



## **Integrating immunization data into electronic disease surveillance systems**

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# Land Acknowledgement

Every community owes its existence and vitality to generations from around the world who contributed their hopes, dreams, and energy to making the history that led to this moment. Some were brought here against their will, some were drawn to leave their distant homes in hope of a better life, and some have lived on this land for more generations than can be counted. Truth and acknowledgment are critical to building mutual respect and connection across all barriers of heritage and difference.

We begin this effort to acknowledge what has been buried by honoring the truth. This presenter is on the ancestral lands of the Dakota people. We want to acknowledge the Dakota, the Ojibwe, the Ho Chunk, and the other nations of people who also called this place home. We pay respects to their elders past and present. Please take a moment to consider the treaties made by the Tribal nations that entitle non-Native people to live and work on traditional Native lands. Consider the many legacies of violence, displacement, migration, and settlement that bring us together here today. Please join us in uncovering such truths at any and all public events.\*

\*This is the acknowledgment given in the USDAC Honor Native Land Guide – edited to reflect this space by Shannon Geshick, MTAG, Executive Director Minnesota Indian Affairs Council

# Agenda

Public Health Information  
Systems involved

Need for improved  
communication

Solution implemented

Status of efforts and lessons  
learned





# Public Health Information Systems

- **Minnesota Immunization Information Connection (MIIC)**
  - Opt out jurisdiction
  - 9.5 million clients
  - 127.5 million immunizations
  - 15 million updates
  - 52 million queries (~77.5%)

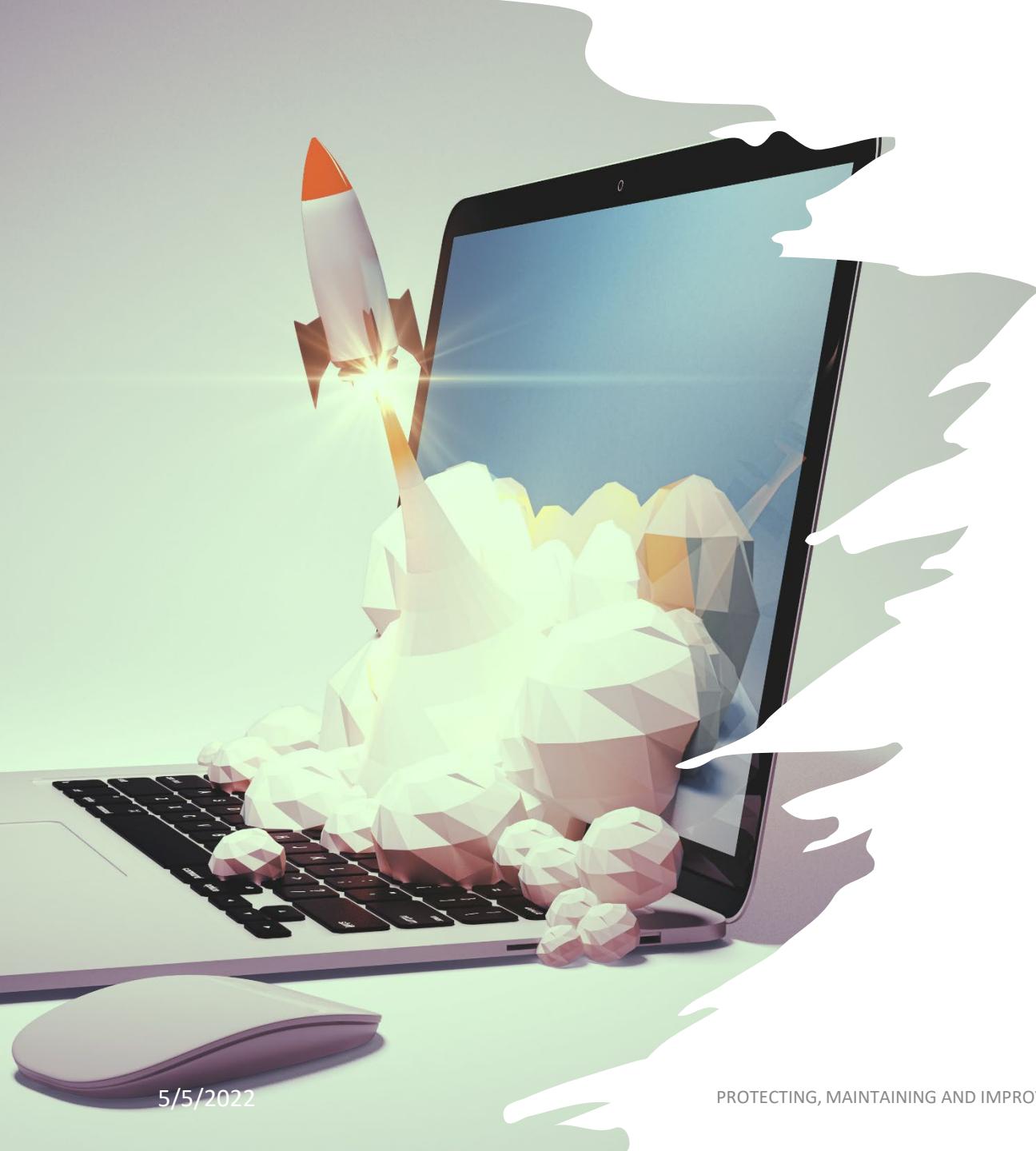


# Public Health Information Systems

- **Minnesota Electronic Disease Surveillance System (MEDSS)**
  - State/Local public health, labs, clinics
  - Electronic lab reporting in HL7
  - Used for case management, contact tracing, and outbreak management
  - ~220,000 events in 2019
  - ~5 million events in 2021

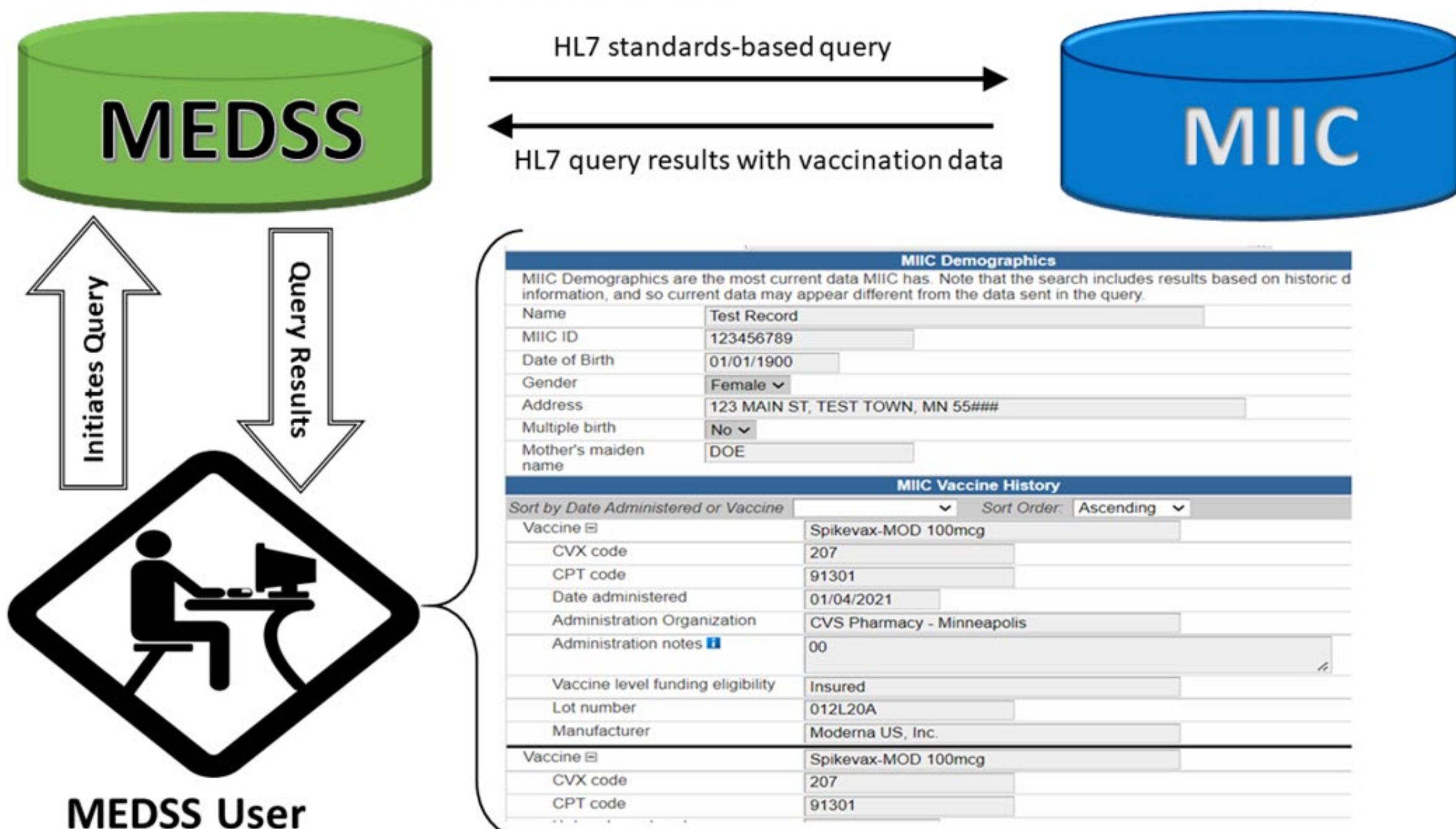
# Time study of original data flows

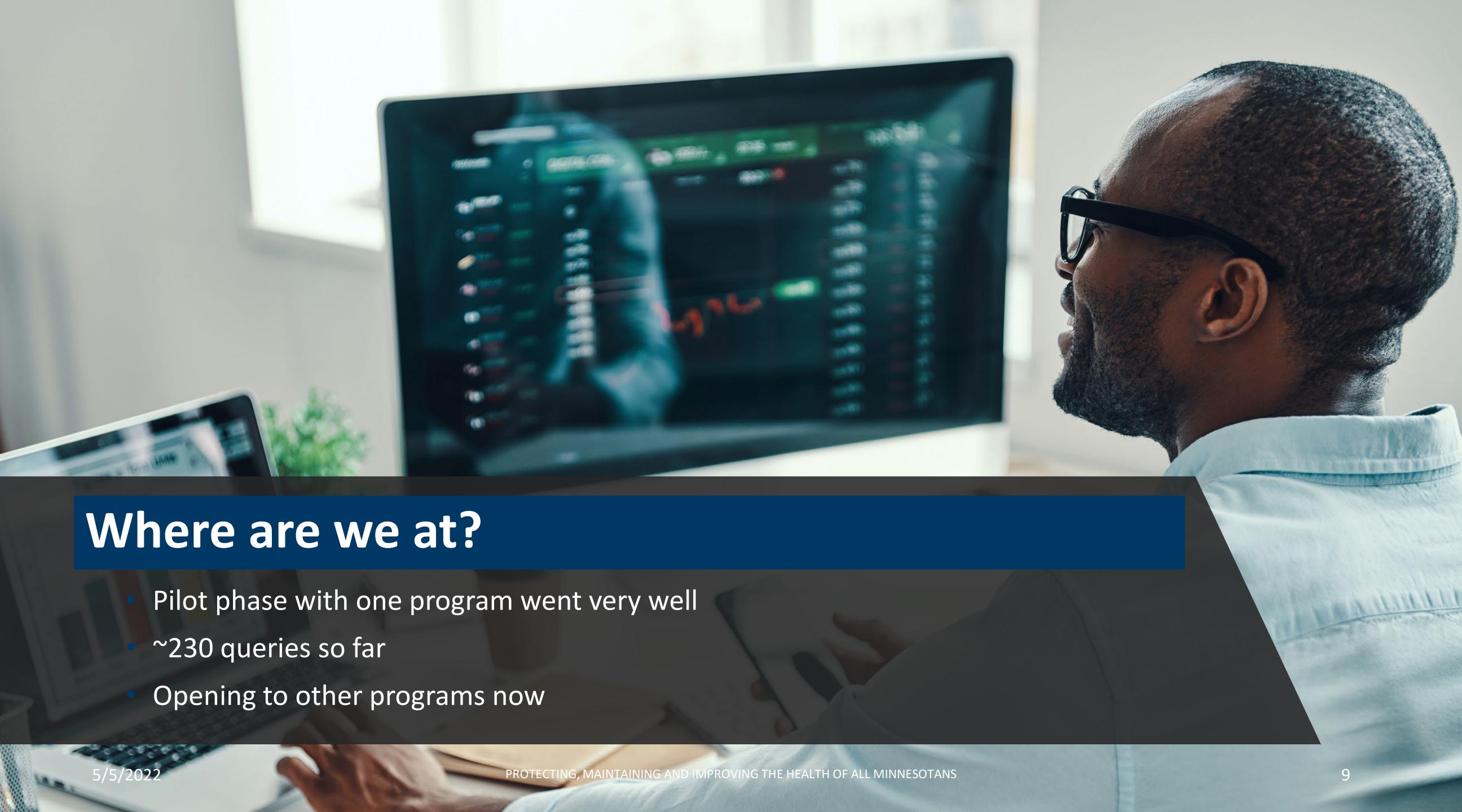
Method	Metrics	Results
<b>MIIC and MEDSS open simultaneously (analogous to the actual data entry)</b>	Time estimate to access an event in MIIC and enter data in MEDSS	134 seconds (2 minutes, 14 seconds)
	Number of clicks to complete data entry	50 clicks
	Estimate of data entry errors (over X time period)	~300 errors to fix annually
	Staff effort for manual process	1 epidemiologist, 2-3 student workers over 1 year
<b>Pulling MEDSS report, SAS code, MIIC query (preparation process)</b>	Total non-data entry time (Data pulled to data ready-to-enter)	~ 8 minutes (best case with an experienced user) to get file uploaded to MIIC, then up to 24 hours before data is accessible
	Number of clicks for non-data entry time (Saving reports, opening programs, running them, uploading query file)	104 clicks



# Breaking out of our manual processes

- Both systems used HL7
- Mapping vaccine codes to diseases
- Vendor built solution that was flexible
- Single person search in MEDSS event





## Where are we at?

- Pilot phase with one program went very well
- ~230 queries so far
- Opening to other programs now

## Assessing use and learning lessons

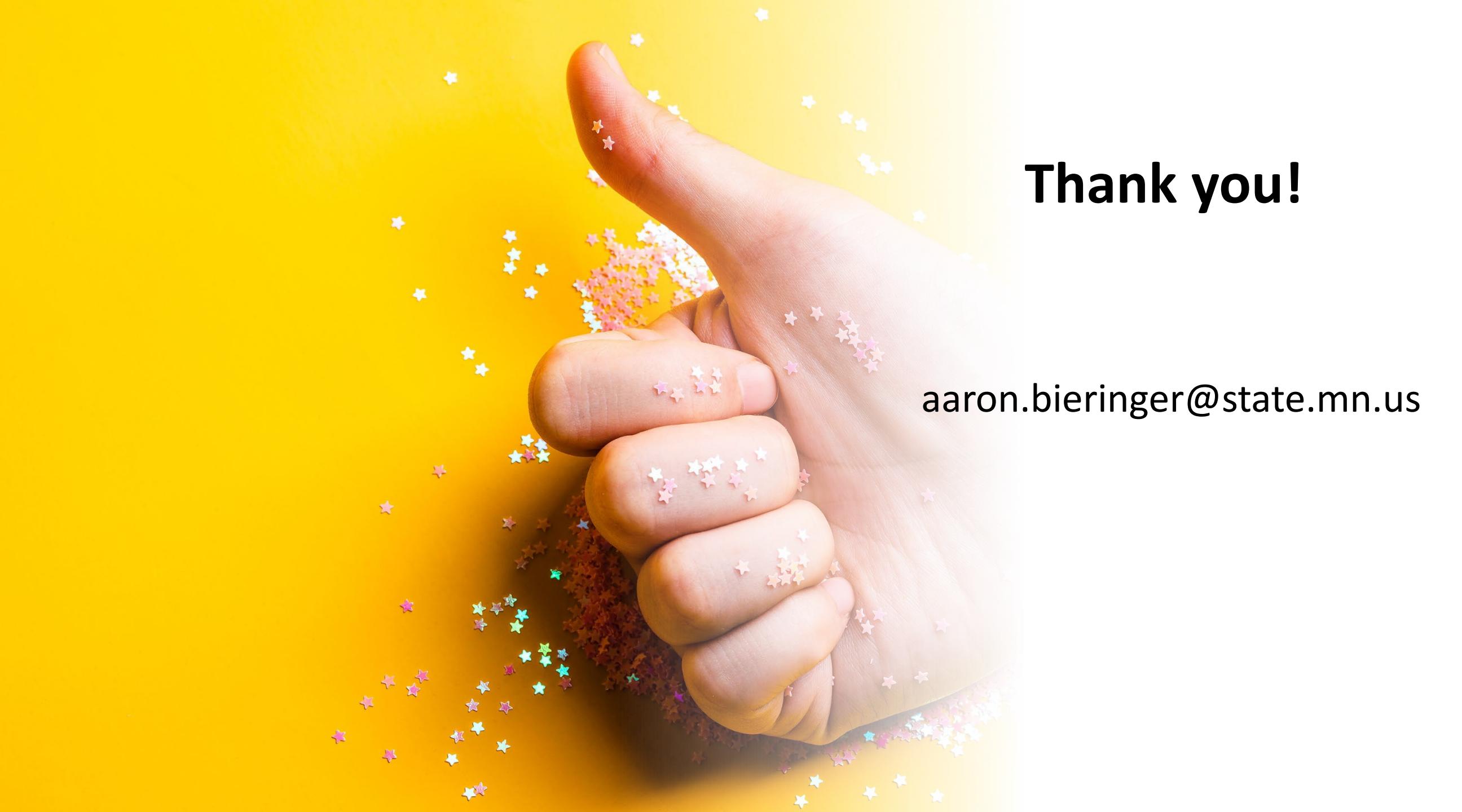
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- Requirements gathering is critical
- Talk to stakeholders
- Leave a LOT of time for testing
- State the value case for buy-in

# Acknowledgements

- Co-authors:
  - Priya Rajamani, MBBS, PhD, MPH, FAMIA, MN Dept of Health, University of Minnesota
  - Hanna Chakoian, MPH, MN Dept of Health
  - Sarah Solarz, MPH, MN Dept of Health



A photograph of a person's hand reaching out towards the left. The hand is positioned palm-up, with the thumb pointing upwards and the fingers slightly curled. The background is a vibrant yellow, and numerous small, colorful stars (pink, white, and blue) are scattered across the surface, particularly concentrated around the hand and fingers.

**Thank you!**

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