eHealth at a Crossroads

October 2022

What is eHealth and what is the HSE vision for it?

eHealth definitions vary somewhat but have common themes

World Health Organisation	The cost-effective and secure use of information and communications technologies in support of health and health-related fields, including health-care services, health surveillance, health literature, and health education, knowledge and research
European Commission	The tools and services using information and communication technologies (ICTs) that can improve prevention, diagnosis, treatment, monitoring and management
NHS	The use of information and communications technologies in medicine and other health professions to manage illnesses and health risks and to promote wellness
US (govt)	The use of web-enabled systems and processes to accomplish some combination of the following goals: improve or enhance medical care; improve patient involvement in their medical care and their overall satisfaction with the health care experience; streamline operations and business practices; control expenditures

The HSE eHealth Vision guides strategic action by pointing to the future state the HSE is trying to achieve

eHealth provides connected and complete digital patient records across all patient pathways and care settings

For further definitions of terms, see Glossary in the Appendix

What WE WANT…

Recovery, Resilience & Reform

The 3 R's

Recovery

- Focusing on how to we have set the foundations over the last 3 years for future growth in services and development of the programmes.

Resilience

Strengthening health systems resilience - what do we absorb, adapt and transform reflecting on the last 3 years - key areas, clinical leadership and service delivery, integrated teams and services.

Reform

Improvement on population healthcare, focusing on health and well-being, enhancing the quality of healthcare, re-orientating healthcare to the community.

The 4 legged stool – at Least

Clinical Leadership – and clinical team

Management Leadership and team

eHealth Leadership and team

Patient involvement

Current State Programmes

49 Total Capital Programmes

0 Completed Programmes

33 Programmes in Delivery Stage

6 Programmes in Procurement Stage

8 Programmes in Proposal Stage

2 Programmes in Pre-Mandate Stage

eHealth National Service Plan Programmes				Project Count Within Programme (Capital Funded)				
Category	Programme	Programme Stage	RAG Status	TOTAL	1. Proposal	2. Procurement	3. Delivery	4. Completed
1. Foundational Infrastructure & Cyber Technology	1.1 Network & Communications Technologies	3. Delivery	Green	177	9	23	87	58
	1.2 Refresh Current Technology & Devices	3. Delivery	Green	172	21	19	74	58
	1.3 Single Identity	3. Delivery	Amber	6	3		2	1
	1.4 Data Centre & Cloud Services	3. Delivery	Green	50	2	10	21	17
	1.5 Healthlink Cloud Migration	3. Delivery	Amber					
	1.6 Cyber Security Technology	3. Delivery	Green	32	5	9	9	9
	1.7 New Technology	3. Delivery	Green	29	4	8	12	5
	1.8 IHI Infrastructure Refresh & Migration	3. Delivery	Amber	3		2		1
	Subtotal			**469**	**44**	**71**	**205**	**149**
2. National Programmes	2.1 IHI Integration - Sustain Consumer Systems	3. Delivery	Amber	7	4	1	1	1
	2.2 Integration and Interoperability	3. Delivery	Amber	6	3	2	1	
	2.3 Acute Floor Solution	3. Delivery	Green	2	1		1	
	2.4 Critical Care ICT	3. Delivery	Green	16	3		11	2
	2.5 Maternity and Newborn (MN-CMS)	3. Delivery	Green	26	1	3	12	10
	2.6 Medical Laboratories	3. Delivery	Amber	12	3	2	6	1
	2.7 National Cancer Information System	3. Delivery	Green	11			3	8
	2.8 National Electronic Blood Track	3. Delivery	Green	6	1		4	1
	2.9 Medical Imaging (NIMIS & others)	3. Delivery	Amber	19	1	3	8	7
	2.10 CHI ICT	3. Delivery	Green	44	8	7	5	24
	2.11 CHI EHR	2. Procurement	Red	1		1		
	2.12 CHI Crumlin-Temple St	3. Delivery	Green	17	4	4	4	5
	2.13 PAS iPMS	3. Delivery	Green	23	5	5	6	7
	2.14 ePharmacy	3. Delivery	Green	7	2		3	2
	2.15 EU Open NCP-SCR	3. Delivery	Amber	10	5	2		3
	2.16 Chronic Disease Management (CDM)	3. Delivery	Green	2			2	
	2.17 National Forensic Hospital	2. Procurement	Green	2			1	1
	2.18 National Rehab Hospital	2. Procurement	Green	1			1	
	2.19 interRAI Assessment Tool	3. Delivery	Green	2			1	1
	2.20 National Nursing Homes Support Scheme Replacement	1. Proposal	Green	4	1		2	1
	2.21 Small Solutions	3. Delivery	Green	172	66	25	48	33
	2.22 Nurse Task Force Management - Safe Nursing	3. Delivery	Amber	2		1	1	
	2.23 Integrated Financial Management	3. Delivery	Red	21	2	4	14	1
	2.24 National Estates System	3. Delivery	Green	2			1	1
	2.25 National Integrated Staff Records	3. Delivery	Green	7		2	3	2
	2.26 National Single Sign-on Solution	3. Delivery	Green	2	1	1		
	Subtotal			**424**	**111**	**63**	**139**	**111**
3. HSE Transformation Priorities	3.1 Scheduled Care eEnablers	1. Proposal	Amber	8	6		1	1
	3.2 Shared Care Record	1. Proposal	Amber	5	3		2	
	3.3 Integrated Community Case Management	1. Proposal	Green	3	3			
	3.4 Telehealth	3. Delivery	Green	11	1	1	4	5
	3.5 Endoscopy	1. Proposal	Green	1		1		
	3.6 Cardiology	Pre-Mandate	Green	1				1
	3.7 SSW Inpatient Journey Solution	2. Procurement	Amber	1		1		
	3.8 Order Comms	2. Procurement	Red	2		1	1	
	3.9 ePrescribing & NMPC	1. Proposal	Green	3	2	1		
	3.10 Infectious Disease Register (CIDR)	Pre-Mandate	Amber					
	3.11 Citizen Portal	3. Delivery	Amber	2	1			1
	3.12 Immunisation	2. Procurement	Green	10	1	1	4	4
	3.13 Home Support Management System	1. Proposal	Green	1	1			
	3.14 Residential Care Management System	1. Proposal	Amber	2	1		1	
	3.15 Health Performance and Visualisation Platform	3. Delivery	Red	2	1		1	
	Subtotal			**52**	**20**	**6**	**14**	**12**
TOTAL eHEALTH				**945**	**175**	**140**	**358**	**272**

- 3 Categories, 49 Programmes
- Over 945 eHealth projects
  - 358 in Delivery
  - 139 National Programmes
  - 14 Transformational
- Multiple Domains
- Some Mega Projects
  - Covax
  - CTT

Current State Programmes

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Current State Programmes

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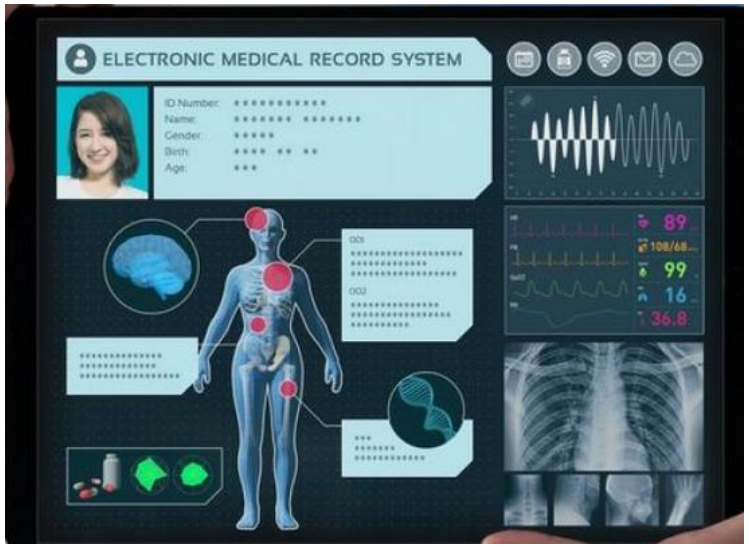
3 Big Challenges

Identity

Integration

Electronic Health Record



Transport
- SFTP
- SMTP
- MLLP
- HLLP
- HTTPS
- SOAP

Security
- IPsec VPN
- Mutual TLS
- Basic
- OAuth
- JWT

Content
- HL7v2
- X12
- CCD, CDA, C-CDA
- NCPDP
- DICOM
- FHIR

Code/Terms
- LOINC
- SNOMED
- RXNorm
- CVX
- ICD-10
- CPT

3 Big Challenges - Identity

Identity must uniquely manage identity at point of care

- **Recovery**:
  - IHI index is available
  - 97% success rate in Covid Vaccine programme
- **Resilience**
  - IHI delivery in Acute Hospital Letterkenny
  - PCRS seeded
  - GP's to be Seeded Q4 (public patients)
  - Deployment to start in West and Mid-West Q4
- **Reform**
  - Integration to clinical systems
  - Health Information Bill
  - Digital Wallet

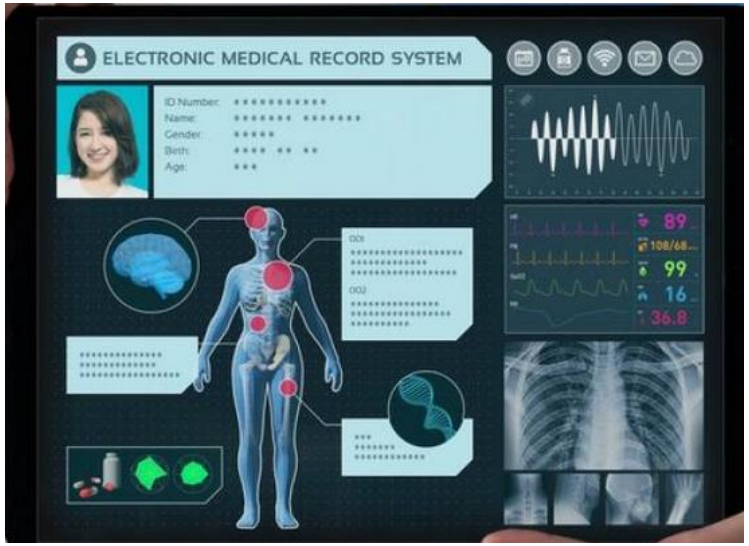
3 Big Challenges - Integration

Integration – Share existing data across care locations

- **Recovery**:
  - Programme underway
  - Market soundings started Q4 for Share Care Record
  - Enterprise Integration Solution planned for 2023
- **Resilience**
  - Standards based approach for all new solutions
    - Data Access, Coding, Security, Information Management
  - Retrofit existing solutions where possible
- **Reform**
  - Share Care Record Programme

3 Big Challenges - Integration

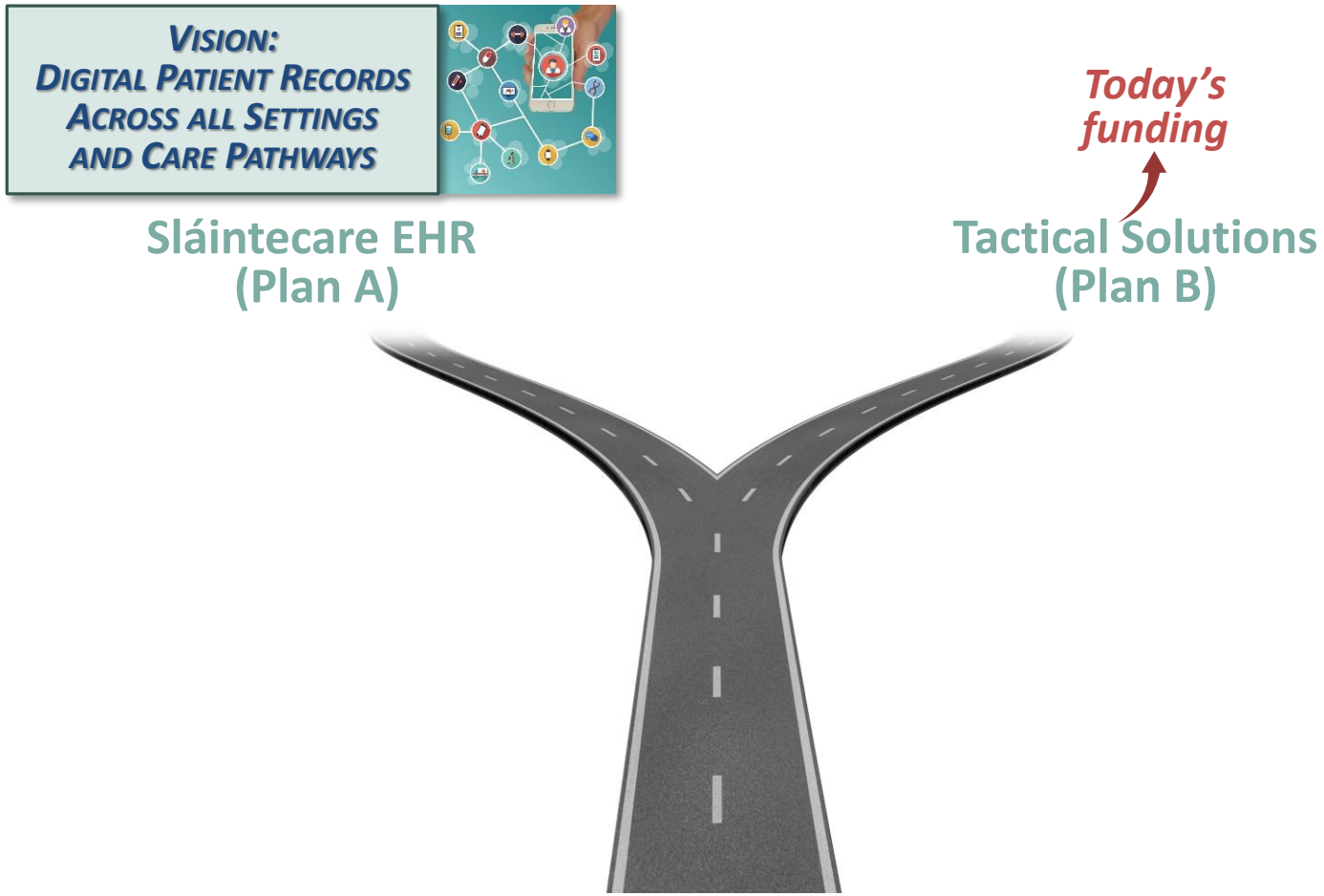
EHR – Please….



- **Recovery**:
- **Resilience**
- **Reform**
  - A goal of Sláintecare and what the service wants
  - Gives us a single “North Star” – an ultimate destination
  - Would require some point solutions, but they would be integrated into the EHR
  - Supports the development of RHAs
  - Every other EU/Western country is pursuing a version of Plan A
  - HSE business case cost estimates for an EHR are consistent with international experience
  - A national EHR is not funded at this time

Current State of Play: eHealth funding is misaligned with Sláintecare targets

- The leading Sláintecare Action for eHealth is *Implement Electronic Health Record System*, but this is not on a national delivery path because funding has not been approved
- Approval was deferred in 2019 until after reviewing the outcomes of the CHI EHR
- This left only one option for digitising and unifying patient records – delivery of multiple Tactical Solutions



Current State of Play: Our current path does not result in digitised patient records

- Because of this, we still have hospitals and community organisations across the country who are left with the problem of paper patient records
- Current funding does not provide a path to solve this nationally

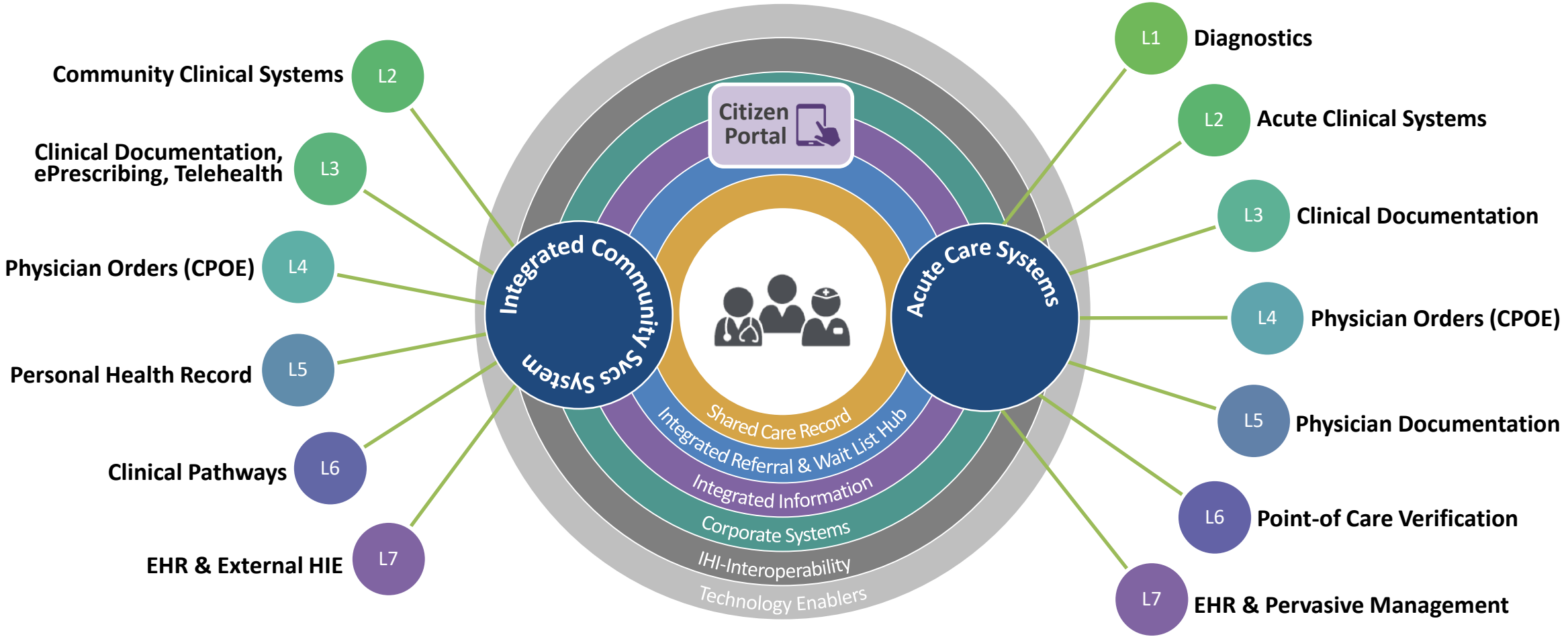
Plan B is a temporary detour, not a stand-alone option; it both extends the timeline for achieving the vision, and ultimately increases cost

- What do we want to do about it?
- How do we get back to Plan A?

Key Benefits of an EHR

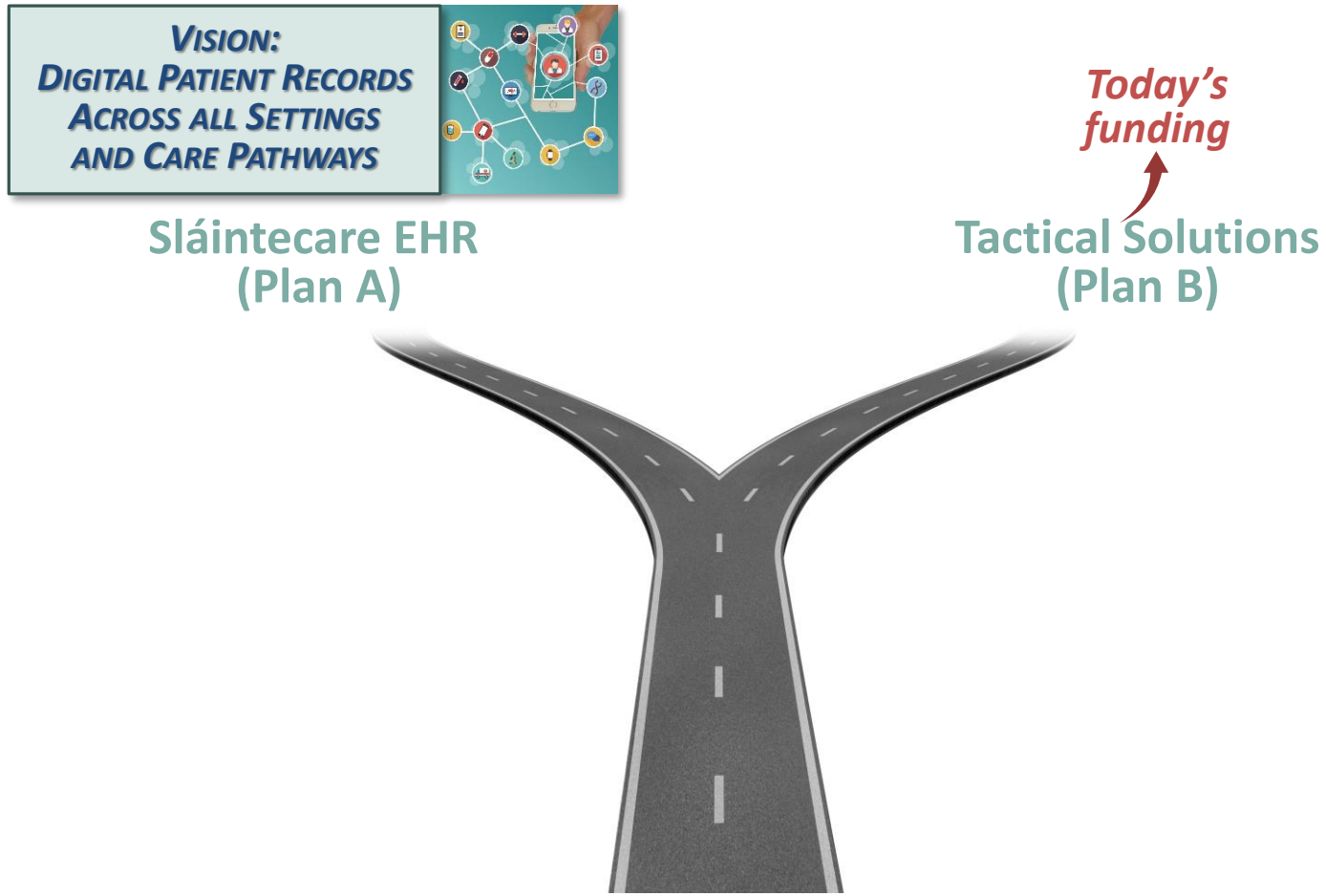
Comprehensive view of the patient	Dynamic patient-centred records enable clinicians to track a patient's care continuum over the person's lifetime, in sickness and health. Having a single, continuous record for a patient provides a holistic view of overall health for better diagnosis and lifetime treatment.
Seamless care pathways	With digital records, clinicians can more easily coordinate and track patient care across practices and facilities. Services can be coordinated and scheduled over the course of a single visit, rather than time-consuming multiple visits. Clinicians across specialties and disciplines also collaborate on patient outcomes as a team to ensure better care.
Shared information	The ability to share information across disciplines, specialties, pharmacies, hospitals and RHAs, as well as have on-demand access to charts via mobile devices, enables faster diagnostic turnaround times and allows for better and more timely decision making, particularly in critical situations. At the regional level, information sharing allows for informed allocation of both patients and clinical resources.
Reduction in medical errors	Digital records allow for better tracking and more standardized documentation of patient interactions, which has the potential to improve patient safety by reducing medical error. With digital paper trails, illegible handwriting in clinicians' notes or prescriptions is no longer a problem, and coding for procedures or billing is easier. Integrated systems can also be set to flag drug interactions and other indicators of potential harm.
Streamlined workflows	EHRs increase productivity and efficiency of clinicians while cutting down on paperwork. Patients and staff have fewer forms to fill out, leaving clinicians with more time to see patients. Referrals and prescriptions can be sent quickly, cutting wait times for appointments and pickups. Automatic reminders can tell patients when it's time for annual check-ups or alert them as they approach milestones that require regular screenings. With integrated patient tracking, billing and insurance claims can be filed in a timely manner.
The power of data to inform health strategy	Continuous data collection allows for greater personalization of care, allowing providers to address health issues in a preventive manner. Also, 'big data' analytics and aggregated patient data may be able to alert providers to larger health trends such as potential outbreaks and which flu strains are prominent during each flu season. On a macro level, analysis of system-wide population and health data informs the development and evolution of health strategy.
Greater efficiency and cost savings	Digital records and integrated communications methods can significantly cut administrative costs, including reducing the need for transcriptions, physical chart storage, as well as facilitating care coordination and reducing the time it takes for hard-copy communications among clinicians, labs, pharmacies, etc.

Vision: Integrated systems architecture that aligns services to HIMSS* maturity levels



*HIMSS: Healthcare Information and Management Systems Society

Note: L1-L7 solution categories based on HIMSS EMR Adoption Models (EMRAM)

Strategy and Plan B 2023

- eHealth is developing an updated strategy
- Designating a number of key transformational programmes
  - IHI, Sharecare Record ++
- Maximising our existing technology stack across all health care settings
- Maximise the Data Lake