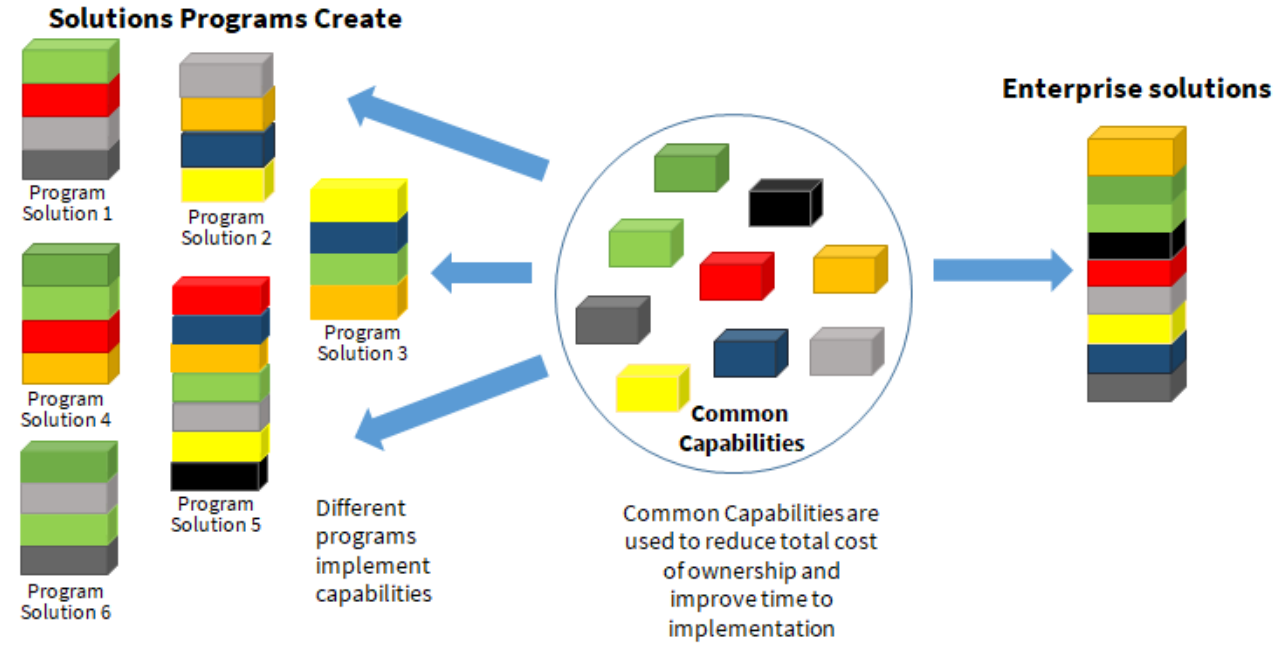
An enterprise perspective addresses common capabilities



Lab Data Processing Systems

10/2013 - 10/2020: CDPH HIE Gateway

- ELR from labs to CalREDIE

10/2020 - 9/2022: CCRS

- Higher volumes
- Higher velocity
- CSV
- Dupe detection & suppression
- Uplift & standardization
- Message logging & tracking
- Reporting dashboards

9/2022 – Current: SaPHIRE

- Access to raw messages
- Improved transparency
- Jira
- SPLR
- eCR processing?

Lab Reporting Quality & Analytics

THEN

- No reports

NOW

- Hourly Reports
  - Messages processed into CalREDIE
  - CalREDIE ELR inbox queues
  - CalREDIE ELR dashboard
  - Data Quality alerts
- Daily Reports and Alerts
  - AM/PM CalREDIE reports
- Weekly Reports and Alerts
  - Non COVID CSV LOINCS Report
  - Weekly Summary Reports
  - Bi-Weekly Patient and Provider Address DQ Report
- Lab Reporting “report cards”

CalREDIE Background

- The CalREDIE system went live in **2010**
- The Data Warehouse/Data Distribution Portal went live in **2012**
- There were 20 people on the CalREDIE team in 2019
- PRIOR to the pandemic, we knew both of these systems were nearing the end of their lifecycles and many people on the CalREDIE team were 'wearing multiple hats'
- Strategy for pandemic: make it work and scale up!

CalREDIE Today

- SOGI data
- CalCONNECT Integration
- Accounts Request Portal
- Occupation Look-up
- Import Utility
- Advanced Auto-Import Rules (AAIR)
- V19.5
- Messaging Module
- **Future State = Future Disease Surveillance System (FDSS)!**

CalREDIE Team – Scale Up!

- Staff of 20 in 2019 vs. 50+ in 2023.
- Formalized structure with two sections and several teams/units in each section.
- Rather than 1, maaaybe 2 people dedicated to an effort, now an entire team.
- Upcoming User Support Priorities
  - Helpdesk ticketing system integrated with VOIP
  - eLearning

Data Warehouse/Data Distribution Portal Today

- COVID + MPX data moved to Snowflake
- Incremental update rather than full replace each night
- COVID flat files provided to LHJs daily via SFTP
- **Future state = all CalREDIE data in Snowflake**

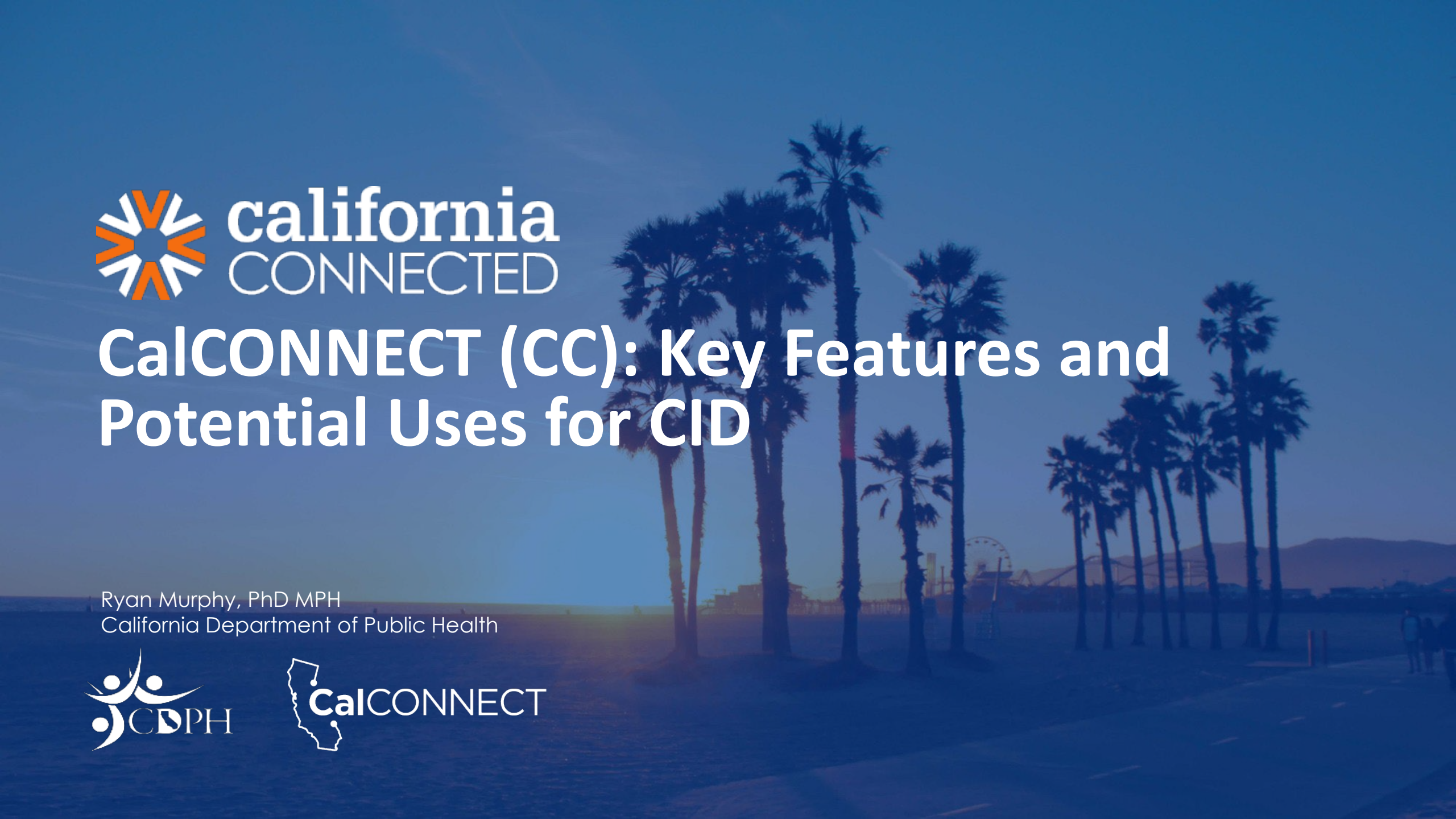
eCR – for COVID & Beyond

THEN

- eCR building capacity (slowly…but surely)
- Big things planned for 2019-2020…COVID pivot

NOW (and near future)

- eCR for COVID to CalREDIE Prod – 250 providers
- Additional conditions in Staging (initial assessment)
- Innate CalREDIE eICR processing
- eCR via SaPHIRE



CalCONNECT (CC): Key Features and Potential Uses for CID

Ryan Murphy, PhD MPH
California Department of Public Health

What is CalCONNECT?

CalCONNECT (CC) is a Salesforce-based platform that was developed to support case investigation and contact tracing activities at the scale necessary for COVID-19.

- Current disease conditions include: COVID-19, mpox, and a generic record that can be used for symptom monitoring.

Another way to think about it:

- A productivity system.

A third way to think about it:

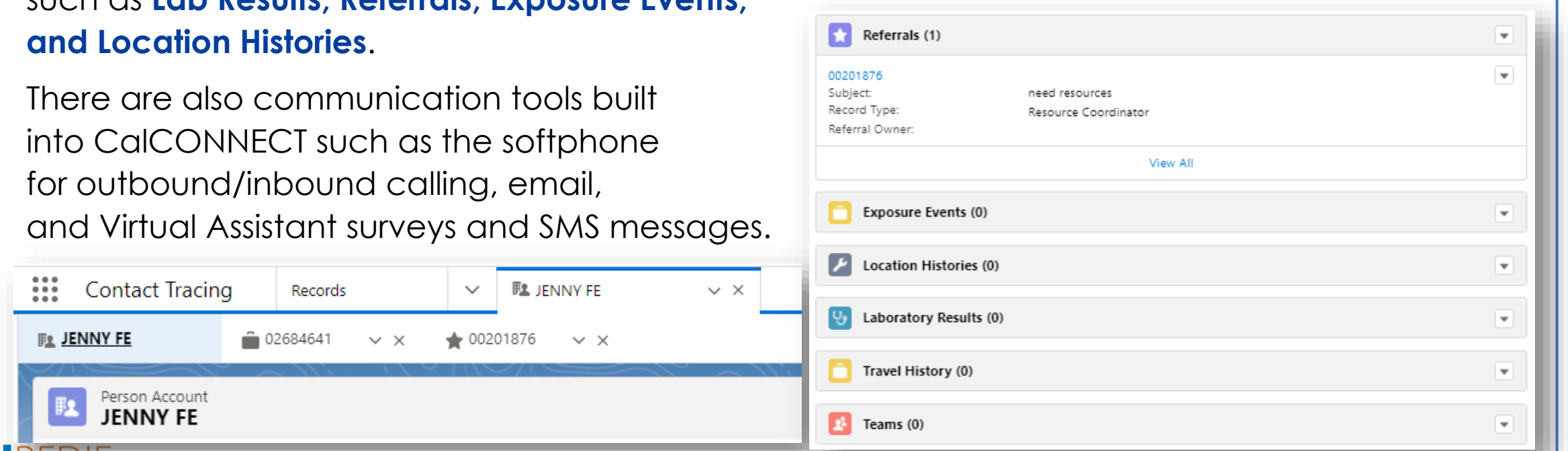
- CalCONNECT consolidates information from others systems (like the surveillance and vaccine registries) and contains tools/features that support efficient workflows for case investigation, contact tracing, and other public health action/outreach.

CalCONNECT Structure

Within CalCONNECT, the **Person Account** contains information related to the person themselves such as contact info & demographics (equivalent to CalREDIE Person), while the **Case and Contact Records** contains information specific to the person's infection or exposure (equivalent to CalREDIE Incident).

Each Record is comprised of an investigation form and other objects that can be attached such as **Lab Results, Referrals, Exposure Events, and Location Histories**.

There are also communication tools built into CalCONNECT such as the softphone for outbound/inbound calling, email, and Virtual Assistant surveys and SMS messages.

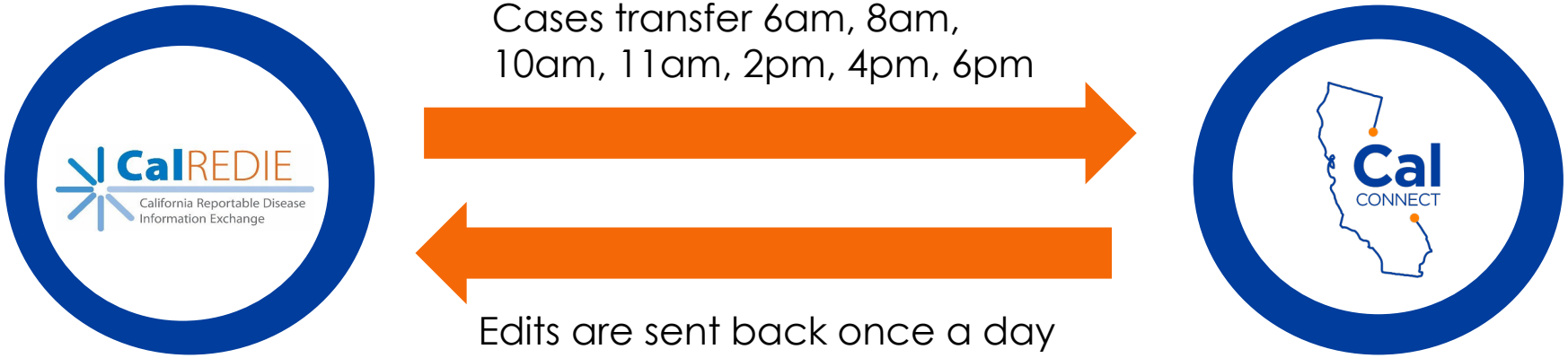


CalREDIE to CalCONNECT Integration

Two-way data flow will occur for fields in CalCONNECT that are integrated with CalREDIE.

The CalREDIE to CalCONNECT **Auto Transfer** feature **automatically triggers** cases that meet **certain criteria** for transmission to CC with no manual prompt.

Post Closure Sync was designed to help mitigate the risk of overwriting data in CalREDIE and it allows LHJs to select a setting for when record updates are sent from CalCONNECT to CalREDIE after the case is initially closed in CC.



Integrations with Other Systems

What is it?

The CalCONNECT platform can be developed to integrate with other systems maintained by CDPH, LHJs, or other partners.

- For example, CalCONNECT is currently integrated with CAIR2/IRIS in such a way that automatically populates the record with COVID vaccine data when a case or contact is created in the system. Users can also manually query the CAIR2/IRIS systems directly from the record.

Potential Use Case:

In theory, CalCONNECT could be developed to integrate with any system pending legal/privacy office approval and support of the partnering system.

Integrations with data systems of LHJs not using CalREDIE or CalCONNECT.

- Even though LA County does not use CalREDIE or CalCONNECT for COVID19 surveillance and contact tracing, we have an integration with their system that allows records to be transferred to and from their local system. This greatly reduces the challenges of transferring records between LHJs who are not using the same system.

What Do We Mean by Informatics?

Informatics is the process by which raw data are turned into digestible information and, subsequently, **knowledge.**

Informatics synthesizes the **theory and practices** of computer science, information sciences, and behavioral and management sciences into methods, tools and concepts that lead to **efficient information systems.**

-- Public Health Informatics Institute

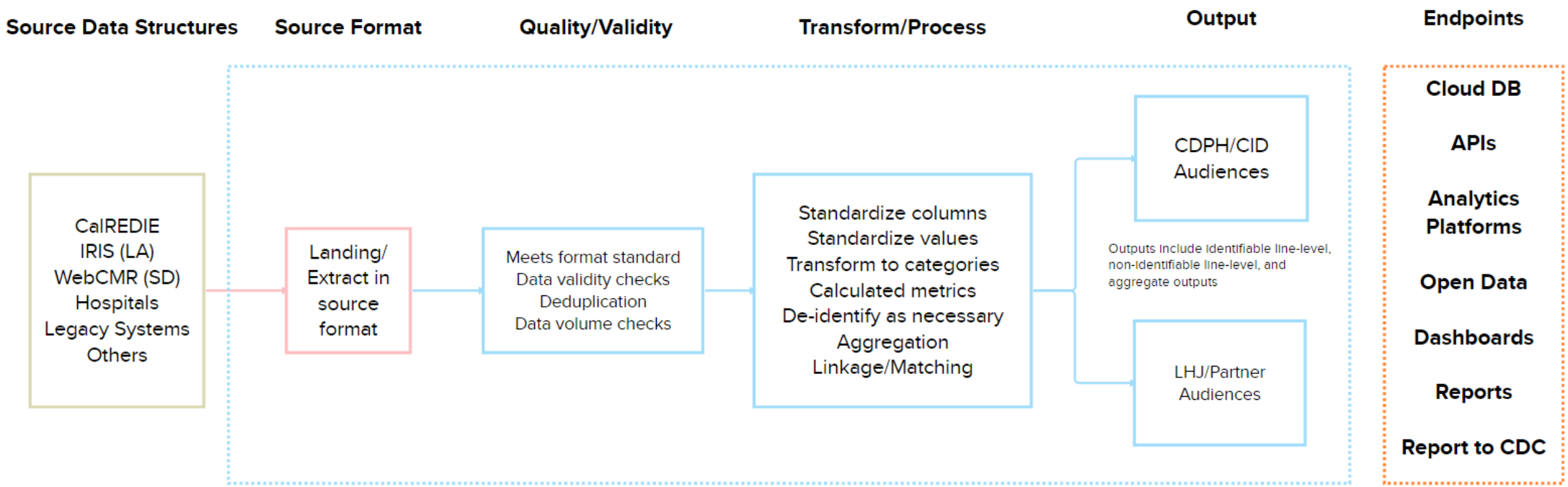
What Do We Mean by Informatics?

For CID we're applying this definition more narrowly:

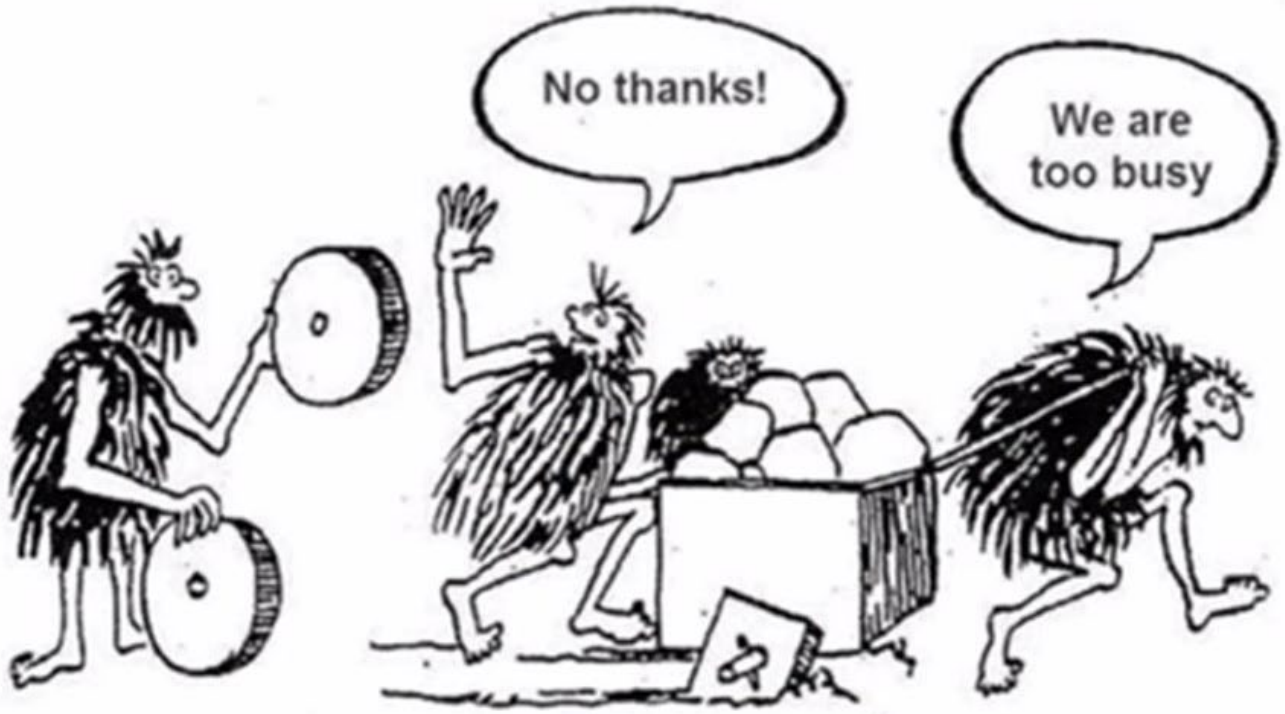
Informatics is the process by which raw data **from source systems** are turned into digestible formats for **analysis, reporting, and sharing.**

What Do We Mean by Informatics?

Example data pipeline



Vision for CID Cloud Data Warehouse


No thanks!
We are too busy

Center for Infectious Diseases
California Department of Public Health

Questions?