

# Ecosystem Overviews/Diagrams

The [ACTS Roadmap](#) - and this [ACTS COVID-19 Guidance to Action Collaborative](#) and [Learning Community](#) - focus on improving the cycle whereby **evidence** gets translated into **knowledge and tools** that support care delivery/improvement **actions** which generates **data** about results, which feeds into **evidence**, and so on. This page presents various diagram that have been developed to depict this cycle, and the elements that support and drive it. These diagrams are being integrated and refined by Collaborative participants to clarify how various efforts focused on the cycle can come together more efficiently and effectively to achieve shared goals and drive progress toward executing the ACTS Roadmap. [Background](#)

## List of Evidence/Knowledge/Quality Ecosystem Diagrams

1. ACTS LHS cycle
2. More detailed ACTS current/future state LHS/Knowledge Ecosystem Cycle
3. Magic evidence ecosystem diagram visualizing key AHRQ actors and offerings, standards, methods, platform, other actors on top of 'evidence ecosystem diagram'
4. Quality Ecosystem - FHIR Standards (Maria Michaels version)
5. Brian Alper/COKA FHIR Diagrams
6. Mary Butler/UMN-EPC Ecosystem Diagram
7. Theoretical Enhanced Evidence/Quality Ecosystem - potential UMN/C19HCC/EPC example

### 1. ACTS Learning Health System (LHS) Cycle

## Shared Future Vision for a National LHS: A Virtuous Cycle Without Obstacles/Silos



24

### 2. More detailed ACTS current/future state LHS/Knowledge Ecosystem Cycle

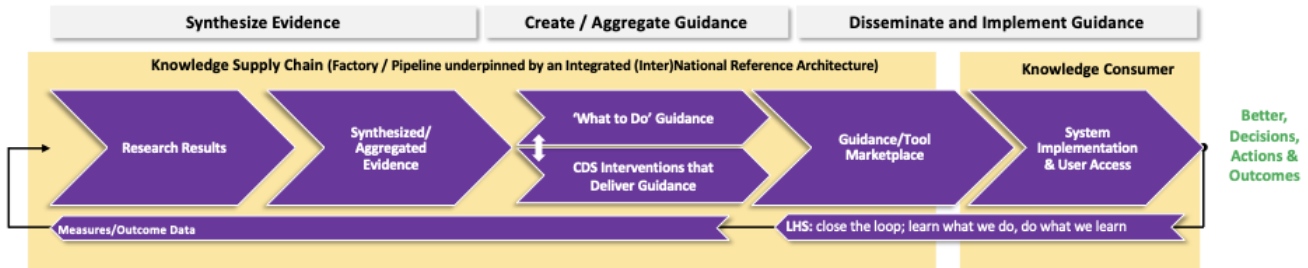
## Knowledge Loop for COVID-19 and Beyond

*Key Building Block for an Effective/Efficient (Inter)National Knowledge Ecosystem*

## CURRENT STATE

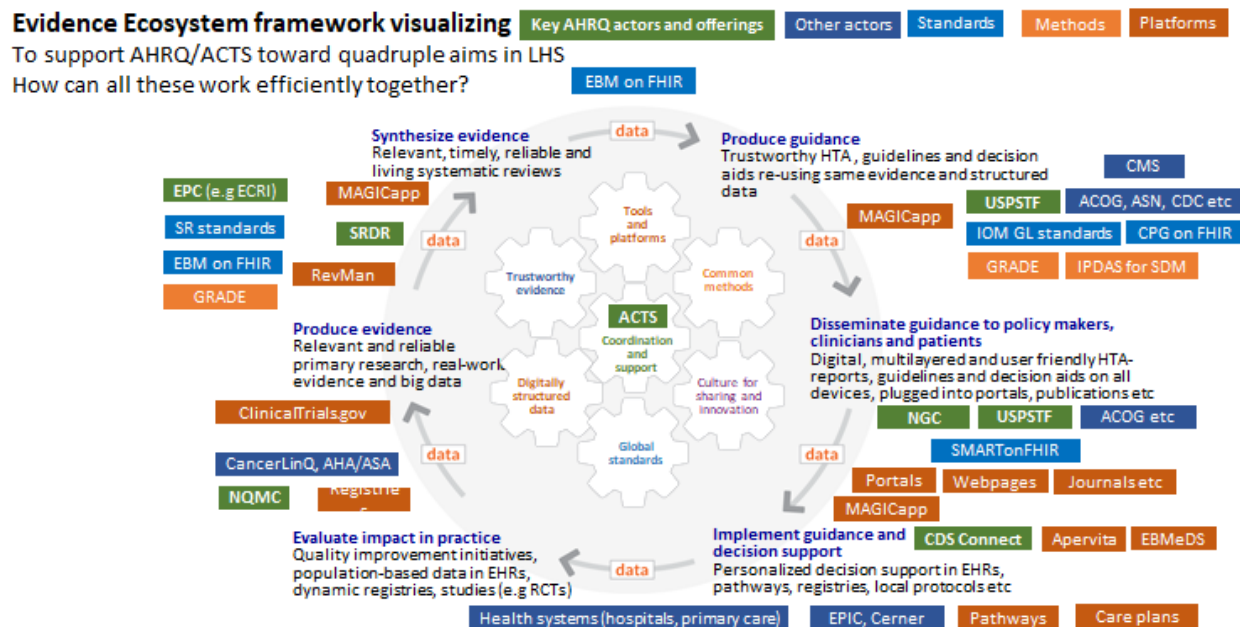
- Non-standardized and inaccessible knowledge supply chain
- Attempts to fix have been siloed and without overarching coordination toward a common-goal
- A low-performing supply chain results in sub-optimal decisions, actions and outcomes – evidence not delivered/used effectively

**FUTURE STATE: Learning Health System** (Knowledge flow is more Computable, FAIR, Useful)



- This project helps 'Fix' this knowledge supply/implementation/evaluation loop for COVID-19
- **Entire** knowledge supply chain is more computable, interoperable and accessible (L1 [Paper / PDF] → L4 [Executable])
- This enhanced COVID-19 cycle seeds Knowledge Ecosystem that enables Learning Health Systems to achieve the Quadruple Aim

3. The diagram below is part of a slide deck prepared for ACTS by Per Olav Vandvik and Linn Brandt from the [MAGIC Evidence Ecosystem Foundation](#)



Full deck is here: [from MAGIC - Solutions Evidence Ecosystem for ACTS October 28 2019 \(2\).pptx](#) (see [Assistive Technology Disclaimer](#)).

[slide 2 in the MAGIC deck has an editable version of the diagram copied above.] Learning Community participants are adapting this diagram to reflect components of the evidence /knowledge/guidance ecosystem they are addressing, e.g., with living CDS interventions for specific COVID-19 targets (and ultimately many other topics beyond).

#### 4. Quality Ecosystem - FHIR Standards (Maria Michaels version)

### Clinical Quality Lifecycle with Situated Standards



Adapted from [HL7 Clinical Quality Information \(CQI\) Workgroup](#) by Maria Michaels, Centers for Disease Control and Prevention

- See slide 10 in this deck: [DQS\\_Track2\\_Maria'sSlides\\_20200722.pptx](#) (see [Assistive Technology Disclaimer](#))

#### 5. Brian Alper/COKA FHIR Diagrams



- Full deck found here: [From Alper - Evidence Ecosystem image set 2020.pptx](#)  
(see [Assistive Technology Disclaimer](#))

Alper/COKA also working graphic "Computerized Organization to Realize Ecosystem": "The slices of the circle are DATA to EVIDENCE to GUIDANCE to ACTION. The layers from the outer ring to the core show each slice from GENERAL to SPECIFIC to COMPUTABLE to EXECUTABLE. The closer to executable, the closer to the CORE and this matches the interoperability reached when reaching the CORE. Overall this is the Computerized Organization to Realize the Ecosystem (CORE). "

# The Knowledge Ecosystem – Clinical Knowledge View



Full Deck from Alper/COKA is [here](#) - above is slide 7 from this deck. (see [Assistive Technology Disclaimer](#))

## 6. Mary Butler/UMN-EPC Ecosystem Diagram





JO Notes on this EPC diagram - are there opportunities to:

- tie 'topic nomination' more closely to care transformation initiatives (e.g., as in ACTS COVID Guidance to Action Collaborative)? (currently there can be open nominations, but typically nominations only proceed if there is an 'adoption partner'; growing attention to feeding LHS efforts)
  - leverage standards more fully to improve FAIRness of information flowing into reviews and applying reviews more seamlessly to guidance/CDS /eCQM development? e.g., as outlined in table at top of [this page](#). (SRDR/EPCs and others working on this)
  - tighten connections/collaborations between 'NextGen' offerings (more computable/concise/user-friendly/interactive evidence summaries) and those who can benefit from integrating that information into guidance and CDS offerings downstream? (there's important application nuance in the reports)
  - otherwise more tightly integrate the EPC/SRDR products and processes with broader efforts (e.g., ACTS COVID Guidance to Action Collaborative and other related efforts) in mutually beneficial ways?
- Full deck found here: [Butler V3 UMN Ecosystem image.pptx](#) (see [Assistive Technology Disclaimer](#))