
AWS
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HLC201

# Using open data on AWS for healthcare and life sciences

Erin Chu, DVM, PhD (she/her)

AWS Open Data
Amazon Web Services

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# AWS for Health



Omics



Healthcare




Life sciences

Accelerating innovations from benchtop to bedside

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# Applying big data strategies to personal medical journeys

## is my why.

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# Flipping the flow of research with the cloud

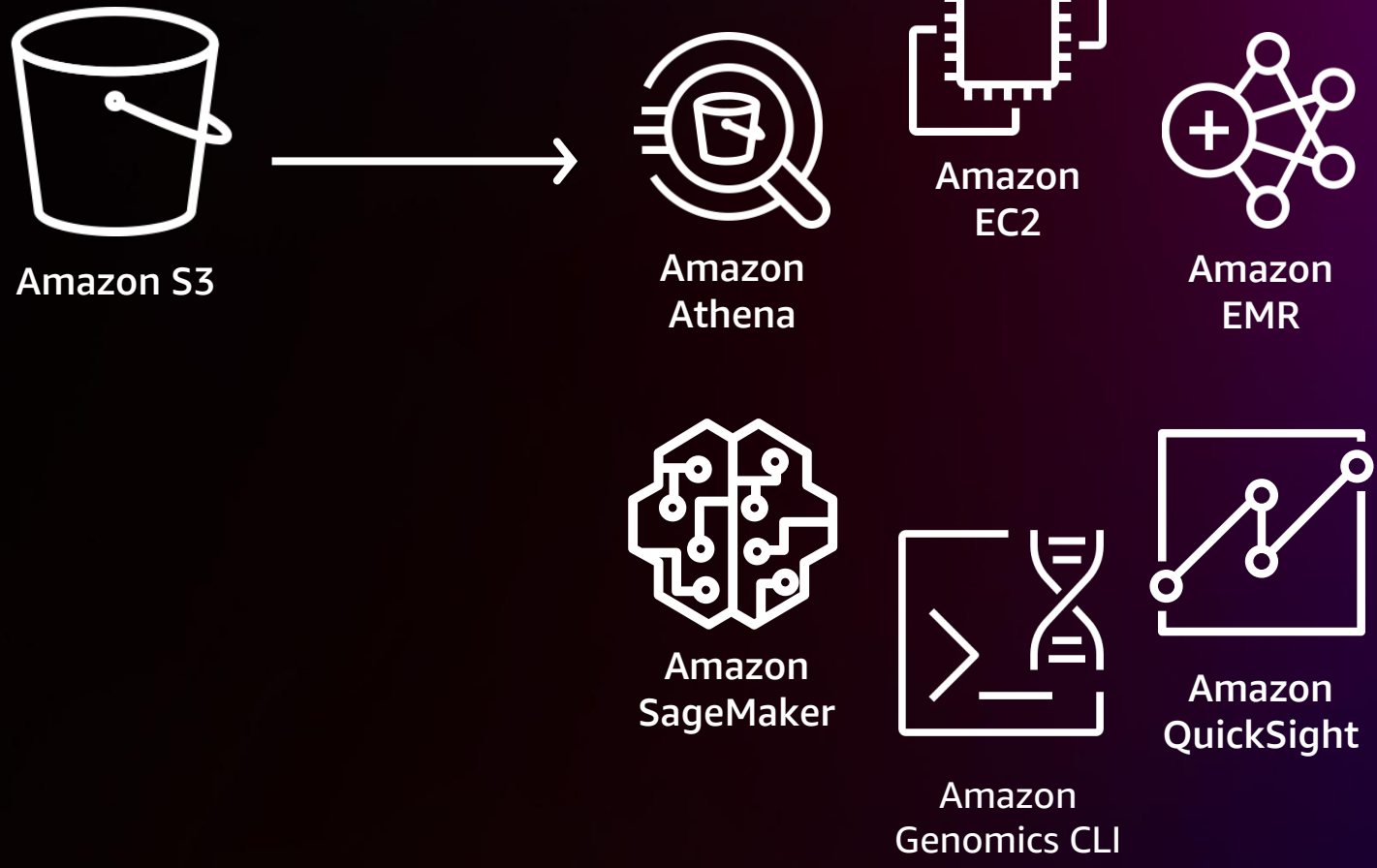
**Traditionally:**
**Bring data to your local resources**



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# Flipping the flow of research with the cloud

**Now:**
**Bring resources to the data**

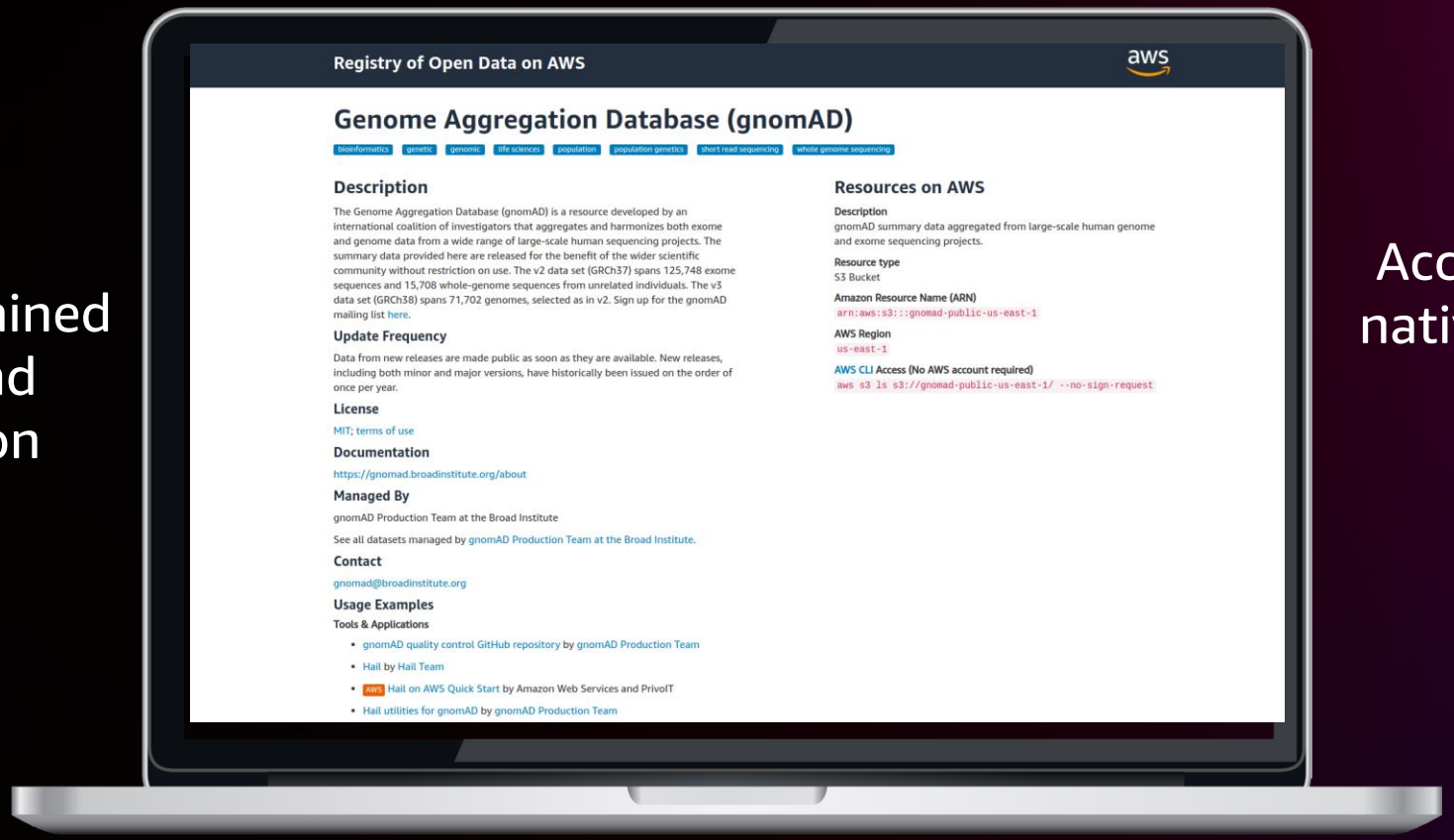



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# Access open data on AWS

**Open data** is typically accessible at no cost to the data user

Data provider-maintained documentation and contact information

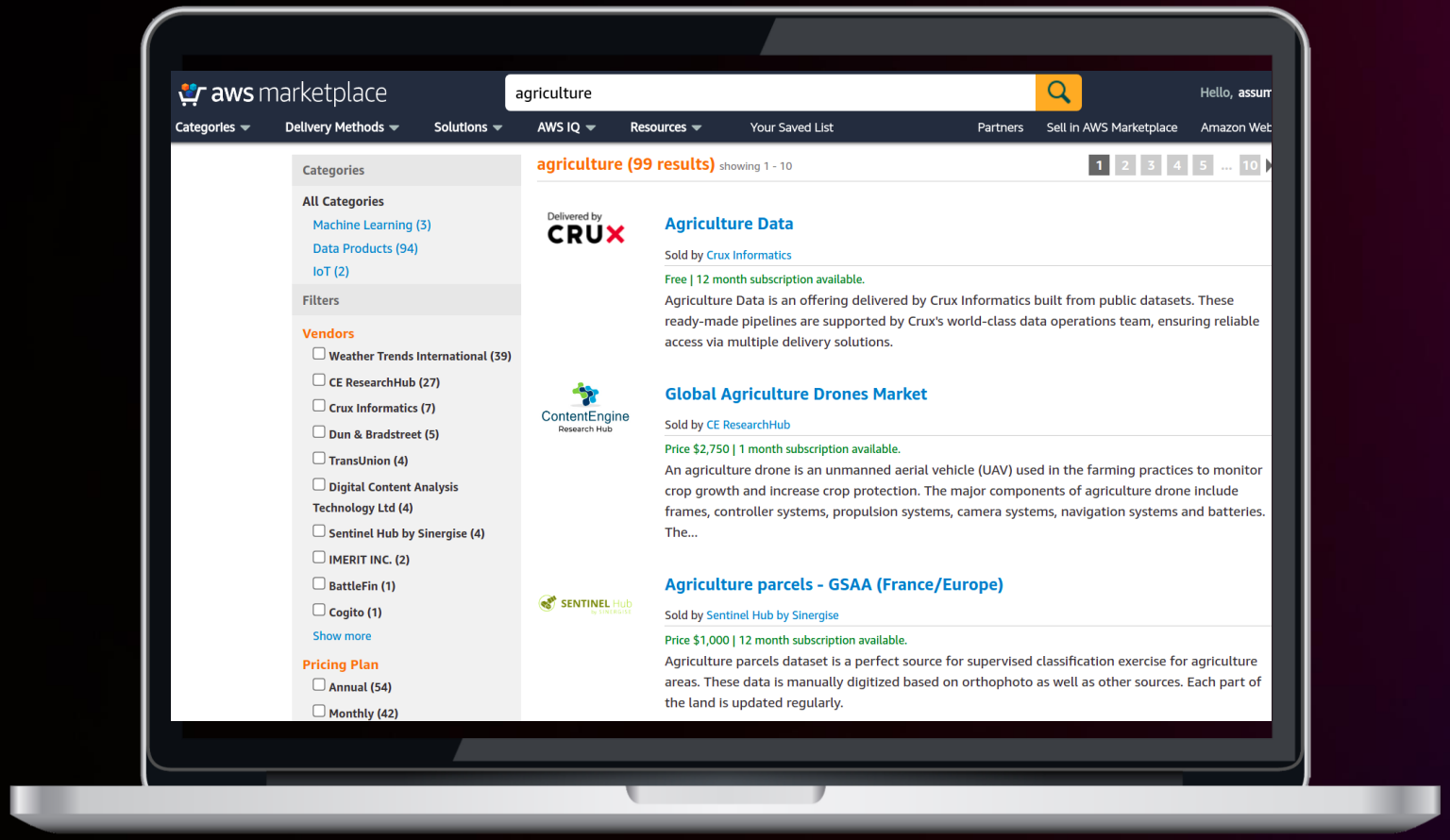



Access datasets with native AWS interfaces

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# Access open data on AWS

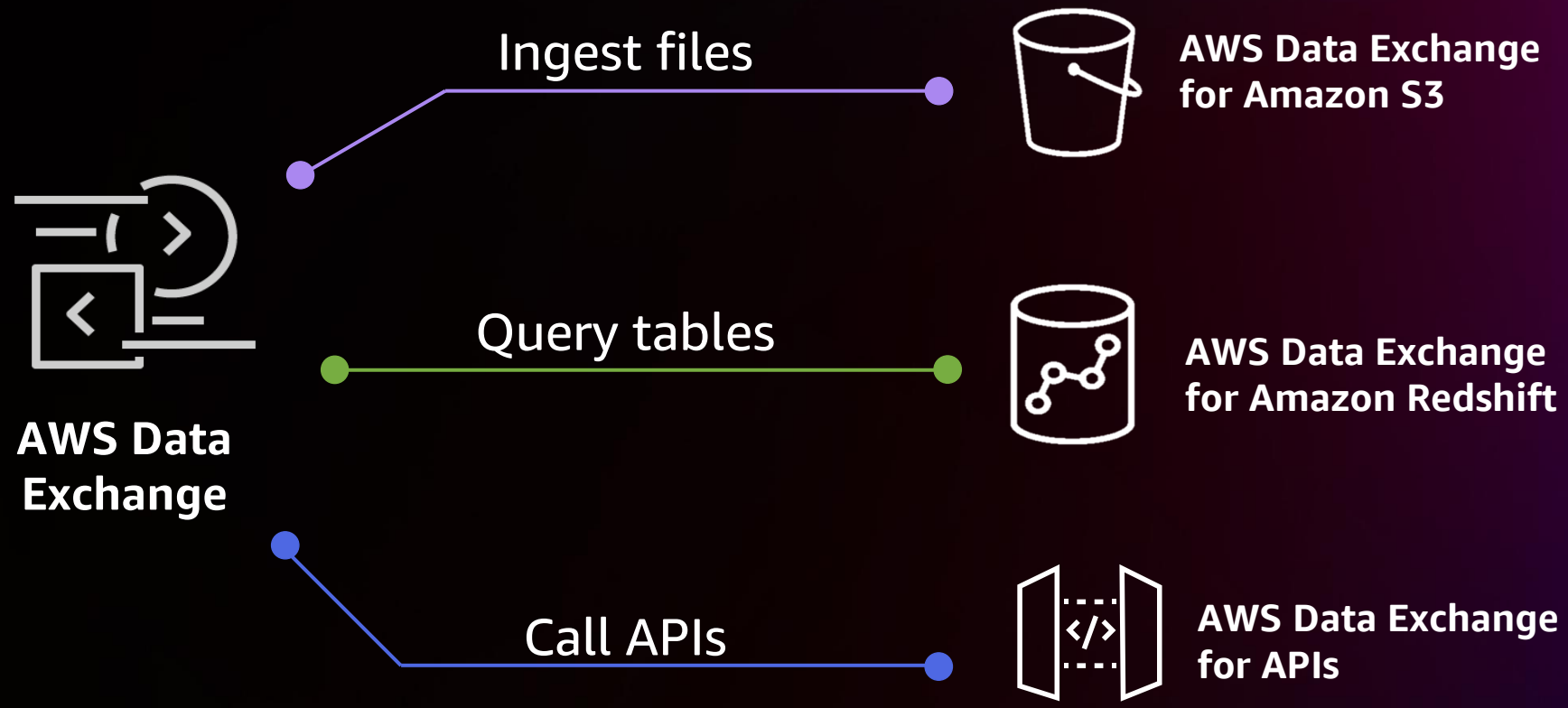
## **Open data** is now searchable via the AWS Data Exchange catalog




aws.amazon.com/data-exchange

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# AWS Data Exchange for objects, tables, and APIs




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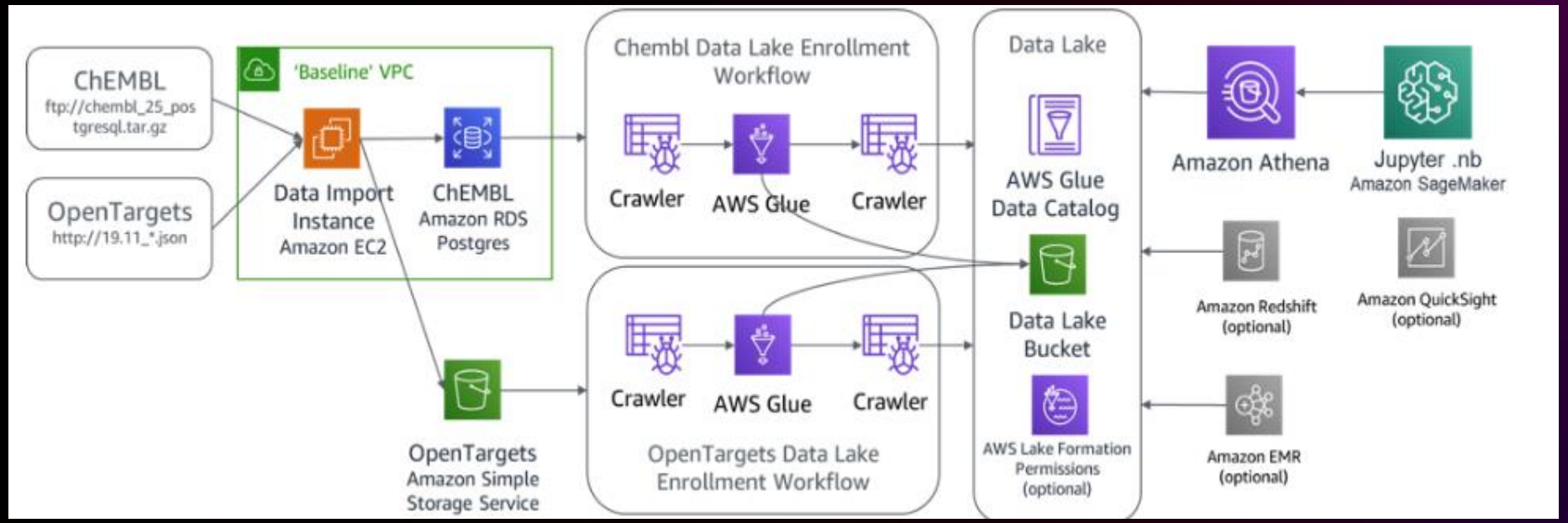
# Data lake as code

**Source data**
- Structured files
- Relational DB
- Data streams
- Unstructured files

**Data lake**
- Long term storage
- Metadata store
- ETL
- Permissions

**Data lake access layer**
- Hot/warm/ cold
- Queryable

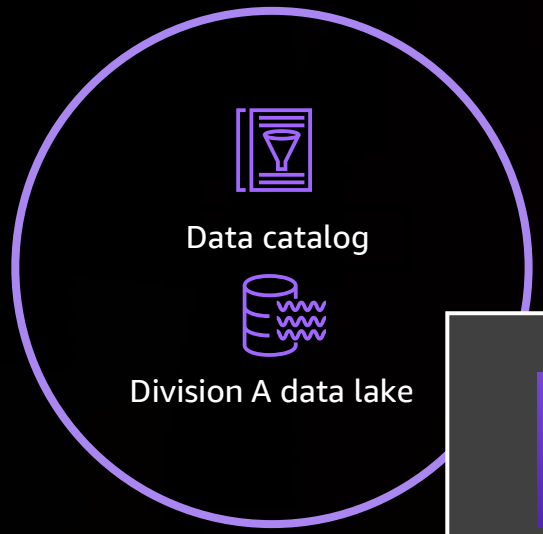
**Analytics**
- Note-books
- BI Tool
- ML

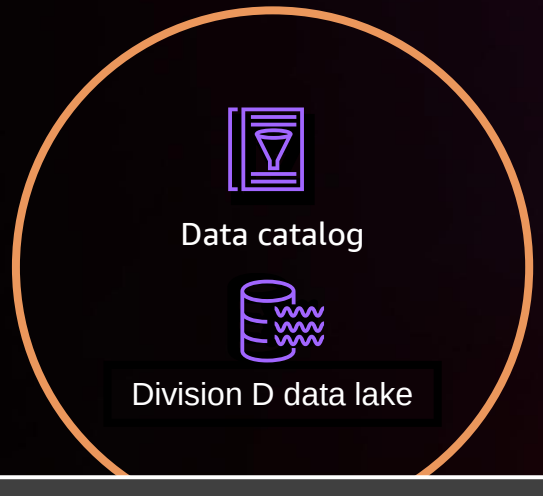


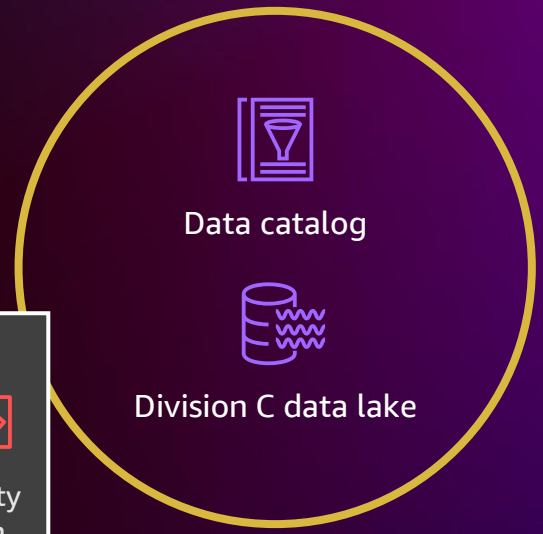

aws.amazon.com/blogs/startups/a-data-lake-as-code-featuring-chembl-and-opentargets/

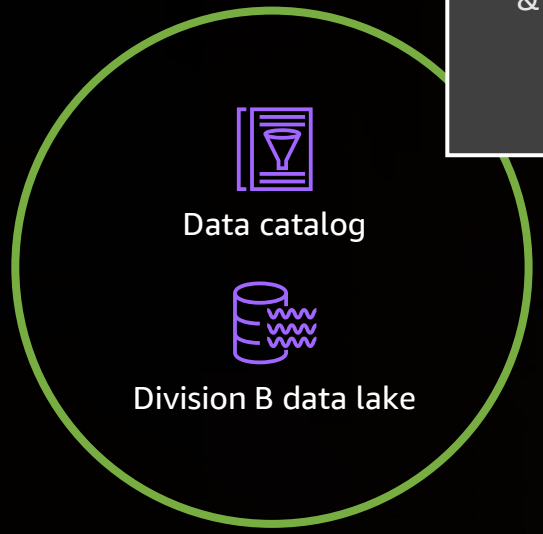
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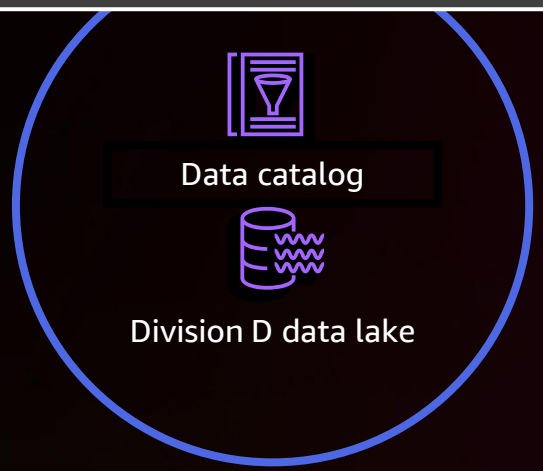
# Data mesh

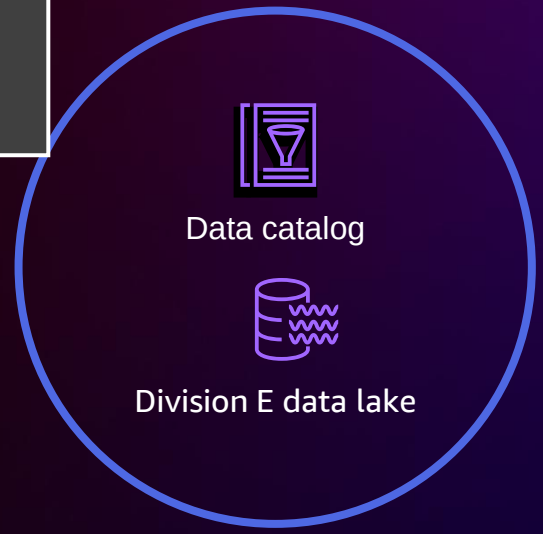


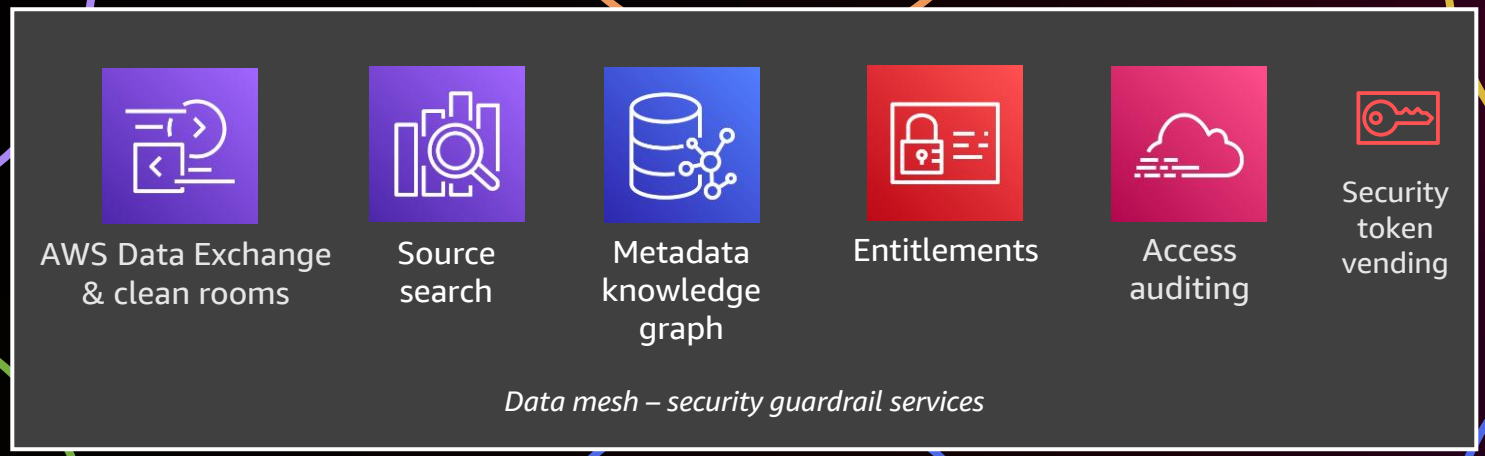




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# Data mesh

Catalog of catalogs


Division data lake


Division data lake


Division data lake


Division data lake


Division data lake

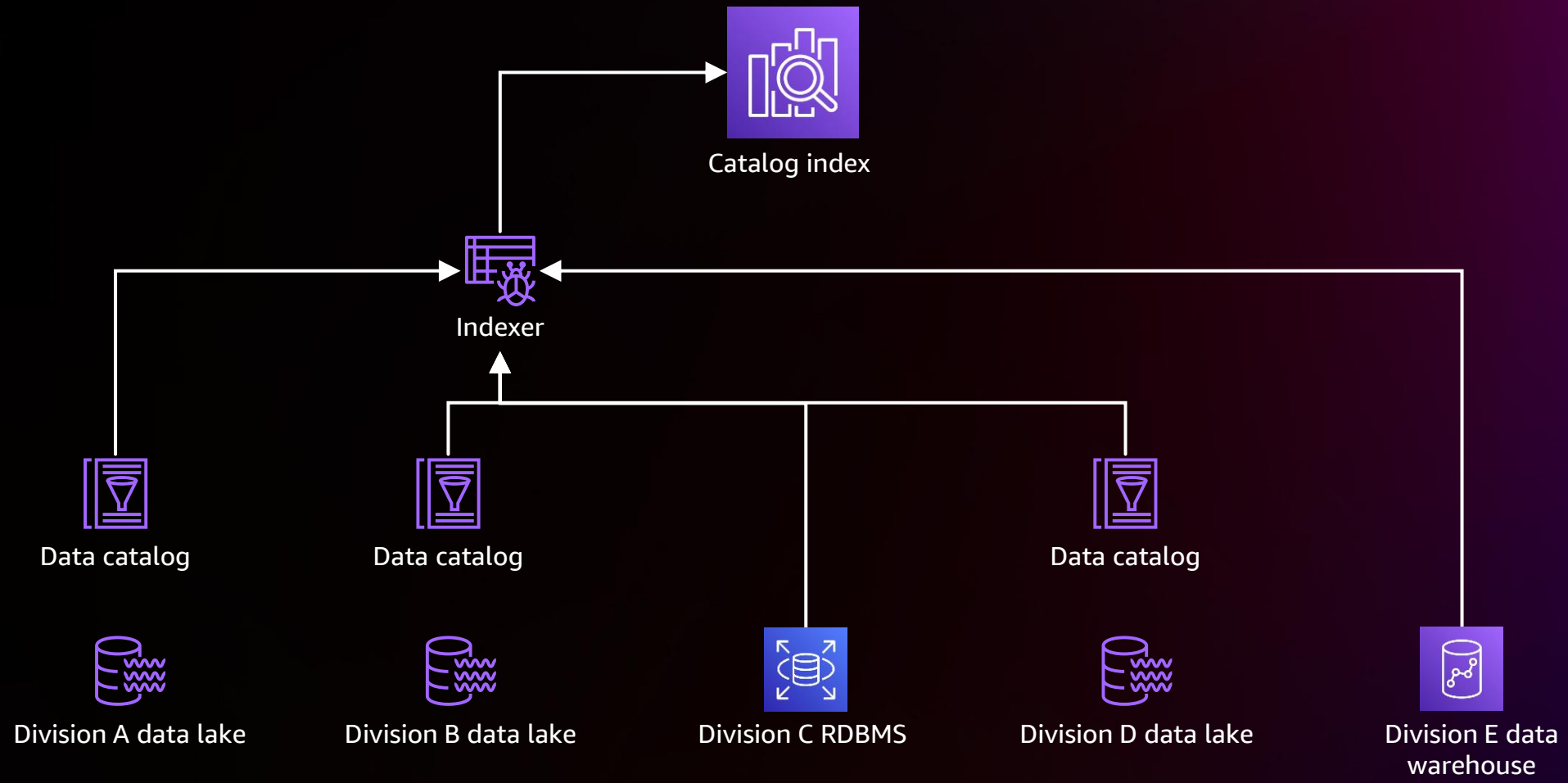
Unified security model

| | | | |
|---|---|---|---|
| Identity | Classification | Ownership | Policy definition |
| Access review | Auditing | Cleanrooms | Token vending |

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# Data mesh – Catalog of catalogs



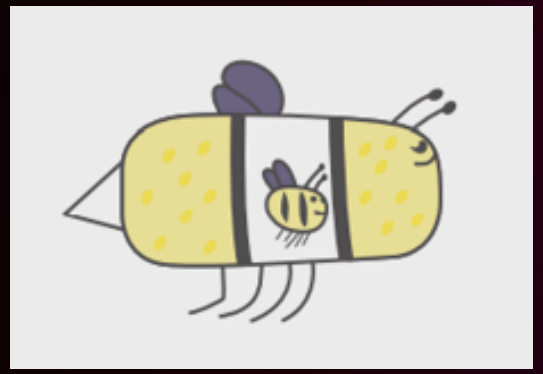

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# AWS + Children's National Hospital

## Customer Obsession = Patient Obsession

Collect pins at the AWS for Health Lounge from child artists who are also patients at Children's National Hospital – learn about their inspiration and "their why"





Artwork provide by Victoria, age 9, patient with cerebral palsy

*"The Bee is a band-aid that represents how Children's National works together like bees in a hive and sticks together because they're sweet like honey"*

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# AWS for Health Lounge

Connect with **AWS Health experts** and other attendees in our dedicated lounge space for **informal discussions and networking.**

Explore **AWS Healthcare & Life Sciences demos** and new additions to the AWS for Health portfolio!




**Location:** AWS Industries Networking Lounges; Caesars Forum Main Hall

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# Thank you!

Erin Chu, DVM, PhD
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