Adams County Health Department Strategic Plan

Goal: Data and Technology

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Goal: Data and Technology

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Over the next 3-5 years, support the public health workforce and partner organizations by improving data skills and public health data infrastructure to make data more accessible and to drive programmatic decision-making.

Objectives

Develop and maintain health department **capacity** so staff, academic institutions, and community-based partners can **implement** and **use public health data/information**.

Ensure health department program **data collection** and storage is **streamlined** to meet the needs across the health department.

Develop the components of an "**Integrated Data System**" that will tie together data across the health department to support programmatic decision-making and objectives across the strategic plan.

Ensure programs and the public have **access to systems** where they may access data and information to make **better decisions** for public health topics.

Position ACHD at the forefront of innovation, leveraging **artificial intelligence** (AI), **machine learning** (ML), and emerging technologies to transform operations, enhance client-centric services, and champion health equity across our county.

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Adams County Health Department Divisions

- Environmental Health
- Epidemiology & Data Science
- Nutrition & Family Health
- Nursing
- Health Equity & Strategic Initiatives
- Operations

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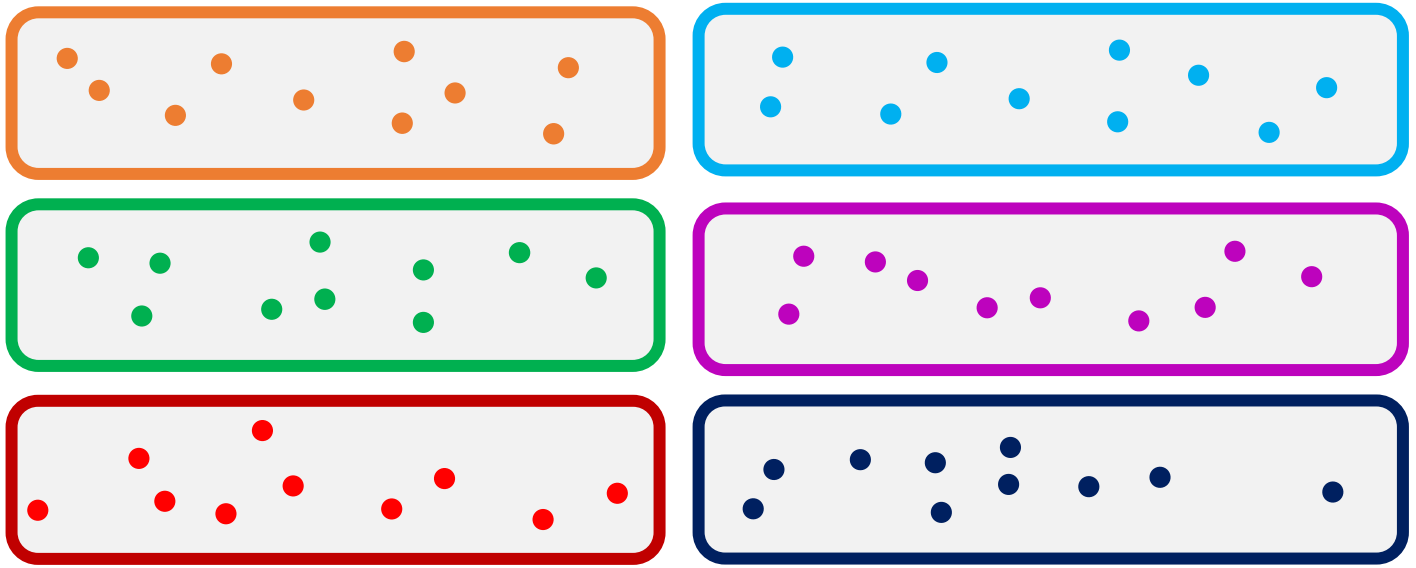
Adams County Health Department Divisions



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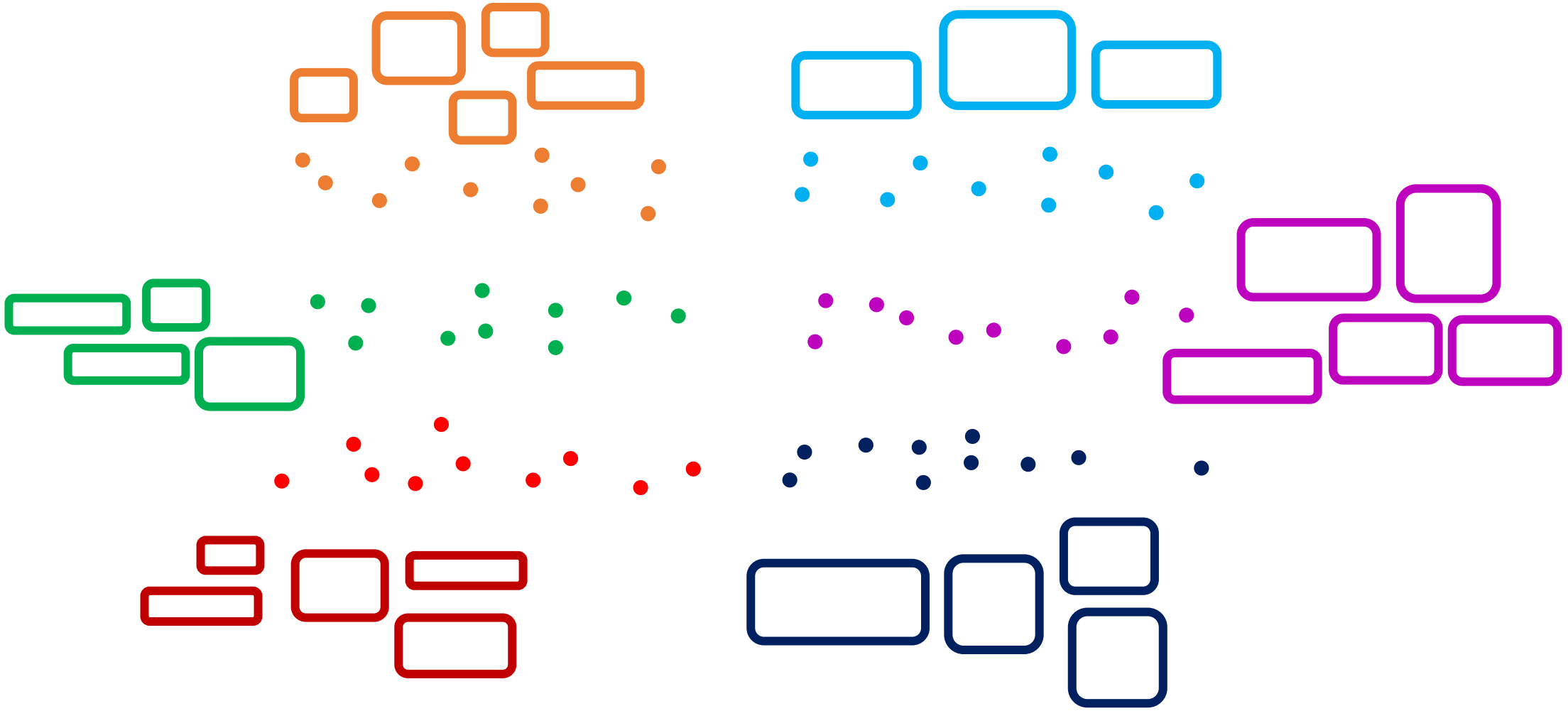

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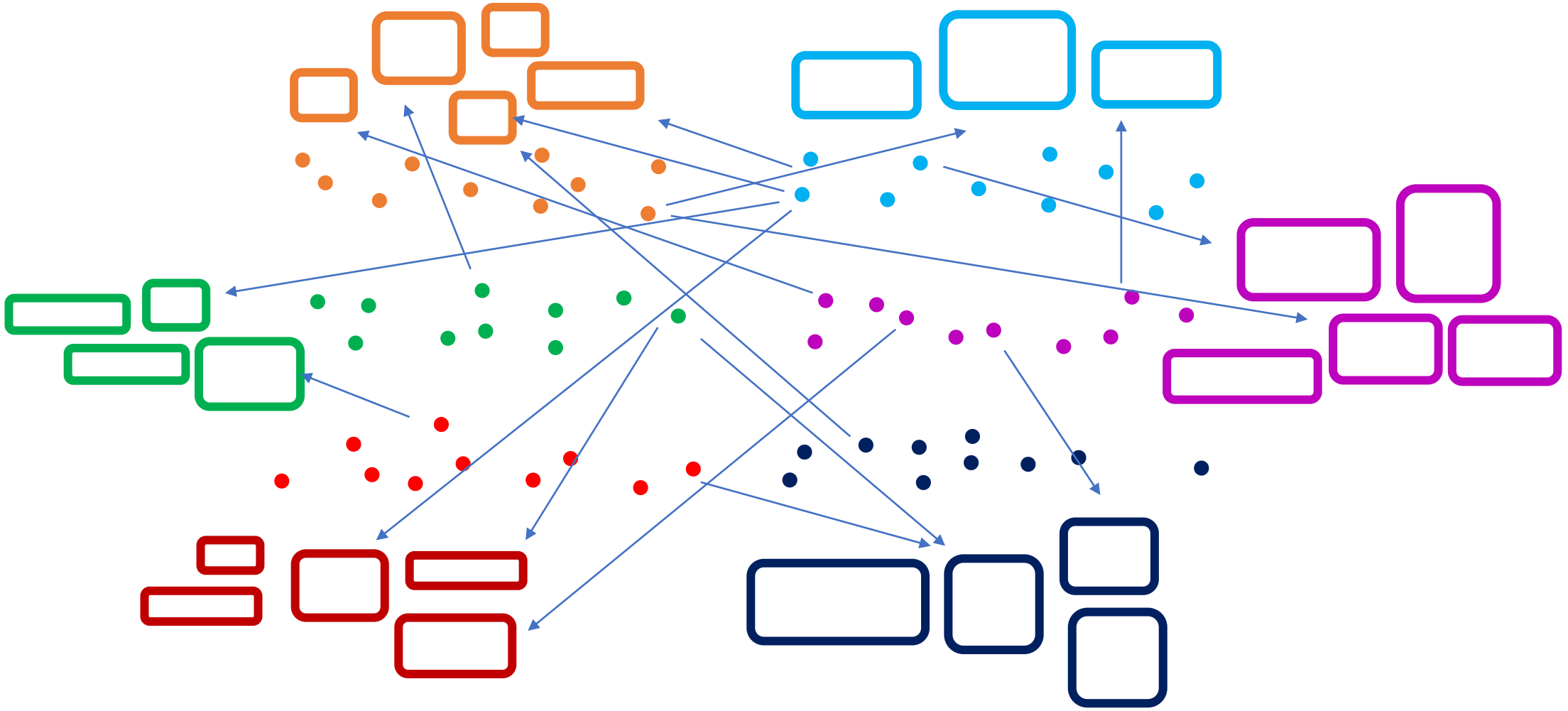

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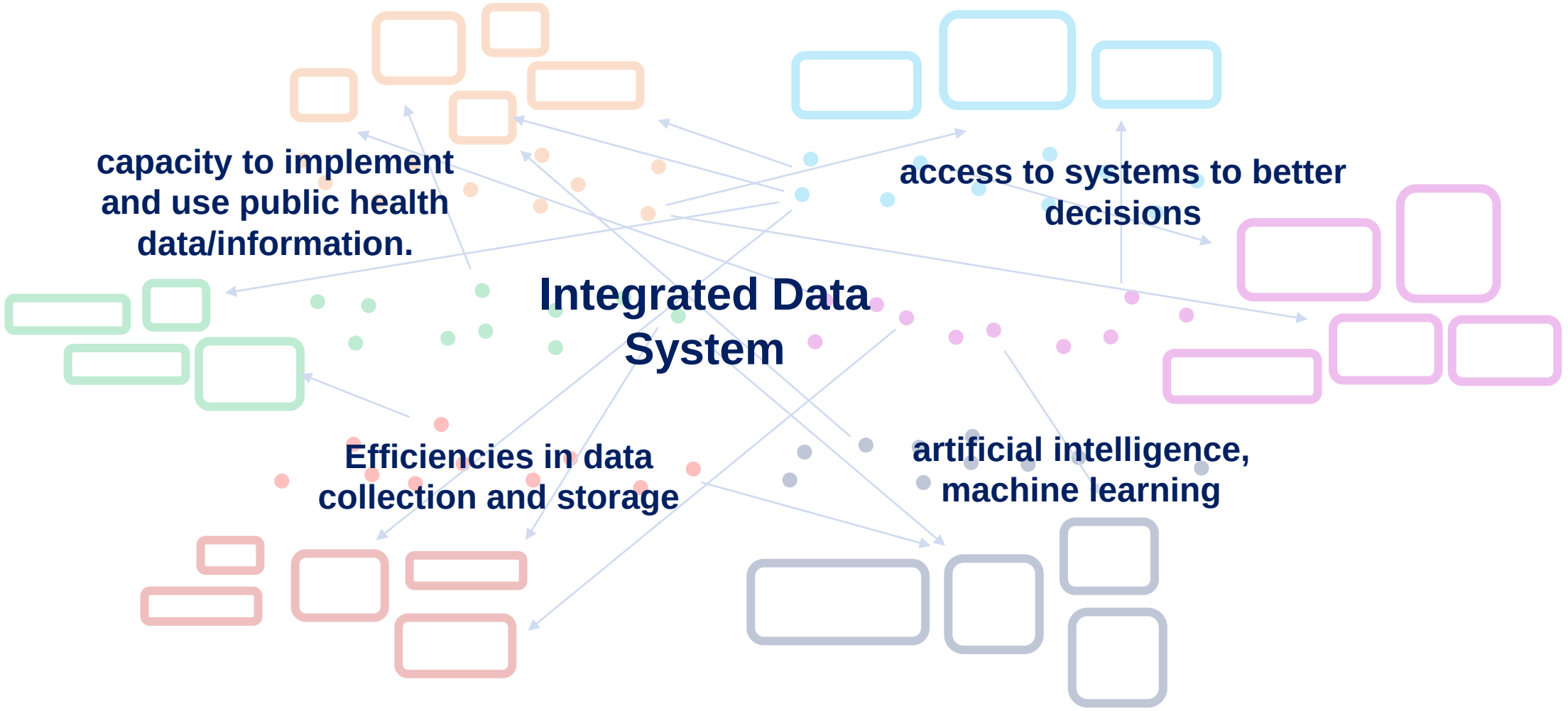

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What is a health department integrated data system?

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What is a health department integrated data system?

The Adams County health Department Integrated Data System is a system of governance and documentation for data/processes/outputs and that ties these pieces together across the health department to support programmatic decision-making and objectives as needed by users.

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Use-Case 01

Create a web-based tool to allow anyone in the public to search for septic records permitted by Adams County.

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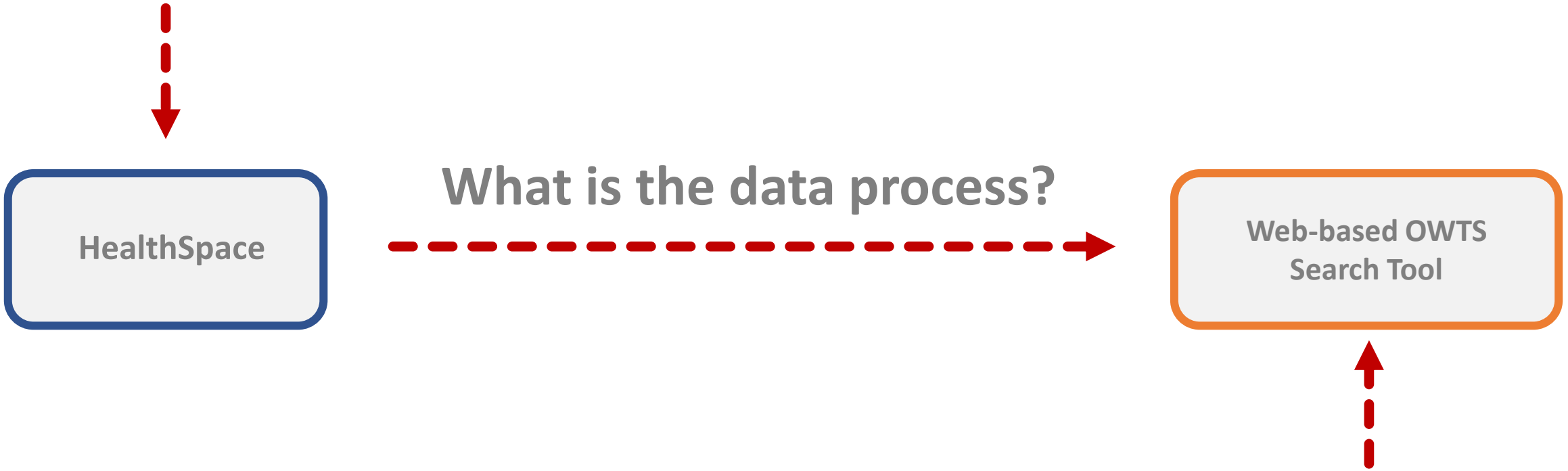
Where does the data live?



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Governance Document
UC01

OWTS ETL Process

Use-case: Create a data table of OWTS records to be used by the health dept

Governance Document
UC01

OWTS Web-based App

Use-case: Create a web-based application for the public to access OWTS records

Governance Document
OWTS ETL Process
Use-case: Create a data table of OWTS records to be used by the health dept

UC01

Governance Document
OWTS Web-based App
Use-case: Create a web-based application for the public to access OWTS records

UC01

What Does Governance Documentation Mean?

Governance Document
OWTS ETL Process
Use-case: Create a data table of OWTS records to be used by the health dept

- Overview
- User Access
- Update Cycle
- File locations
- Data sources
- Data workflow map
- HealthSpace Documentation
  - Database tables
  - Data dictionary
- ETL documentation:
  - Data management steps
- Output Table
  - Data dictionary

Governance Document
OWTS Web-based App
Use-case: Create a web-based application for the public to access OWTS records

- Overview
- User Access
- Update Cycle
- File locations
- Data sources
- Data workflow map
- Feature Service(s)
  - Data dictionary, URL, Ownership
- Web-Map
  - Configuration, URL, Ownership
- Application
  - Configuration, URL, Ownership

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Use-Case 01

Create a web-based tool to allow anyone in the public to search for septic records permitted by Adams County.

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Use-Case 02

Automatically report OWTS KPIs for the Environmental Health

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Governance Document

EH KPI Reporting: OWTS

Use-case: Automatically capture KPIs for OWTS workflows for reporting dashboard

- Number of new permits
  - YTD, monthly
- Number of repairs
- Time for a permit
- Number of inspections with title transfers

UC02

Governance Document

OWTS ETL Process

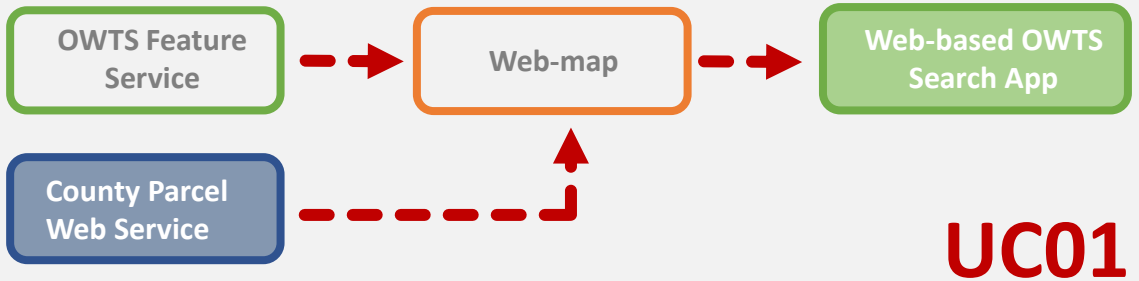
Use-case: Create a data table of OWTS records to be used by the health dept

UC01,02

Governance Document

OWTS Web-based App

Use-case: Create a web-based application for the public to access OWTS records



UC01

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Use-Case 01

Create a web-based tool to allow anyone in the public to search for septic records permitted by Adams County.

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Use-Case 02

Automatically report OWTS KPIs for the Environmental Health

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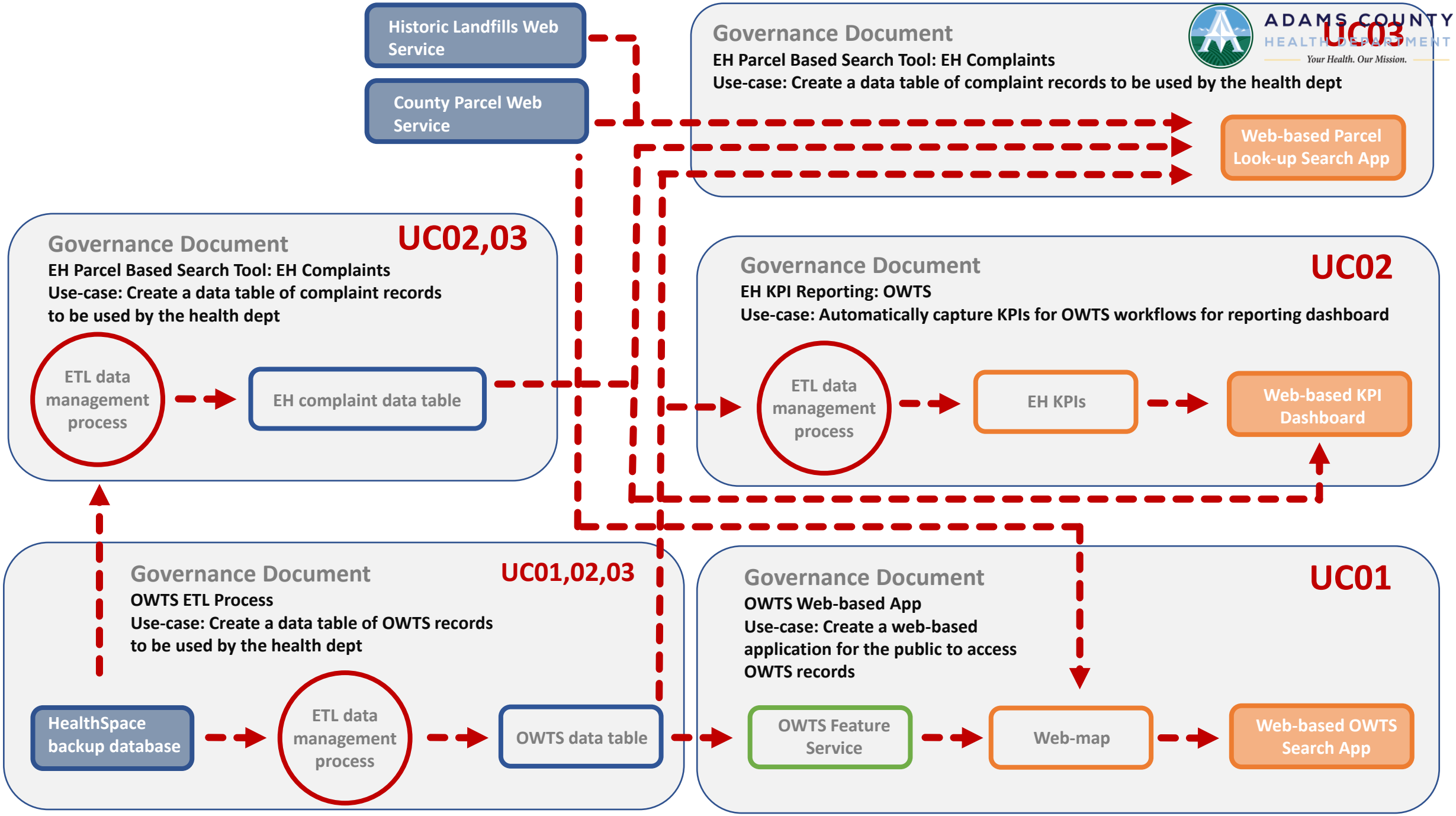
Use-Case 03

Create parcel-based search tool to find environmental health records


Historic Landfills Web Service
County Parcel Web Service
Governance Document
EH Parcel Based Search Tool: EH Complaints
Use-case: Create a data table of complaint records to be used by the health dept
UC03
Web-based Parcel Look-up Search App
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Governance Document
UC02,03
EH Parcel Based Search Tool: EH Complaints
Use-case: Create a data table of complaint records to be used by the health dept
ETL data management process
EH complaint data table
Governance Document
UC02
EH KPI Reporting: OWTS
Use-case: Automatically capture KPIs for OWTS workflows for reporting dashboard
ETL data management process
EH KPIs
Web-based KPI Dashboard
Governance Document
UC01,02,03
OWTS ETL Process
Use-case: Create a data table of OWTS records to be used by the health dept
HealthSpace backup database
ETL data management process
OWTS data table
Governance Document
UC01
OWTS Web-based App
Use-case: Create a web-based application for the public to access OWTS records
OWTS Feature Service
Web-map
Web-based OWTS Search App

Environmental Health Use-Cases

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- Create search tool for the public to find septic system records
- Create parcel-based search tool to find environmental health records
- Create an elevated blood lead case management system
- Create a process to capture retail food inspection records from HealthSpace
- Create a process to capture childcare inspection records from HealthSpace
- Create a process capture, store, manage, and provide access to climate data
- Create a process to automate environmental health KPI reporting

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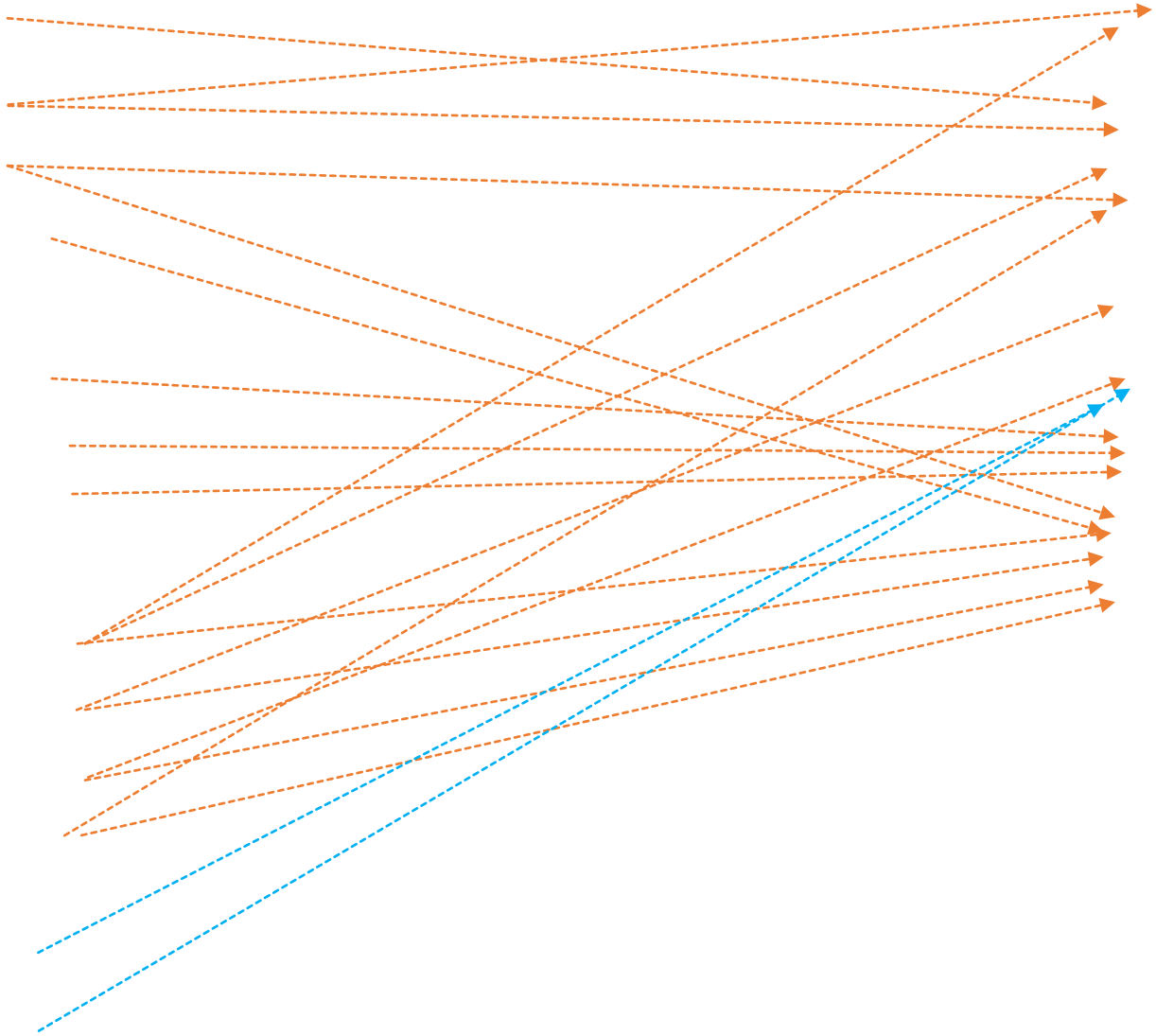
Datasets

- Historic Landfill
- Parcel Data
- Lead Case Data
- Outbreak Reporting
- Climate
  - Air
  - Precipitation
  - Temperature
- HealthSpace Database
  - Septic
  - Retail Food
  - Childcare
  - Complaint
- Immunization
- Communicable Disease



Environmental Health Use-Cases

- Septic
- Parcel-Based Search
- Lead Case Management
- Retail Food
- Childcare
- Climate
- KPI Reporting

Environmental Health Use-Cases

- Create search tool for the public to find septic system records
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Communicable Disease Use-Cases

- Create a communicable disease surveillance system
- Create a process to automate communicable disease KPI reporting

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Datasets

- Historic Landfill
- Parcel Data
- Lead Case Data
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  - Retail Food
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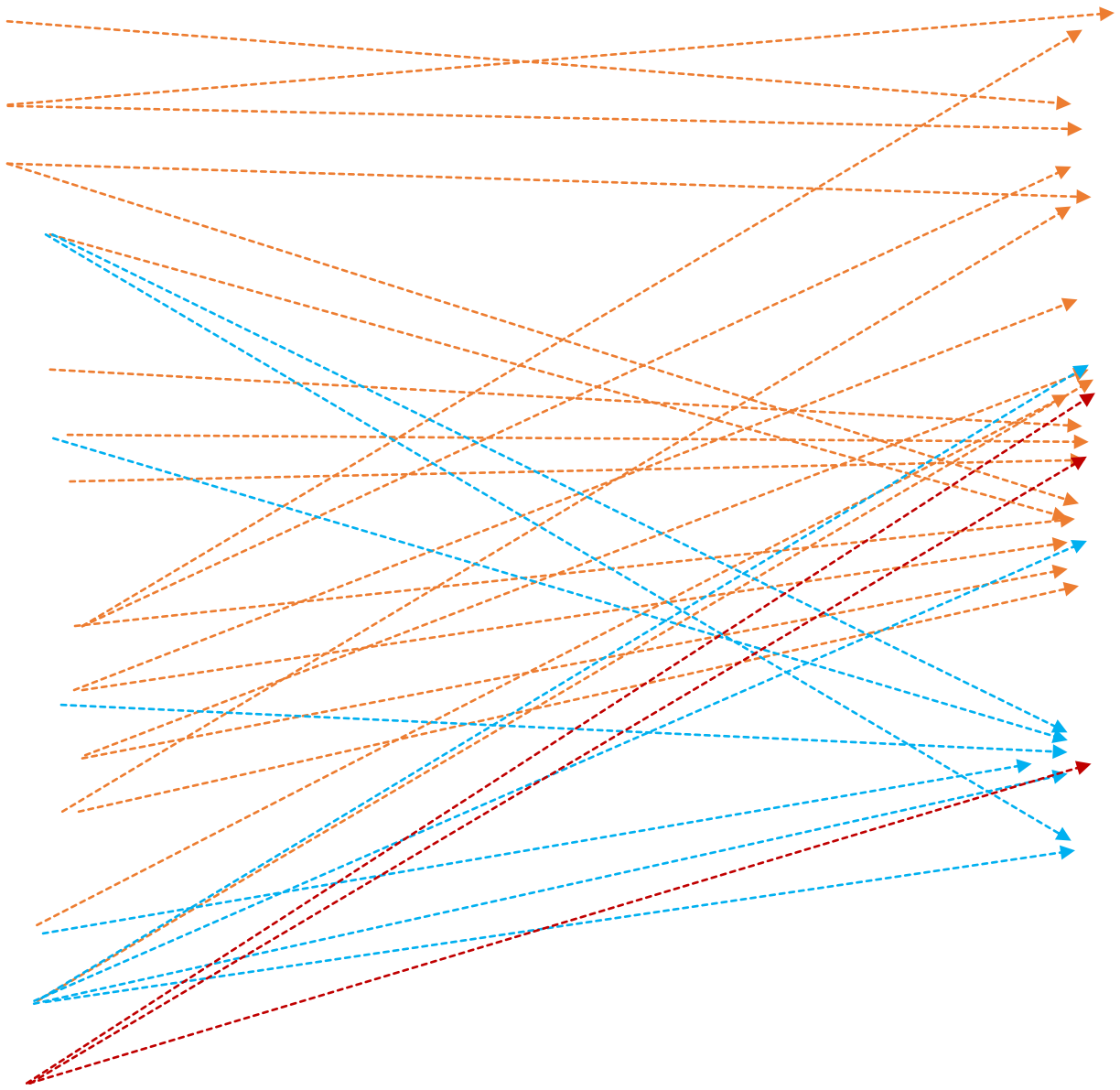
  - Complaint
- Immunization
- Communicable Disease
- Amer. Comm. Survey



Environmental Health Use-Cases

- Septic
- Parcel-Based Search
- Lead Case Management
- Retail Food
- Childcare
- Climate
- KPI Reporting

Communicable Disease Use-Case

- Communicable Disease Surveillance System
- KPIs

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Goal: Data and Technology

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Objectives

Develop and maintain health department **capacity** so staff, academic institutions, and community-based partners can **implement** and **use public health data/information**.

Ensure health department program **data collection** and storage is **streamlined** to meet the needs across the health department.

Develop the components of an "**Integrated Data System**" that will tie together data across the health department to support programmatic decision-making and objectives across the strategic plan.

Ensure programs and the public have **access to systems** where they may access data and information to make **better decisions** for public health topics.

Position ACHD at the forefront of innovation, leveraging **artificial intelligence** (AI), **machine learning** (ML), and emerging technologies to transform operations, enhance client-centric services, and champion health equity across our county.

Objective 1: **Develop and maintain health department capacity so staff, academic institutions, and community-based partners can implement and use public health data/information.**

Actions/Tasks

Coordination with ITi to plan and initiate support

Ensure ITi staff are trained in the software and hardware necessary; acquisition of necessary software licensing, staff resource capacity

Develop staff skills and program capacity to improve data driven decisions

Communication plans and ACHD program outreach around their role in data; Develop a suite of data/systems oriented trainings; Evaluation of learning processes

Data Team Support

Ensure data team staff are trained and are skilled now/future in the data/software/hardware necessary to support obj.; update job descriptions; document all skills needed; request FTE

Objective 2: **Develop the components of an "Integrated Data System" that will tie together data across the health department to support programmatic decision-making and objectives across the strategic plan.**

Actions/Tasks

Data Governance

Develop and templates and procedures for all data processes; systems for storing and managing data processes and governance; UX and Branding for web applications

Data Sources

Establish processes to access data from systems (EHR, Healthspace, EpiTrax); Manage all uses cases for data access; Manage all data dictionaries for all datasets

Hardware

Develop hardware governance; Finish ArcEnterprise buildout, Build out ACHD web-server; planning for all future hardware needs

Software

Develop software governance, inventory all software within ACHD and uses cases; determine and develop application for storing and managing all IDS governance and workflows

Objective 3: **Ensure programs and the public have access to systems where they may access data and information to make better decisions for public health topics.**

Actions/Tasks

Building Data Systems to Access Data Portals
Communicable disease surveillance system; School data portals; EH parcel lookup; SDoH data portals; Climate data portal; Lead case management; ACHD KPIs

Building Climate/Health Database Systems
30 years daily min/max temp; 30 years daily precip; daily air quality; other major regional climate events

SDoH Database Systems
Social determinants of health screening tools

Build Division/Program KPI Processes and Dashboards
Systems and processes to automatically pull and calculate program/division KPIs

Objective 4: **Ensure health department program data collection and storage is streamlined to meet the needs across the health department.**

Actions/Tasks

Program outreach to discuss data and data collection processes by program

Inventory all program data and processes; Prioritize programs for consultation for improving data collection processes

Evaluate and make recommendations for data collection and storage

Develop templates for data workflow/collection; Evaluation plan for process improvement; Ensure any data process consult results in auto generated KPIs

Ensure SDoH and community specific data is integrated into program data narrative

Develop process to integrate SDoH and community data in data workflows

Ensure program staff understand and can describe community level data related to their program

Objective 5: **Position ACHD at the forefront of innovation, leveraging Artificial Intelligence (AI), machine learning (ML), and emerging technologies to transform operations, enhance client-centric services, and champion health equity across our county.**

Actions/Tasks

Develop governance around the use of AI for local public health applications

AI Workgroup; Document use-cases; Guidance documents for uses

Administrative processes

Present at local and national conference on use of AI in local public health; Automate data processes where applicable within ACHD data systems

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Questions?

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