

Alberta Innovates

Re-imagining Innovation in Health

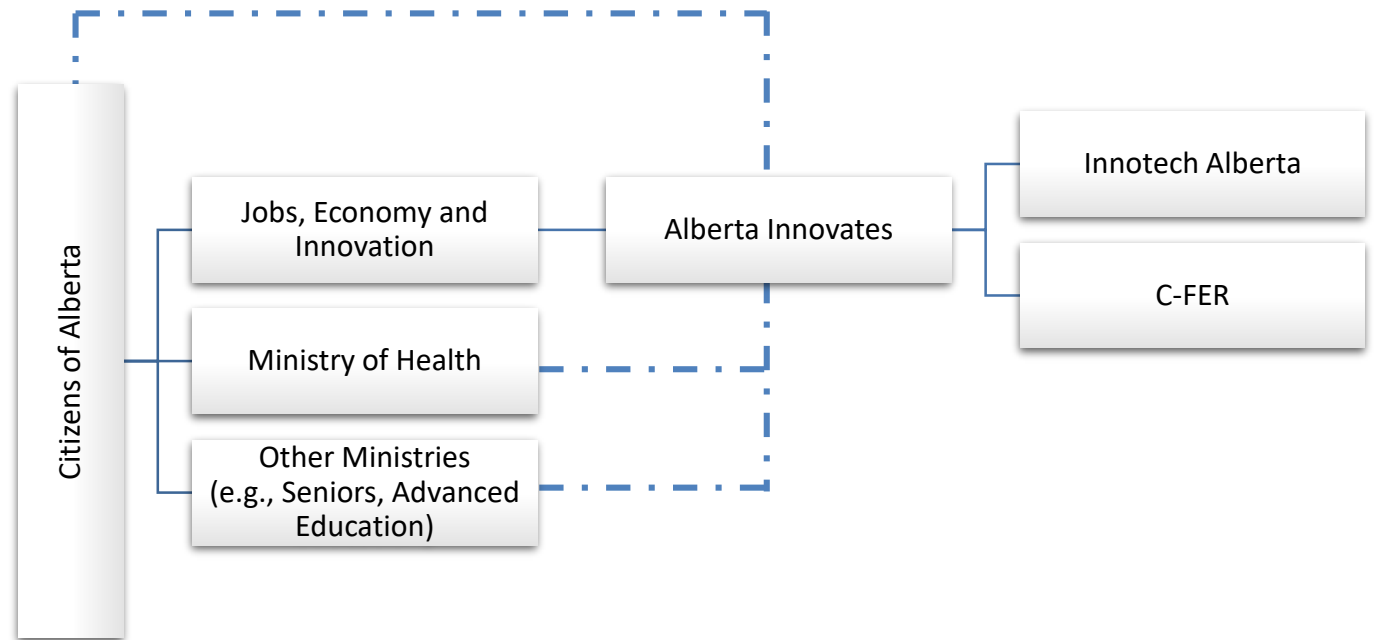
Tim Murphy, Vice President, Health
InfoCentral Health Analytics Community

January 28, 2021



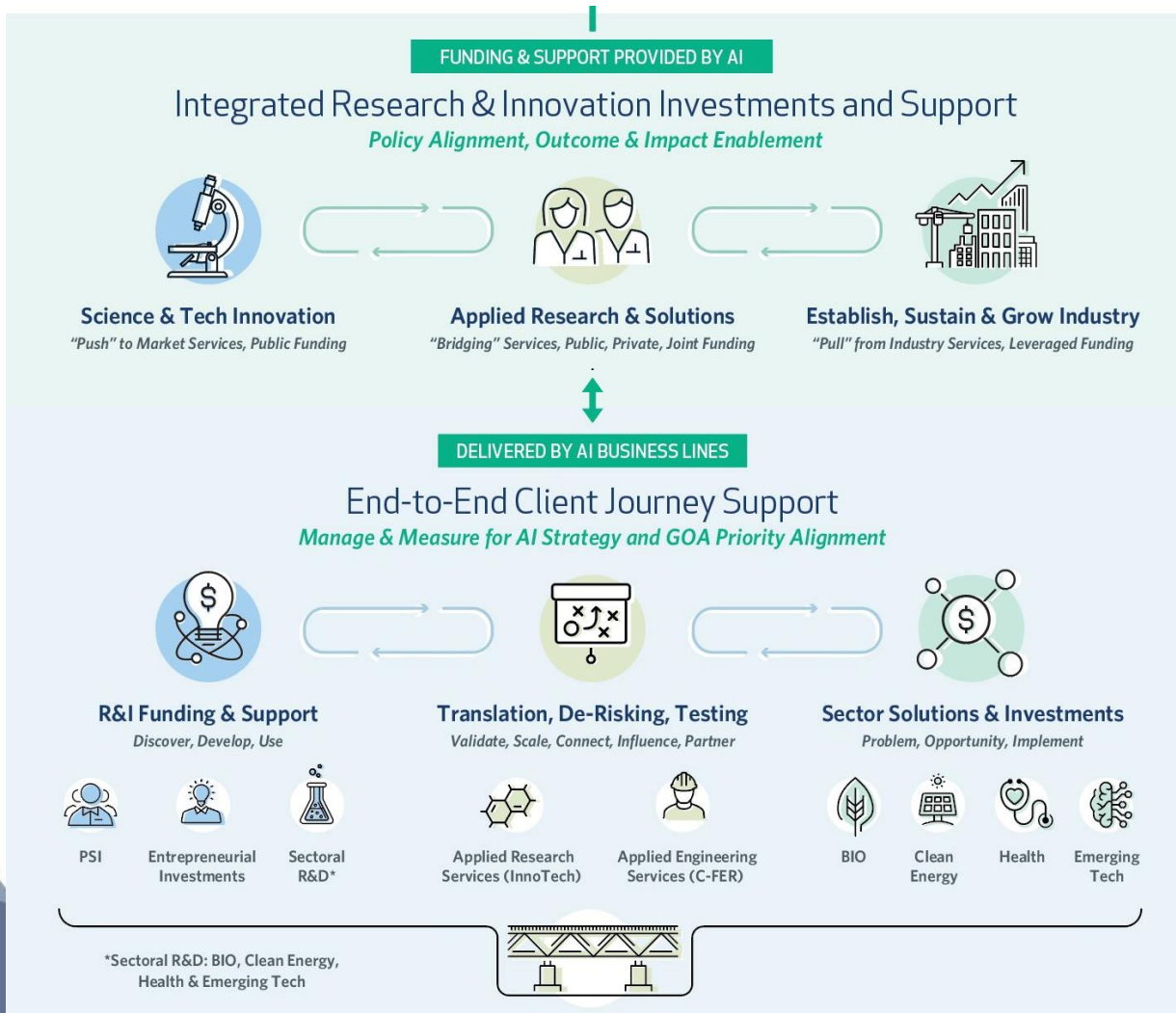
ORGANIZATIONAL OVERVIEW

GOVERNANCE



ORGANIZATIONAL OVERVIEW

BUSINESS MODEL & ORGANIZATIONAL STRUCTURE



Mandate

To deliver 21st –century solutions for the most compelling challenges facing Albertans.

ORGANIZATIONAL OVERVIEW

STRATEGIC PRIORITIES



Develop Emerging Technologies

Facilitate growth and development of emerging technologies and their applications in Alberta that have demonstrated potential for high return and lower risk.



Enhance Our Knowledge Workforce

Play a key role in enhancing Alberta's knowledge workforce by working with post-secondary partners and others.



Embrace the Digital Future

Streamline and automate our internal processes and operations to ensure clients are aware of and have seamless access to our programs and services.



Data-Enabled Innovation

Transforming data into actionable information enables digital transformation.



Digital Technology for Business Transformation

How we leverage technology to sense and measure information across an enterprise is changing the way we live and conduct business.



Clean Technology

The sustainability of our planet necessitates innovation for a low carbon future

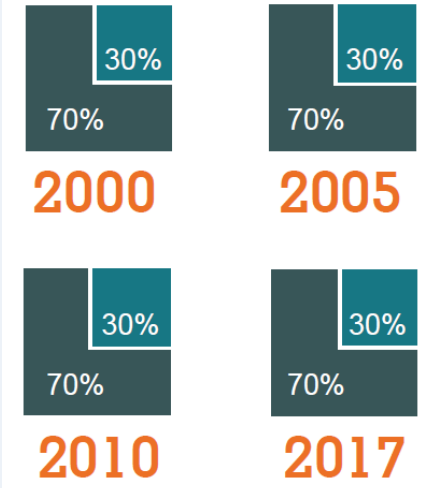
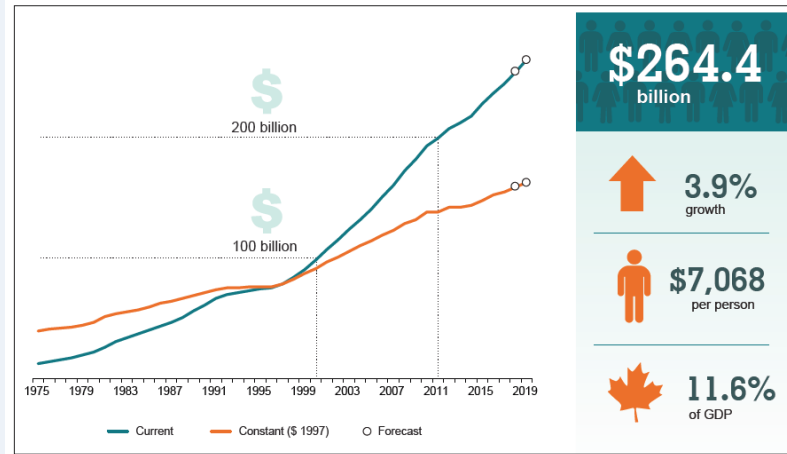
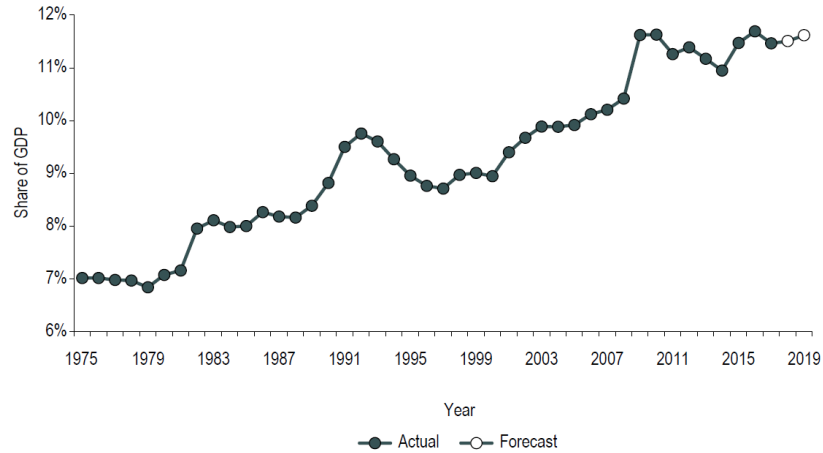


Innovation Production and Distribution

In a globalized economy, product innovation and access to market is critical to competitiveness and continued prosperity.

Opportunities in Health Care Delivery

Economic Opportunity



REPORT CARD

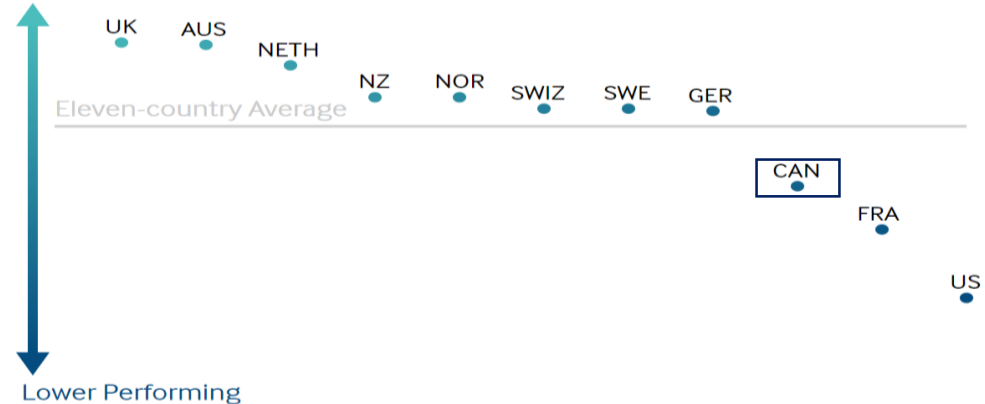
Health

1	Switzerland	A	4	Australia	B	15	Finland	C	21	Denmark	D
2	Sweden	A	5	Norway	B	16	U.K.	C	22	N.S.	D
3	B.C.	A	6	France	B	17	N.B.	C	23	Man.	D
			7	Ont.	B	18	Austria	C	24	Sask.	D
			8	Japan	B	19	Ireland	C	25	U.S.	D
			9	Netherlands	B	20	Belgium	C	26	N.L.	D-
			10	Canada	B				27	Yukon	D-
			11	Que.	B				28	N.W.T.	D-
			12	P.E.I.	B				29	Nunavut	D-
			13	Alta.	B						
			14	Germany	B						

Note: For details on methodology, see the "Methodology & Data" section of this website.
Source: The Conference Board of Canada.

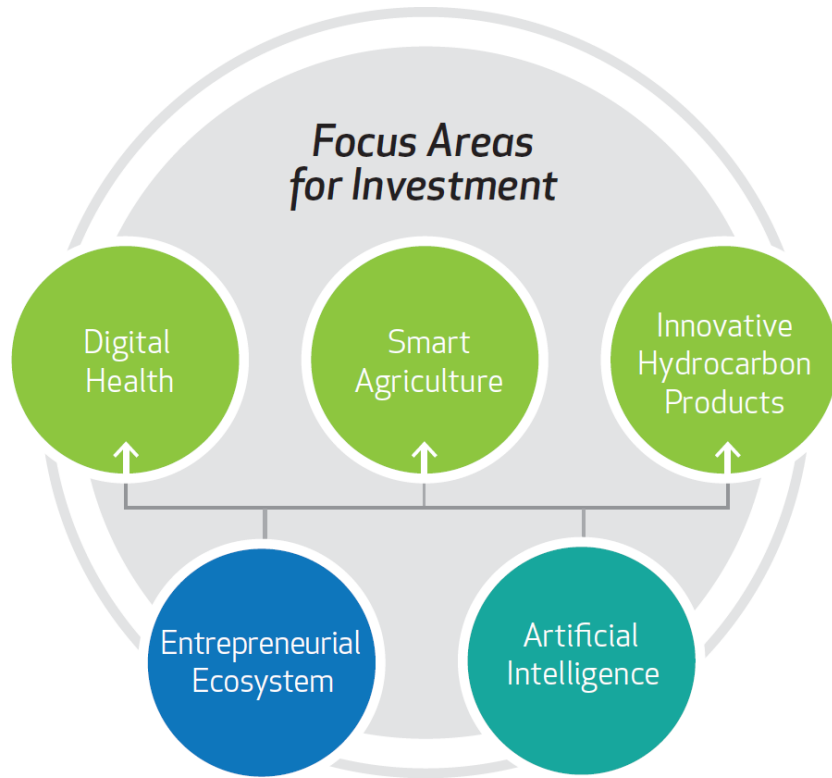
Overall Care Process Access Administrative Efficiency Equity Health Outcomes

Higher Performing



Health Opportunity

Research and Innovation Priorities

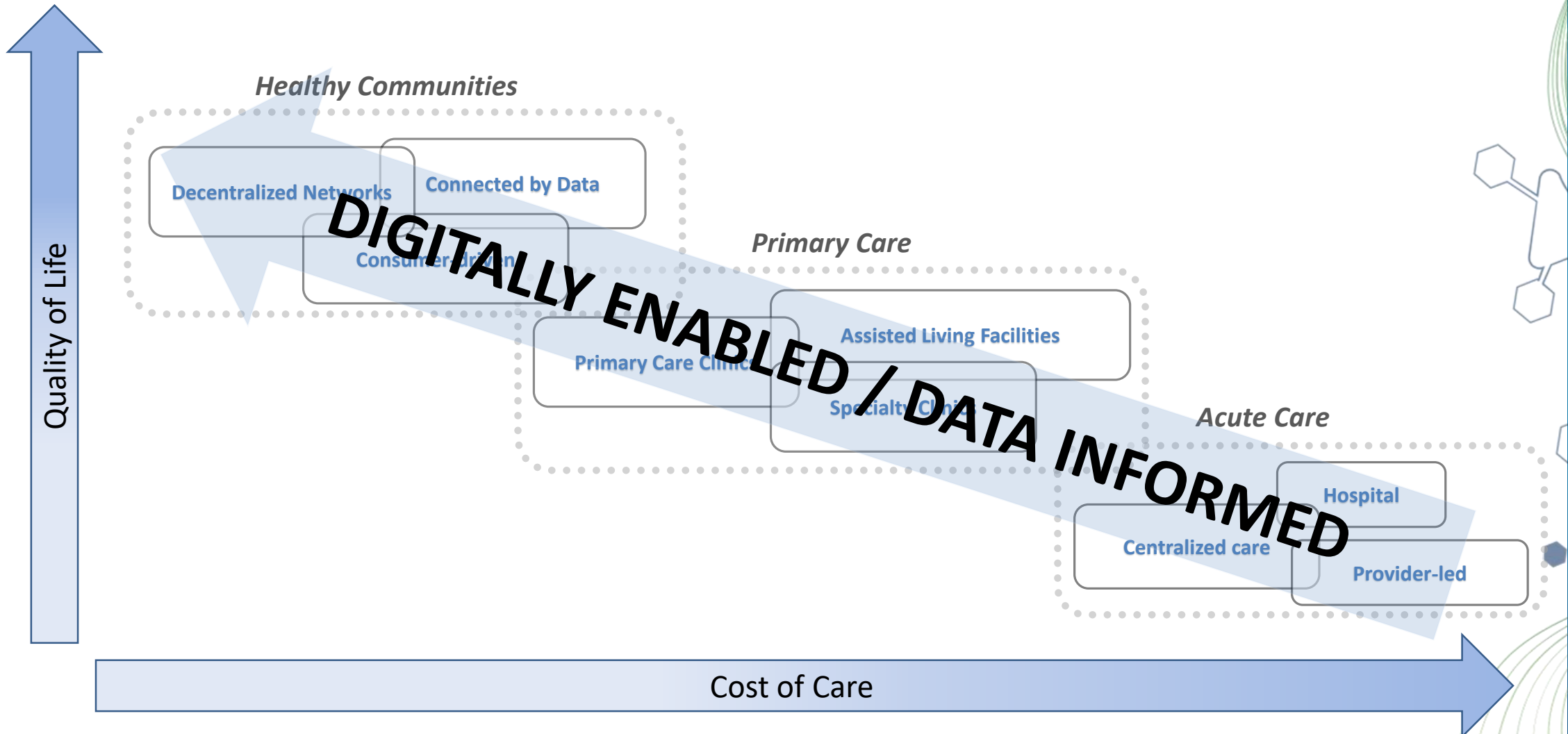


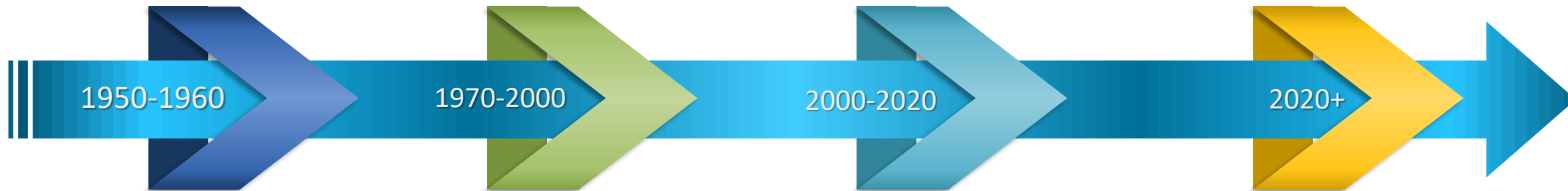
See [Alberta Innovates 2019-2022 Business Plan](#) for more detailed information on global market trends.

2000 - 2020	2020+
E-health	Digital Health
Necessary to capture baseline data to improve quality and safety of healthcare.	Necessary to make holistic care that is patient-centric a reality.
Enabled by public funders investing in interoperability.	Enabled by exponential advances in and connectivity of digitally-enabled and data-informed technologies.
Enterprise-wide shared health record (EMR/EHR) implementation becomes a necessity.	Analytics, artificial intelligence, robotics, machine learning, internet of things, health apps, xReality, precision health.
Provider-directed and controlled care processes.	Citizen-centric with providers as participants.

*Adapted from Rowlands "What is digital health and why does it matter". Accessed 2020.08.31 from https://www.hisa.org.au/wp-content/uploads/2019/12/What_is_Digital_Health.pdf?x97063.

Shifting the Paradigm.





Mainframe Computers

Health IT

E-Health

Digital Health

Mainframe computers are introduced into business sectors.

Mainframe computers were agnostic to all sectors.

Code written in machine and assembly language.

Relatively limited impact on healthcare.

Focus: Limited focus on corporate support functions only.

Health informatics as a discipline emerges.

Problem oriented health record is implemented.

Personal computers on the market for consumers.

Health IT departments in hospitals deploy IT enterprise systems.

Focus: Logistics and organizational functions a major focus, performance is prioritized. Management systems software focus.

Growth in chronic illness rates, need for data given quality and safety challenges.

Consumerism emerges with use of personal computers and access to information via internet. Public funders invest in interoperability.

E-commerce emerges. Enterprise wide shared health record (EMR) implementation underway.

Focus: Health IT focus on patient care delivery, digital technologies focus on provider directed and controlled care processes.

Analytics, AI, robotics, machine learning, Internet of Things, health apps, virtual reality.

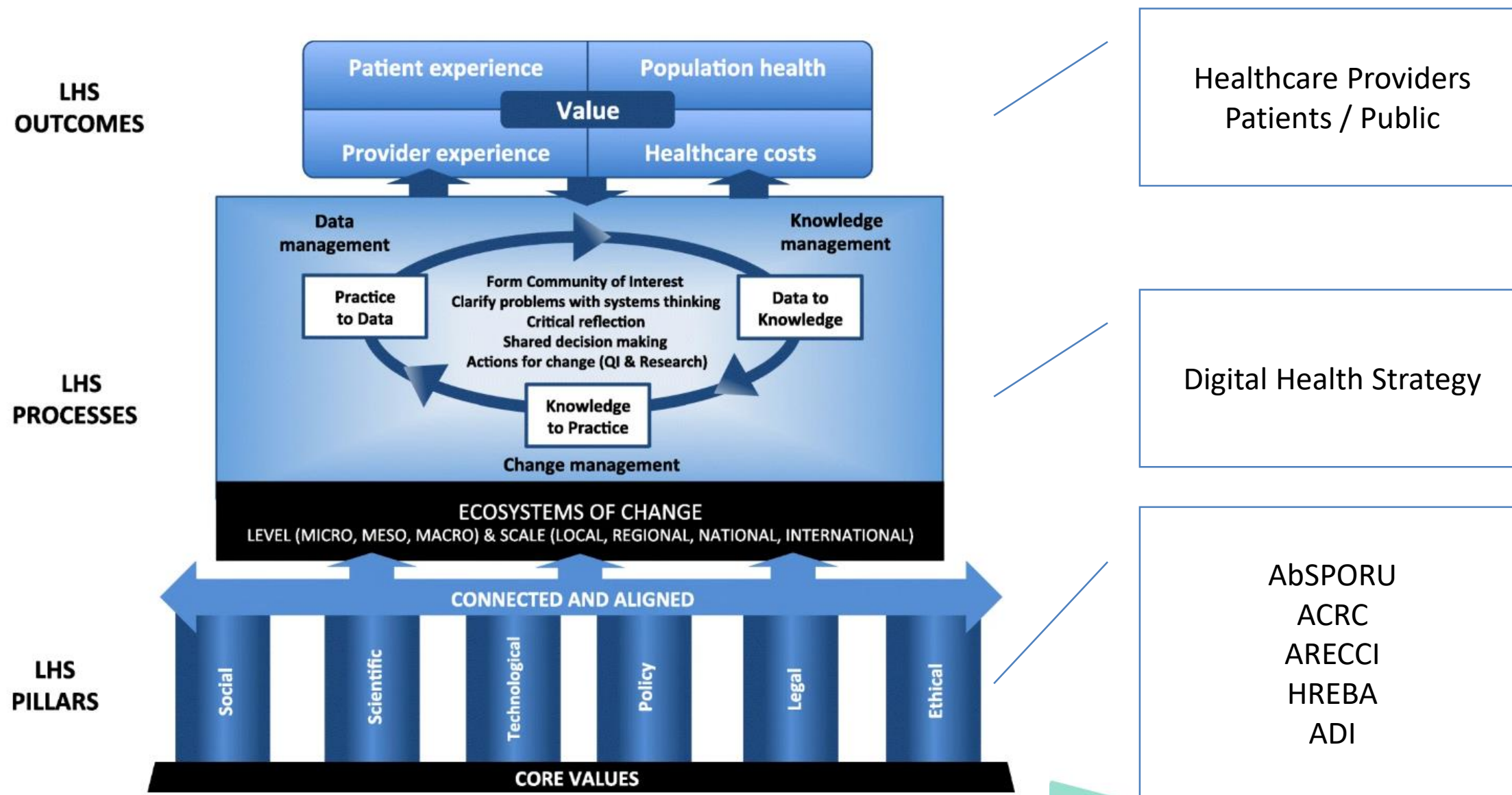
Pervasive use of ICT in “digital” societies.

Wellness focused.

Citizens demand health services that are responsive when and where needed, digitally, like other business sectors.

Focus: Citizen and consumer-centric — care that aligns with lifestyle. New data sources (e.g. wearables, sensors, social network data) connect to health systems.

LEARNING HEALTH SYSTEM



What are the Key Assets in Alberta?

- Single Integrated Health System
- Data Assets
- Diverse Population
- Strategic Clinical Networks
- Alberta Machine Intelligence Institute
- Alberta SPOR SUPPORT Unit
- Real World Evidence Unit
- Institute of Health Economics
- Strong Talent/Skills
- Highly Digitized Health System – Patient Portal; EPIC Implementation

Our Vision.

Alberta Innovates aspires to

“Play a strategic role by supporting and creating a vibrant digital health sector in Alberta while maintaining a citizen focused view.”

Our digital health vision is to play a strategic role by supporting and creating a vibrant digital health sector in Alberta, while maintaining a citizen-centric view to improve the health and well-being of Albertans. Over the next three years, we are committed to:

BE A CONVENOR AND CONNECTOR



Further to our current role as an advocate, we will also be a convener and connector within the ecosystem.

SET THE STANDARD



Conduct business in an ethical and socially responsible manner.

INVEST IN DIGITAL HEALTH



Create funding opportunities specific to digital health.

DELIVER BUSINESS-FIRST SUPPORT



Support Alberta companies to commercialize.

BUILD A BOLD CULTURE & COMMUNITY



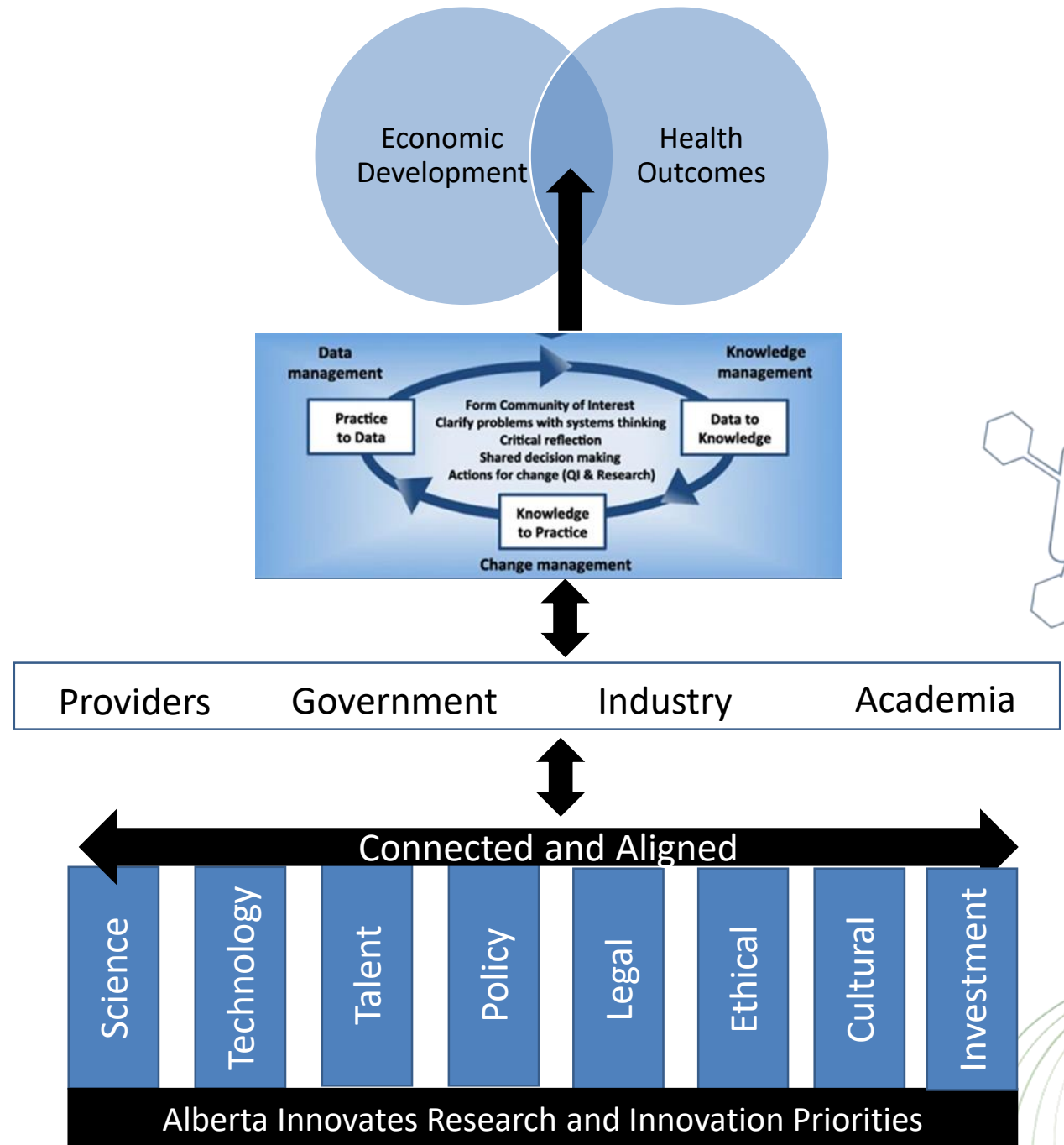
Create a sustainable and brave culture to be innovative and take risks.



Our Approach

What do we know?

- Innovation in Health is a multi-faceted and complex process.
- Partnerships are a critical success factor.
- Learning from our experiences will maximize our activities.
- Economic and Health outcomes are the end game, and, in our case, they are inextricably linked.
- Our research and innovation priorities drive our activities through this framework



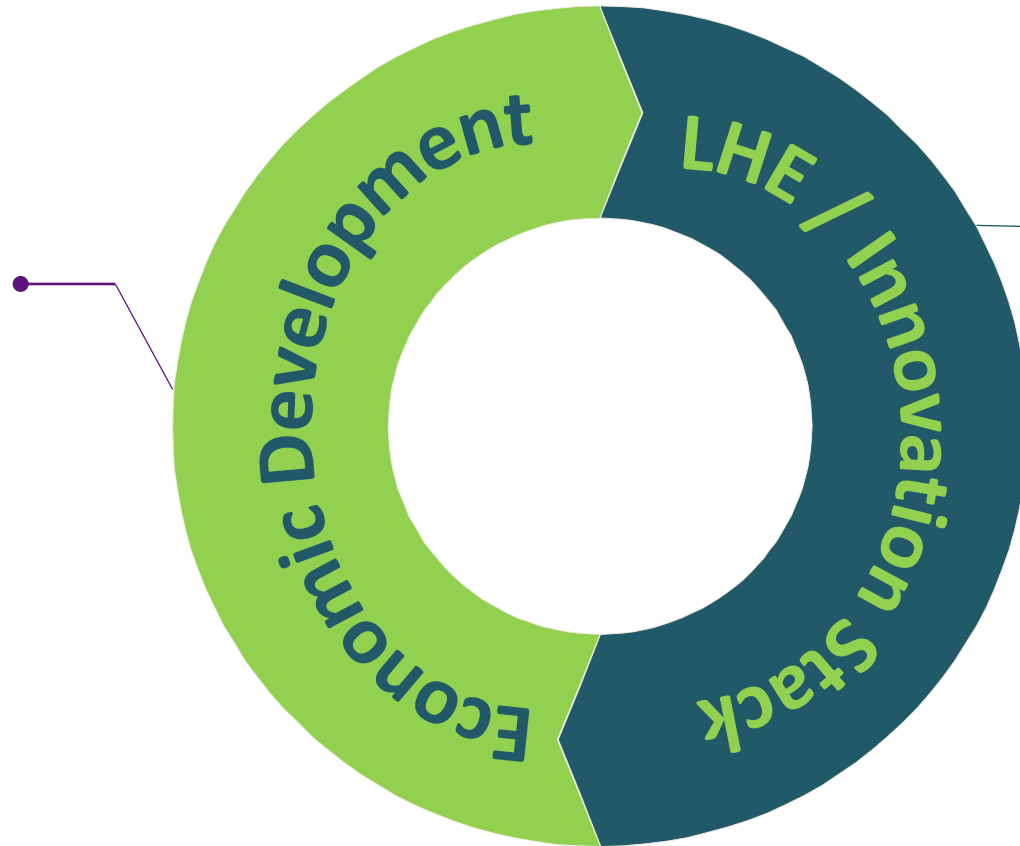
Digital Health Impacts

	NIH	HC	FDA	AI Business Plan
Health	<ul style="list-style-type: none"> • Improve access to care; • Reduce inefficiencies in the care system; • Improve the quality of care; • Lower the cost of care; • Provide more personalized health care for patient 	<ul style="list-style-type: none"> • Improve access to care; • Facilitate more timely diagnoses and treatments; 	<ul style="list-style-type: none"> • Empower consumers to make informed decisions about their own health; • Provide new options for facilitating prevention, early diagnosis of life-threatening diseases; • Improve management of chronic conditions. 	<ul style="list-style-type: none"> • Reduce inefficiencies in health care delivery; • Improve access; • Reduce cost of care; • Increase quality of care; • Make medicine more personalized and precise.

	Canada Health Infoway	OECD	ICTC	ISED
Economic	<ul style="list-style-type: none"> • Digital health investments contribute to economic development in terms of job creation, increased productivity and other economic measures. 	<ul style="list-style-type: none"> • Digital technology has transformed the global economy. But two decades into the 21st century, a similar transformation is yet to occur in health. 	<ul style="list-style-type: none"> • The domestic health ICT sector has an impact on the overall Canadian economy including the creation of employment, generation of revenue and innovation. 	<ul style="list-style-type: none"> • Digital health is due to be a \$233 billion global market by 2020, and precision medicine, which is set to be an \$88 billion market by 2023.

Two sides of the same coin for sustainable growth

**Economic
Development:**
Jobs; Economy;
Economic
Diversification



**Learning Health
Environment
Outcomes:**
Patient and Provider
Satisfaction; Improved
Health Outcomes;
Value for Money.

Health Innovation Ecosystem Partnerships

Health System Transformation We work closely with health service delivery partners and their patients to facilitate the development and adoption of novel solutions that will enhance health care delivery for patients in Alberta. This includes testing and scaling novel models of care, leveraging digitally-enabled and data informed technology, and empowering patients to actively participate and lead their own care when it is possible.

Health Technology Acceleration We work collaboratively with ecosystem partners to grow a robust health innovation ecosystem that eliminates the barriers that slow innovation. This includes building partnerships and platforms that provide opportunities for health-technology companies to develop their products, navigate the regulatory system, ready their businesses, and test product-market fit.

Emerging Opportunities Health is a complex and ever-changing industry. We are responsive to emerging opportunities in new strategic areas; spanning the innovation spectrum from discovery to development to market adoption.

Talent People are at the heart of everything we do, and we need to generate the talent necessary to drive the future of our economy. We support the attraction, retention, and development of skills in alignment with the evolving health innovation market needs.

THE ALBERTA INNOVATES CLIENT JOURNEY

(Adapted with permission from startupcommons.org)



We cannot create a health innovation ecosystem on our own.

**Our ecosystem partners are doing great work
(or trying to do great work with limited resources).**

Let's work together.

Our Plan

Digital Health Roadmap Implementation Committee

1. Digital Health – Governance and Impact

2. Digital Health Champions and Change Agents (Internal)

3. Operational Excellence

4. Partnerships

5. Talent (External)

6. Engagement Enablers

6.1 Positioning and Content Campaign

6.2. Digital Health Dashboard

6.3. Digital Health Summit

7. Digital Health Client Journey

7.1. Program/Services Mapping and (re)Alignment

7.2. Clinical Trials Support

7.3. Data Access Support

7.4. Regulatory, Security, Privacy compliance



Questions?

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