The VacSeen Project: Connecting Vaccine-Related Logistical and Healthcare Information Systems Using Linked Data

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AUTO-ID LABS

Field worker scans barcode >>> Data uploaded to database >>> Integrated into Linked Data lake >>> Validated using business rules >>> Visualized

1 Abstract

- **Siloed data** a major impediment to leveraging implementation of AIDC technologies such as barcodes.
- A solution in **Linked Data**, an approach to publish data in machine-readable, structured, and interoperable form.
- *Key differentiators:*
  - *Joint leverage of mobile and Linked Data technology to seamlessly bridge logistical and healthcare information systems.*
  - *Ease of adoption anchored to compatibility with existing infrastructure.*

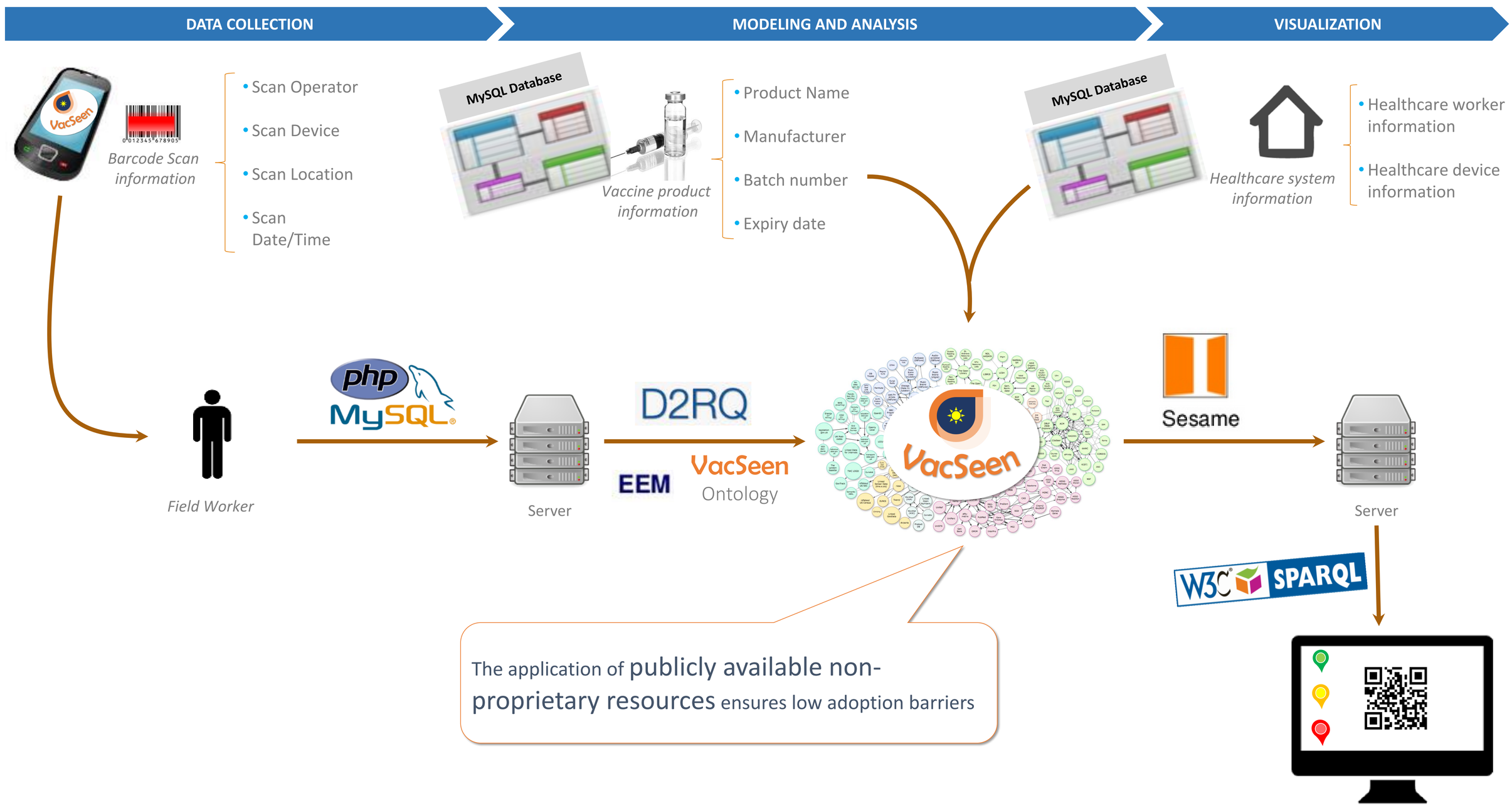
2 Motivation

- Linked Data proposed by Tim Berners-Lee in 2001.[1]
- Forms an abstraction layer on top of existing information systems.
- Data from varied sources can thus be easily integrated and analyzed.

Fig. 1. Linked Data standards

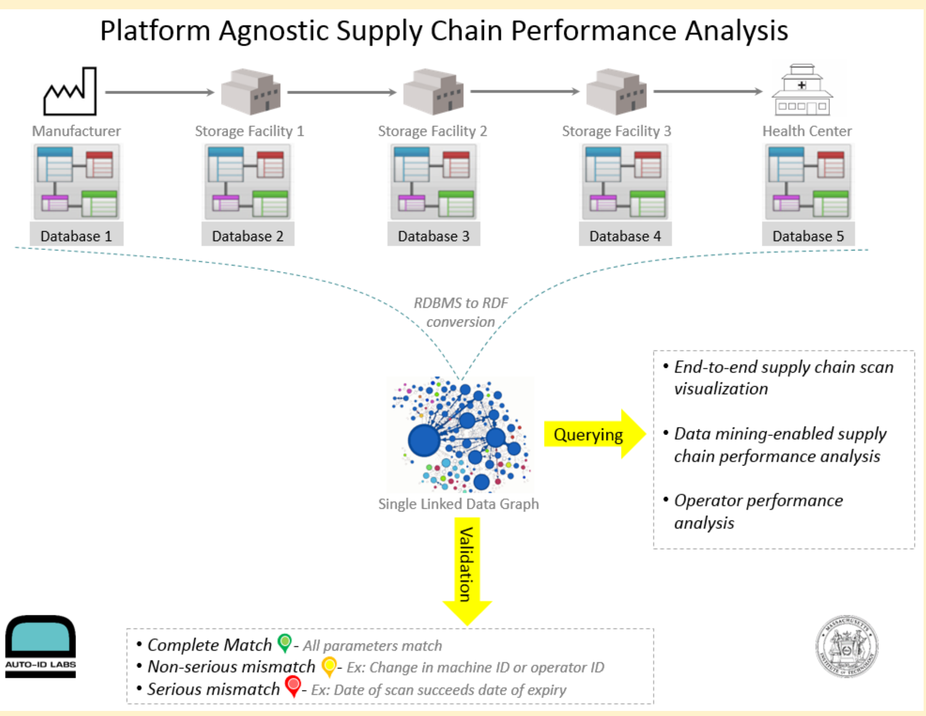
3 The VacSeen Project: Workflow

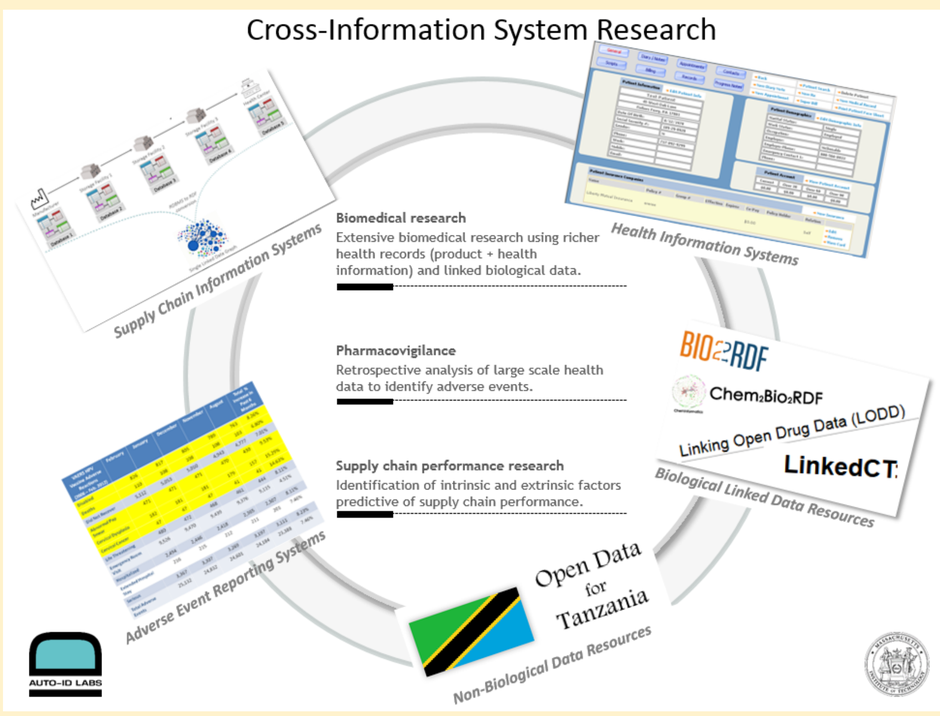
Mobile-based barcode scans on the field are retrospectively validated using a data lake formed from logistical and health information systems



4 Applications of Linked Data

Interoperability renders Linked Data an effective tool for logistical systems research





5 Acknowledgement

GS1

PATH

6 Future Work

- Future work will focus on:
  - Scaling up the system to accommodate complex information systems
  - Integrating RFID-based temperature sensing data
  - Leveraging sensor networks, biomedical databases, and open datasets for generating richer insights

Try VacSeen

[1] Tim Berners-Lee, James Hendler and Ora Lassila, "The Semantic Web", Scientific American, May 2001, p. 29-37.