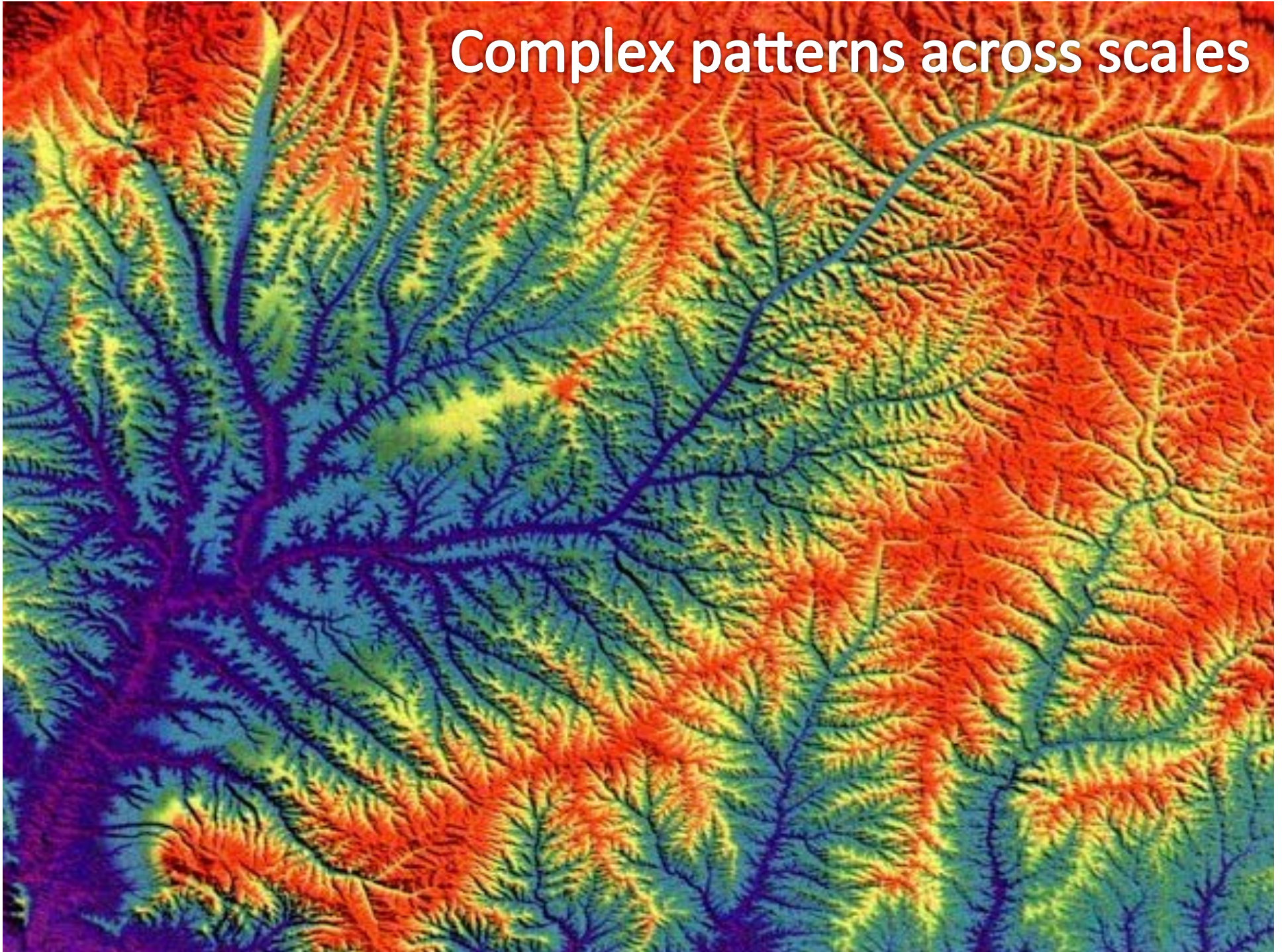


# The Adaptive Path of HIO Development

Mark Elson  
Cal eConnect

Complex patterns across scales



# Patterns Driving Demand for HIE

- Transitions of care across fragmented systems
  - Between individual providers
  - Within larger medical trading areas
- Need to deliver more efficient care
- Caregivers expect access to patient data

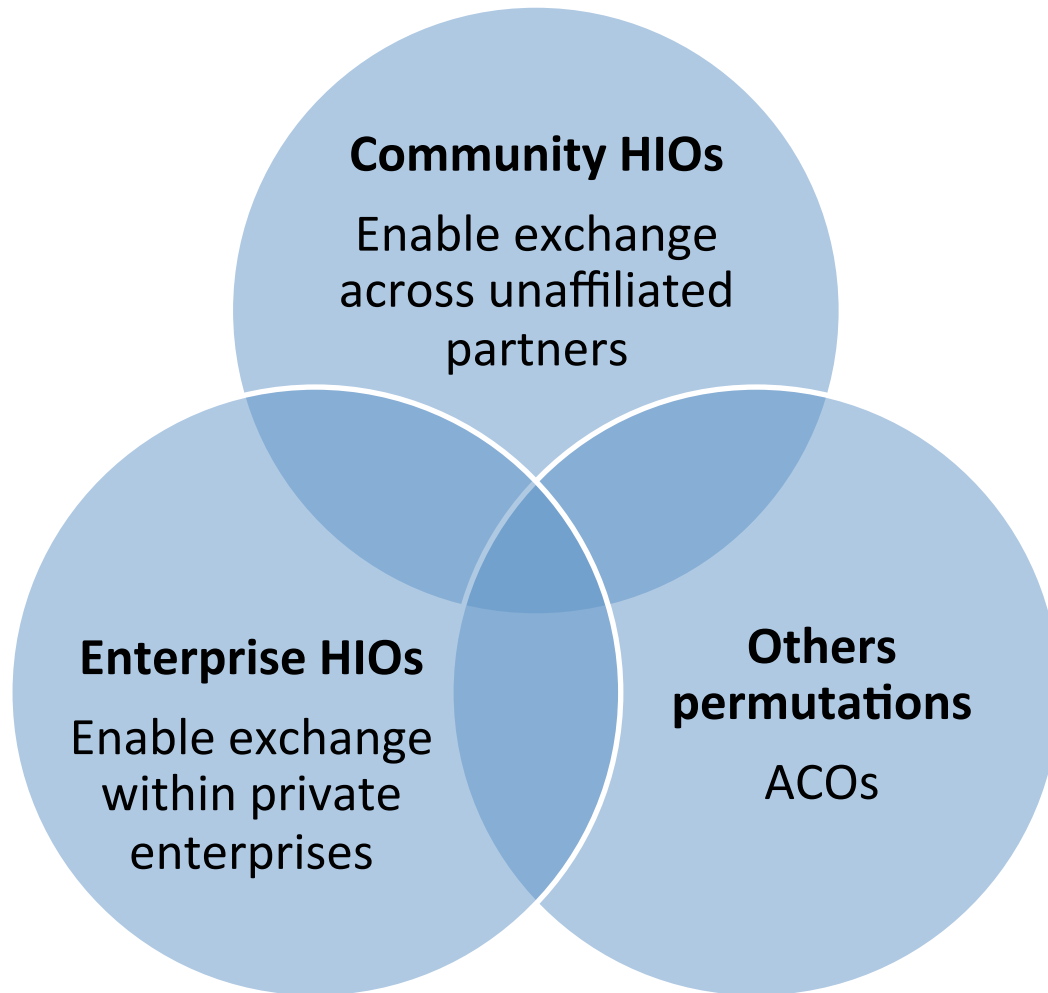
# HIE and HIOs

- HIE is poised for tremendous growth
- But what about HIOs?
  - How are they adapting to the emerging landscape?
  - What value will they deliver?

# What is an HIO?

- An Health Information Organization (HIO)
  - provisions HIE services
  - Provides a governance function
    - In contrast to a HISP / vendor
    - Typically local governance in a medical trading area, nested in larger state/national frameworks

# Types of HIOs

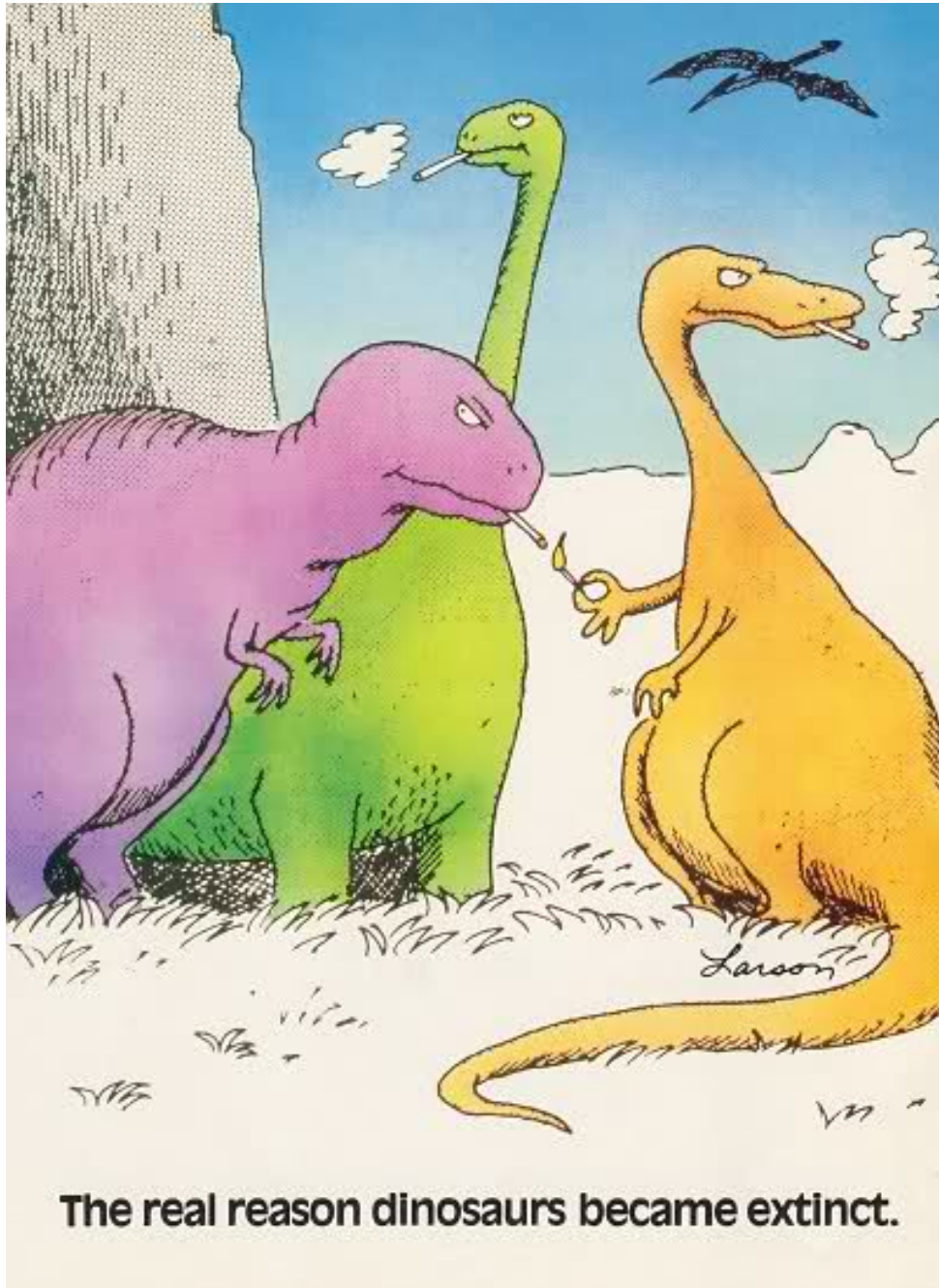


Community HIOs have been written off  
before...



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**The real reason dinosaurs became extinct.**

# Threats and Challenges

## Potentially threatening models

- EHR vendor-based exchange
- Direct
- Single statewide infrastructure

## Ongoing challenges

- Trust framework
- Stakeholder and vendor dependencies
- Resources, cost structure, sustainability

# Staff to Board Ratios

- Cal eConnect – 2:3
  - Plus advisory groups – 1:10
- Community HIOs in CA
  - 1:3 to 1:1
- IBM – 31,000:1

*Limited dedicated resources to meet objectives set by volunteer governing boards*

And yet,  
there is more HIO activity and investment in  
California now than ever before

# A Dynamic Market

- Question is not: Will HIOs survive?
- Rather:
  - Which ones?
  - What forms will they take?
  - How will they deliver value?
  - How will they interact with each other?

*These are questions one might ask of any dynamic market.*

# Targeted Patient Populations

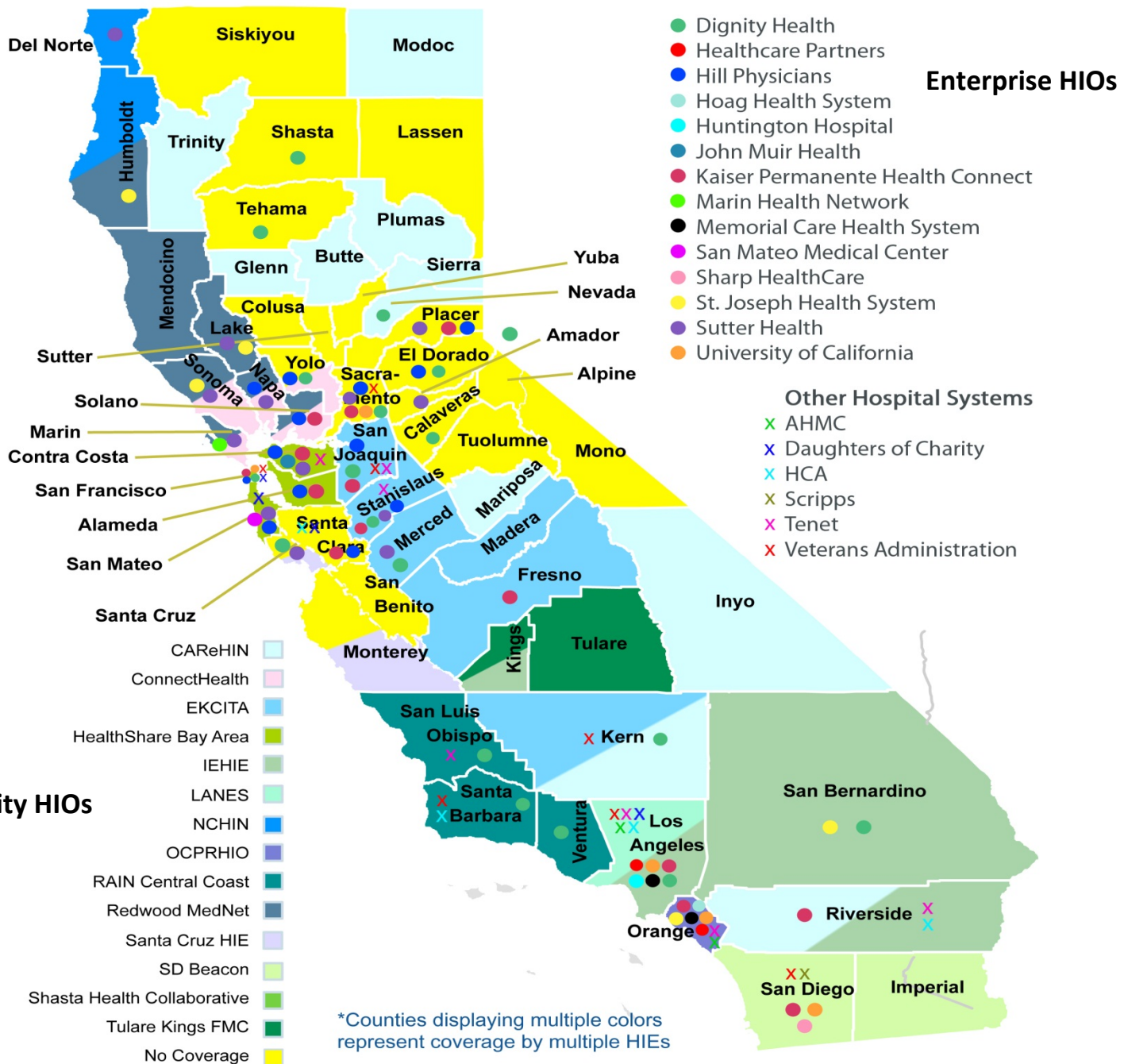
Community HIOs	2012	2013
CAReHIN	173,000	173,000
EKCITA	200,000	800,000
HealthShare Bay Area	1,000,000	1,500,000
IEHIE	1,000,000	1,000,000
LANES	6,000,000	7,000,000
NCHIN	130,000	160,000
OCPRHIO	500,000	1,000,000
RAIN Central Coast	150,000	300,000
Redwood MedNet	Not reported	Not reported
Santa Cruz HIE	270,000	680,000
SD Beacon	10,000	80,000
Shasta Health Collaborative	0	52,000
Tulare Kings FMC	0	100,000
<b>TOTAL</b>	<b>9.5 million</b>	<b>12.8 million</b>

Enterprise HIOs	2012	2013
Dignity Health	3,700,000	3,800,000
Healthcare Partners IPA	500,000	500,000
Hill Physicians	300,000	1,000,000
Hoag Health System	270,000	270,000
Huntington Hospital	Not reported	Not reported
John Muir Health	525,000	525,000
Kaiser Permanente	6,600,000	6,600,000
Marin Health Network	0	250,000
Memorial Care Health System	Not reported	Not reported
San Mateo Medical Center	Not reported	Not reported
Sharp HealthCare	Not reported	Not reported
St. Joseph Health System	140,000	140,000
Sutter Health	Not reported	Not reported
UC Davis Medical Center	Not reported	Not reported
<b>TOTAL</b>	<b>12 million</b>	<b>13 million</b>

Note: Some initiatives overlap resulting in potentially higher reported counts. Results as of early 2012.

These and additional data in this presentation were gathered by Top Tier Consulting for Cal eConnect. Full report forthcoming.

# Self-projected HIO locations by end of 2012



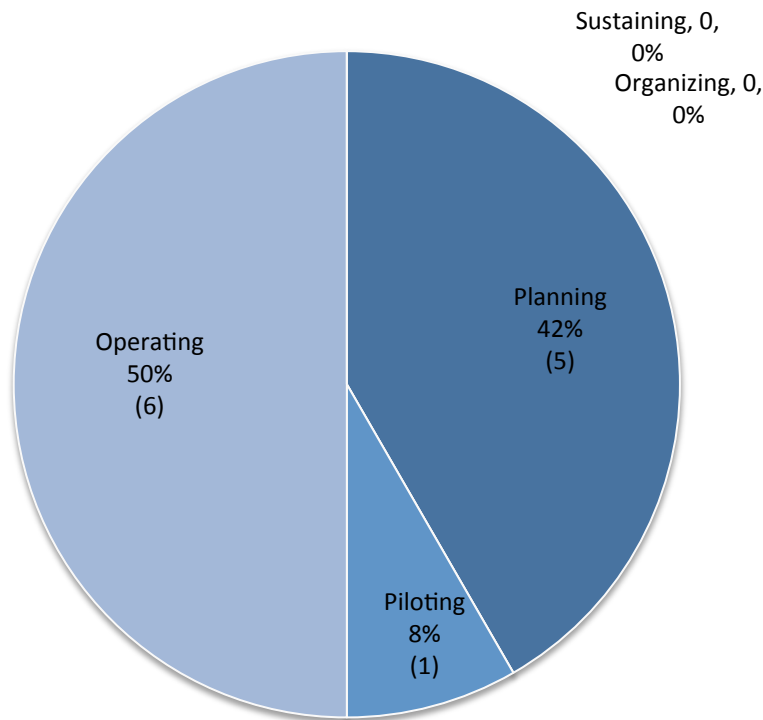
# Self-projected HIO locations by end of 2013



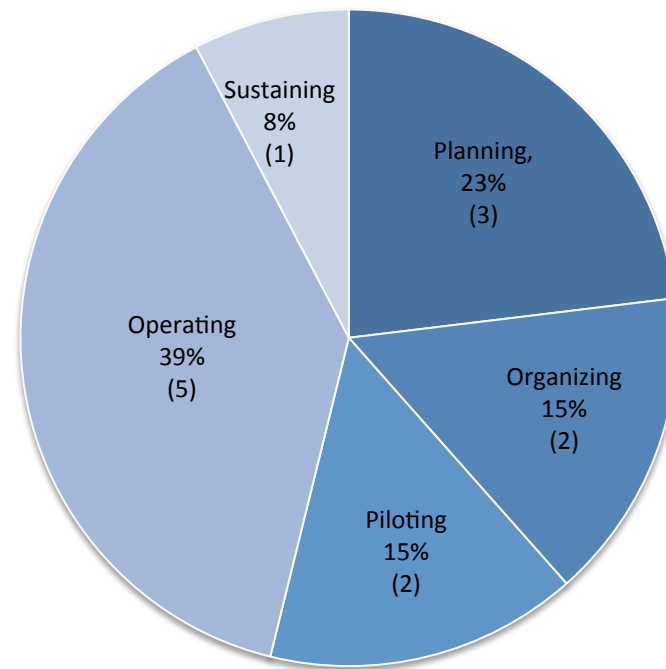


# Stages of Development

**Enterprise HIOs (n=12)**



**Community HIOs (n=13)**



Self-described development level as of early 2012 based on eHI stages of HIE development

# Transaction Types

Planned Transaction Type	Total # of Community HIOs offering (n=12)		Total # of Enterprise HIOs offering (n=11)	
	2012	2013	2012	2013
<b>ONC HIE Priority Areas:</b>				
Lab Results Delivery	11	13	8	8
Care Summary Exchange	8	10	11	11
Immunizations (Public Health)	7	8	1	3
ePrescribing	5	5	4	4
Syndromic Surveillance (Public Health)	5	7	1	3
<b>Other Data Types:</b>				
Radiology Results Delivery	8	10	8	7
Discharge Summaries (ADT)	8	9	7	7
Transcriptions	7	9	6	6
Referrals – Request	4	8	3	4
Disease Registries	4	7	1	4
Ambulatory Order Entry	3	6	6	7
EHR-Lite	5	6	1	2
Patient Access PHR	2	9	3	7
Analytics	2	6	2	3

Projected exchange types to be offered as of early 2012

# HIO Contracting Options

## Contract with vendor(s)

- Build and integrate a unique technical HIE infrastructure

## Contract with HISP

- Implement an instance of their infrastructure
- Might be an existing HIO

## Join another HIO

- Join HIO with contiguous / overlapping service area

## Governance only

- Endorse standards, processes, or HISPs for local data exchange

# User Interfaces and Workflow

- Web portal
- Push messaging into EHRs
- “Community data” tab in EHRs
- Query across systems

# Bridging the Digital Divide

Less HIT Penetration	More HIT Penetration
<p><u>Providers:</u></p> <ul style="list-style-type: none"><li>• Safety-net providers and community clinics</li><li>• County hospitals / Critical Access Hospitals</li></ul>	<p><u>Providers:</u></p> <ul style="list-style-type: none"><li>• Large physician groups</li><li>• Advanced private hospitals / health systems</li></ul>
<p><u>Patient Population:</u></p> <ul style="list-style-type: none"><li>• Medi-Cal / Medi-Cal Managed Care</li><li>• Uninsured</li></ul>	<p><u>Patient Population:</u></p> <ul style="list-style-type: none"><li>• Medicare</li><li>• Commercially insured</li></ul>
Enterprise HIOs / ACOs	Enterprise HIOs / ACOs
Community HIOs	

# Example - OCPRHIO

- Independent stakeholder board; submitting application for 501c3 status
- Approach includes
  - Classic HIE / IHE Connectivity / ACO and public health event notification
  - Portal and interfaces to EHRs
- Contracting with Mirth for core HIE infrastructure
- Targeting 100% of hospitals and providers for participation over three-phase plan by end of 2013
  - Leveraging investments by several hospital systems in their own enterprise HIOs
  - First phase began with physicians in Monarch HealthCare (2,000) and 1/3 of hospitals in county
  - Active involvement from county Medi-Cal managed care plan (CalOptima)
  - Partnering with COREC to reach its 1,254 supported physicians and 5 EHRs in second phase
- Currently completing testing with Monarch and several hospitals; initial live data exchange to begin in 1 month...
- ...Pending signing of participation agreements

# Signs to watch for...

- Incremental plans and progress
- Sightings of the “hockey stick”
  - Signed agreements
  - Number of exchange transactions / pts in system
  - Maintenance fees paid by participants
- Staffing levels
- HIO competition and connection
- Congruence across scales in CA HIE landscape