

ENTERPRISE DATA GOVERNANCE: A PILLAR OF CENTRALIZED, SUCCESSFUL, AND SUSTAINABLE DATA INFRASTRUCTURE

Advancing Analytics for Children's Hospitals

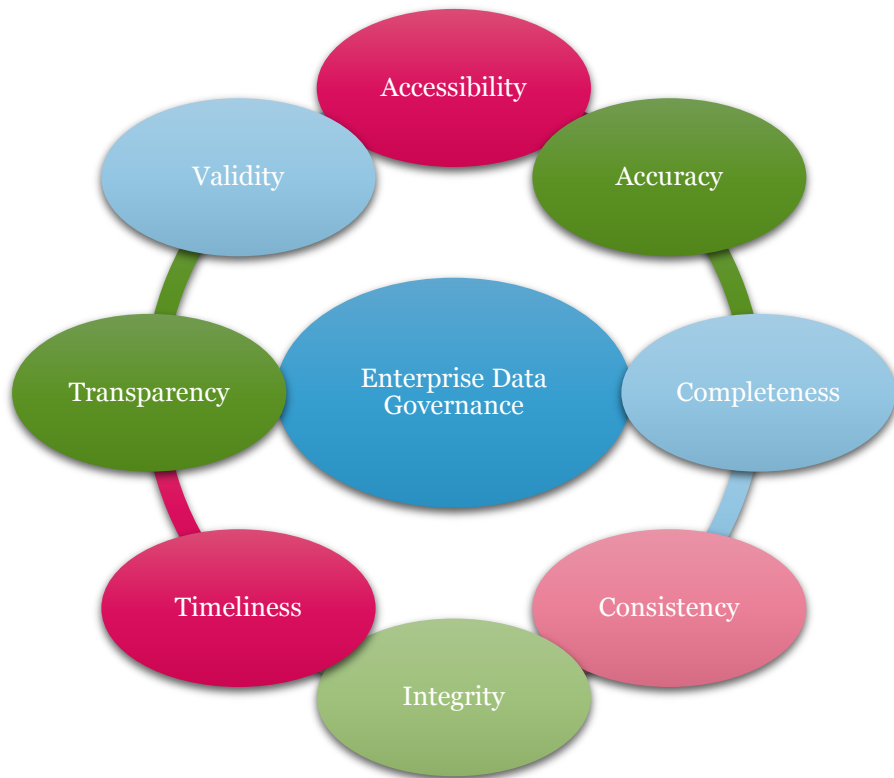
Natalie Rahming, PhD, Joseph Zorc, MD,
MSCE, Mary Rosman

6/5/2018



What is Enterprise Data Governance (EDG)?

Enterprise Data Governance (EDG): Process for formalizing and guiding behavior over the definition, production, display and interpretation of information and information-related assets



Includes standards & policies governing:

- Data as a valued/strategic asset
- Data management design & operation
- Where data lives & who can access
- Responsibility & accountability for data
- Internal/external compliance rules

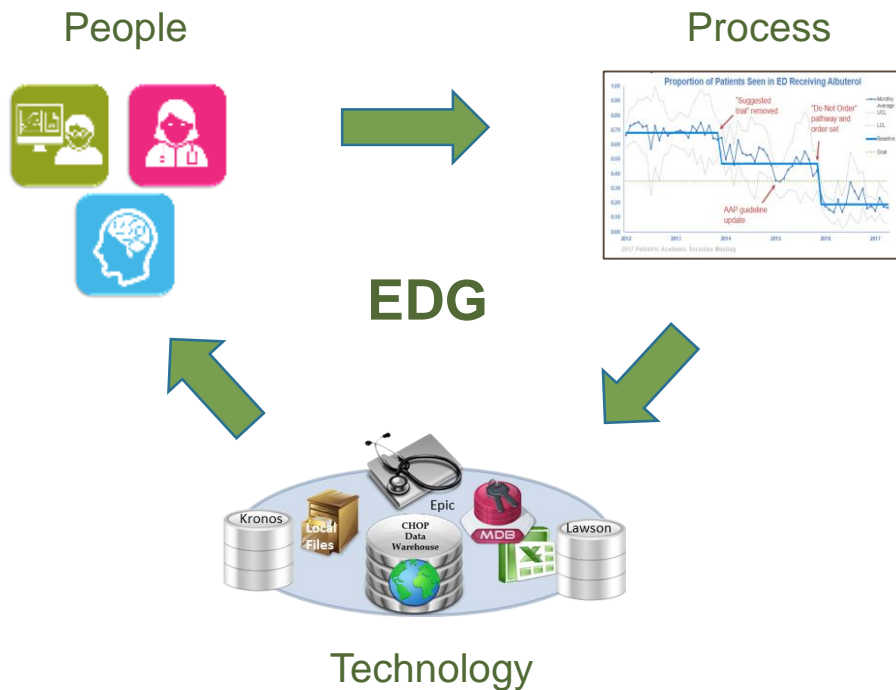
Data governance is everyone's responsibility!

Introduction: EDG Solutions at CHOP

- We established an Enterprise Data Governance (EDG) program at CHOP to tackle challenges around data & its effective use
- We design solutions around EDG pillars of *Structure, Stewardship, Standardization, & Single Source-of-Truth* that improve data usage & analytical capabilities
- Our EDG program operates iteratively based on lessons we've learned & opportunities to continuously improve



EDG began as an opportunity to improve use of CHOP data & enhance analytical capabilities



CHOP Data Challenges

What data exists & how do I access it?

Where, how, from whom do I get data?

Why are the 'same' metrics showing different results?

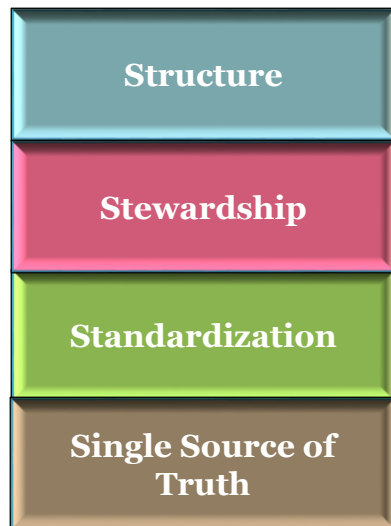
Why are 'different' metrics displaying the same result



EDG centralizes people, processes, & technologies to support successful data & analytics infrastructures

EDG Pillars: Structure, Stewardship, Standardization, Single Source-of-Truth

EDG as the Central Pillar



Key Solutions w/ EDG

Various Projects & Initiatives

Stewardship Community

Enterprise Data Governance Explorer or 'EDGE' Map

CHOP Data & Acronym Dictionaries

Analytics-Ready Data Layers



- ✓ We follow **4S's** of successful data governance
- ✓ Solutions designed around these tenets support quality data, analytics, & reporting
- ✓ EDG may play a key role in creating & sustaining analytics

Major Projects

- Streamline data processes from upstream to downstream (e.g. geographic changes & department groupers)
- Data alignment among clinical, financial, & research
- Metadata collection for consistent & accurate use & interpretation
 - Metrics
 - Applications/ Dashboards
 - Cohorts
 - Reports



EDG is important in supporting the integrity of CHOP data

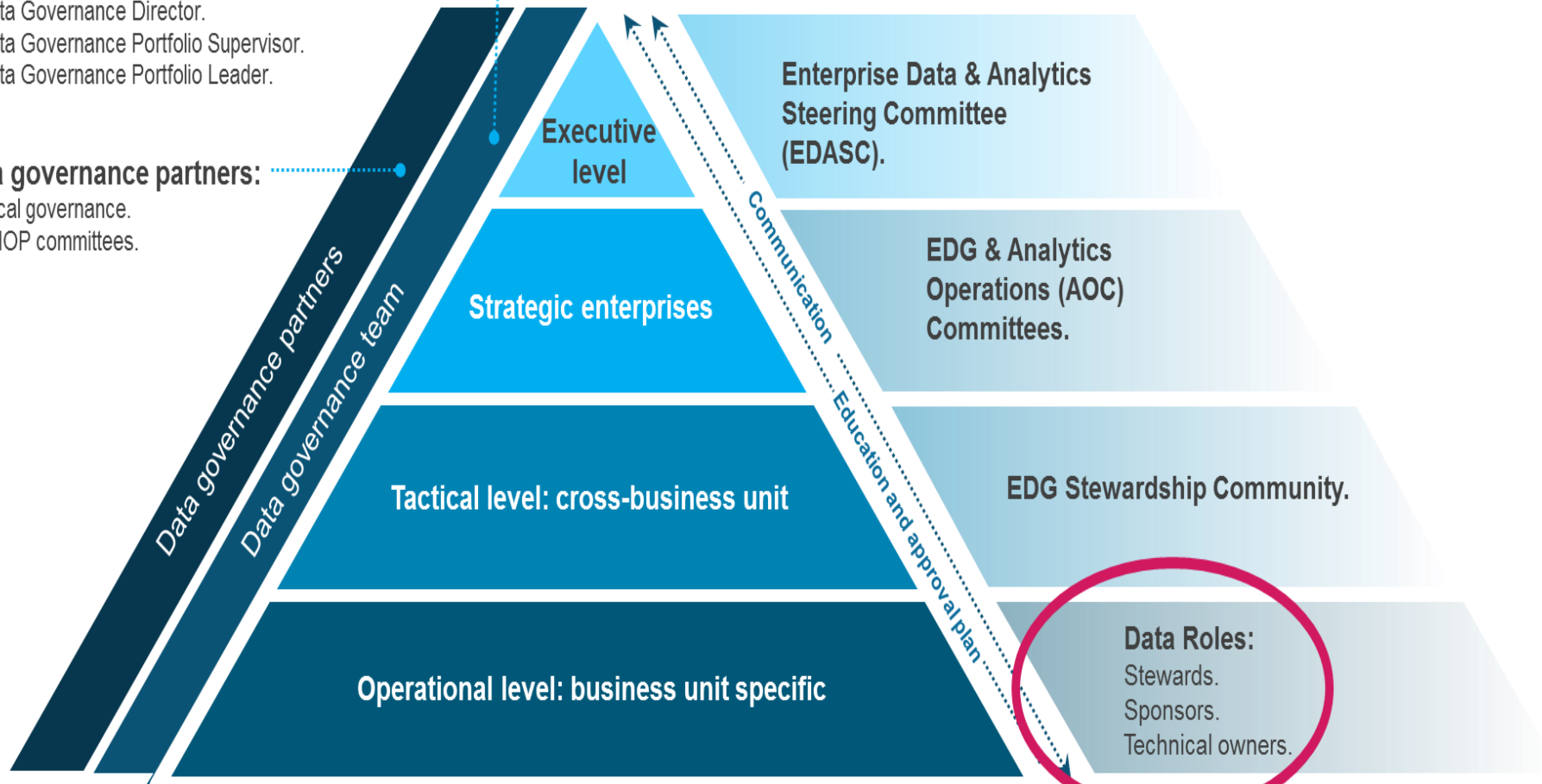
CHOP EDG Structure

Data governance team:

- Data Governance Director.
- Data Governance Portfolio Supervisor.
- Data Governance Portfolio Leader.

Data governance partners:

- Local governance.
- CHOP committees.



Individuals in data governance roles are foundational in maintaining data governance & analytical objectives

Key Point Person



Data Sponsor

“Process Expert”

Clinical/Business Leader
Accountable for Processes
Approves Access to Data



Data Steward

“Data Expert”

Connects Process to Data
Key contact for data quality
Works with data as key job role



Technical Owner

“Technical Expert”

Extracts and presents data
Contact for technical issues
Codes & queries data systems

Data Stewards are integral players in governance & analytics

Standardization – Data Layers

EDG is an essential contributor to the establishment of trusted, validated & consistent data to be used for self-service analytics

CHOP Data Blocks

Governed data layer w/ info for the most routine requests.

EDG is core team member.

Assigns sponsors/ SMEs for sustained integrity.

Enterprise Data Marts

Governed data layer w/ info for specific subject area requests.

Monitored by EDG and stakeholder-approved.

Self-Service Analytics

EDGE Tool

***The Enterprise Data Governance Explorer (EDGE) tool is a business glossary developed in-house to transparently display quality data, metadata, relationships, and data lineage.**

EDGE MAP

- Reference Library of metadata, assets, & people (MAP)
- Data management, organizational structure, & roles & responsibility

Data Dictionary

- Dictionary of data & metadata in CDW tables & columns
- Lineage, definitions, & relationships between data sources

Acronym Dictionary

- List of acronyms or abbreviations commonly used at CHOP
- Full name & correct usage to promote consistency & accuracy

EDGE Tool – Homepage

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Welcome to CHOP's Enterprise Data Governance Explorer "EDGE"




EDGE MAP

Go to the EDGE MAP to view the catalog of data assets, their metadata, and the individuals who are responsible for governing them. Looking for the original EDGE Tool? It's here!



CHOP Clinical Data Warehouse (CDW) Data Dictionary

Go to the CHOP Clinical Data Warehouse (CDW) Data Dictionary to view information about the tables, columns, data sources, and relationships among the entities which comprise the CDW.



CHOP Acronym Dictionary

Go to the CHOP Acronym Dictionary to learn what acronyms stand for, mean, or how they are used across CHOP.

EDGE Tool – MAP

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Metrics, people or organization Search

DEPARTMENTS

Care Network

CHOP Foundation

Clinical and Support Services

Clinical Divisions/Units

Facilities and Construction Management

Finance

Human Resources (HR)

Information Services (IS)

Multidisciplinary Programs and Services

Nursing

Physician Practice

Quality & Safety

Research

Strategy, Communications and Public Affairs


RELATED RESOURCES

EDG Roles & Responsibilities Guide

EDGE Tips

Welcome to the Enterprise Data Governance Explorer (EDGE) MAP


The EDGE MAP is a "reference library" of the metadata and people associated to data assets across CHOP. It illustrates the EDG data management and organizational structure, and organizes data into manageable focus areas. Search or browse the EDGE MAP to find the information you need.



Metadata

Use EDGE MAP to find metadata about CHOP data assets


- Each type of data asset has a standardized set of metadata attributes
- The metadata is provided by data stewards and certified by the EDG team



Data Assets


Use EDGE MAP to learn about CHOP data assets (e.g. metrics, cohorts, applications/dashboards) & the relationships between them

- CHOP data are assets because they are valuable for decision-making & informed action
- Data assets are measurement standards, defined patient groups, or management & reporting tools




People

Use EDGE MAP to find the individuals in governance roles assigned to CHOP data assets & focus areas across the CHOP Enterprise




Data Steward Data Expert

Key contact
Responsible for issues relating to the definition & production of data



Technical Owner Technical Expert

Responsible for generating and presenting data




Data Sponsor Process Expert

Responsible for approving access & major process changes

To submit changes to existing CHOP data assets, click [here](#)

For more information regarding EDG or any of the content displayed on this website or to add new CHOP data assets, please contact Data Governance (DataGovernance@email.chop.edu).

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Center for Healthcare
Quality & Analytics

EDGE Tool – MAP

Metrics, people or organization
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EMPLOYEE



Zorc, Joseph
Dir Emergency Info Systems

60014-Emerg Med-Main-CHOP

Calderon, Brandon C

ZORC@email.chop.edu

215-590-5237

Associated Data Assets:

– Metrics (5):

Data Sponsor for Metrics

Emergency Department (ED) Left Without Being Seen (LWBS) Rate - All patients
Emergency Department (ED) Median Length of Stay (LOS) for Admitted Patients (Minutes)
Emergency Department (ED) Median Length of Stay (LOS) for Discharged Patients (Minutes)
Emergency Department Total Patient Encounters Presenting
Emergency Department Total Patient Encounters Seen

+ Focus Areas (2):

+ QlikViews (6):

Cohorts:

No associated cohorts identified at this time. If you would like to provide us with this information, please contact DataGovernance@email.chop.edu.

EDGE Tool – MAP

[Search](#)

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CHOP Foundation
Clinical and Support Services
Facilities and Construction Management
Finance
Human Resources (HR)
Information Services (IS)
Multidisciplinary Programs and Services
Nursing
Physician Practice
Quality & Safety
Research
Strategy, Communications and Public Affairs

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METRIC

Adjusted Patient Days

Finance > GL > HB Revenue

Total number of inpatient patient days adjusted to account for outpatient activity which entails outpatient technical hospital service

Focus Area Category:
[HB Revenue](#)

Data Stewards (Primary Contact):
[Manning, Tyler](#)

Technical Owners:
[Awai, Sk](#)

Data Sponsors:
[Lutts, Meaghan K](#)

Calculation:	$\frac{((\text{Inpatient Gross Revenue} + \text{Outpatient Gross Revenue}) / \text{Inpatient Revenue})}{\text{x Inpatient Patient Days}}$
Desired Direction:	N/A
Type:	Percentage
Benchmark:	Children's Health Association (CHA)
Source:	Epic Billing via CDW
Inclusions:	Billing status
Exclusions:	Outpatient revenue for Lab Outreach and Homecare is not included, Professional fees also not included, Observations not included in count of patient days
Data Elements:	1) Outpatient Revenue, 2) Inpatient Revenue 3) IP Patient Days
Current Target:	-
Current Red Threshold:	-

Associated Data Assets:

Cohorts:

No associated cohorts identified at this time. If you would like to provide us with this information, please contact DataGovernance@email.chop.edu.

[+ QlikViews \(2\)](#)

EDGE Tool – CHOP Data Dictionary

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CDW Data Dictionary

Search [i.e. visit]

The CDW Data Dictionary is a set of information describing the following:

- What data is collected and stored in the warehouse's tables and columns
- The metadata attributes to help organize and process the data
- How and where the data is used

You can use the CDW Data Dictionary to:

- View information about sources, tables, & columns/ fields
- Learn about data lineage, definitions, & relationships
- Explore new data or subject areas
- Validate your work and better understand processes

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CDW TABLE

VISIT_REASON

VISIT_REASON

This contains the data entered in the Reason for Visit spreadsheet for an clinical system encounter. Each row in this table is one reason for visit associated with a patient encounter. One patient encounter may have multiple reasons for visit; therefore, the item LINE is used to identify each reason for visit within an encounter.

Type: CDW
Data Source: CDW (CDWPRD)

Columns	Description	EPIC INI Items
RSN_KEY	The key of the record associated with the Reason for Visit (HRV .1) entered in an clinical system exam encounter.	EPT 18100
SEQ_NUM	The line number of the reason for visit within the encounter.	
VISIT_KEY	A unique serial number for this encounter. This number is unique across all patients and encounters in the system.	EPT 8
CREATE_BY	Denotes source of record when created.	
CREATE_DT	Date the record was created in the table.	
ENC_ID	A unique serial number for this encounter. This number is unique across all patients and encounters in the system assigned by EPIC.	EPT 8
RSN_CMT	The comments associated with the reason for visit entered in an clinical system exam encounter.	EPT 18110
UPD_BY	Denotes source of record on update.	
UPD_DT	Date the record was updated in the table.	

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CDW Data Dictionary

visit

Search Results for: visit

- + CDW Tables (63)
- + CDW Columns (407)
- + Source Tables (11)
- + Source Columns (43)

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CDW COLUMN

VISIT_REASON.SEQ_NUM

The line number of the reason for visit within the encounter.

Data Type: BIGINT

Primary Key Indicator: ☒

Audit Column Indicator: ☐

Surrogate Indicator: ☐

Not Null: ☒

Derived Indicator: ☐

Column Ordering: 3

Data Source: CDW (CDWPRD)

EPIC INI ITEMS:

FK Relationship:


Source Relationship: PAT_ENC_RSN_VISIT . LINE

Columns By The Same Name

ACCOUNT_COVERAGE_LIST . SEQ_NUM
ACCOUNT_DISTRIBUTION . SEQ_NUM
ACCOUNTS_PAYABLE_INV_DISTRIB . SEQ_NUM
ACCOUNTS_PAYABLE_INVOICE . SEQ_NUM
ACCOUNTS_PAYABLE_PAYMENT . SEQ_NUM
ALERT_ACTION_TAKEN . SEQ_NUM
ALERT_DRUG_DOSE . SEQ_NUM
ALERT_MEDICATION_ORDER . SEQ_NUM

EDGE Tool – Acronym Dictionary

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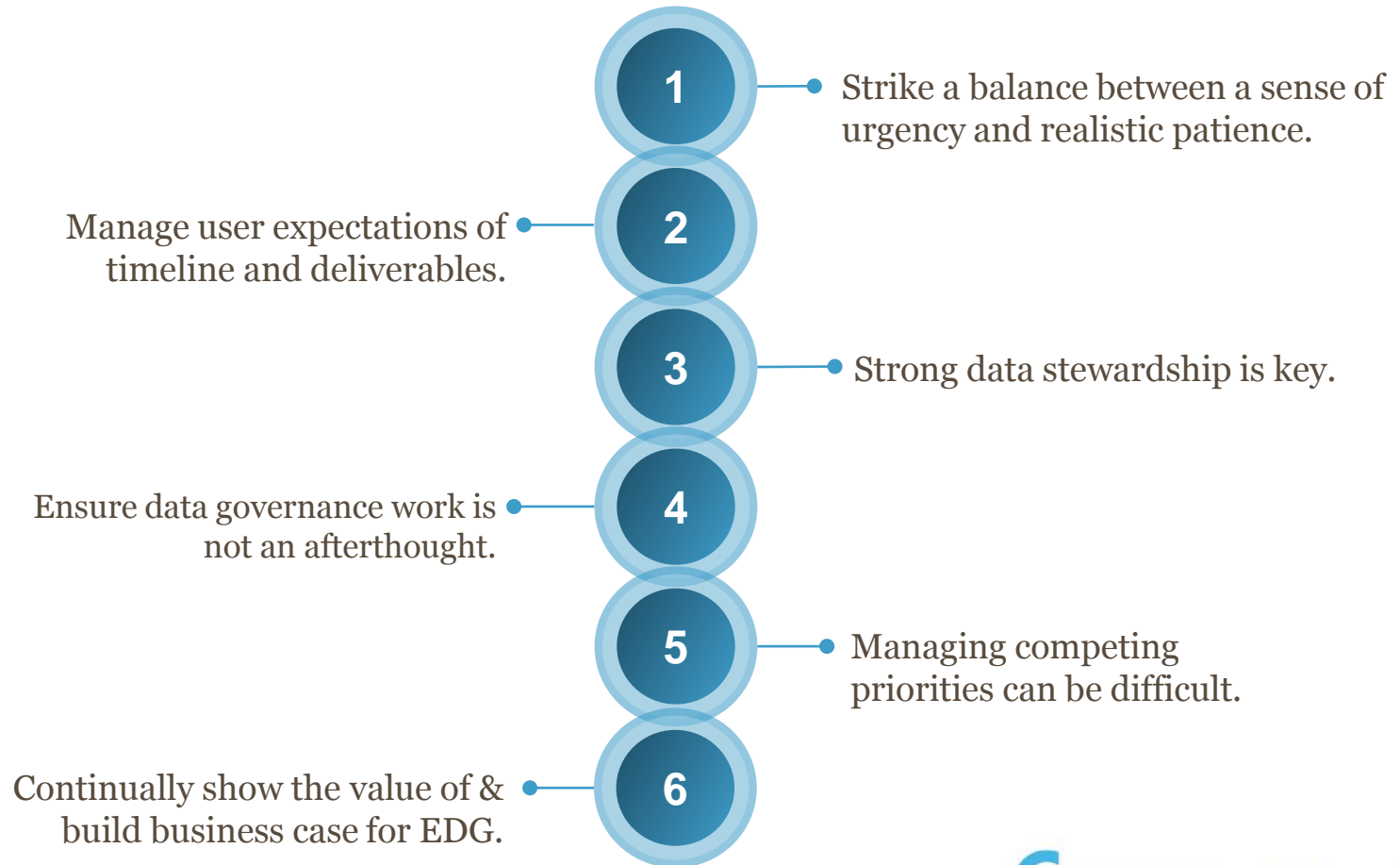
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Search Results for: **cdw**

Acronym	Definition	Category	Comments
CDW	CHOP Data Warehouse	ANALYTICS	

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Lessons Learned



EDG is valuable! Make sure people know & understand that!

***Have you identified data stewards
at your organization?***



***What data governance
standardization tools are used at
your organization?***



Any Questions?

