Data Governance Defined

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Objectives for this Session

- Define Data Governance
- Examine the urgent drivers for Data Governance
- Describe DG key functions, including master data and metadata management
- Initiate planning for enterprise data governance

Data Everywhere

More:

- Applications
- Medical Devices
- Consumer Devices
- Systems

What is Data?

- The dates, numbers, images, symbols, letters, and words that represent basic facts and observations about people processes, measurements, and conditions
- Raw facts without meaning or context

American Health Information Management Association. Pocket Glossary of Health Information Management and Technology. 5th Edition. AHIMA Press. 2017.

Data Continues Expand

- Dark Data
- Non-relational data stores
- Blockchain
- Machine Learning and Artificial Intelligence
- Data Lakes
- And many others

Value of Data

Data in its raw form is of limited value. It needs to be processed in a meaningful way to create information that would be relevant to a situation.

WHAT IS INFORMATION GOVERNANCE (IG)?

AHIMA DEFINES IG AS:

"An organization-wide framework for managing information throughout its lifecycle and for supporting the organization's strategy, operations regulatory, legal, risk, and environmental requirements."

AHIMA's Information Governance Adoption Model (IGAM™)

- 10 competencies
- 75+ maturity markers
- 1 IG program
- All of healthcare

WHAT IS DATA GOVERNANCE (DG)?

Data Governance (DG) provides for the design and execution of data needs planning and data quality assurance in concert with the strategic information needs of the organization. Data Governance includes data modeling, data mapping, data audit, data quality controls, data quality management, data architecture, and data dictionaries.

Why Data Governance?

"If we lose, can't find, can't understand, or can't integrate valuable enterprise data or if it is of questionable quality- the maximum value of the data is not realized, leading to a loss of business insight or sub-optimal operations. At the end of the day, we govern data not for the sake of the data, but ***for the sake of the business!!"***

– Pete Stiglich

http://blogs.perficient.com/healthcare/blog/2012/06/12/data-governance-vs-data-management/

DATA VS. INFORMATION

Examples of Data

- 120/80 blood pressure reading
- Date on an employee application
- Number of cesarean sections in May
- Vendor address

Examples of Information

- John Doe's blood pressure reading on 9/15/15
- Employee application record
- ABC Hospital cesarean section rate for May
- Vendor record

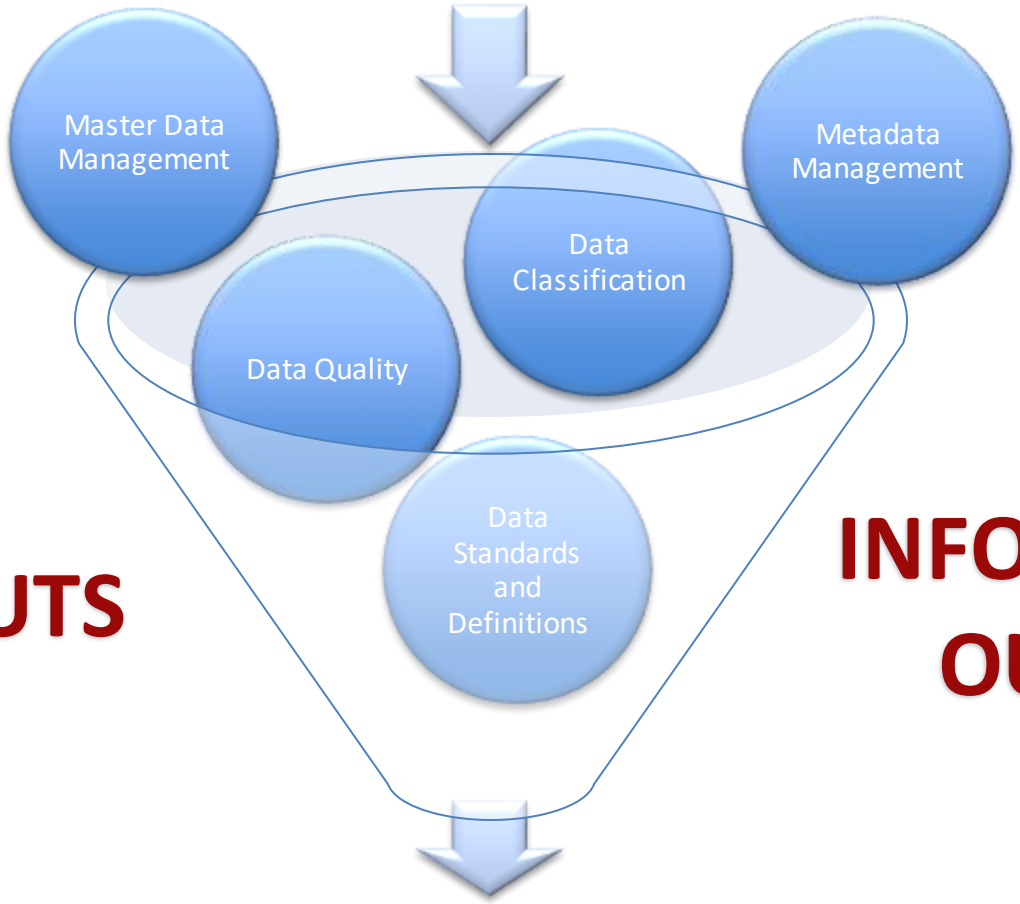
Example Data Governance Functions

» Data Quality Control and Management
» Identity Management
» Data Cleansing
» Metadata Management
» Master Data Management

Example Information Governance Functions

» Enterprise-wide Governance Policies
» Life Cycle Management
» Information Use, Exchange, and Preservation
» Physical and Electronic Systems Governance
» Privacy and Security
» Information Risk Management
» Legal and Regulatory Response
» Information Vendor Services Management

DATA GOVERNANCE



DATA INPUTS

INFORMATION OUTPUTS

INFORMATION

STRATEGY

OPERATIONS

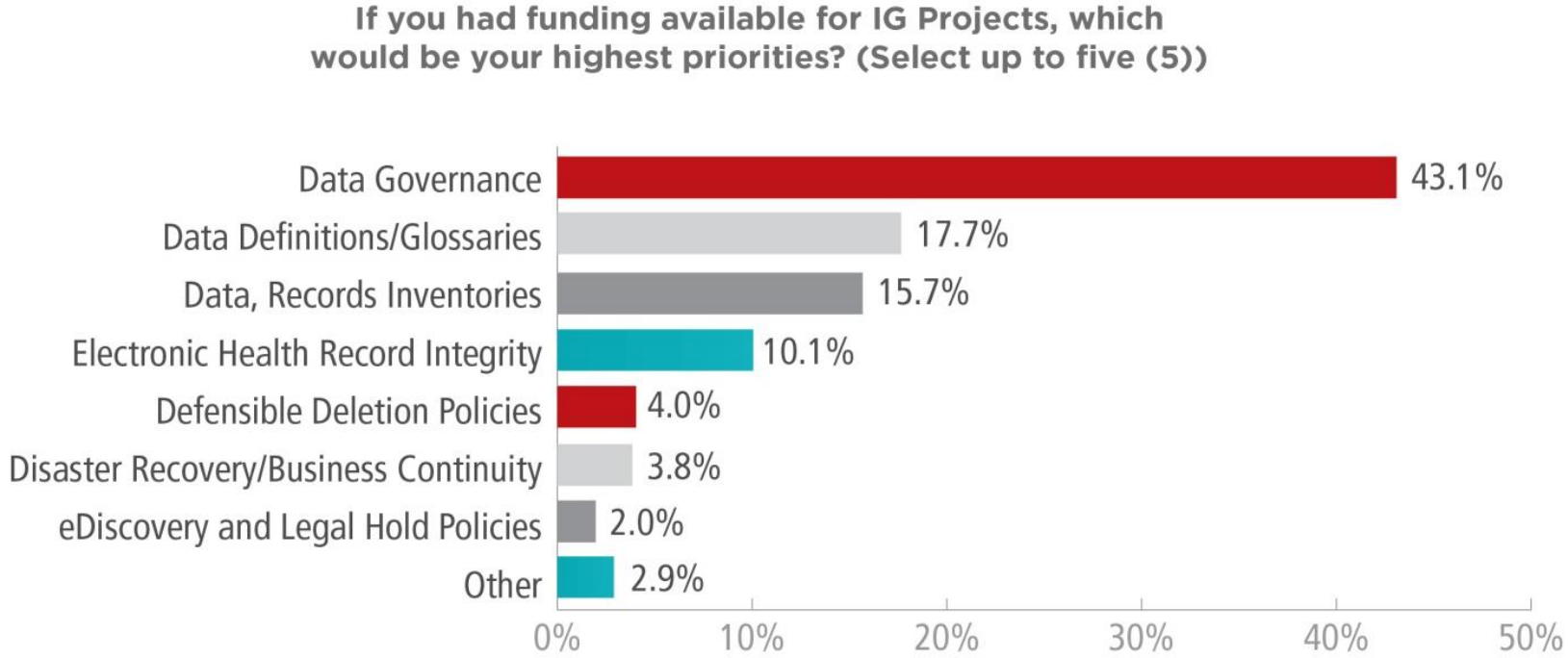
CLINICAL CARE

INDUSTRY DEMANDS

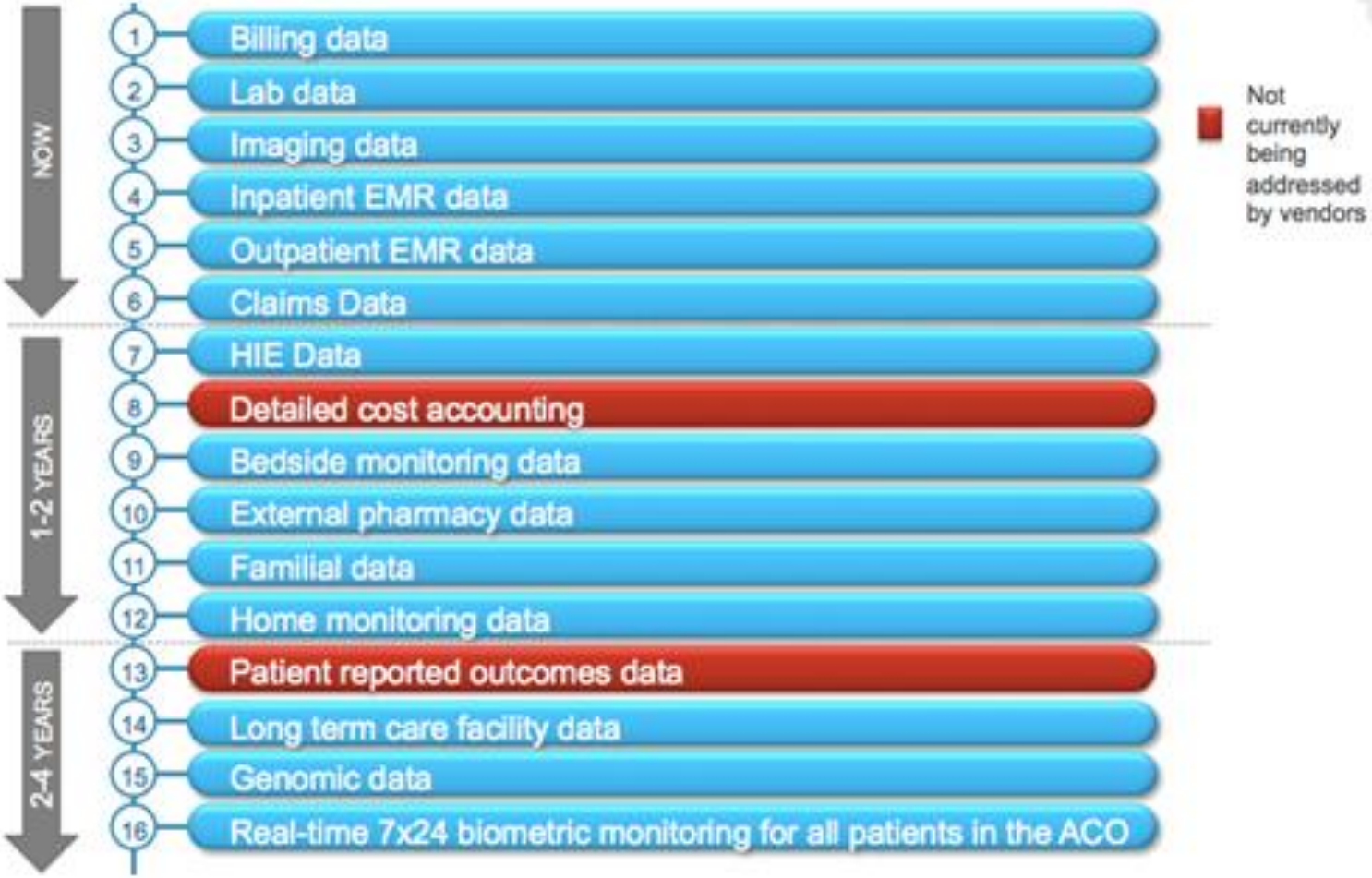
The Flood of **BIG DATA**

In the world of "Big Data," the five Vs summarize the changing habits of data as it is exponentially increasing. The five Vs also emphasize the reasons why information governance is more important now than ever. **The five Vs include: Volume, Velocity, Variety, Veracity and Value.**

Project Prioritization if Funding is Available



What Data Are We Governing?



https://www.healthcatalyst.com/demystifying-healthcare-data-governance

What Are Some DG Initiatives

Key Functional Components of DG

- Master Data Management
- Metadata Management
- Data Quality Management
- Data Architecture

Other Key DG Initiatives

- Data Cleansing (Scrubbing)
- Data Transformation
- Data Mapping
- Data Classification
- Data Definitions

Types of Master Data

Party Data

- Individuals or organizations
- Includes employees, patients, providers, companies, vendors
- MPI Example – Manages master data related to patients

Financial Master Data

- Data about business units, cost centers, and accounts
- Used in accounts payable, payroll and materials management
- Cost Center Example – Includes cost center name, cost center code, description

Product Master Data

- Describe an organization's products
- Includes data about components making up a product
- Product Example – product and service identification codes, description, price, manufacturer information

Location Master Data

- Describes data about the location of an organization's customers, suppliers and others
- Includes postal codes, latitude, longitude, geopolitical boundaries, and sales territory
- Location Master Example – Critical in terms of public health and surveillance of disease and health hazards

http://library.ahima.org/doc?oid=106378#.WX9A1IffN-Z

Metadata Management

"Data about data" Identifies, describes, explains content, context, structure of data
Allowing it to be classified, retrieved, used. and managed
Examples: Tags, Labels, Value sets, Indexes, Catalogs

Metadata Decisions and Accountability:

- Data Definitions
- Standards, Conventions, and Compliance
- Semantic Interoperability (consistent meaning and application)

DATA GOVERNANCE

ORGANIZATION AND ROLES

MASTER DATA MANAGEMENT

METADATA MANAGEMENT

DATA QUALITY MANAGEMENT

DATA ARCHITECTURE

Types of Metadata

Application Metadata

- Created by the application specific to the ESI being addressed, embedded in the file, and moved with the file when copied.
- Copying may alter application metadata.
- Examples include patient account number, patient last name, patient first name, date of admission.

Document Metadata

- Properties about the file stored in the file, as opposed to stored in the document content.
- Often this data is not immediately viewable in the software application used to create/edit the documentation, but can generally be seen in "Properties" view.
- Examples include author, company, creation/revision dates.

File System Metadata

- Generated by the system to track the demographics (name, size, location, usage, etc) of the ESI that are stored externally from, rather than embedded within, the ESI.

Embedded Metadata

- Generally hidden, but an integral part of ESI.
- Some metadata may be extracted during processing and conversion for eDiscovery, embedded data may not be.
- May only be available in the original, native file.
- Examples include "track changes" or "comments" in Word document, or "notes" in PowerPoint.

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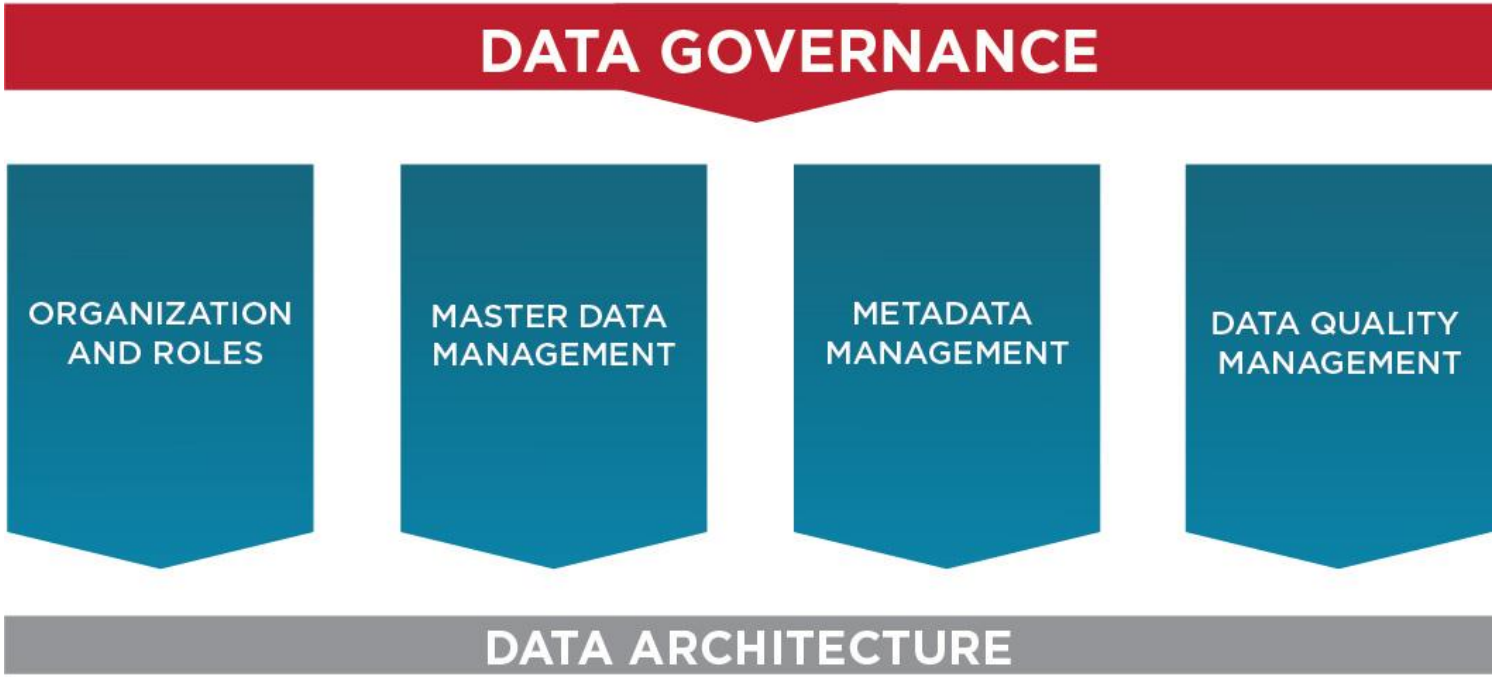
Data Quality Management

- An integrated, collaborative approach to assuring that data is "fit for use" for business operations, decision-making, and planning
- Focus is on detecting, assessing and fixing data defects in a systematic way
- Reviews and measures dimensions of quality:
  - Accuracy, validity, completeness, timeliness, duplication and integrity



Data Quality Terms

- **Data Quality Management**: The business processes that ensure the integrity of an organization's data during collection, application (including aggregation), warehousing, and analysis.
- **Data Quality Measurement**: A quality measure is a mechanism to assign a quantity to quality of care by comparison to a criterion. Quality measurements typically focus on structures or processes of care that have a demonstrated relationship to positive health outcomes and are under the control of the healthcare system.

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AHIMA's Data Quality Management Model

Data Quality Management Model

The Data Quality Management Model was developed to illustrate the different data quality challenges. Definitions for the terms within the model are included below.[2]

Application: The purpose for the data collection
Collection: The processes by which data elements are accumulated
Warehousing: Processes and systems used to archive data
Analysis: The process of translating data into meaningful information

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Data Architecture

An integrated set of policies and procedures, and specifications (models and diagrams) used to define data requirements, guide integration, and control data assets as well as align data investments with data strategy

Examples of tools and components: Use cases, data flow diagrams, data models and structures, requirements analysis, software engineering

DATA GOVERNANCE

- ORGANIZATION AND ROLES
- MASTER DATA MANAGEMENT
- METADATA MANAGEMENT
- DATA QUALITY MANAGEMENT

DATA ARCHITECTURE

Other Key DG Initiatives

- Data Cleansing (Scrubbing)
- Data Transformation
- Data Mapping
- Data Modeling
- Data Classifications
- Data Standards
- Data Definitions

Data Cleansing (Scrubbing)

- The process of amending or removing data in a database; it's incorrect, incomplete, improperly formatted, or duplicated.

Data Cleansing (Scrubbing)

Sources and Causes of Poor Data Quality

1. Older systems with obsolete data.
2. Inaccurate data entry (good, old-fashioned human error).
3. Too many databases and channels to maintain properly.
4. Lack of coding standards.
5. Simple errors like missing data in database fields.

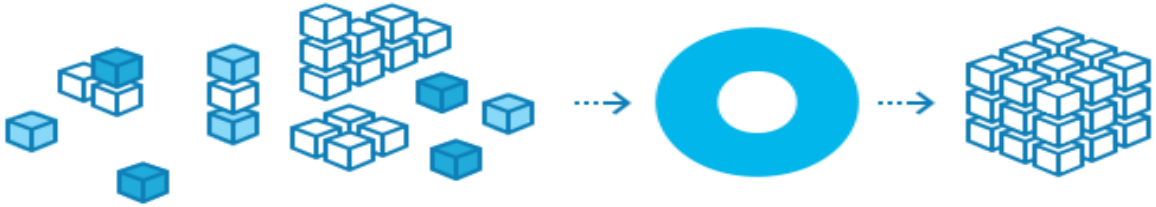
5 Simple Data Scrubbing Steps for Your Team

1. Determine at least one area in your business with a data quality problem.
2. Enlist the participation of top management by demonstrating business benefits due to data quality improvements.
3. Review current data quality in the "target" area.
4. Use data scrubbing software and other data scrubbing tools to produce a sample report about the current data quality in the target area.
5. Within your various teams, find "Data Quality Champions" to lead the way by spreading awareness and communicating both big and small achievements in improving data quality.

https://www.dataentryoutsourced.com/blog/how-to-improve-business-intelligence-with-data-scrubbing/

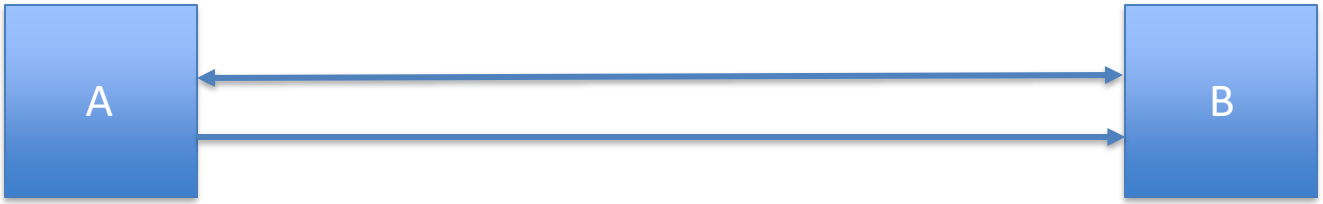
Data Transformation

- The process of converting data or information from one format to another, usually from the format of a source system into the requirement of a new destination system.



Data Mapping

- Data mapping involves "matching" between a source and a target. Can be unidirectional or bidirectional.



Data Modeling

- The process of determining the users' information needs and identifying relationships among the data.

IG Executive Training Video

You don't need a crystal ball to see where the healthcare industry is going. What you need is the

Privacy, Cybersecurity, and Information Governance Institute

SEPTEMBER 22–23, 2018 | MIAMI, FL

AHIMA celebrates the Privacy and Security Institute's 12th anniversary with a name change to match the evolutionary changes in the industry. In 2018, this meeting will be called the Privacy, Cybersecurity, and Information Governance Institute. Watch ahima.org for more details!

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Questions?