Information Governance

Framework Development

Scope and Approach

Prepared For: **BC Health Organization Information Governance Summit**

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➢WHAT IS INFORMATION GOVERNANCE??

Information Governance formalizes the accountability for information and enables effective management and delivery of shared or common data assets and resources

Industry Definition

Information governance encompasses the actions by which a company controls the delivery of information both internally and externally, and manages the overall data strategy and architecture resources. Information governance addresses the processes, skills, leadership and assets required to successfully administer a company's information resources that allows it to define its business, run the business on a day-to-day basic and manage the business for continuity.

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Why Governance?

Establish policy and guidance around overall data strategies, processes, leadership, skills and delivery service levels (SLA's).

Think of the data and information as a VALUED Corporate asset.

- Move away from linear ownership to formalized accountability and stewardship across the lifecycle phases (from capture, to integration, to delivery) of the data and information.

Maintain consistency at the same degree for collection, as for delivery and exchange of information, both internally and externally:

A**t the point of care:**

- Capture structured data, that's actionable and available real-time,
- Allow interoperability and integration of dispersed patient information capture points, to improve accessibility and sharing of information

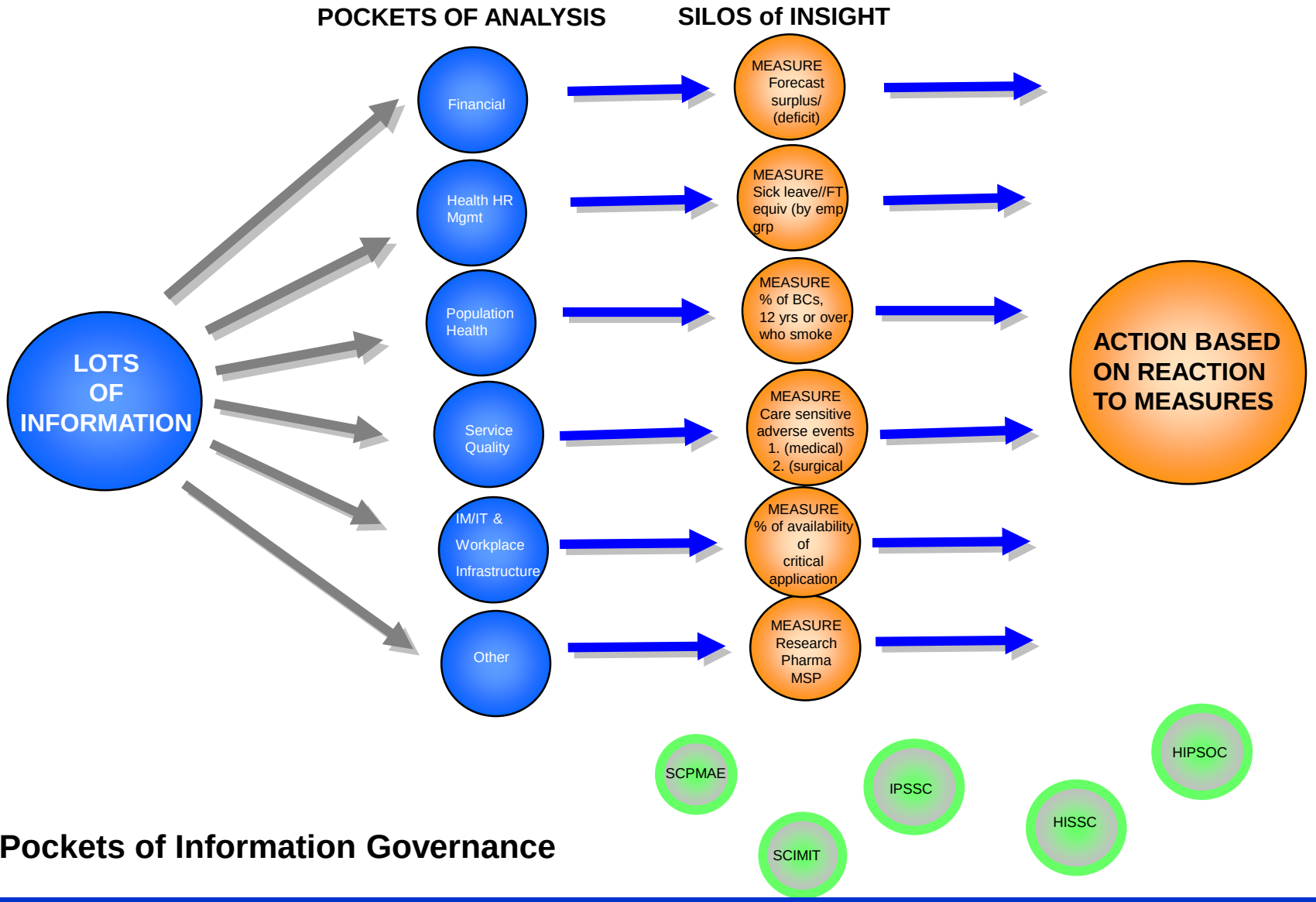
Use of Information:

- Create the ability to access and perform integrated analysis for decision making for both Primary and Secondary use data

Ability to deliver high quality and auditable data.

Address lack of clarity on Roles, who are your Stakeholders, etc

TODAY's CORPORATE INFORMATION FLOW



SOME ACTIONABLE FLOW OF INFORMATION

rom the Ministry of Health Standing Committee on Performance Measurement, Analytics and Evaluation (SCPMAE).

Problems with Current Information Governance

Problem Areas:

Dispersed Master Data
- Interpretation, synchronization, “leveling”
- Heavy data cleansing “after the fact” from the operational data sources
- Provider Identity

Unclear Ownership
- Who owns the data?
- Failure to create data in timely manner
- Failure to address changes effectively
- Transformation Preparedness

Diverging Data Definitions
- What is **Alternate Level of Care (ALC)**?
- What is **Day Surgery Encounter Type**?
- What is **Sepsis?**
- **Patient Safety?**
- **Patient Length of Stay?**

Lack of proper tools
- Metadata / Dictionary
- Extensive impact analysis
- Failure of replication
- Duplication

Impact:

Reconciliation
- Creation of a corporate “master” **Source of Truth**
- Maintenance of cleansing and transformation rules
- Information Dissemination – to the right Person

Business Delays
- For making a decision on a corporate initiative
- For introducing new resourcing strategies
- Hinder the ability for agile Transformation

KPI Design and Management
- Agreement on semantics and quantity
- Maintenance of cleansing and transformation rules
- Hinders integration/exchange/portability
- Vendor community lacks understanding/blueprint

Manual Effort
- Reliance on “expert” culture
- Inspect every application for solution definition
- Fix after end-user called
- Cost Increases – Higher capital costs

➢TOMORROW's ENVIRONMENT

Establishment of Principles & Guidelines, required to be followed, to ensure that information, that can identify a patient, is protected and only used when it is appropriate to do so.

When deciding whether they needed to use information that would identify an individual, an organisation should use the Principles as a test.

Source: NHS – IG ToolKit – T**he Caldicott Principles (2013)** https://www.igt.hscic.gov.uk/

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WHAT CHANGE IS NEEDED?

CULTURAL SHIFT

FROM

INDEPENDENT, NON-SHARING

UNSTRUCTURED ACCOUNTABILITY, RESPONSIBILITY & CONTROL

LIMITED ALIGNMENT TO MEASURES

INFORMATION OWNERSHIP

TO

SHARING, BETTER ENGINEERED INFORMATION FLOWS

STRUCTURED ACCOUNTABILITY, RESPONSIBILITY & CONTROL

ALIGNMENT TO KEY MEASURES

INFORMATION STEWARDSHIP

Smarter and Quicker Organizational Responses
Transparent & Responsible Organization

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TOMORROW's IG UMBRELLA ENVIRONMENT

INFORMATION GOVERNANCE

↓

BUSINESS INTELLIGENCE

↓

STRUCTURED & ENGINEERED INFORMATION DISSEMINATION

↓

ROLE-BASED INFORMATION EMBEDDED IN WORKFLOW

↓

OWNERSHIP OF BUSINESS OUTCOMES

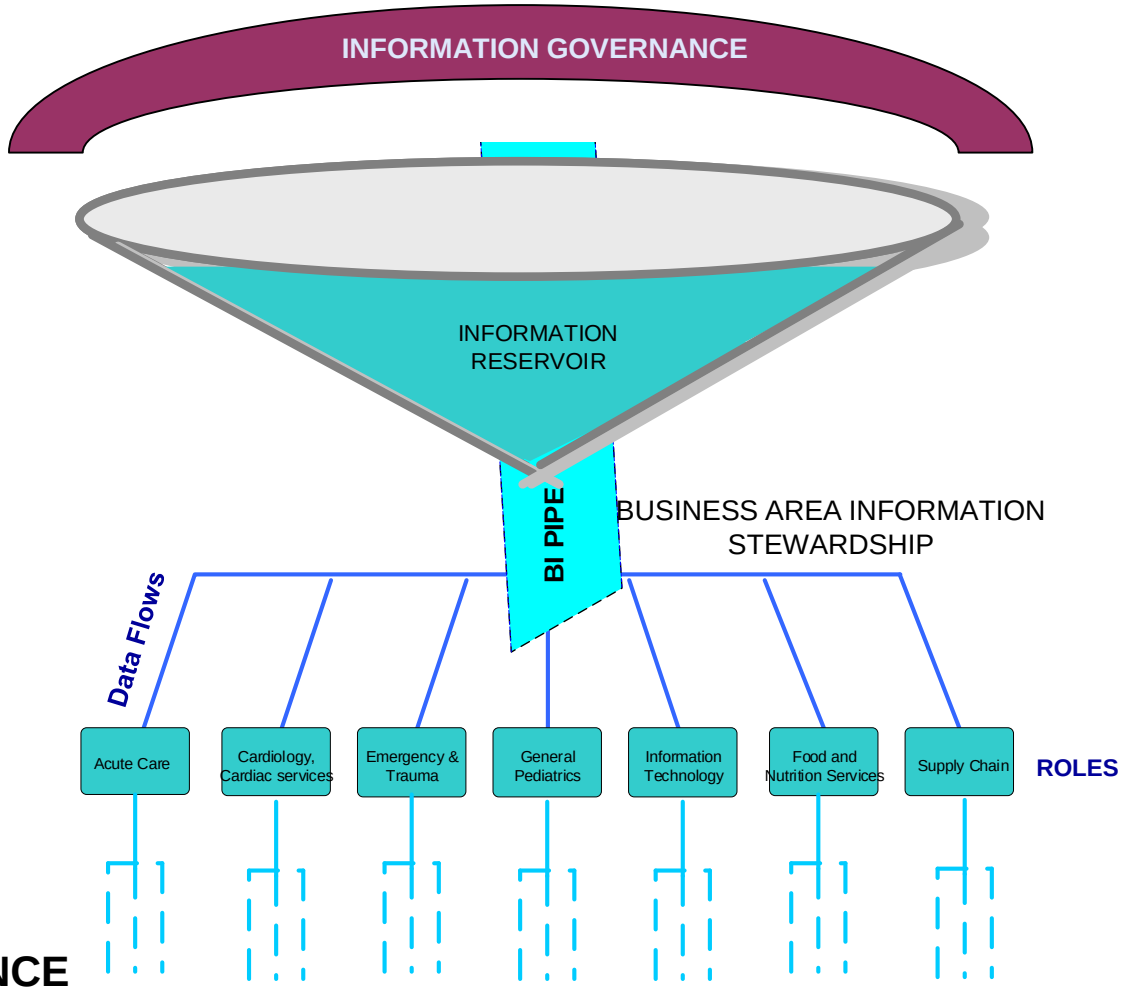
↓

TIED TO BUSINESS PERFORMANCE

↓

MORE AUTOMATION &

SHORTER CYCLE TIME



STRUCTURED & ACTIONABLE INFORMATION

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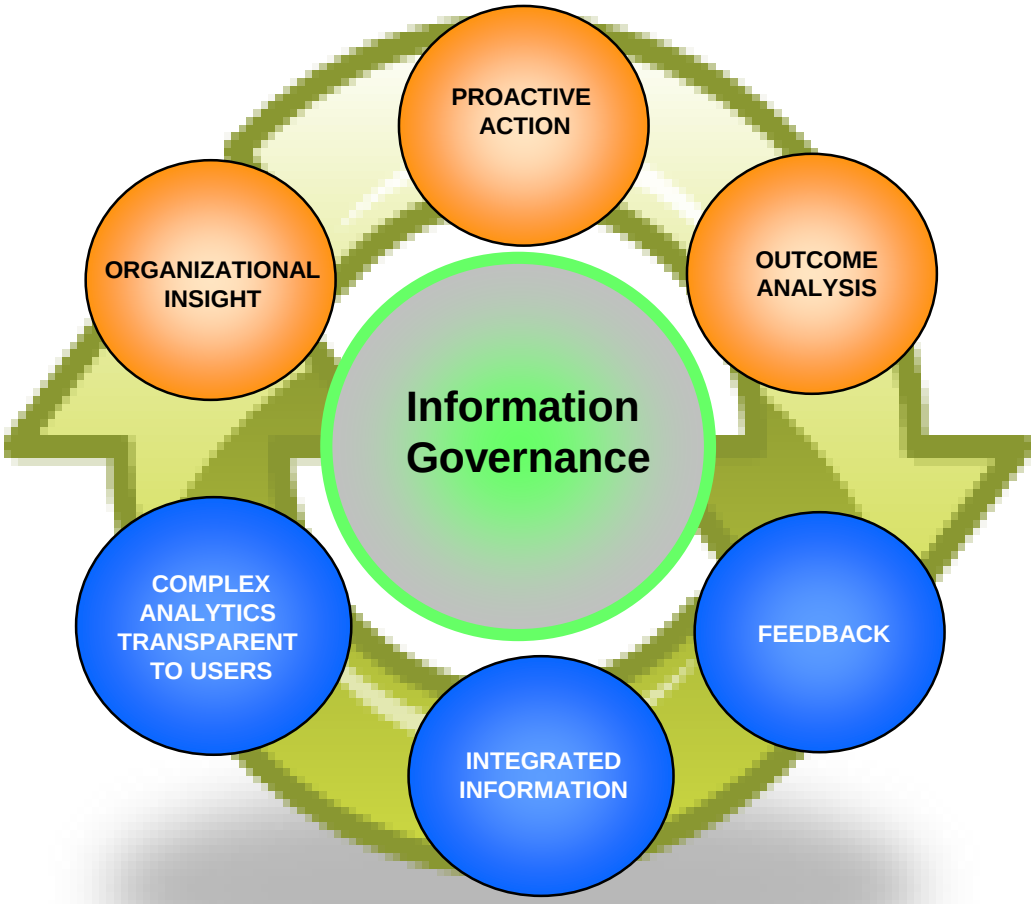
TOMORROW'S CORPORATE INFORMATION FLOW



ACTIONABLE FLOW OF INFORMATION, ANCHORED BY INFORMATION GOVERNANCE, AT STRATEGIC, TACTICAL & OPERATIONAL LEVELS

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The Value of Information Governance to Health Management Systems

Right Data @ the Right Place @ the Right Time, in the Right Format

Right Data

- Agreed, clear, documented and accessible meaning
- Agreed rules for structure, content, and maintenance
- Appropriate data for intended use

@ Right Place

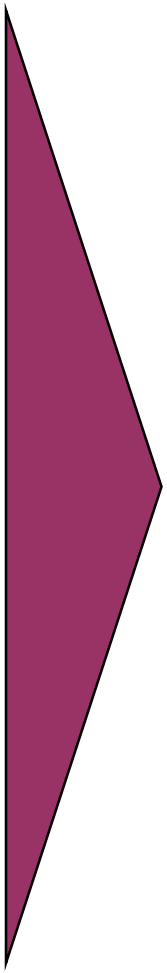
- Appropriately sourced
- Appropriately used
- Impact analysis

@ Right Time

- Data released for use at the appropriate point in lifetime
- Appropriate transport / delivery mechanism

In Right Format

- Data released for use in the appropriate format for each user level
- Appropriate presentation mechanism



Everyone / Every System …

- Works with the same understanding
- Does not require “data leveling”
- Knows who’s the owner

Localization becomes easy …

- Source to target flows are known
- Inherent impact analysis
- Access policies are enforceable

The Service is …

- Definable / enforceable / auditable
- Part of the lifecycle definition
- Managed

The Result is …

- Meaningful
- Presented correctly for decision making
- Consistent
- Interoperable

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INFORMATION GOVERNANCE FRAMEWORK
Industry Best Practices

Based on Research & Review of TDWI, Gartner, Forresters(GiGA), BMO Financial Group, InetSoft & General Web Research Best Practices

DOMAINS	AREAS OF FOCUS
Business	Structure of the program, policies, guidance and vision, from a business perspective.
Delivery Services	Guardianship and Stewardship, role-based access, standards adherence, data lifecycle management and management of service level agreements (SLA's).
Technology	The tools required to leverage Business Intelligence, backup and recovery of critical data, applications for security and role-based access (Identity management)), hardware and software to maintain and update an Enterprise (Master) Data Warehouse. Managing metadata content in a repository
Data	Defining standards about masterdata, metadata, maintaining data quality and control

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➢IG FRAMEWORK DEVELOPMENT - IMPLEMENTATION AS A PROJECT

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First Questions to Ask, and Answer: Heading into Enterprise-Wide IG Project

- **What questions will Information Governance answer?**
- **What issues will Information Governance resolve?**
- **What structure will support these issues?**
  - What are the process flows for IG?
- **What are the roles that will support Information Governance?**
  - Who are our data stewards?
  - Are the IG roles clearly defined?
  - How can we articulate all responsibilities for roles identified?
- **Why is data quality important ?**
  - Why do we need it?
  - What impact does poor data quality have?
  - Why does it matter?

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AN IG Project Purpose and Main Goal

- Analyze Governance in four Domains: **Business, Information Service Delivery, Technology & Data**
- Define current information governance **Business Process** and organizational components- **Roles and Responsibilities**, around information governance in these four domains
- Define any current **Gaps, Opportunities and Issues**
- Define the key **TO-BE** information governance process, roles and responsibilities, process and respective organization components

MAIN GOAL

Allow greater adaptability and flexibility in the definition, running and management of Healthcare, for continuity and privacy of patient care

IG *Project Main Objectives*

1. Define the key AS-IS information governance business processes and organizational components to include: **Standards; Security and Access; Audit and Quality Assessment; and Information and Data processes**.

2. Design the Information Governance **Service Delivery Model**

3. Design and Develop the roles and responsibilities required to successfully administer information and data resources

4. Design the key TO-BE information governance processes, organizational components and supporting documentation.

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Project Key Assumptions

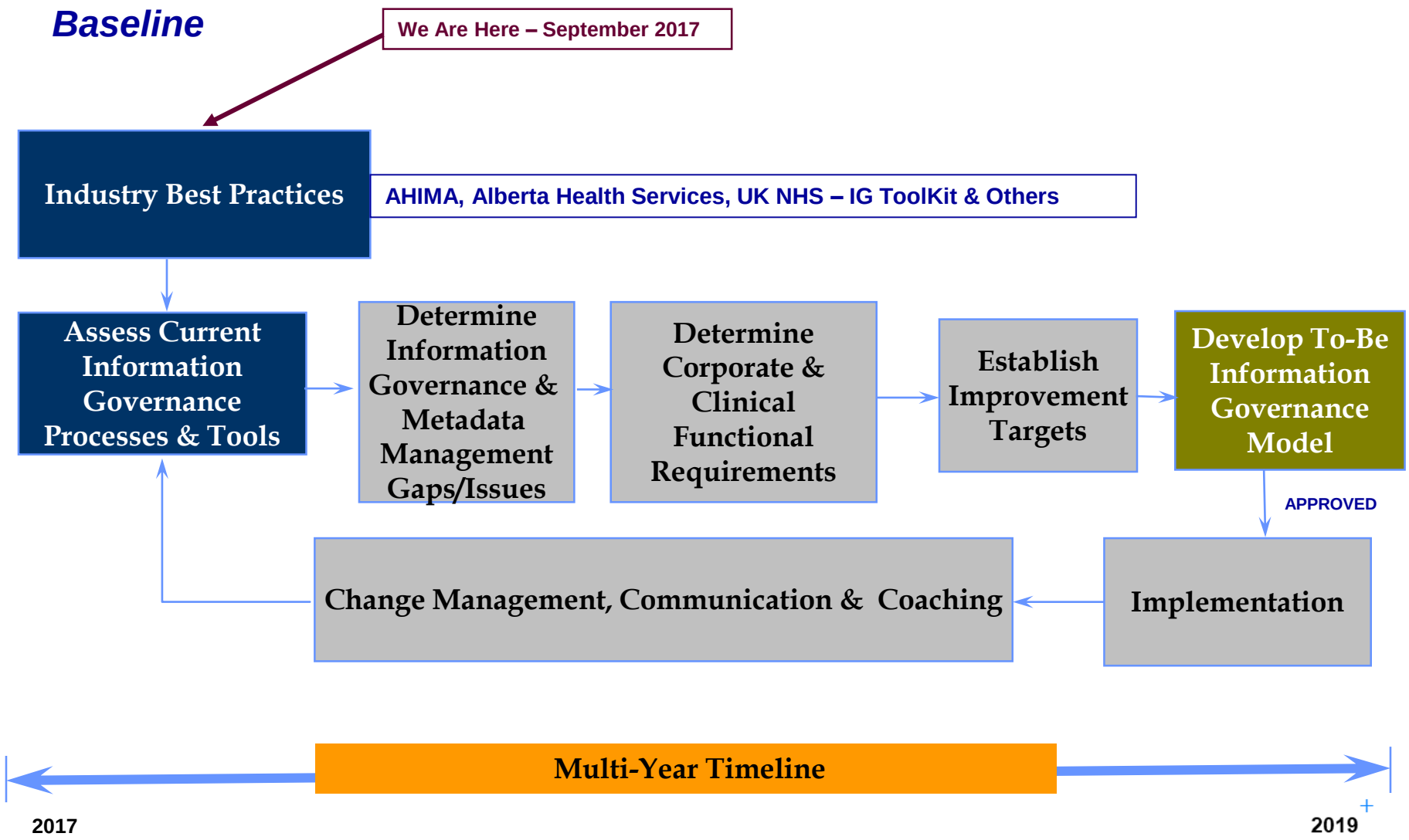
1. Governance is a **Corporate initiative**, not departmental nor project driven

2. Appointed or designated people will have **decision making capabilities**

3. Members/Participants have a good understanding of, and agreement with, the IG Framework, Long Term Strategy and Recommendations

4. The value of Information Governance is clearly understood and supported by all members/participants

IG Framework Development Approach Overview



Identify Industry Best Practices in IG

Industry Best Practices

Based on Research & Review of TDWI, Gartner, Forresters (GiGA), BMO Financial Group, InetSoft & General Web Research, 4 Domains for IG were identified:

DOMAINS	BEST PRACTICES AREAS OF FOCUS
Business	Structure of the Program, Policies, Guidance and Vision, from a Corporate perspective.
Delivery Services	Guardianship and Stewardship Role-based Access Standards Adherence Data Lifecycle Management Service Level Agreements (SLA's) Management.
Technology	Business Intelligence & Analytics Tools Backup and Recovery - of critical data Identity Management applications - for security and role-based access Hardware and Software - to maintain and update an EDW Metadata Content Management metadata in a repository
Data	Defining standards about metadata Maintaining data quality and control

Perform IG Process Assessment

Assess Current Information Governance Processes & Tools

Purpose is to:

Analyze Governance in four Domains: Business, Delivery Services, Technology & Data

Define the current information governance business process and organizational components

Identify and Define any current Gaps, Problems and Issues

Design the key to-be information governance process and organization components

Questions

- What are the Critical Success Factors that will measure the success of the initiative? (e.g. overall efficiency, quality, cost metrics)
- What are the key components of the existing governance business process(es)?
- What is the TO-BE governance business process (manual and automated; Clincal and Corporate) and what are the key improvements/changes?
- What are the major flows of information between and within the Business, Risk Management, Knowledge Management and DSS, to enable the overall governance business process?
- What are the key technology (tools, facilities, equipment, infrastructure, etc) and organizational requirements in order to enable the desired process changes?

Process Scope

- Information Governance Process
- Information Standards Process
- Information Audit and Quality Assessment Process
- Knowledge/Information Management Process
- Analytic Services Delivery Process Design

Deliverables

- Defined Governance Vision
- Critical Success Factors for all four Domains
- High Level As-Is Governance Process Summary
  - As-Is Process Flows and Descriptions
- High Level To-Be Process Architecture
  - To-Be Process Flows and Descriptions
- To-Be Information Flows
  - To-Be Level Information Flows
- Primary Business Scenarios
- Analytics Services Delivery Model

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Identify IG Critical Success Factors (CSF's)

SAMPLE CSF's (as identified by TDWI)

- **Executive Sponsorship – C-Suite**
- **Patient Resources on the Information Governance Team**
- **Envision the Solution**
- **Take Small Steps**
- **Include post-implementation activities**

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High Level IG Process Flow

Key information governance triggers, processes and process flows are outline below:

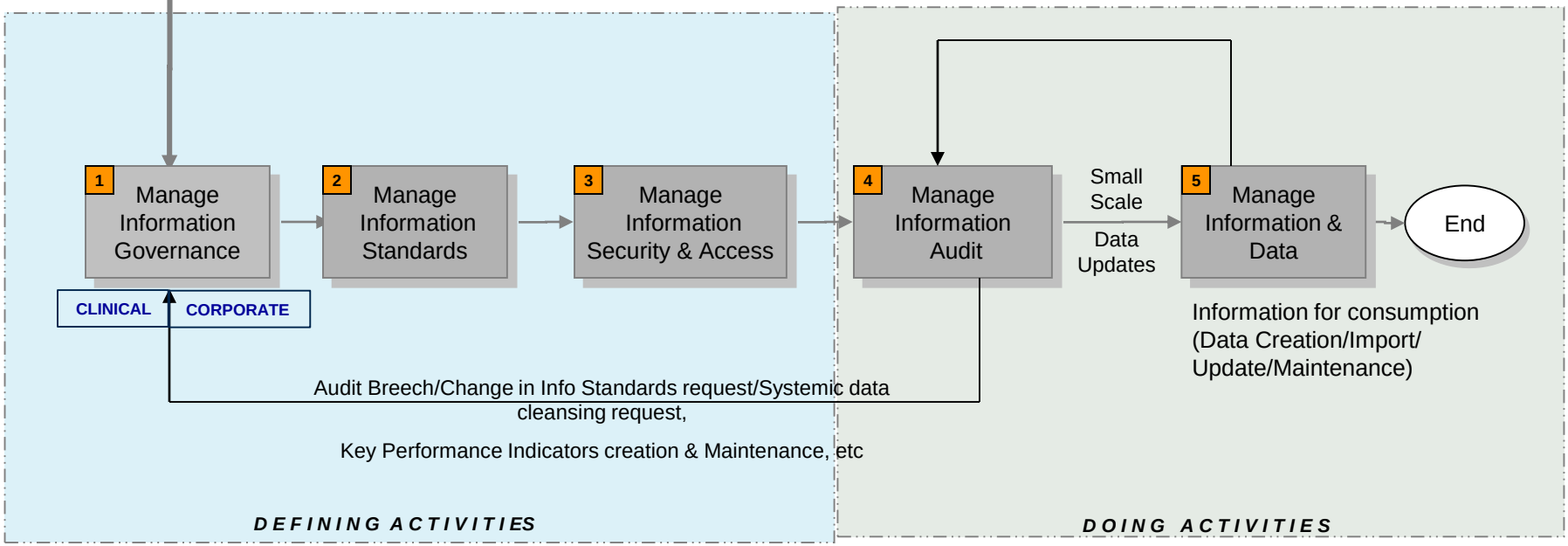
Triggers and Information Inputs

External

- Legislative, Compliance &/or Regulatory Change
- Ministry of Health (Federal & Provincial) Changes
- New Data Interchange Request
- Information Industry Standard Change Request
- Privacy Commission

Internal

- Re-Organization/Transformation Initiatives
- Senior Executive Level Staff Changes
- Key Performance Indicators/Measures Changes
- New Information System Implementation
- New Data Interchange Request
- Information Standard Change Request
- Systemic Data Change and/or Archival Request
- Periodic Code Reviews
- Audit Changes



Manage IG Process: Related Questions To Be Answered

- **What is the accountability of the assigned to the governance committee?**
- **Who will be on governance committee -> what will represent a quorum?**
- **How will requests be initiated?**
- **How will "work" be assigned?**
- **How will approvals be managed (tracked, etc.)?**
- **Will there be layers based on type of request?**
- **What is the governance group's accountability to Senior Executives or Boards?**

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Key Strategic Needs & Information Requirements Summary (Example Output)

Determine Corporate & Clinical Functional Requirements

The following summarizes the strategic business needs and drivers, per key theme, identified by Senior Executives, for Information Governance as it aids in Corporate Performance Management

Key Theme

Corporate Information Governance

Key Business Needs

- Establish a Common Language/ Vocabulary of Terms
- Improve Information Governance Process
- Establish Common Measures
- Capitalize on Standardized Decision Making Information
- Establish Data Quality Control Measures
- Manage Information Privacy

Key Information Requirements

- Standard Definitions: Business; Technical and External Facing
- Common Measures Data Elements e.g. Exp. Ratings, Variance, Actuarial Cost Rate, etc.
- Establish access controls, such as: Private; Privileged; Not Sharable; Sharable
- . Deal with small sample sizes that negate privacy.
- Improve Privacy in Data Warehouse
- Ensure Continuity of Governance
- Embedded Business Metadata in help screens
- Definition for **ALC**
- Definition for **Surgical Day Care**
- Definition for **Sepsis**

Key Theme

Education & Communication

Key Business Needs

- Improve Communication & Education
- Achieve a Knowledge Organization
- Provide Corporate Change Agents (as Educators)
- Develop a Curious Workforce
- Train Internal Data Users
- Improve understanding, by frontline staff, of the importance of the data being collected
- Changing Cultures and Societal Attitudes & Behaviors

Key Information Requirements

- Share Knowledge
- Effective Transfer of Information
- Knowledge Proliferation
- Collaboration among Divisions and Individuals alike
- Train users for self-serve for information access.

Colour Code Legend

- In EDW
- In Other DW/Marts
- Fielded Source Systems
- Do not currently collect in a fielded data source (Unstructured)
- N/A for Data Source

Identifiy Data & Information Issues (Example Output)

Determine Corporate & Clinical Functional Requirements

Outline of issues around:

- **Operational systems foundational efforts for new data collection**
- **Existing data requiring modifications for granularity, versioning and history needs**
- **What condition is the data in - to satisfy advanced analytics**

Foundational Efforts around New Data & Information Requirements

Required to Satisfy:

- **Improved Data Collection**
- **Improved Data Granularity**
- **Provision of Consistent & Validated Data and Information Sources**
- **Retention of Data History (Versioning - in the short-term & Archiving - in the Long-Term)**

Key New Information Requirements - examples

- Infectious Disease Analysis – Patient Exposure
- Retain data Up to 10 yrs for Comparing Performance Measures
- Patient Discharge
- Coma Patients
- Introduction of New ICD11 codes
- Change data capture for Patient Classification over time
- Voice of the Patient (need electronic, from survey data)
- Health Industry Group Analysis
- Ability to link to archived historical data
- Corporate Metadata Build and Integrate

Colour Code Legend

- In EDW
- In Other DW/Marts
- Fielded Source Systems
- Do not currently collect in a fielded data source (Unstructured)
- N/A for Data Source

Perform Information Governance Roles & Responsibilities Process Assessment

Purpose

To define the current roles and responsibilities around information governance in all four domains

To define any Gaps, Problems/Issues

To design the key to-be roles and responsibilities and organization components in all four domains

Questions

- What are the current roles involved in information governance?
- What are the changes in roles and responsibilities as a result of the governance process changes?
- What are the competencies (knowledge, skills and abilities) required to execute the new processes and new applications?
- What are the key organizational structure changes (e.g. information governance group)?
- What are the key components and behaviors encapsulating the Information Stewardship Culture?

Deliverables

- Roles & Responsibilities High Level
  - High Level As-Is Roles Summary
  - To-Be Roles Definition
  - Key Organizational Structure Changes (If Any)
  - Competency Requirements

Industry Best Practices –Roles & Responsibilities:
Business Domain

- An Executive committee of Business, IT & Patient Reps
- Data Governance Program Team (Working Group)
- Information Governance Steering Committees
- Data Governance/Management Policy
- Data Guardian and Steward Policy
- Data Steward Practice Directives

Industry Best Practices – Roles & Responsibilities:
Delivery Services Domain

- **Identify de facto Data Stewards**
- **Assign/Identify a combination of Corporate and business unit stewards:**
  - ✓ Data Stewardship Program Manager
  - ✓ Data Stewardship Project Manager
  - ✓ Subject Matter Manager
  - ✓ Data Definers
  - ✓ Data Transformers
  - ✓ Data Readers
  - ✓ Metadata Steward
- **Create an automated Stewardship Repository**
- **Data Steward Training and Support**
- **Develop a balanced scorecard for Delivery Services to measure Service Level Agreements (SLA)**

IG Roles & Responsibilities: Examples

POTENTIAL ROLES

- Information Governance Committee (IGC)
- ***Information Governance Standards Author***
- IG DW Audit Supervisor/Senior Analyst
- IG DW Information & Data Senior Analyst
- IG Request Tracking Manager/Supervisor
- IG Request Tracking Analyst
- Business Metadata Manager
- Technical Metadata Manager
- Metadata Analyst
- Metadata Registrar
- Executive Data Guardian (ISPRC)
- DW Security & Access Analyst
- Analytic Service Request Tracking supervisor (For self-serve)
- Analytic Service Request Reviewer & Screener (For self-serve)
- Data Steward

POTENTIAL ROLE

Manage Information Standards

Information Governance Standards Author

Key Activities

1. Record life cycle of request throughout Information Standard Request workflow
2. Information Standard – Planner, Designer, Developer, Ascertain Audit Requirements, Implementer
3. UAT
4. Produce and Communicate change
5. Performance measurement and overall metric compilation
6. Respond to an IT Project requiring a new/change/withdrawal of an information standard or data change (this may be a standard, data change that has been approved by IG Governance group)
7. Respond to an appeal of an implemented Standard
8. Respond to an Information Standard Audit

IG Benefit Summary and Key Success Factors

Patient Benefits/Impact

- Standardized rules and definitions
- Safety
- Less Medical Errors
- Improved patient care per authority
- Consistent patient care across authorities
- Patient Management System- access to patient information for swiftness of care

Financial Benefits

- Reduces Cost
- Enablement of the identification of new initiatives
- Reduces duplication of efforts - from a staffing perspective
- Reduced Risks
- New IT Initiatives rolled out with less costs (quicker and more efficient leads to less cost
- Reduce IT data support and maintenance costs

Non-Financial Benefits

- Improved quality, timeliness and availability of data
- Increase ease of gathering metadata
- Provide a more consolidated and accessible Information Governance,
- Reduce duplicate data entry of information

Key Success Factors

- Designed, developed and implemented Information Governance (IG) Organization and Processes
- Implemented Metadata Registry
- Extensive integration with back office metadata repositories and existing data warehouses across Authorities - for full realization of benefits
- *Embedded COMMUNICATION & EDUCATION*

CONCLUSION

Information Governance should always be implemented incrementally

Implementing Information Governance is a multi-year journey which must be planned, owned, and enforced at the highest level within the enterprise. There will be the need to:-

- ✓ **Appoint a Body/Structure/Person within that Body to own, manage and be committed to, the data assets**
- ✓ **Use a structured framework for addressing every item in scope (business, delivery services, technology, data)**
- ✓ **Create a transition plan with the end vision in mind and having pragmatic / tactical steps to moving forward**
- ✓ **Build a Roadmap**

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THANK YOU