

# Data Modernization: Priorities and Next Steps

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# What is the problem we are trying to solve?



## **Siloed information:**

Disconnected and/or proprietary disease systems driven by disease-specific budget lines keep us from seeing the complete picture



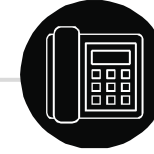
## **Outdated skills:**

The public health workforce needs training to use today's technologies more effectively



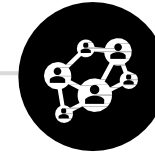
## **Heavy burdens for Providers:**

Providers in healthcare and at health departments are burdened with sending data to many places in many ways



## **Older technologies:**

- Most systems at health departments are not flexible, do not use cloud, and are not scalable



## **Public health is not a part of the healthcare data ecosystem**

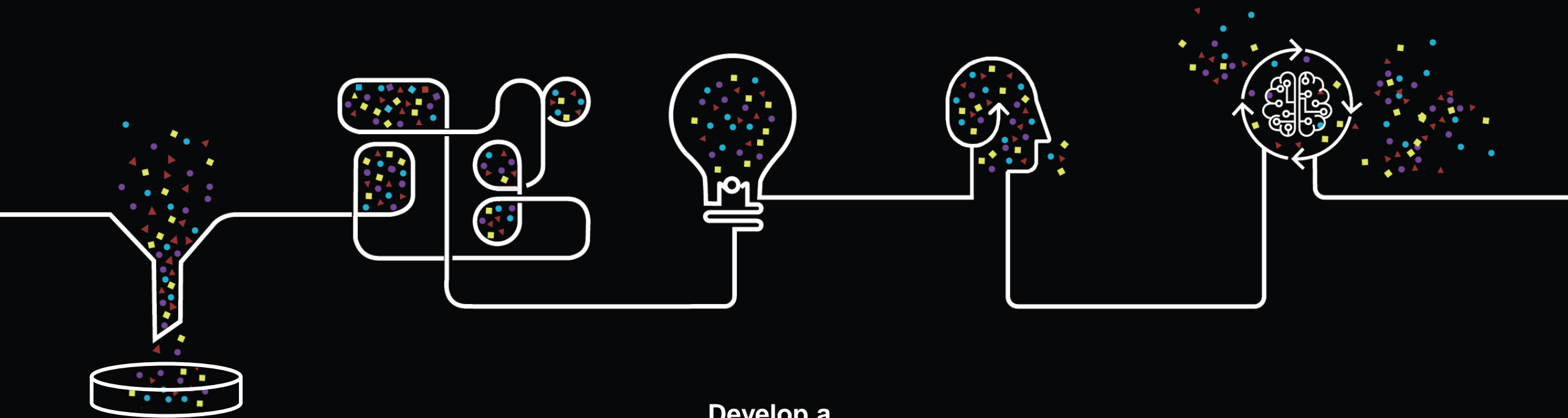
- Public health got left behind as federal incentives and regulations helped healthcare systems to be able to easily share data automatically in the Electronic Health Record.

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## Our Ultimate Goal

To move from siloed and brittle public health data systems to connected, resilient, adaptable, and sustainable **‘response-ready’** systems that can help us solve problems before they happen and reduce the harm caused by the problems that do happen.

# DMI Priorities



## Build the right foundation

Provide the new information infrastructure and automated data sources for pandemic-ready data sharing

## Accelerate data into action

Create faster, more integrated use of data to have more real-time situational awareness and forecasts of health threats for greater prevention and response

## Develop a state-of-the-art workforce

Identify, recruit, and retain experts in Health IT, Data Science, and Cybersecurity to generate meaningful public health insights

## Support + extend partnerships

Engage with state, territorial, local, and tribal partners to address policy challenges and create new strategic partnerships to solve problems

## Manage change + governance

Provide the necessary structure to support modernization and aid adoption of unified technology, data, and data products

# Priority 1: Build the right foundation

## Alignment to DMI Roadmap: Coordinate People and Systems

*Provide the new cloud foundation and automated data sources for response-ready data sharing and to break down data system silos.*

- a. **Develop a shared vision of a public health ecosystem** for coordinated and seamless exchange of actionable data between healthcare data providers and public health agencies.
- b. **Expand foundational infrastructure** to provide scalable, flexible services for timely and appropriate access to actionable data in the public health ecosystem.
- c. **Modernize and connect public health systems and sources** for streamlined and consolidated collection, routing, exchange, and linkage of public health data using standards and the foundational infrastructure.
- d. **Transform legacy public health data systems, processes and activities** to use the foundational infrastructure, thereby replacing and combining existing siloed systems with systems that work for all diseases and conditions and will reduce duplicative activities, cost, and time to scale up and respond in emergencies.
- e. **Create the ability for CDC and STLT staff to easily store, discover, analyze, and visualize data** in the public health ecosystem.

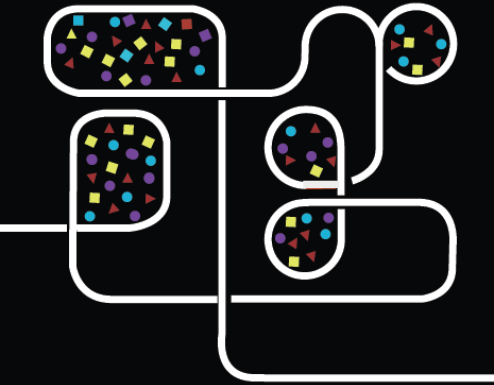


# Priority 2: Accelerate data into action

## Alignment to DMI Roadmap: Accelerate Data for Action

*Faster, more interoperable data provides high-quality information that, in turn, leads to knowledge and provides a more real-time, comprehensive picture to improve decision-making and protect health.*

- a. **Develop, align, test, and implement new data standards** to increase interoperability
- b. **Increase data linkages** across diverse data assets
- c. **Advance the use of forecasting and predictive analytics** to make efficient and effective decisions to respond to outbreaks, emerging threats, and exposures
- d. **Implement tools for scalable outbreak or emerging threat response**
- e. **Identify health inequities and promote equitable health outcomes**





## Priority 3: Develop a state-of-the-art workforce

*Identify, recruit, and retain critical workforce in Health IT, Data Science, and Cybersecurity Specialists to be stewards of larger quantities of data and tools – better and faster – to generate meaningful public health insights.*

- a. **Identify workforce capacity and capability** needs and opportunities
- b. **Increase the data science capacity and capabilities** of the CDC workforce.
- c. **Facilitate data science upskilling** for epidemiologists and technologists at STLT agencies

## Priority 4: Support + extend partnerships

*Engage with state, territorial, local, and tribal partners to ensure transparency, address policy challenges, and create new strategic partnerships to solve problems.*

- a. **Increase collaboration, communication, and messaging** among CDC and partners to ensure alignment and participation across DMI activities
- b. **Public health policies support the exchange and use of data** between CDC, STLTs, partners, and data providers

## Priority 5: Manage change + governance

# We are listening...

Challenges and Opportunities  
for Strengthening the US  
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Findings from the Scan of the Literature

MAY 2021

 National Network  
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 Bipartisan Policy Center

**Positioning  
America's Public  
Health System for the  
Next Pandemic**

June 2021



**Public Health API Concept  
Paper Version 1.0**

Prepared by the Digital Bridge Public Health API  
Workgroup

Workgroup Chair – Walter Suarez, MD, MPH  
September 2021

**VIEWPOINT**

**Modernizing Public Health Data Systems  
Lessons From the Health Information Technology  
for Economic and Clinical Health (HITECH) Act**

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**Barriers** to timely data collection and exchange hindered health departments throughout COVID-19, from fax machines creating bottlenecks for disease monitoring to inconsistent reporting of race and ethnicity. Modernizing public health data systems has become a bipartisan postpandemic imperative, with President Trump engaging the US Digital Service to improve data exchange and President Biden issuing an Executive Order on his second day in office to advance public health data and analytics.

These initiatives should be informed by the experience of digitizing health care delivery. The Health Information Technology for Economic and Clinical Health (HITECH) Act drove the near-universal adoption of certified electronic health records (EHRs).

more than \$1 billion for the CDC's Data Modernization Initiative (DMI), such overdue resources are the means, not the ends. Policy makers need to learn from HITECH—which had 30-fold more funding and still encountered roadblocks—to ensure data systems meet the needs of the public health community, and in turn, the US population.

**Lessons From HITECH**  
Like public health today, health care in 2009 predominantly relied on paper-based systems despite the increasingly digital nature of US society. The HITECH Act sought to address this gap by accelerating EHR adoption. However, building EHRs was no guarantee of adoption by hospitals and use by clinicians. Thus, it was



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# Questions