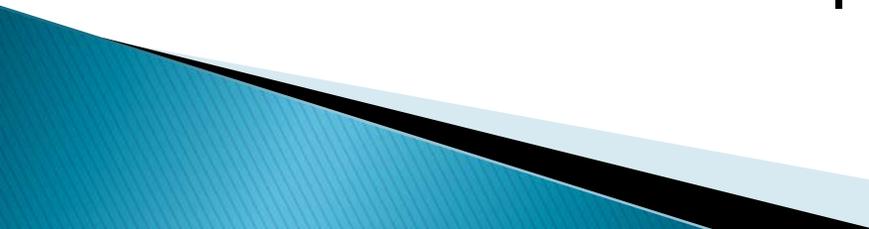


Access to Community Health Indicator Data

Bela T. Matyas, MD, MPH
Health Officer, Solano County

Vision for Public Health Data

- ▶ Electronic submission of community health and other public health data
 - From EMRs, labs, point-of-use devices and other relevant sources
 - To inform community health and public health programs
 - ▶ Access to these data (de-identified and/or aggregate, as appropriate) for healthcare providers, academics and the general public
 - ▶ Personal data submission, as appropriate
 - ▶ Avatars to inform personal health
- 

Critical Data for Public Health

- ▶ Statutory Reportable Conditions, Title 17
 - ▶ Syndrome Surveillance data
 - ▶ Reportable data under Meaningful Use
 - ▶ Vital Statistics
 - ▶ Community Health Indicator data
 - ▶ Needs Assessment data
 - ▶ Public Health Nursing and case management data
 - ▶ Jurisdiction-specific data
 - ▶ Clinical data for jurisdiction clients
- 

Access to Local Public Health Data

- ▶ First, leverage Meaningful Use
 - For Syndrome Surveillance, Immunization, ELR data
 - For “special registries”
 - ▶ Then, expand to Statutory Reporting
 - Title 17, Health & Safety Code, local requirements
 - Ultimately, electronic morbidity reporting
 - ▶ Finally, expand to Community Health Indicator Data
 - ▶ Access to data vs. Use of data
 - ▶ Solano approach: the “Hub”
- 

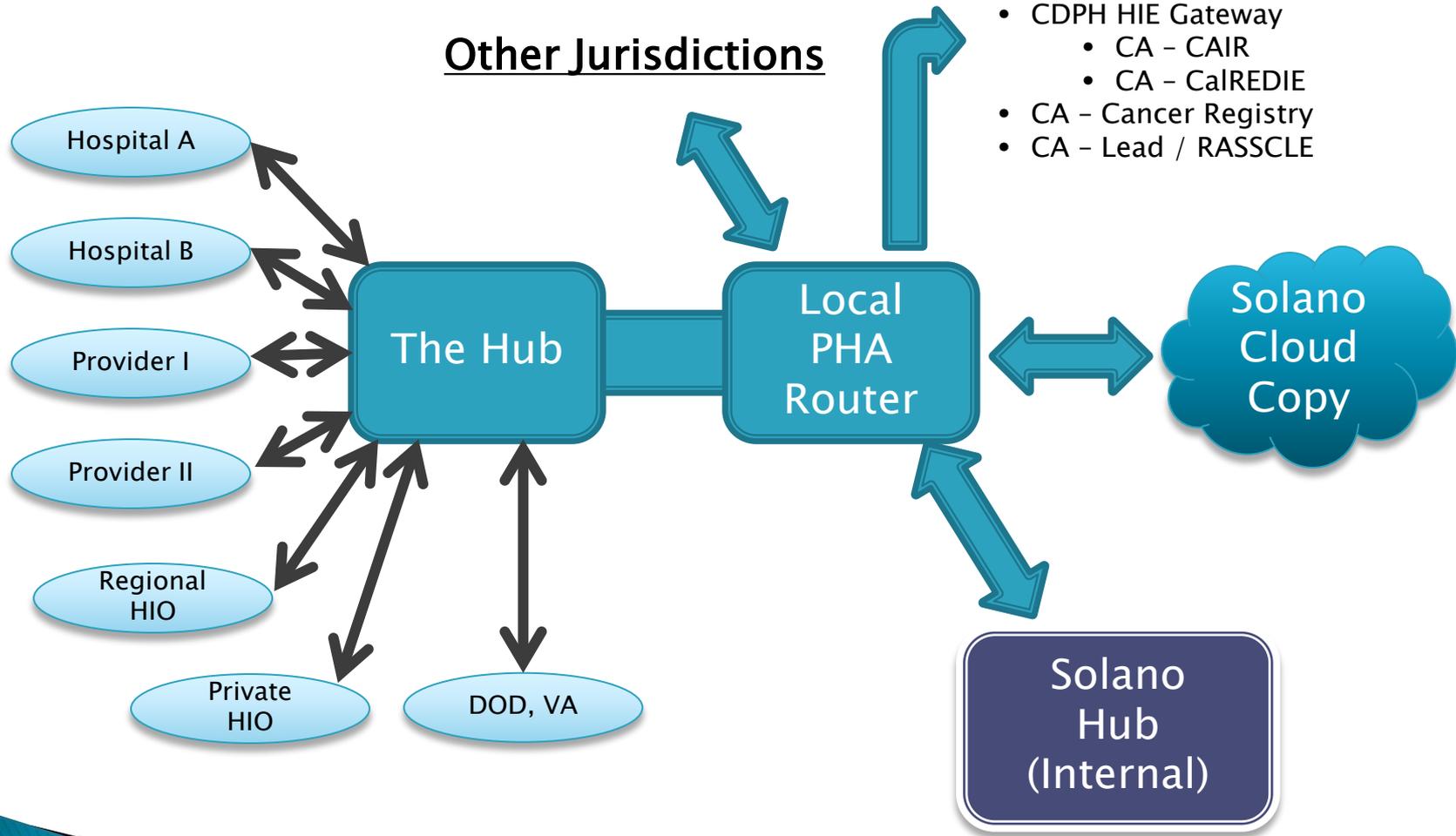
The “Hub” Design Specifications

- ▶ Maximum ease for data sources; single pipeline
 - ▶ Router vs. database (transmission, not storage)
 - ▶ Accept data from all source EHRs
 - ▶ Data QA and universal data mapping at Hub
 - ▶ Route data to any destination
 - ▶ Maximum flexibility
 - ▶ Maximum scalability
 - ▶ Standard, not custom; software-as-a-service
 - ▶ Long-term value (indefinite timeframe)
 - ▶ Able to share data with partners
- 

The “Hub”

- ▶ All public health data flow to “hub”, which both translates data (QA) and routes to destinations including CDPH HIE Gateway
 - ▶ Subscription Software as a Service model
 - ▶ Data available “in the cloud” or a local copy under the governance of local public health and its partners, or both
 - ▶ Allows jurisdiction to focus on internal needs with a single feed from healthcare
 - ▶ Allows healthcare to focus on collaboration
- 

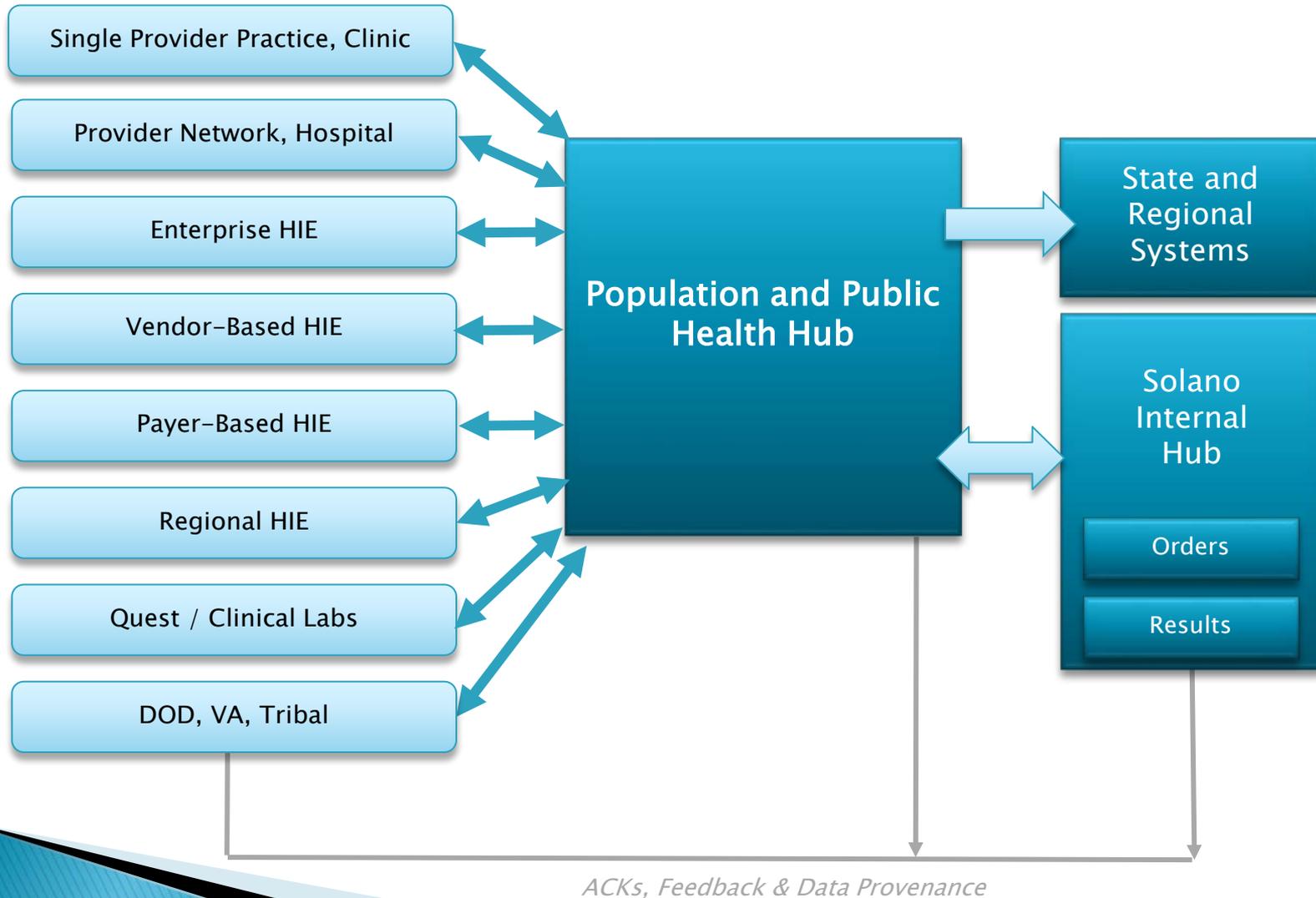
Routing Model



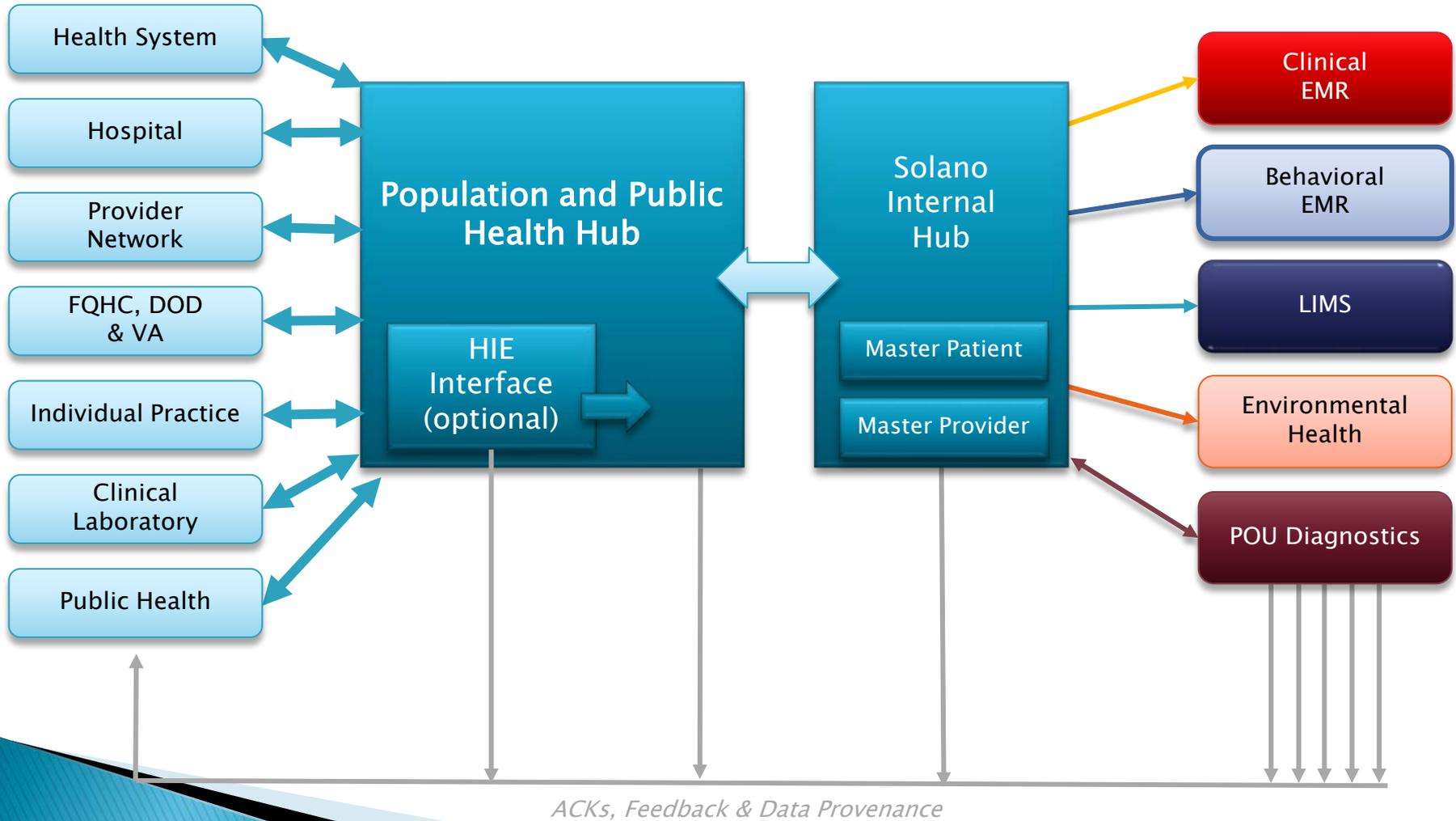
Regional/Statewide

- CDC/ASTHO BioSense 2.0
- CDPH HIE Gateway
 - CA - CAIR
 - CA - CaIREDIE
- CA - Cancer Registry
- CA - Lead / RASSCLE

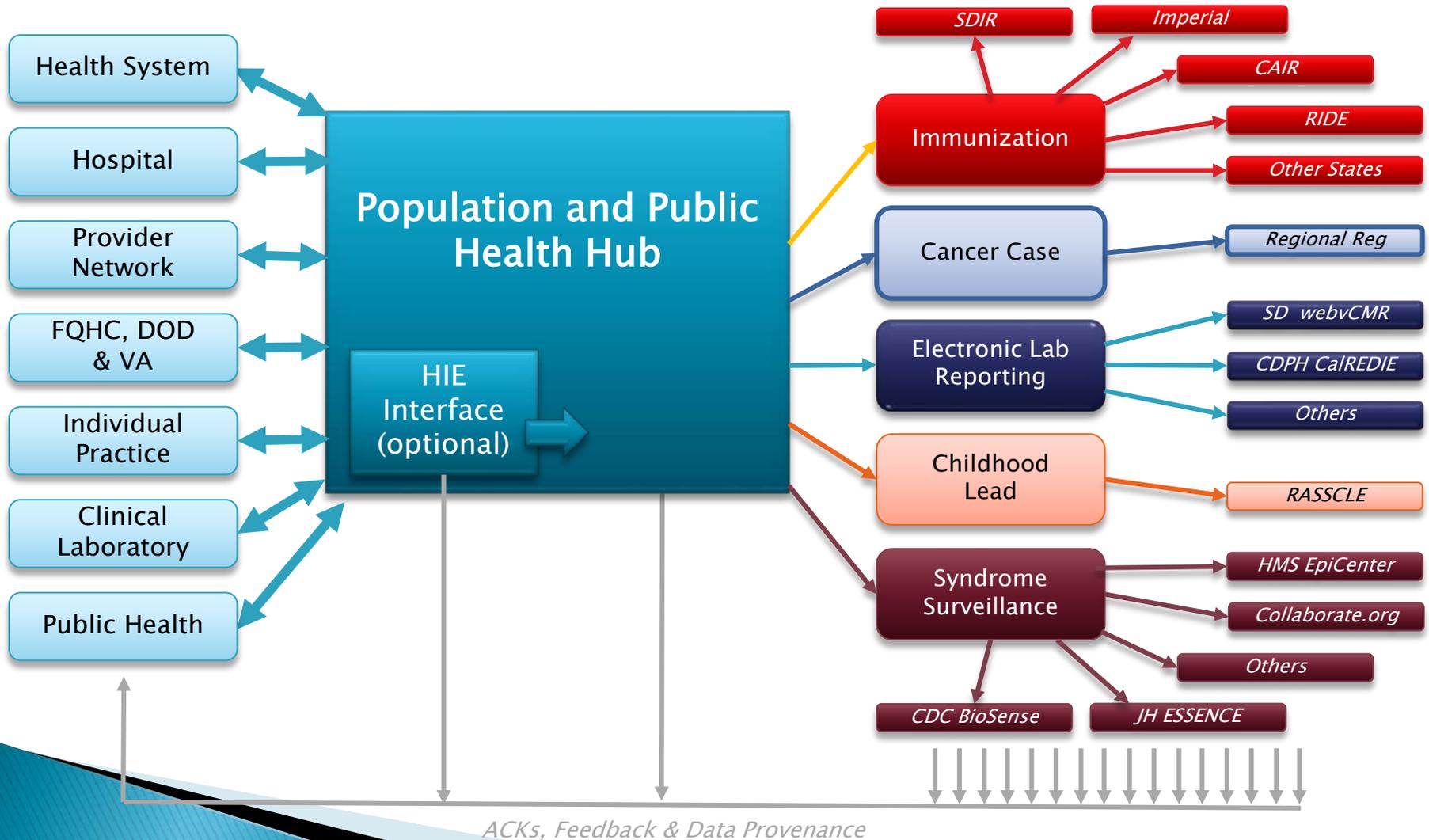
All Categories of Partners



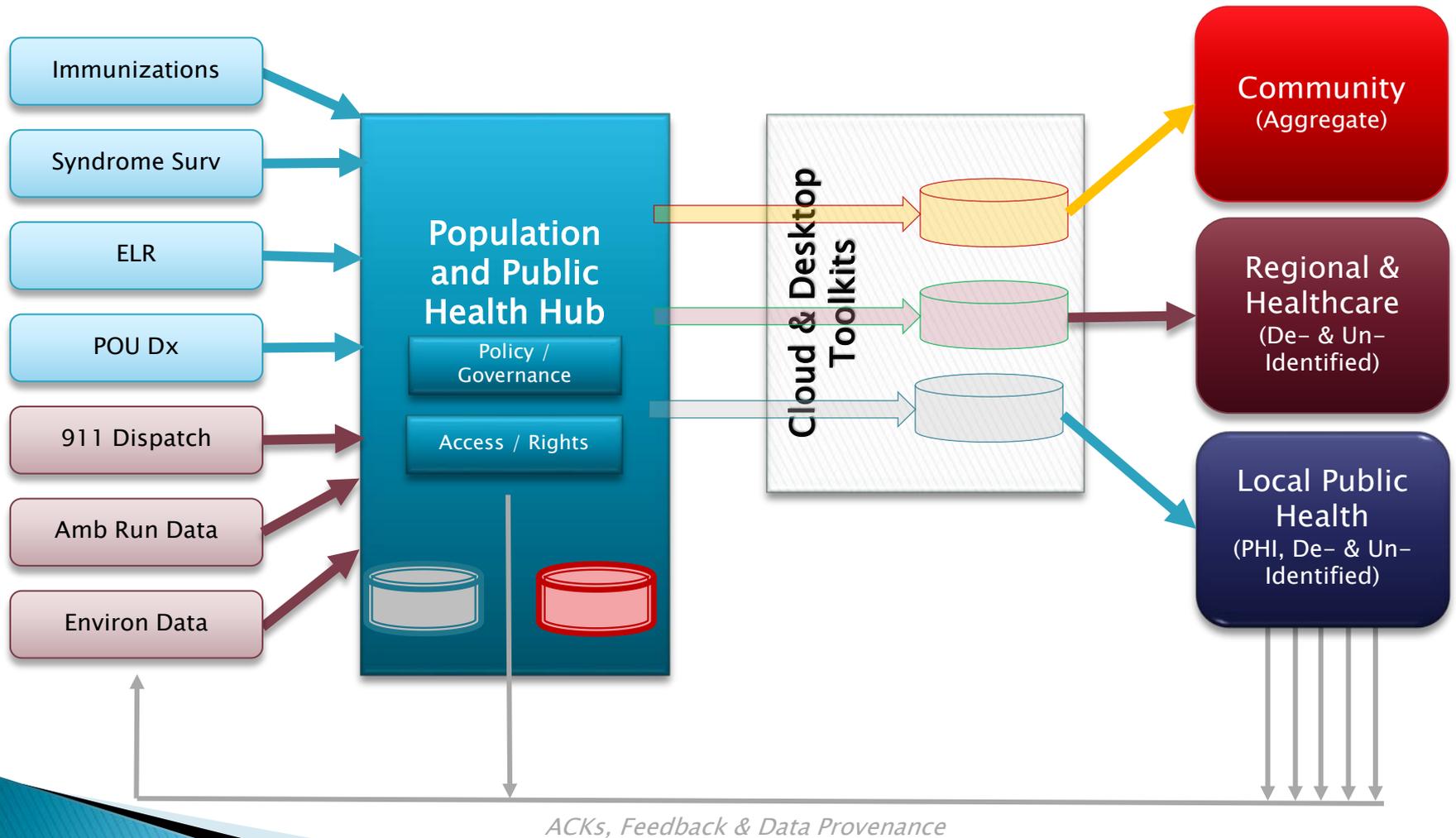
Route to internal systems



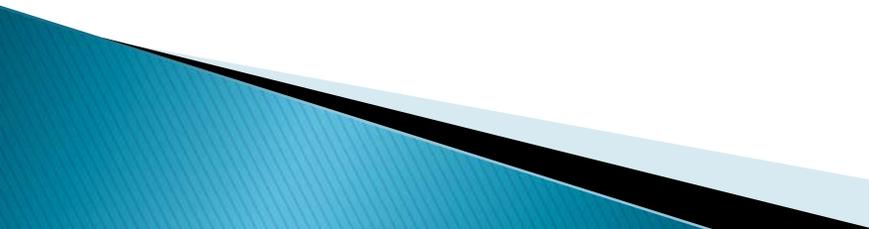
Route to existing applications



New “data driven” analysis



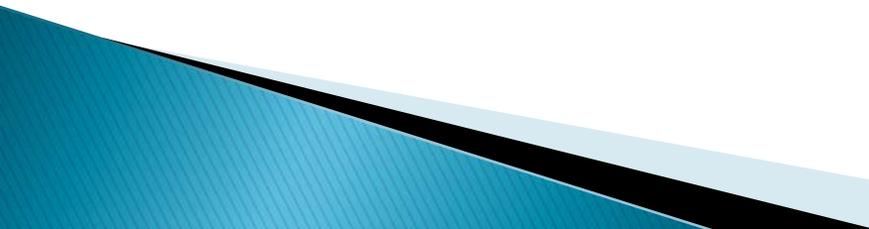
Benefits of the Hub Design

- To LHD
 - Access to all public health data
 - Reduced data entry, more analysis
 - To Partners
 - One data pipeline; reduced reporting costs
 - Collaborate.org site, data visualization
 - To State
 - Clean, consistent reporting; fewer connections
- 

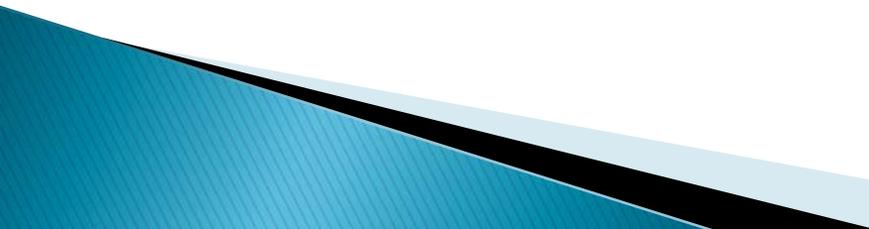
An Evolving Hub Benefit

- ▶ Exposure monitoring
 - Ebola → Measles → All Conditions
 - Spreadsheets and Access databases
- ▶ Data from many sources – the hub has many
 - EMR, Lab, POU diagnostics, Vital measurements, Clinics, Physicians, Individuals
- ▶ Health Evaluation Assessment and Tracking
 - H.E.A.T. – collaboratively developed in 3 weeks
 - Customizations by CD and EPI staff – no IT
- ▶ Individual monitoring can convert to clinical cases

Started with Meaningful Use

- Financial incentive to EPs and EHs
 - Access to SS (encounter), ELR and Imm'n data
 - Address policy and legal (e.g. BAA) issues
 - Build partnerships
 - Build data highway and, via Hub, QA and routing capacity
 - Capture most hospitals and clinics, many providers
- 

Transitioning to Statutory Reporting

- Title 17, Health & Safety Code, Local requirements
 - Expand partners to all hospitals, clinics, providers
 - Expand data from partners
 - Encounter data & ELR for suspect cases
 - EMR data
 - Data on locally-required reporting (e.g. flu, animal bites)
 - Can expand to cancer and childhood lead data
 - Can expand to electronic morbidity reporting
 - Uses the same data highway and Hub
- 

Community Health Indicator Data

- Can use same data highway and Hub to capture broader data
- Relies heavily on partnerships
 - Reporting of these data voluntary
 - Collaboration site provides value to reporting partners
- Need BAA, thoughtful consideration of whether data are patient-identifiable, de-identified, or aggregate
- Seek broader EMR and encounter (beyond SS) data
 - Demographics – height, weight, veteran status, etc.
 - Risk Factors – smoking, BMI, blood pressure, etc.
 - Diagnoses – asthma, diabetes, hypertension, etc.

Comm. Health Indicator Data, cont.

- Can supplement with point-of-use diagnostic data
- Can supplement with data from non-clinical data sets: finance, census, OSHPD, environmental, etc.
- Allows richer analysis, sharing of data with partners/public:
 - Layered GIS maps
 - Customized views (e.g. catchment area, neighborhood)
 - Risk factor vs. disease maps (e.g. SES vs. diabetes)
 - Identification of cultural and linguistic health disparities
 - More accurate estimates of disease (e.g. diabetes in Solano)
- Useful for: Whole Person Care Initiative, tracking chronic diseases, Community Health Assessments, understanding community health, evaluation of interventions, etc.

Other Data Considerations

- LHDs can sometimes default to CDPH solutions
 - For MU ELR and Immunization data, Not for SS data
 - For cancer and childhood lead data
 - Likely, in time, For Title 17 and electronic morbidity
 - Not for timely community health indicator data
 - Not for encounter data or for local expanded data
 - Solano County working with UC and Cancer Registry Consortium to define common data sets for risk factors, demographics, social determinants of health and health indicators: useful for all programs
 - Solano Co. working with DOD & VA on data sharing
- 