

# 2015-2020 Alberta Health Services

## Information Management and Information Technology Strategic Plan



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# EXECUTIVE SUMMARY

We need to make the right information available to the right people at the right time across the health system, so that health care providers can rely on the data to make meaningful decisions to improve health care for Albertans. In keeping with the Alberta Health Services' 2014-17 Health Plan and Business Plan, the Information Management and Information Technology (IMIT) Strategic Plan outlines how Alberta Health Services will invest in IMIT over the next five years to support better quality health care in this province. The IMIT Strategic Plan was developed following consultation and engagement with diverse groups of stakeholders across the province.

The IMIT Strategy can be summarized in the following themes:

## What do we need?

- **We need a single integrated patient record** – To enhance patient safety and the continuity of patient care, departments, facilities, community services and the patient's home need to be able to talk to each other electronically. One comprehensive record for each patient will improve access to complete and timely health information.
- **We must meet the ever-changing consumer expectations and trends in technology** – Both patients and health care providers increasingly rely on technology to make health care decisions. Mobile information access, social media, cloud technologies, increasing complexity of security and the volume and availability of data all continue to drive our expectations. More and more, patients can be treated in their communities and closer to home and they want to have access to their health information, participate in health care decisions and be able to communicate with their healthcare providers using multiple channels.
- **We must meet changing health needs** – Alberta's population is aging and there is a growing need to manage patients with multiple chronic diseases, using multiple medications.
- **Our organization needs modern and reliable Information Technology** – As one of the largest providers of health care in the country we need to make sure our information technology is current, consistent across the organization and reliable. This will reduce the risk of service interruptions and allow us to better respond to the needs of the organization today and in the future.
- **We must find the balance between privacy, access and collaboration** – To improve the quality of care and to safely and effectively support the improvement of health care delivery we must work together to ensure information is secure, with appropriate access for those who need it and the ability to seamlessly share information across the province and beyond.
- **Our clinical standards and content must be consistent** – The clinical content we rely on (e.g., order sets, care pathways, clinical documentation), knowledge, tools, and the way we store and transform this data must support a common provincial healthcare system. We also need to make sure that our clinical systems are designed, implemented, and used appropriately to enable high-quality health care in Alberta.

## How will we do this?

The following three directions summarize our plans for addressing the needs outlined in the previous page.

### Transform Care

- Empower Albertans to participate in their own health by providing better access to their health information and easier ways to communicate with their care providers
- Support the adoption and automation of clinical decision support at the point of care to ensure optimal decisions, flow and outcomes
- Support research, learning and innovation to drive long term quality improvement in the health system

### Optimize Operations

- Focus Information Management and Information Technology investments on initiatives that deliver the best value to Albertans
- Rationalize technologies to focus support and resources on critical services
- Improve access and flow by efficient and effective processes

### Strengthen the Foundation

- Improve information flows across the health system to enable better quality, safety and patient experience
- Strengthen our teams' understanding and use of technology to improve the services we deliver
- Provide a reliable, modern and cost-effective technology infrastructure and info-structure
- Enhance security and information sharing capabilities to support collaboration

## INTRODUCTION

Whether it is a paramedic using their wireless device to send patient information to a hospital, or a home care worker downloading a health chart before visiting a client, technology is an essential part of modern health care.

AHS is working to make sure we are keeping pace with rapidly changing technologies. We equip our teams with technology that will enable them to do their jobs effectively and to ensure that patient information and the supporting systems are available quickly, securely and no matter where Albertans require care and treatment.

In the near future, Albertans will be able to use technology to interact with the health system in new ways: care will move closer to home, remote technologies will be used for appropriate care interactions, and tools and information will be available to help manage and monitor health outcomes. A modern technology infrastructure is needed to support these types of care delivery models.

AHS' Information Management and Information Technology (IMIT) Strategy outlines our roadmap to move to a world where health information is accessible, reliable and secure and supports clinical care and the research we do to improve the health outcomes of Albertans.

## Purpose

AHS' 5-Year IMIT Strategic Plan, along with the *Alberta Health Services 2015-2018 Health Plan and Business Plan*, guides and supports how AHS invests in information management and information technology. It outlines where we are going and provides detailed operational plans that explain how we will get there.

The *AHS Patient First Strategy* recognizes that patients and families need proper and timely communication about their care and seamless transitions when moving between services and facilities. The AHS IMIT Strategy outlines strategies to improve communication between health care provider and patient, family, and other health-care providers through initiatives such as the Personal Health Portal.

This plan and the supporting operational plans will be tracked and adjusted regularly to ensure IMIT is aligned and accountable to AHS' priorities and keeping pace with the ever-changing world of technology.

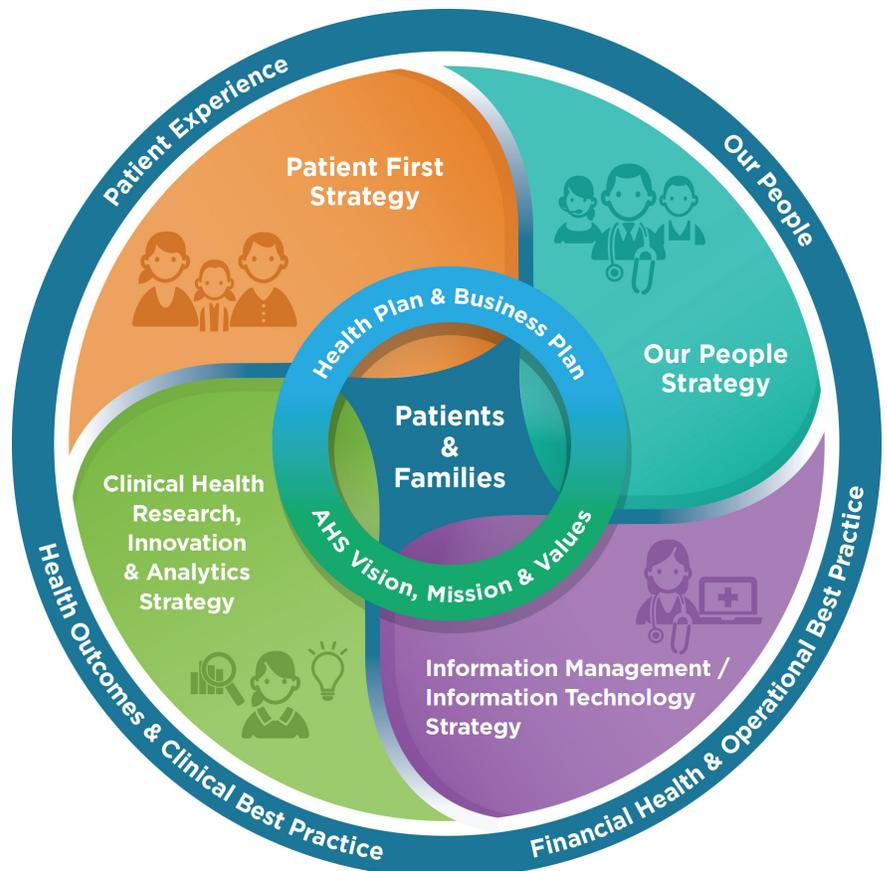
## Development of IMIT Strategy

Alberta Health Services' Information Management and Information Technology Strategic Plan was informed by:

- The goals of AHS' Health Plan and Business Plan and the three other foundational strategies
- Consultation with clinicians and corporate teams across the organization, and other external stakeholders across the province
- Research and input on IMIT best practices by information technology research and advisory organizations such as Gartner and Forrester Research

## Vision for the Future

Our IMIT Strategy is one of four AHS foundational strategies to achieve AHS' vision: Healthy Albertans. Healthy Communities. Together.



We need to make the right information available to the right people at the right time across the health system so that health care providers can rely on the data to make meaningful decisions to improve health care for Albertans. We must also improve customer experience and meaningful engagement in their ongoing health management through ease of interaction with AHS; ease of access to required information; and ease of communication with AHS and providers through multiple channels. The rising costs of health care and continued resource constraints demand that we find new ways to improve our system and ensure its sustainability. Through this plan, we are rising to the challenge to equip patients, healthcare providers, researchers and communities with the data, tools, integrated systems and services that promote an innovative health system. It is designed to improve the efficiency and sustainability of our services while improving the health and quality of care of Albertans.

## **Trends driving IMIT Strategy**

This strategy takes into account important trends in technology and what's happening in Alberta, as they influence our current and future information and technology needs.

### **Trends in Healthcare**

- Increasing expectation and need to treat patients in their communities and closer to home
- Escalating healthcare costs, inconsistent quality and lack of accessibility to timely care
- Shifting healthcare demand, including an geographically diverse and aging population
- Innovations in treatment
- The need to manage patients with multiple chronic diseases using multiple medications
- Increasing patient expectations to access their health information, participate in healthcare decisions and contribute updated information related to care plans as partners managing their health

### **Trends in Technology and User Expectations**

- Increasing use of mobile devices and other internet enabled devices that can network and communicate with each other
- Expectations of users for more services and faster delivery
- Growing need to support a variety of devices, applications and technologies including the ability to support users who bring their own devices
- Greater concerns for identity management and privacy
- Ability for patients to communicate with their healthcare providers using multiple channels and easier ways for patients to interact with the health system, e.g., online appointment scheduling, electronic notifications and reminders, and online access to test results

- Shift from on-site data storage and applications, to keeping information and applications on cloud technology
- Pervasiveness of multimedia and social media applications
- Increasing complexity of security and compliance
- The volume, complexity and availability of data

## Where do we need to go?

Since the formation of AHS progress has been made in consolidating our infrastructure and applications, integrating systems, implementing clinical information systems, and expanding the data sources and users of the Alberta Electronic Health Record, but there is still much work to be done.

### Single, Integrated Patient Record

**We need technology that supports patients as they move through the healthcare system and manage their health outside of a care setting.**

One of the most commonly reported frustrations from patients is having to repeat their story to multiple health care providers, giving the impression that health care providers do not communicate with each other. This inefficiency leads to fragmented care and can lead to quality and safety issues.

Clinicians have told us that the information they have is often incomplete and that integration among departments, facilities, community services and the patient’s home would improve access to complete and timely information.

### Technology Infrastructure & Application Portfolio

AHS manages over \$500M of IT infrastructure assets spread across 700 connected sites. Clinical care is increasingly dependent on technology and consequently service interruptions and the inability to access critical applications can have a significant impact on patient care. To ensure our infrastructure is responsive to current needs and agile to support future ones and to take advantage of economies of scale, **we need to consolidate and modernize our technical and application portfolio.**

“Currently the patient moves before the information moves.”

“You would have more time to care for your patients directly and to provide the appropriate care because you have complete information.”

**Did you know that the AHS IT department manages 5,400 servers, 10,000 Terabytes (TB) of storage, 2.1 million emails per day, 129,500 IT system access requests per year, 1,400 served-based applications, 16,000 TVs, 85,000 telephones, and 78,000 computers.**

## Security, Access and Collaboration

IT security is important for protecting patients' records and other sensitive data. Keeping health information safe and secure is essential. To date, our focus has been building strong and effective safeguards for health information and other sensitive data to reduce the possibility of unauthorized access. But in order to advance the goal of improved health care, **we need a balance between security, privacy and information sharing inside and outside of AHS.**

## Clinical Content Standards

Clinicians are trying to keep pace with the growing amount of information required for optimal patient care. Automated clinical content and clinical decision support can help health care professionals use the latest health evidence, drug-interactions, and treatment standards to provide the best care possible. In some areas of the province already have the tools (pathways, protocols and guidelines, schedules, algorithms, assessment findings that trigger recommendations and care plans, and clinical orders) that support clinical decision making and electronic documentation across the province and the health system for all health care providers. **We need to provide these tools and knowledge across the whole province to support better care for Albertans**

## Analytics

We collect information across AHS from our corporate, primary care, community care, home care, and acute care systems that can help us make decisions every day. By using this information, we can improve the health of Albertans, the delivery of health care and be as cost-effective as possible. Currently, not all of the information that is available is linked across the province or easily accessible for quality improvement, performance management and research.

**We need to have organized, accessible, relevant, current, high-quality health information to become a high-performing health system.** To support this, there is a need for an overarching data and analytic and data strategy that meets the needs of health service delivery, policy and governance, and research and innovation.

## THE PATIENT JOURNEY

The opportunities for IMIT can best be understood from the point of view of our patients trying to navigate the health system. Currently patients must provide their health information over and over again, and don't have timely access to their information. Patients and clinicians alike have consistently identified areas for improvement throughout the patient's journey, specifically related to transitions between service points and related to communications between providers and patients. The case of a fictional patient "Jane Smith" and associated IMIT improvements below demonstrate how the IMIT strategy will result in a significantly different patient experience.





### Meet Jane Smith

Age 45  
Mother of 1  
Accountant  
Has drug allergies

### Future Patient Experience

Using the Personal Health Portal, Jane regularly contributes information to her personal health record for use by her care team.



Jane is overdue to have a physical exam. She calls her Family Physician to make an appointment

Jane's family doctor tracks and reminds Jane when she is due for an exam using a wellness schedule in her EMR.

Jane schedules her appointment online and receives an online or text notification reminder of her appointment.



Jane's doctor accesses and reviews Jane's medical history in the electronic medical record (EMR) and updates her electronic record based on the current assessment.

Her family physician takes a detailed history. During exam she finds a mass in Jane's right breast



Jane goes to her community hospital for a mammogram and other diagnostic tests. She provides her medical history again

The Radiologist immediately has access to Jane's health information and requested diagnostic tests in the radiology information system.  
The mammogram and other diagnostic test results are uploaded to the Alberta Netcare Electronic Health Record and are sent electronically to Jane's family doctor's EMR



Results confirm breast cancer. Jane's doctor discusses care plan with her and faxes referrals to specialists

Jane's family doctor finds the next available specialist and submits the referral electronically



Jane drives home and tells her 12-year old son.



Jane brings all her records with her to her appointment with the cancer surgeon

The breast cancer surgeon accesses Jane's medical records and recent diagnostic results in his EMR. He views additional results and clinical documents through the Alberta Netcare viewer in the EHR. Jane also has access to her health information and results in the Personal Health Portal



Jane goes to the acute care hospital for her right-sided mastectomy. She brings a copy of her advanced care plan which is filed in her chart.



Jane is told it will be 5 days before they get the test results. By day 6 she calls the clinic.



Jane goes to the Cancer Centre where she completes more documents and gets a stereotactic biopsy of her left breast

The clerk at the hospital scans in Jane's advanced care plan it is immediately uploaded to the enterprise content management system, making it available to all care providers electronically.

Jane receives notification on her mobile phone to contact her care provider to review her results as soon as her results are received

Jane logs into [www.myhealth.alberta.ca](http://www.myhealth.alberta.ca) to fill out documents online before her visit. The documents are now available to her care providers at the Cancer Centre



Jane undergoes surgery, and receives medications as she recovers after surgery

When the surgeon is placing Jane's post-op medication orders the clinical information system alerts him to Jane's drug allergy



Jane wants to "pay it forward" and signs consent to allow her data to be used for research.

Healthcare providers and researchers contribute information and learn from information shared across the health system, leverage analytical tools to derive meaning from the data

Care plans and treatment protocols are updated with the latest evidence and configured into the clinical information system to provide standardized clinical decision support to the front line healthcare providers across Alberta

# FUTURE DIRECTION

IMIT's future strategic direction to support the strategies and priorities articulated in the AHS Health Plan and Business plan are summarized in the following three themes:

<b>Transform Care</b>	<ul style="list-style-type: none"><li>• Empower Albertans to participate in their own health by providing better access to their health information and easier ways to communicate with their care providers</li><li>• Support the adoption and automation of clinical decision support at the point of care to ensure optimal decisions, flow and outcomes</li><li>• Support research, learning and innovation to drive long term quality improvement in the health system</li></ul>
<b>Optimize Operations</b>	<ul style="list-style-type: none"><li>• Focus Information Management and Information Technology investments on initiatives that deliver the best value to Albertans</li><li>• Rationalize technologies to focus support and resources on critical services</li><li>• Improve access and flow by efficient and effective processes</li></ul>
<b>Strengthen the Foundation</b>	<ul style="list-style-type: none"><li>• Improve information flows across the health system to enable better quality, safety and patient experience</li><li>• Strengthen our teams' understanding and use of technology to improve the services we deliver</li><li>• Provide a reliable, modern and cost-effective technology infrastructure and info-structure</li><li>• Enhance security and information sharing capabilities to support collaboration</li></ul>

## STRENGTHEN THE FOUNDATION

### 1. Improve how information flows across the health system to enable better quality, safety and patient experience

Technology can support how patients and information move across the health system. The provincial clinical information system (CIS), the Personal Health Portal and other technology initiatives will enable health-care providers to better understand the full picture of patient's health. A consolidated provincial CIS contains patient-centered, electronically-maintained information about an individual's health status and care. When the information related to each patient's care is consistent and available across the system it enables:

- Better outcomes and satisfaction for the people we serve
- A comprehensive base of information to support healthcare providers in the delivery of care to their patients
- Better management of the healthcare system
- Information that can be used in research and analytics

#### We know we will be successful when:

- Support patients as they move through the health system
- Enable secure flow of health information across the care continuum
- Improve access to information by patients and clinicians to support care plans and treatment
- Enable referrals and all scheduled services to be booked electronically across the care continuum

The provincial CIS also has the potential to be a catalyst for change to improve health outcomes and reduce costs. Patients' health information will follow them across the province and throughout the entire care continuum, from their family physician's office, to a visit to an emergency department and an acute care stay.

IMIT initiatives to support the improved flow of information across the health system are:

- Procure and implement a provincial Clinical Information System
- Enhance electronic patient scheduling and electronic referrals to support access to services and flow between primary care and specialists
- Work with the electronic medical record (EMR) vendor community to ensure the technology and standards support the sharing of health information between acute, ambulatory and community care settings
- Optimize existing clinical information systems
- Complete implementation of the Critical Care Clinical Information System (CCCIS) into Intensive Care Units (ICUs) across the province
- Consolidate provincial integration technology
- Expand data sources and adoption of Alberta Netcare, the provincial Electronic Health Record

## 2. Strengthen our teams' understanding and use of technology to improve the quality and efficiency of the services we deliver

In order for technology to achieve to its true potential it must be supported with the right processes and used by people with the right skills. It is the coming together of people, process and technology that truly drives innovation. While this IMIT strategy mostly focuses on information management and technology, its success depends on effective partnerships throughout our organization.

We have a role in promoting the effective use of technology. We need to support change management processes, education and workflow to ensure that those relying on the technology understand how to use and integrate it into their business processes.

AHS staff and physicians are our biggest asset when it comes harnessing technology throughout the organization. We need to invest, support and train our teams so that they are capable and competent to execute service delivery efficiently.

### **We know we will be successful when:**

- **All health care delivered to Albertans is documented and managed**
- **All care providers are using information systems to their full potential employing common standards, knowledge and clinical practice with seamless integration**
- **Albertans and their care team use common systems to enhance communication**

To strengthen our teams' effective use of technology, we will:

- Ensure that individual users understand how to use and integrate current and future systems into their business processes using organizational change management methods and encouraging the educated adoption of technology
- Optimize the safety and safe use of health information systems through clinical informatics quality and safety initiatives
- Develop health informatics competencies in our teams to support innovation and improvements in the delivery of health care

### 3. Provide a reliable, modern and cost-effective technology infrastructure and info-structure to meet the changing needs of the organization

Significant additional investment is required in our foundational IT infrastructure to support existing services, service improvement, service efficiency and to reduce the risk of service interruption by modernizing an aging infrastructure. We also need to invest in our info-structure, which is the framework for "content" moving through the technology "pipes". Examples of foundational info-structure include enterprise content management, registries (client, provider, location) and terminology services. Implementation of standards and the ability to apply these standards to our data enables us to:

- Compare health data
- Aggregate data
- Interchange data between health systems
- Use data for research and quality improvement, and other secondary uses
- Automate clinical decision support

To strengthen our foundational technology infrastructure and info-structure, the following four priorities and accompanying actions have been identified:

- Improve the reliability of our systems by moving to supported technology and consolidating to central facilities
- Provide consistent levels of support and reduce duplication through the creation of provincial IT Access and provincial Service Desk teams

#### **We know we will be successful when:**

- **Consolidation and modernization of the technical infrastructure results in:**
- **Reduced service provisioning times**
- **Lower unit costs**
- **Improved agility and responsiveness**
- **Improved proactive operations through Predictive Operations Management**
- **Improved reliability and availability of our critical systems**
- **Optimization of clinical information systems with:**
- **Increased percentage utilizing provincial registries**

- Decrease the time required to provide IMIT services by making more services available on demand through self-service, online tools
- Enable access to core IT systems at the point of care by increasing wireless network access in health facilities, implementing technology to enable users to access core systems remotely and by developing Bring Your Own Device capability
- Support information availability and reuse through further integration to our client, provider and location registries, and through the evaluation and expansion of standard terminologies (i.e., expansion of Terminology Services to provide translations to and from standard vocabularies)

## 4. Enhance security and information sharing capabilities to support collaboration

Our goal is to securely give the right people, the right access to the applications and information that they need when they need it.

We need to be able to provide access to, and share information seamlessly in order to support better health care. In order to do this, we need to manage security risks proactively and effectively. This will be delivered by focusing on four areas: Enabling, Collaborating, Responding and Assuring.

### 1. Enabling

- Expand existing technologies like Identity and Access Management to provide innovative approaches to providing secure access
- Deploy policies and tools to enable a mobile workforce
- Deploy policies to allow information to flow from AHS to partners and stakeholders
- Foster a proactive risk management view on new opportunities like cloud technologies.

### 2. Collaborating

- Increase our security awareness campaigns and providing messaging, tools and supports for partners and stakeholders outside of traditional AHS settings;
- Formalize opportunities to listen to the clinician community inside AHS and with partners and stakeholders to understand how our policies, technologies and controls can be better deployed;
- Continue to work with Alberta Health on the security components of strategic priorities such as Personal Health Portal (PHP) and Provincial Health Analytics Network (PHAN).

#### We know we will be successful when:

- Healthcare providers and researchers contribute information and learn from the information shared across the health systems
- Collaboration between patients, care providers and researchers is enabled through the appropriate access to information

### 3. Responding

- Expand our security analytics tools processes for our critical applications to provide enhanced ability to detect and prevent outages and breaches
- Provide enhanced technology and services to facilitate auditing of accesses of health information
- Develop a formalized and comprehensive security assessment process to determine weaknesses

### 4. Assuring

- Expand reporting on IT management best practices and standards
- Expand our compliance report to include our secondary critical applications
- Increase our focus on designing best practices and controls into new service offerings
- Develop new assurance reports for internal and external stakeholders

Our key initiatives to enable us to enhance security and information sharing capabilities to improve support collaboration are:

- Develop and implement identity access management strategy to simplify and streamline access including self service capability
- Implement new collaboration software and tools to support virtual teams
- Implement technology to enable users to securely access key AHS applications remotely
- Contribute to changes to the Health Information Act

# OPTIMIZE OPERATIONS

## 5. Focus investments on initiatives that deliver the best value to Albertans

Demands for IMIT will always far exceed our capacity. We need to ensure that AHS' IMIT investments and resources are aligned to the priorities and desired outcomes of the organization and to initiatives that will deliver the most value. We will continue to work with our business stakeholders to establish processes and business governance to align IMIT investments with business priorities. We will also guide and direct our IT teams to strengthen collaboration with our AHS partners, in order to prioritize service improvements and application enhancement in keeping with AHS goals.

Our key initiatives to better managing the demand for IMIT investment are:

- Refine IMIT investment and decision-making and governance processes
- Implement standardized processes and a common set of tools to manage the intake, assessment, and prioritization of IMIT investment requests
- Aggregate reporting to demonstrate the business value of IMIT investments and alignment to business priorities
- Develop coordinated IMIT planning process with external partners
- Document the economic and quality gains made through IMIT investments

### **We know we will be successful when:**

- **AHS has better visibility and control over IMIT costs, risks, and resources.**
- **There is better alignment between IMIT priorities and AHS strategic objectives to maximize the value delivered by IMIT.**
- **Offer the highest economic returns for the health system (e.g., creating real savings in cost, increased quality, or improved access)**
- **Support Albertans priorities (e.g., wait times and access)**
- **Are critical to enabling other benefits**

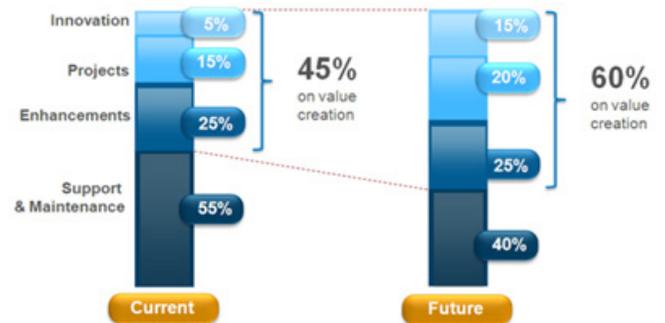
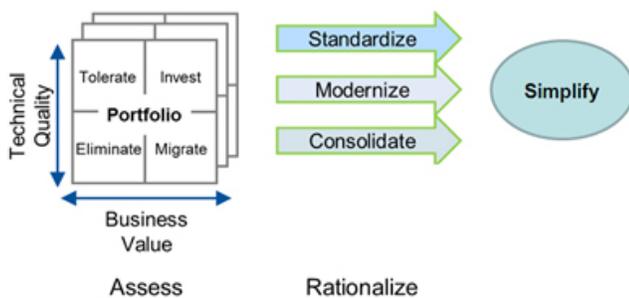
## 6. Rationalize IMIT technologies to focus support and resources on critical services

We must reduce and simplify the applications and technologies we support to better satisfy both current and future needs. Through what's called 'technology rationalization', we can be more responsive to the needs of the AHS. Time spent troubleshooting or resolving user issues and maintaining technology that does not fit with AHS' priorities, can be diverted to higher value activities, and the risks of unplanned failures and downtime for these applications impacting the services AHS delivers are decreased. We must manage the life cycles of application and technology, from the time they are put into service until they are decommissioned.

### We know we will be successful when:

- We can be more flexible and responsive to the evolving needs and priorities of the organization
- IMIT spending and resources are focused in areas of value and our ability to support our existing technologies is more sustainable
- IMIT services are more reliable
- There is reduced complexity - fewer systems to standardize, reduced clinical variance and improved system functionality

### Technology rationalization approach and objective



Source: Adapted from Gartner

Our key initiatives to reduce the cost and complexity of our IMIT environment are:

- Develop and integrate strategic application and technology roadmaps to guide investment decisions
- Consolidate and retire applications and technologies to drive out cost, complexity, and risk
- Monitor the usage of IT tools and applications to identify opportunities to reduce costs

## 7. Improve access and flow through efficient and effective processes

IMIT can help with the sustainability of the health system by ensuring the services we provide are delivered efficiently and effectively. We will do this by transforming IMIT into a service-oriented IT organization. This transformation starts with a clear articulation of the services that IMIT provides, optimizing the core processes that support those services, determining and communicating the costs and value of those services, and demonstrating that IMIT is delivering on those services to the business areas we serve.

### We know we will be successful when:

- **IMIT performance is tracked against service levels and costs**
- **IMIT services are consistent with user expectations**
- **More efficient and effective processes drive improved customer experience and organizational cost optimization**

Our key initiatives to better manage our IMIT organization include:

- Define IT services, service level agreements and service costs
- Consolidate the Service Desks to provide consistent levels of support across the province
- Implement results of process improvement events (i.e., Kaizen rapid improvement events)
- Implement an IT Work Management system to better manage our applications, resources, and IT requests for projects and enhancements
- Enhance our operational reporting tools

# TRANSFORM CARE

## 8. Empower Albertans to participate in their own health by providing better access to their health information and easier ways to communicate with their care providers

We can empower Albertans to participate in their own health by providing better access to their health information and easier ways to communicate with their care providers. By strengthening the participation of patients and families in the creation and usage of their health information we are better positioned to achieve optimal health outcomes. Through investments in IMIT we can expect:

- That patients and families will be able to more easily access their personal health information
- That Albertans will become more involved in the development of their care plans through online technologies
- That patients will have the ability to collaborate with their health-care providers from a distance
- That care providers will be better able to communicate with each other and with their patients
- That patients will have better access to the health system (e.g., online booking)

### We know we will be successful when:

- **Albertans have the ability to access and use their electronic health information.**
- **Patients can book their appointments online**
- **Albertans can regularly contribute information to their electronic health records for use by members of their care team**
- **Health information from the health care system is easily accessible by Albertans and empowers them to be better informed and more active healthcare providers**

Our key initiatives to empower Albertans to participate in their own health are to:

- Develop and implement a mobile device strategy allow patients and clinicians to interact with each other and their health information through their preferred communication channels
- Enhance our telehealth and remote monitoring capabilities to allow patients receive care closer to home
- Populate and enhance the personal health portal (MyHealth.Alberta.ca) with new data sources and features to enable Albertans to more actively participate in their health

## 9. Support the adoption and automation of clinical decision support at the point of care to ensure best decisions, practices and outcomes

Successful adoption and usage of clinical information systems depend on our ability to deliver high-quality, evidence-based clinical content at the point of care to support clinical decision-making.

Recognizing the need and advantages of a provincial approach to clinical knowledge and clinical decision support, AHS will create, adjudicate, optimize, maintain, store and disseminate provincial clinical knowledge, standards and documentation within clinical systems. Clinical decision support will be implemented using electronic health information systems safety guidelines, supported by governance for adoption, as necessary.

Our key initiatives to support the automation of clinical decision support at the point of care are:

- Develop and implement standard knowledge and clinical decision support for all health care providers into our clinical information systems
- Add additional data to Alberta Netcare
- Improve results distribution to support the continuity of care
- Streamline access process to clinical information systems
- Improve the interoperability between our information systems through the expansion of terminology services to support clinical decision support, research, reporting and analytics
- Implement tools and processes to support knowledge management

### We know we will be successful when:

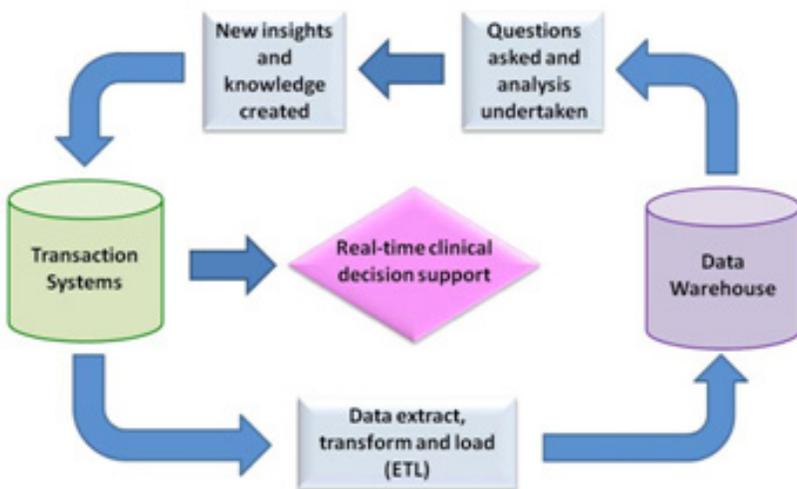
- **Clinical decision support is well adopted and well automated, fitted into a health care provider's workflow, in order to measurably improve the quality and efficiency of care.**
- **Increased availability of standardized provincial content**
- **Governance structure and policies are in place to support adoption and utilization of content and CISs, reflecting executive sponsorship**
- **Increased access and usage of available clinical information systems by all providers**
- **All clinical services are using clinical decision support tools to guide practice**

## 10. Support research, learning and innovation to drive long-term quality improvement in the health system

To realize the full value of investments in IMIT, the data created in our systems will be linked with other data, used and reused to continually improve quality and outcomes in the health system. Data will be protected and governed to manage appropriate access and be compliant with privacy legislation.

The secondary use of data will support clinical care across the continuum and help create insights to optimize outcomes, cost and patient experience. Knowledge created from analyzing the data will be fed back into our clinical information systems and other transactional systems for decision support at the point of care.

### Closed Loop Analytics Lifecycle



#### We know we will be successful when:

- **More Data** – increase in the number and variety of data sets available for secondary analysis
- **Broader and Enhanced Access** – increase in the number of individuals and organizations accessing and using data and services
- **More Analytic Products** – increase in the number of analytic products produced: dashboards, research projects, evaluations, etc.
- **Rationalized Data and Tools** – costs are reduced due to the rationalization of data, tools and processes across organizations
- **Customer Satisfaction** – improved satisfaction by customers that access services and data products
- **More informed evaluation and feedback to the system** for continuous improvement, improved quality and safety, and more efficient utilization of the healthcare system

Analysts will be coordinated and connected, and assigned to the most important analytical priorities to maximize the value of our data assets.

Our key initiatives to enable higher-value analytics, research and innovation are to:

- Improve quality through analytics and connect analytical teams within AHS supported by the Analytics Executive Council
- Promote the sharing of data between Alberta Health, AHS, community care providers and researchers through initiatives such as the Health Analytics Portal

# RISKS and CHALLENGES

This section is not intended to be an exhaustive list of risks and challenges; rather it is intended to be representative at a high-level of the overarching risks to the IMIT Strategic Plan and potential mitigation strategies.

Risks / Challenges	Mitigating Strategies
1. Availability and access to skilled IMIT resources.	<ul style="list-style-type: none"> <li>Align IMIT resources to the highest priority initiatives of the organization</li> <li>Develop recruitment and retention strategies to reduce resource gaps</li> </ul>
2. Managing competing and emerging IMIT priorities in an evolving health environment.	<ul style="list-style-type: none"> <li>Establish strong, business-aligned IMIT governance processes to allocate and prioritize the investments in IMIT</li> </ul>
3. Balancing existing operational systems with implementing new technologies	<ul style="list-style-type: none"> <li>Ensure decommission plans for obsolete technologies developed as part of implementation strategies for new technologies.</li> <li>Maintain application consolidation and retirement focus to reduce the cost and complexity of the application portfolio</li> </ul>
4. Availability of sustained funding for a Provincial Clinical Information System and other required IMIT investments	<ul style="list-style-type: none"> <li>Develop strong business cases which articulate the business value</li> <li>Put in place business value measurement and monitoring plans to demonstrate value</li> </ul>
5. The ability to access health information and data to support transformation change is hindered by policy and legislation	<ul style="list-style-type: none"> <li>Work with Alberta Health and other stakeholders to develop data governance and to recommend required changes to legislation</li> </ul>
6. Availability of sustained funding for a Provincial Clinical Information System and other required IMIT investments	<ul style="list-style-type: none"> <li>The AHS IMIT Strategy and operational plans must remain tightly linked to the future evolution of the AHS strategy</li> <li>Create capacity to free up resources to focus on systems of innovation</li> </ul>
7. The value of implementing clinical information systems is not fully realized due to poor clinical adoption and user engagement	<ul style="list-style-type: none"> <li>Develop and resource a comprehensive engagement and change management strategy</li> </ul>

## SUMMARY

The IMIT strategic themes of strengthening the foundation, optimizing operations, and transforming care balances the need to mature our foundational systems, processes, and people with investing in new capabilities that will enable the organization to transform the delivery of care:

- Albertans will continue to demand that our healthcare system “catch-up” to address their expectations of how they would like to interact with health providers and their health information. The ability to electronically connect patients and care providers through IMIT offers a new way to create a consumer driven health system benefiting patients and providers alike.
- Provincial clinical knowledge that has been enabled through provincial clinical information systems will ensure our care providers have the best information at their fingertips, supporting them to make better decisions.
- Pressures centered on cost, quality and access issues are driving the need for data and analytics to support research and innovation. Investments in our ability to capture quality information, link it to other key data sources, analyse it and integrate that information into business processes to achieve better outcomes will continue to drive our transformation agenda.

# 2015-2020 Alberta Health Services

## Information Management and Information Technology Strategic Plan

