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Healthcare Technology Management-Closing the Information Gap with Data Management Strategy

This presentation is a summary of a proposed framework developed by Prof. Richard Tidman, Prof. Marko Costic and Prof. Abdelbaset Khalaf.

Within the 21st International Operations & Maintenance Conference in the Arab Countries

An Initiative by
OMAINTEC
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Healthcare Technology Management (HTM)

- Transition is usually gradual and difficult to comprehend, but this long held paradigm has been elevated.
- We are witnessing a seismic shift in the direction healthcare is taking, driven by breakthrough health technologies.
- Better health outcomes are the result of better technology and **a holistic** approach to administration, integration and application.
- Now more than ever, it is necessary for the healthcare professionals to understand the clinical environment and decisions made as a result of the technology they manage.

Healthcare Technology Management (HTM)

WHO defines Healthcare Technology (HTM) as the practical application of knowledge & skills in the form of devices, medicines, vaccines, procedures and systems:

- To solve a health problem
- To improve quality of life

Purpose & Nature:

- Medical purpose: diagnostic, preventive, therapeutic, rehabilitative, organizational, supportive.
- Physical nature: drug, device, procedure, infrastructure, etc.

- BME/CE are key professional tasked to manage HT during its life span.

- An integrated approach to health technology management, the systems, processes, and organizational reengineering needed to coordinate the health technology element in the national care system.

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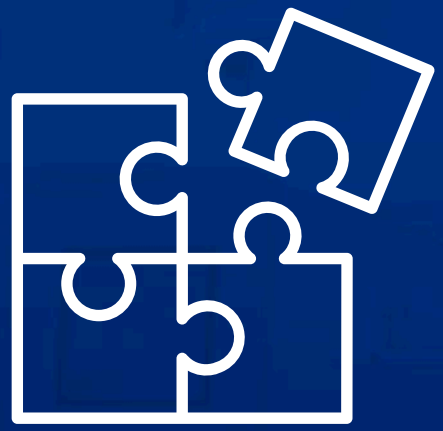
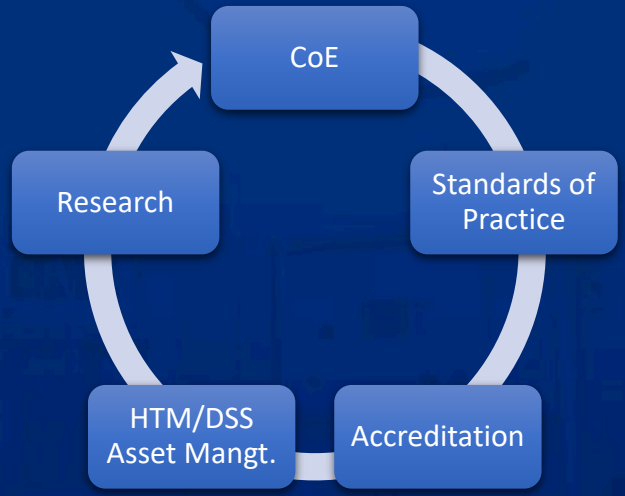
The Agenda

BACKGROUND



CURRENT STATE

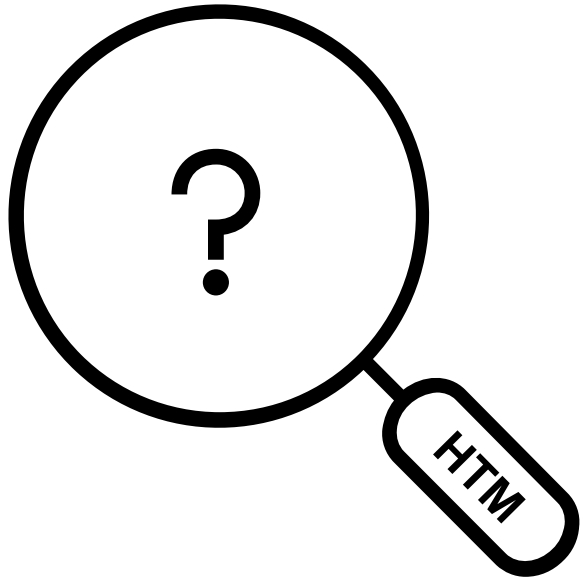


SOLUTIONS

BENEFITS

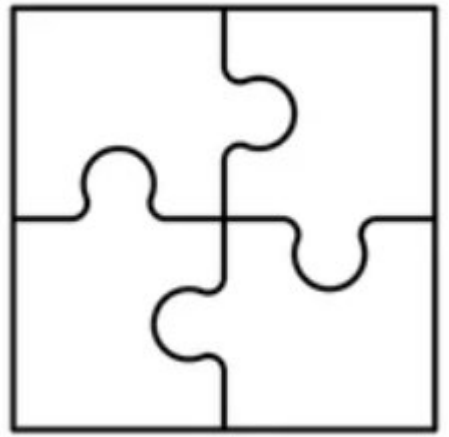
THE INFORMATION DEFICIT BACKGROUND

- A health technology management (HTM) **information deficit** exists across national healthcare affecting decision makers at all levels of care delivery.
- The HTM data deficit represent the **20% and causing 80%** of the problems.
- Deficit is a sign of a deeper **systemic problem**.
- Need practical and **holistic HTM solutions** for a sustainable and successful National Health Data Strategy.
- 60 years of little progress is reflected in a **mental model** that must adapt and recognize the complexities of HTM and welcome new expertise to the organization.
- Health technology is the leading **agent of change**, and the pace of change is only accelerating.



CURRENT STATE

- **Missing** - Interdisciplinary specialist in the life sciences, health technology, and business administration.
- **Missing** - Standards-based scalable health technology asset management application.
- **Missing** - HTM asset management / health technology decision-support tools.
- **Missing** - HTM standards practice.
- **Missing** - National Accreditation and HTM assessment protocol.
- **Missing** - Accountability for the dollars allocated for acquisition of and life cycle costs of health technology.
- **Missing** - Academic programs in HTM, research opportunities for thought leaders and a Centre of Excellence (CoE) for coordination, collaboration and sharing of best practices.



Its time to close the "Information Gap"

In addition to what's hidden!

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FUTURE STATE SOLUTIONS

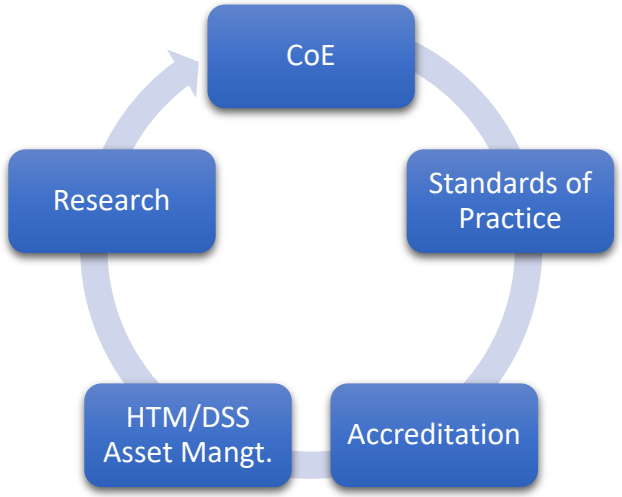
- **Establish a Centre of Excellence (CoE)** with academic programs at the undergraduate, graduate and doctoral levels in health technology management. Create a think-tank for thought leaders, collaborators, and researchers.

- **Develop a "HTM Standards of Practice".** A management standard is the basis for collaboration and continuous quality improvement. A documented agreement is the only means of effectively communicating base level information.

- **Develop Accreditation criteria** from the HTM Standards of Practice.

- **Develop a standard based and scalable HTM asset management** and Decision Support System (DSS) application. One shared system running across country is essential to address the data deficit. As a result, decision makers at all levels of care delivery can make data driven decisions.

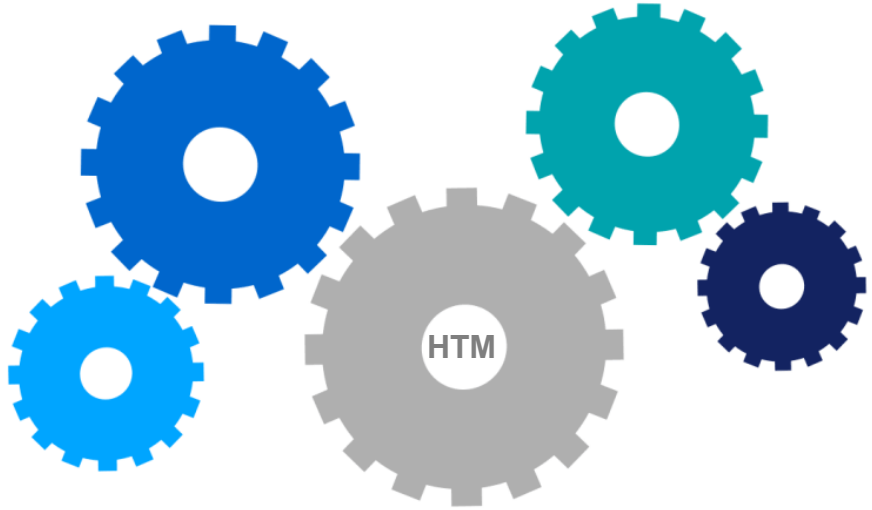
- **Research opportunities** for thought leaders. In addition to a CoE make available the data collected from all national care settings to researchers in authorized academic institutions, etc.



Continuous Quality Improvement

BENEFITS

- **Benefit 1.** Health technology information deficit is solved with billions dollars in annual savings.
- **Benefit 2.** The value of health technology is maximized, and continuous HTM quality improvement possible.
- **Benefit 3.** Data driven decisions become a reality and a National EHR becomes possible and sustainable.
- **Benefit 4**. Coordination and interoperability among care settings become possible within a strategic technology vision.



Roche. (2024, 01 13). *Absolute automation of molecular testing*. Retrieved from Roche Diagnostic: https://diagnostics.roche.com/be/en/article-listing/workflow-efficiency/automation.html

Pan Canadian Health Data Strategy (pCHDS)

WHAT IS THE 2030 VISION FOR CANADA'S UNIVERSAL CARE SYSTEM?

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WE ARE IN DISCUSSION WITH

- The Canadian Ministry of Health (MoH)
- Canadian Institute for Health Information (CIHI)
- The Canadian Health Information Management Association (CHIMA)

Pan Canadian Health Data Strategy (pCHDS) & HTM

The objective of the pCHDS is in the development of a **world class health-data system.** The vision is to collect, share and use data so that by 2030 all Canadians benefit from a fully integrated and continuously optimized learning health system”

An expert advisory group (EAG) uncovered a variety of systemic problems that need to be corrected before the vision becomes reality. Some of the problems are rooted in a lack of collaboration among jurisdictional authority’s (federal, provincial and territorial), between organizations, and professional groups, issues with standardization, etc., leading to system fragmentation.

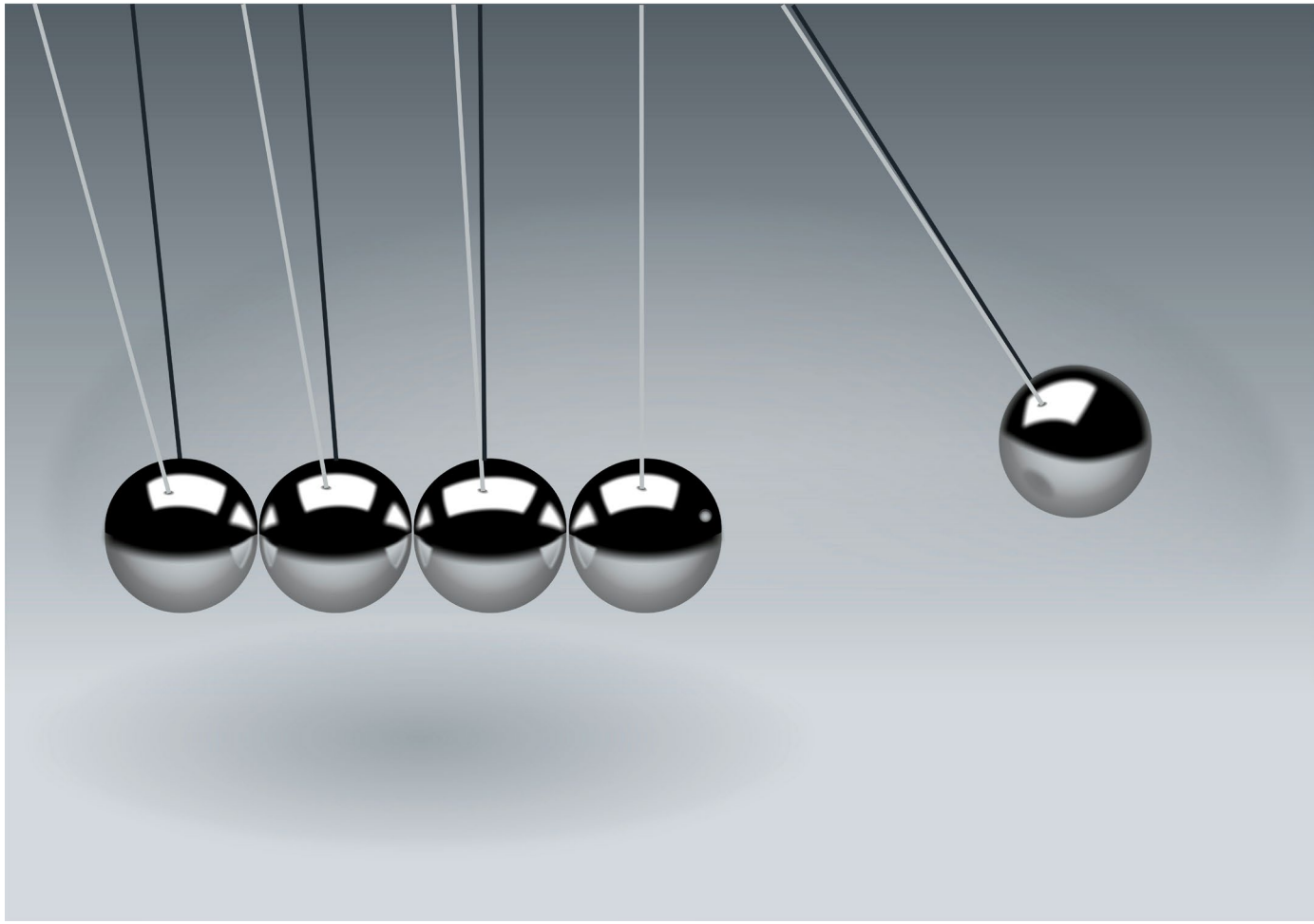
Of particular interest is the “information gap” correlated to a shortage of qualified HTM, uncoordinated systems, lack of standards, jurisdictional differences, etc. Closing the HTM information gap is an essential precursor to achieve the 2030 objectives.

A coordinated approach to HTM answers a critical information gap.

https://www.canada.ca/content/dam/phac-aspc/documents/corporate/mandate/about-agency/external-advisory-bodies/list/pan-canadian-health-data-strategy-reports-summaries/expert-advisory-group-report-03-toward-world-class-health-data-system/expert-advisory-group-report-03-toward-world-class-health-data-system.pdf

ITS TIME TO LEAD

Global HTM Centre of Excellence CoE



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THANK YOU!

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