

Stage 1

- **Innovative leadership** – vision, proactive involvement, commitment including commitment of resources
- **Active involvement** of key stakeholders – starting with clinicians
- **Assessment** of context, needs, challenges, opportunities
- Clear identification of concrete/compelling **needs** and immediate **benefits**

Getting Started - Governance Principles

Stage 1

- **Incentives** (political, financial, professional)
- **Integrated responsibility** – Multidisciplinary team, integrated organizational process, strongly collaborative but with clear objectives and deadlines
- **Training and Support**

Ongoing management

Stage 2

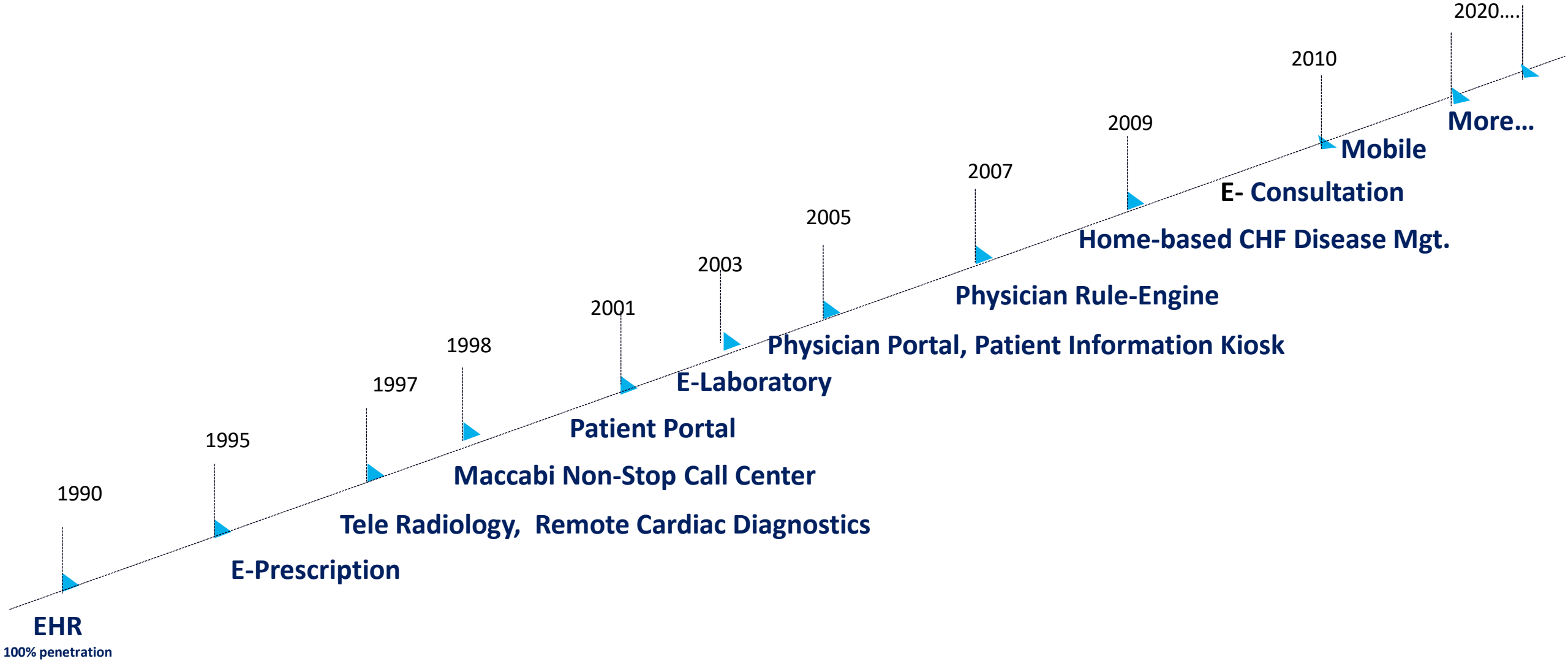
- **Solid supportive leadership, encourage and motivate innovation**
- **Permanent Budget**
- **Foster continued strategic planning**
- **Broadened collaboration of all stakeholders including citizens**
- **Clear process and organizational structure for setting priorities, evaluating new technologies, allocating budgets**
  - multidisciplinary steering committee
  - new organizational units with new skills (medical informatics, quality assurance)

Ongoing management

Stage 2

- ***Building strong relationships between management, clinicians and IT***
- Ongoing **feedback and assessment** by system users, members/patients, doctors and health professionals, managers
- **Monitoring and evaluating** both successes and failures- a continuous learning environment
- Competition and **Change management**
- Achieving **critical mass**

Evolution of Health Data Ecosystem in Maccabi



Clalit Health Services & DbMotion Develop “OfeK”

- **Ofek Network - one of the world’s first integrated HINs**
- **Ofek’s roots -1999, Clalit Health Service (Israel’s largest HMO) - Regional Health Information Organization (RHIO)**
- **Clalit partnered with dbMotion**
  - a web-based electronic health record
  - no central database
  - no requirement to replace existing information systems
  - no disruption to workflow
- **Initially in Clalit Clinics and Hospitals**
- **Today, Ofek Network is Israel’s National EHR Exchange connecting all HMOs with all hospitals**

dbMotion
Connected Healthcare

CLALIT 100 over years
The Best For Your Family

Assuring Sustainability

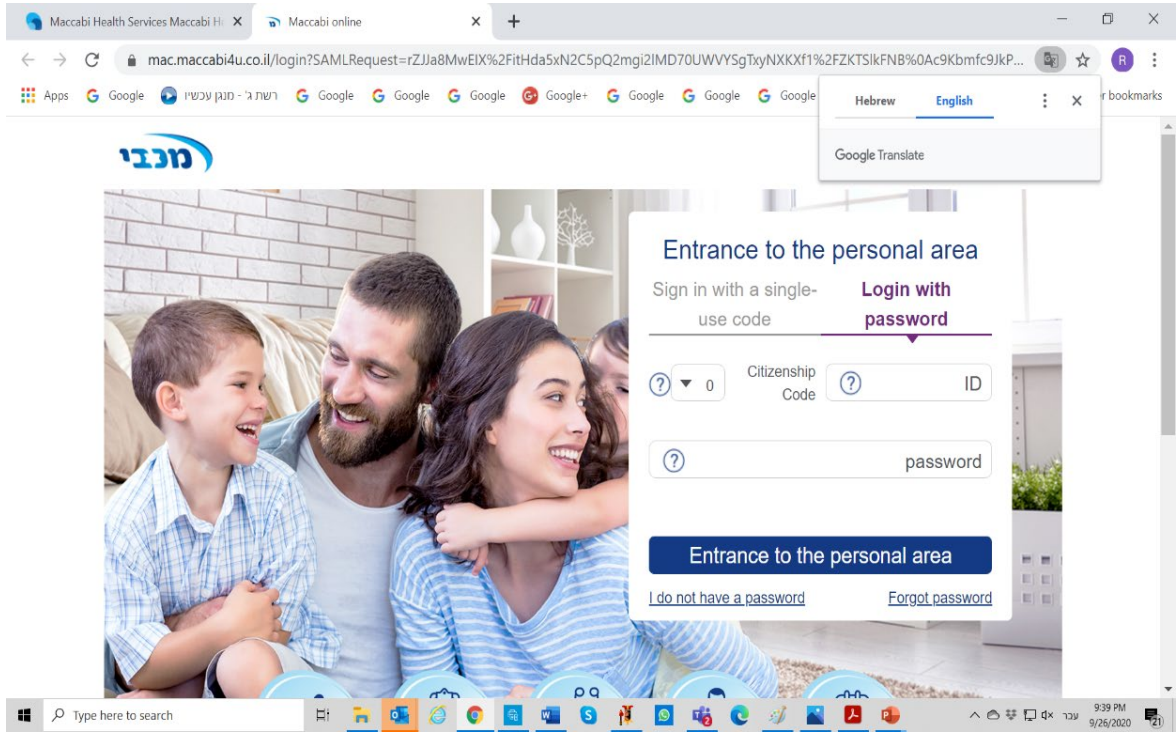
1. Climate that fosters innovation, change, seeing the future, welcomes disruption
2. Embedding IT in ongoing organizational processes – critical mass, way of life
3. Competition and incentives – fostering “champions”
4. Collaboration and co-design – making it easy for users

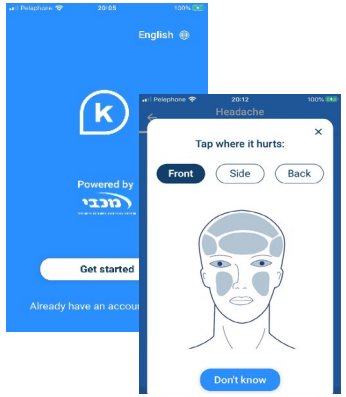
Assuring Sustainability

5. Flexibility and Adaptability – Address Unforeseen Needs – COVID-19
6. Learning to Partner with Tech Industry
7. Securing commitment and leadership at the top levels of governance - appropriate balance and dynamic between top-down and bottom up
8. Ongoing Training and support to all users

Evolution of Maccabi Patient Portal

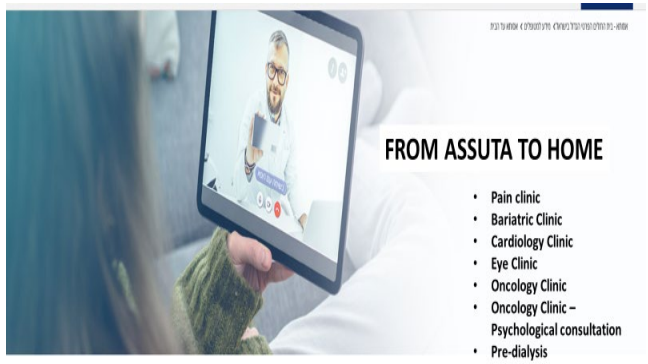
- Website to Mobile
- Accessing information to dynamic interaction
- Passive Recipients to Proactive Partners
  - Virtual Visits
  - Messaging
  - Chat
  - Big Data AI based symptom checker



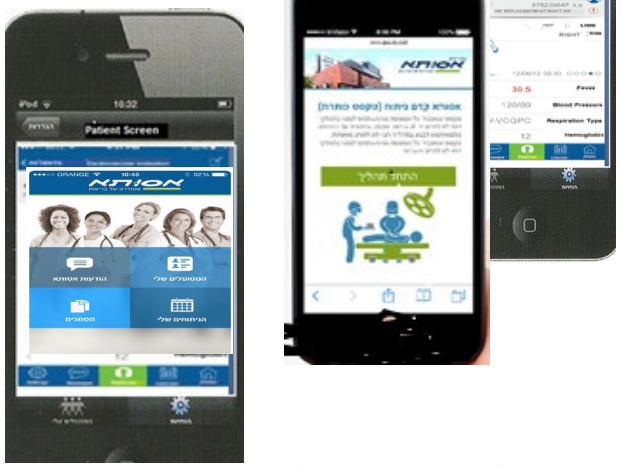


IT Evolution in Assuta Medical Centers

- Hospital/Network- wide EMR
- Patient Portal
- Linking with HMO EMR
- Assuta Doc Mobile EMR
- Proactive link with patients – SMS
- **PROMS**
- TeleConsultation



New! The Assuta Standard Comes to your home – if until now you had to come to a face to face appointment in the hospital for medical consultation, from now on – considering the situation and in order to save you time and money – Assuta offers you remote medical consultation. You can consult with our expert clinicians by video online, from wherever it is convenient for you.



HOSPITAL Assuta RAISING HEALTH STANDARDS

Toward the Future
Changing the semantic

NOT

engagement

BUT

marriage

NOT

empowerment

BUT

partnership

✓ Between management, clinicians, patients and IT

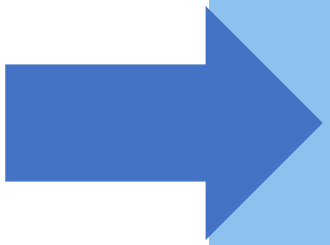
✓ Between Providers and Hi Tech

Toward the Future
Never refreezing

Healthcare needs of the population

Rapid pace of technological change

Advances in medical care



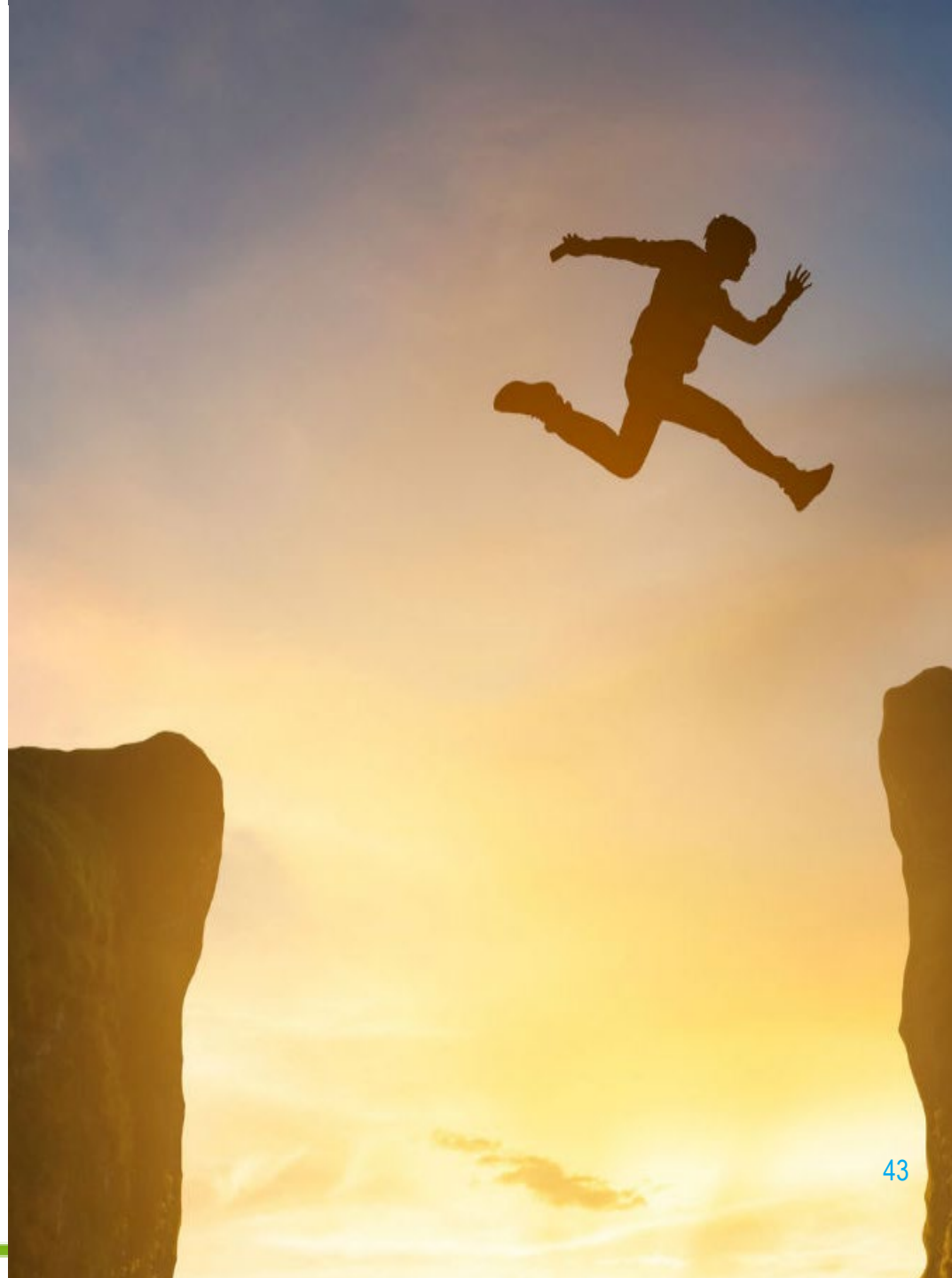
Demand a process of ongoing transformation and openness

Toward the Future
Assure an ongoing process of:

Bridging the gaps between where we are and where we want to be

Learning from our mistakes and correcting

Creating new Challenges and new Goals



Discussion

Front row

- Meghan Bradway – Researcher, Norwegian Centre for E-health Research
- Margaret Whoriskey – Director Technology Enabled Care, Scottish Government
- Zhaklina Chagoroska – eHealth Directorate Advisor, Ministry of Health, North Macedonia
- Donna Henderson – Head of International Engagement, TEC and Digital Healthcare Innovation, Scottish Government
- Reut Ron – Health Policy Researcher, Assuta Medical Centers

Live poll

www.menti.com

Conclusions

Comparing two national approaches

Main differences	Scotland	Israel
Implementation of Health IT	Top-down national strategies	Bottom-up driven by competition
Implementation priorities	Telehealth and telecare	Shared EHRs and Clinical Decision Support Systems (CDSS)

Comparing two national approaches

Commonalities	Scotland	Israel
1. Commited leadership	Shared leadership: senior organisational stakeholders and governmental support	Innovative leadership with commitment from senior management
2. Focus on compelling needs	Accessibility to services, later health and social care integration	Doctors as primary users, later patients
3. Collaboration and communication	Working in partnership (health, social care, local authorities, housing and voluntary sector) + facilitating knowledge exchange with international partners	End-users involved in design of EMR, CDSS and patient portal
4. Embedding IT in ongoing organizational processes	Reflected in national digital health and care strategies implemented	Multi-disciplinary Steering Committee chaired by CEO (Maccabi). All organizational processes are digital and integrated.
5. Providing training and ongoing support	Online resources, exchange networks and training opportunities (NHS Education for Scotland)	Onboarding training for clinicians, health professionals and managers to use Maccabi digital systems + regular updates

Final key messages

- “Permanent white water”: organisational principles to deal with a new reality (agile and disruptive)
- Both bottom-up and top-down approaches agree on governance principles for sustainability:
  - Collaboration between top and bottom players is crucial
  - From stakeholder engagement to marriage
- Knowledge and information sharing is as important as data sharing

Next events

- **EHTEL Innovation Initiative: Exploring Digital Therapeutics**

  Webinar: Digital Therapeutics and interacting with human beings (date TBC)

- **2020 Thought Leader EHTEL Symposium**

  Imagining 2029: Digital services in the move towards healthy and resilient communities

  2-3 December 2020

Thank you for your participation