The "101" of MIROW:
Interactive workshop on a new guidance "Decrementing Inventory via Electronic Data Exchange"

Delivered by the AIRA-MIROW Steering Committee

2015 AIRA National Meeting
New Orleans, Louisiana
Wednesday, April 22, 2015, 11:00 am – 12:30pm

CDC

Contributors

Members of the MIROW SC:
- Warren Williams (Co-Chair)
- Elaine Lowery (Co-Chair)
- Brandy Altstadter
- Frank Caniglia
- Amanda Harris
- David Lyalin
- Megan Meldrum
- Katie Reed
- Bhavani Sathya
- Deb Warren
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AIRA support:
- Nichole Lambrecht
- Ketti Turcato

Other contributors:
- Lisa McKeown, NACCHO
- Angela Williams-Lindsay, CDC contractor

What is MIROW?

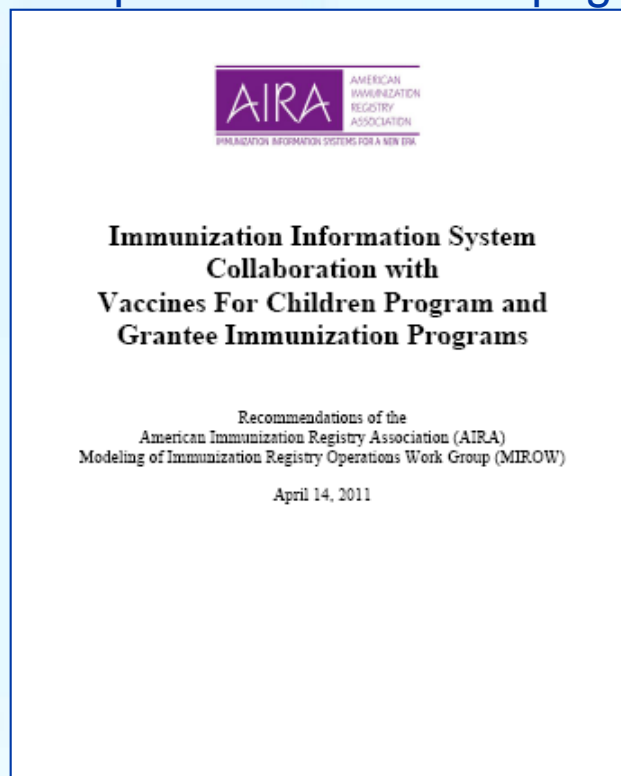- The Modeling of Immunization Registry Operations Workgroup (MIROW)

    - A committee that was formed in 2005 by the American Immunization Registry Association (AIRA) in partnership with the Immunization Information Systems Support Branch (IISSB) at the Centers for Disease Control and Prevention (CDC)

    - Objective: develop a topic-by-topic Best Practice guidebook for various aspects of IIS functionality.
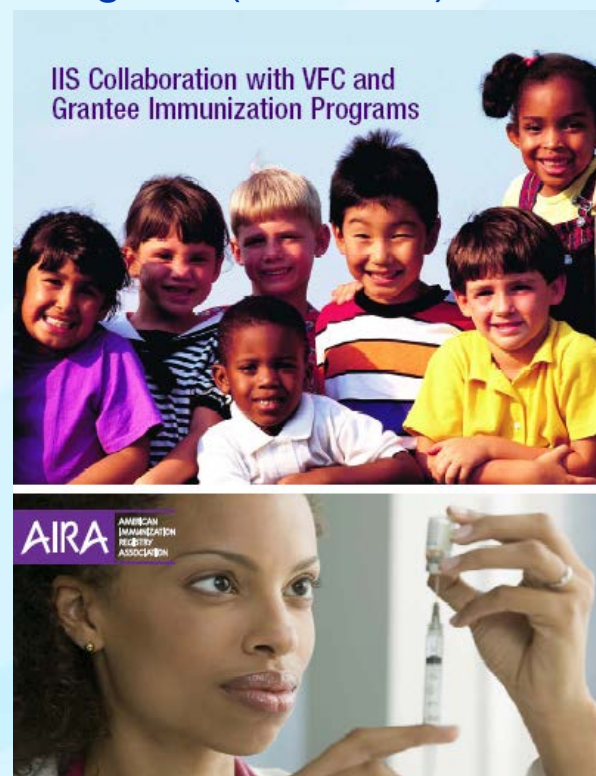
- MIROW Goal

    - MIROW efforts are intended to provide a basis and support for a uniform alignment of the IIS processes according to recommended guidelines.

        - Inconsistency among IIS negatively affects overall data quality, comparability, operational cost, and usefulness of information.

MIROW Documents

Complete Guide – 100+ pages

Mini-guide (brochure) – 4 to 8 pages

Download MIROW documents at:

AIRA web site: http://www.immregistries.org/pubs/mirow.html

CDC web site: http://www.cdc.gov/vaccines/programs/iis/activities/mirow.html

Session's Objectives

- Provide further education to the IIS community on analysis techniques employed to document operational best practices

- Gather inputs from a larger spectrum of subject matter experts across the IIS community for a best practices guidance document (under development) on decrementing vaccine inventory via electronic data exchange.
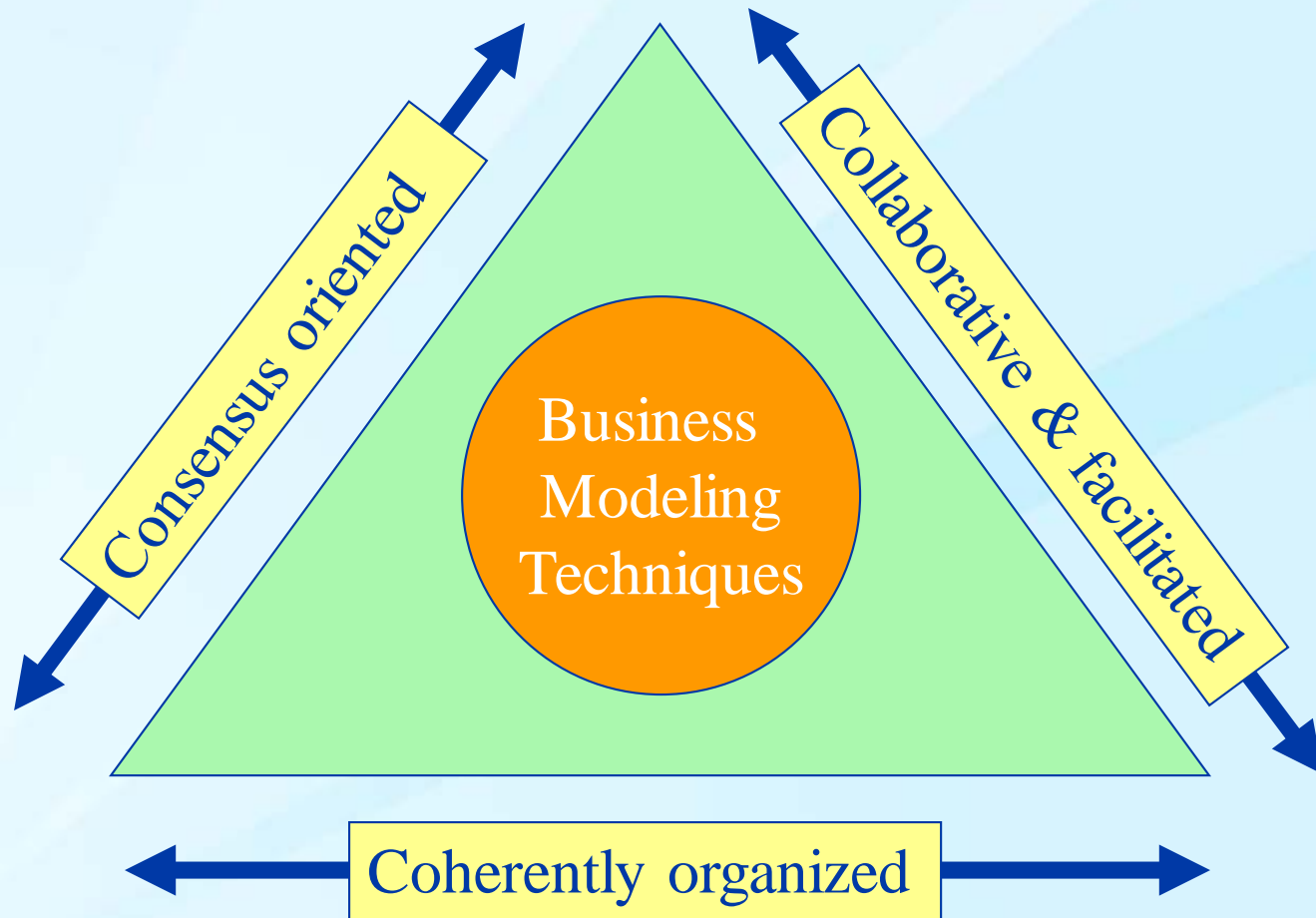
Agenda

- ❑ Introduction (~ 5 min)
- ❑ MIROW 101 – Understanding the Techniques and Tools (~20 min) *slides 7-19*
  - ▪ How to interpret business rules, process diagrams, and other analysis models that are used to analyze and document recommendations for IIS operations and processes
- ❑ Facilitated workshop (~55 min) *slides 20-22*
  - ▪ Group activities aimed to gather feedback to help guide the development of best practices
  - ▪ Introduction to facilitated workshop
  - ▪ Small groups: Develop and rank/prioritize the list of pains (issues) and delights (what works well)
  - ▪ Small groups: present its findings
- ❑ Debrief (~8 min)
- ❑ Closing remarks (~ 2 min)

MIROW 101 – Understanding the Techniques and Tools

- Presenter: David Lyalin
- This presentation aims to give attendees a better understanding of how to interpret business rules, process diagrams, and other analysis models that are used to analyze and document recommendations for IIS operations and processes.

MIROW approach at a glance

Business Modeling Techniques

Consensus oriented

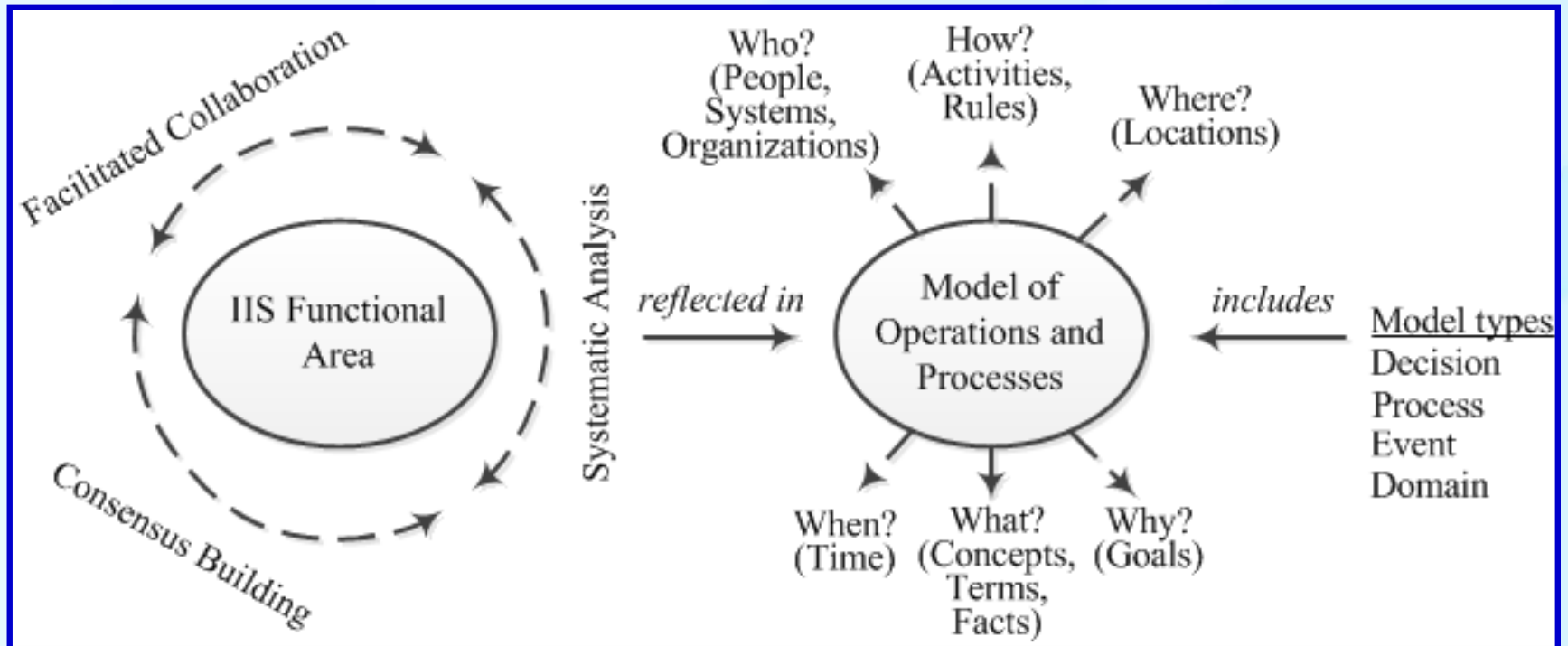Collaborative & facilitated

Coherently organized
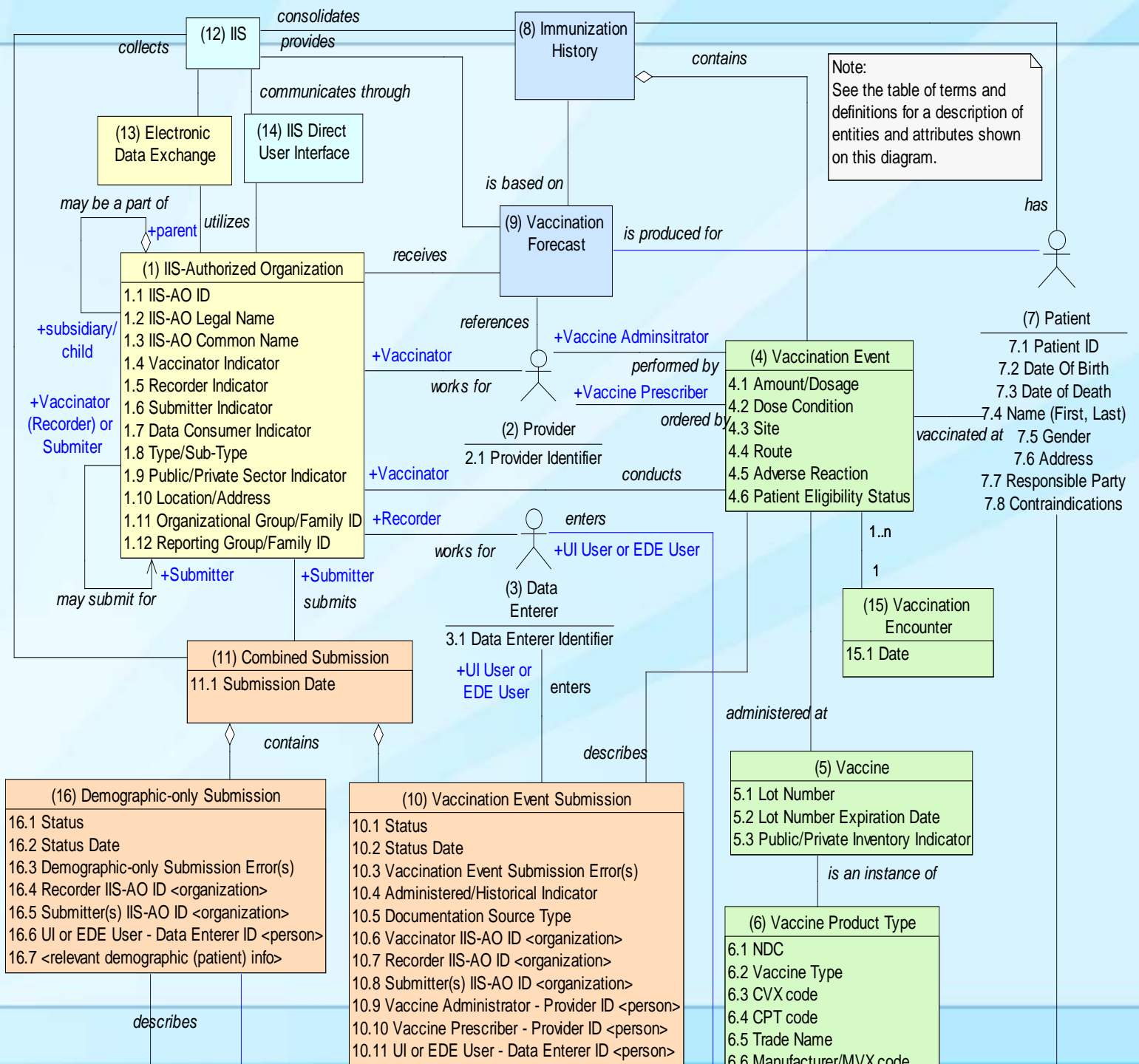
Why Business Modeling?

Modeling helps to:

- ❑ Bring a systematic technique to analyzing and gathering information in a complex 'IT focused' world
- ❑ Analyze, document, and moderate differences in processes and operations, improving quality and consistency of data
- ❑ Reduce complexity to a manageable level
- ❑ Ensure that business needs drive technological (IT) solutions

Business Modeling Overview

"What?Who?Where?": Domain model

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"How?": Business rules

- A business rule is a piece of institutional knowledge written in structured English to guide decision-making for some operational aspect of business activity

- Implementation of business rules techniques enables the business to make good, <u>consistent operational decisions</u>

- It also allows to <u>express business policies</u> and requirements in an unambiguous manner, well understood by business and technical people

- Business rules techniques could be especially helpful to capture <u>complex public health policies</u> and operational requirements

MIROW approach to business rules

❑ Business Rules are based on a shared business vocabulary captured in the <u>domain model (concept/fact model)</u>

❑ Business Rules are developed <u>in a context of other models</u> – process model, state/event model

❑ Level of <u>enforcement for rules violation</u> is defined where applicable (*e.g., reject immunization report without lot number*)

Business Rules Examples

❑ Vaccination Encounter Date must not be before Patient Date of Birth (*data validation logic*)

❑ Vaccine lot number must be reported for every vaccination event (*completeness of reporting*)

❑ There should be 3 (three) Reminder/Recall notification attempts before the Reminder/Recall process is ended (*process guidance*)

❑ If the Patient does not have Medicaid and any private insurance, then the Patient is eligible for the Vaccine For Children (VFC) Program ("Uninsured" status) (*policy documentation*).
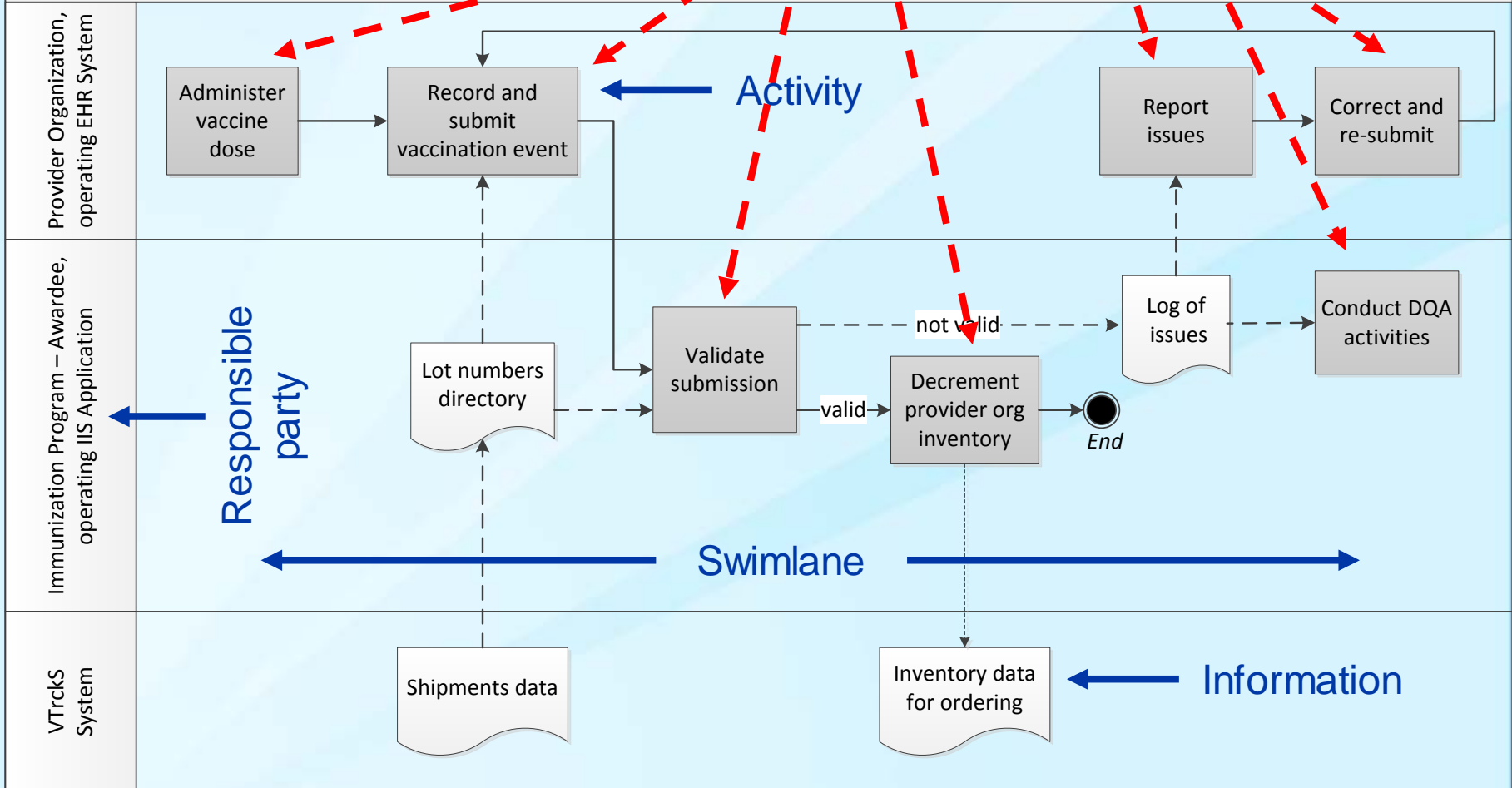
Main benefits of business rules adoption

❑ Capturing institutional knowledge and policies not in software code or IT designs, but in structured text that public health professionals can easily understand and manage.

❑ Fostering better understanding and synergy between public health and IT professionals, as well as better consistency and traceability between public health policies, IIS operational requirements, and technical implementations.

❑ Producing a more robust and adaptive technical architecture that facilitates consistent, faster, and easier updates and changes.

"How? When?": Process model

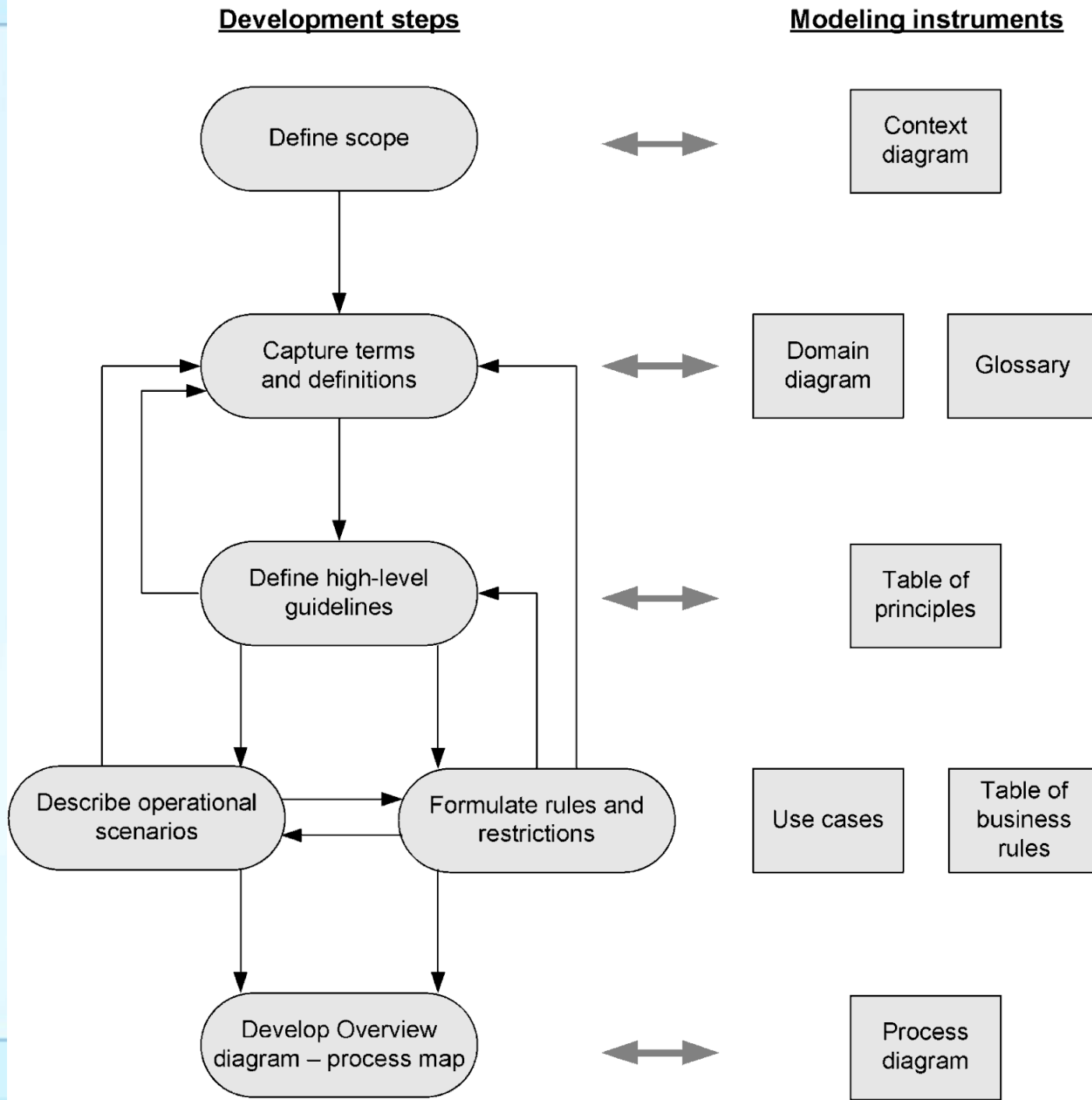Decrementing inventory via EDE process: High-level simplified sketch

Business rules (guidance for activities)

Revision date: 02-06-2015

Provider Organization, operating EHR System
- Administer vaccine dose
- Record and submit vaccination event — Activity
- Report issues
- Correct and re-submit

Immunization Program – Awardee, operating IIS Application — Responsible party
- Lot numbers directory
- Validate submission
- valid → Decrement provider org inventory → End
- not valid
- Log of issues
- Conduct DQA activities
- Swimlane

VTrckS System
- Shipments data
- Inventory data for ordering — Information

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Developing business models

Development steps		Modeling instruments

Define scope ↔ Context diagram

Capture terms and definitions ↔ Domain diagram | Glossary

Define high-level guidelines ↔ Table of principles

Describe operational scenarios | Formulate rules and restrictions ↔ Use cases | Table of business rules

Develop Overview diagram – process map ↔ Process diagram

Take Home Points

- Business models help to address IIS complexity and to reach consensus-based solutions for improvement of the public health programs.
- Business modeling helps to bridge a gap between business needs and IT solutions, between IIS public health professionals and IT developers.
- Domain model documents terms and definitions for main concepts and "things"
- That terms are used to formulate operational recommendations
- Recommendations are formulated in the form of business rules and other modeling/analysis tools (e.g., process models)

Resources

- MIROW guides, available at AIRA and CDC web sites
- RuleSpeak – a guidance on writing business rules
  http://www.rulespeak.com/en/
- International Institute of Business Analysis (IIBA)
  http://www.iiba.org/
- International Association of Facilitators (IAF)
  http://iaf-world.org

Questions?
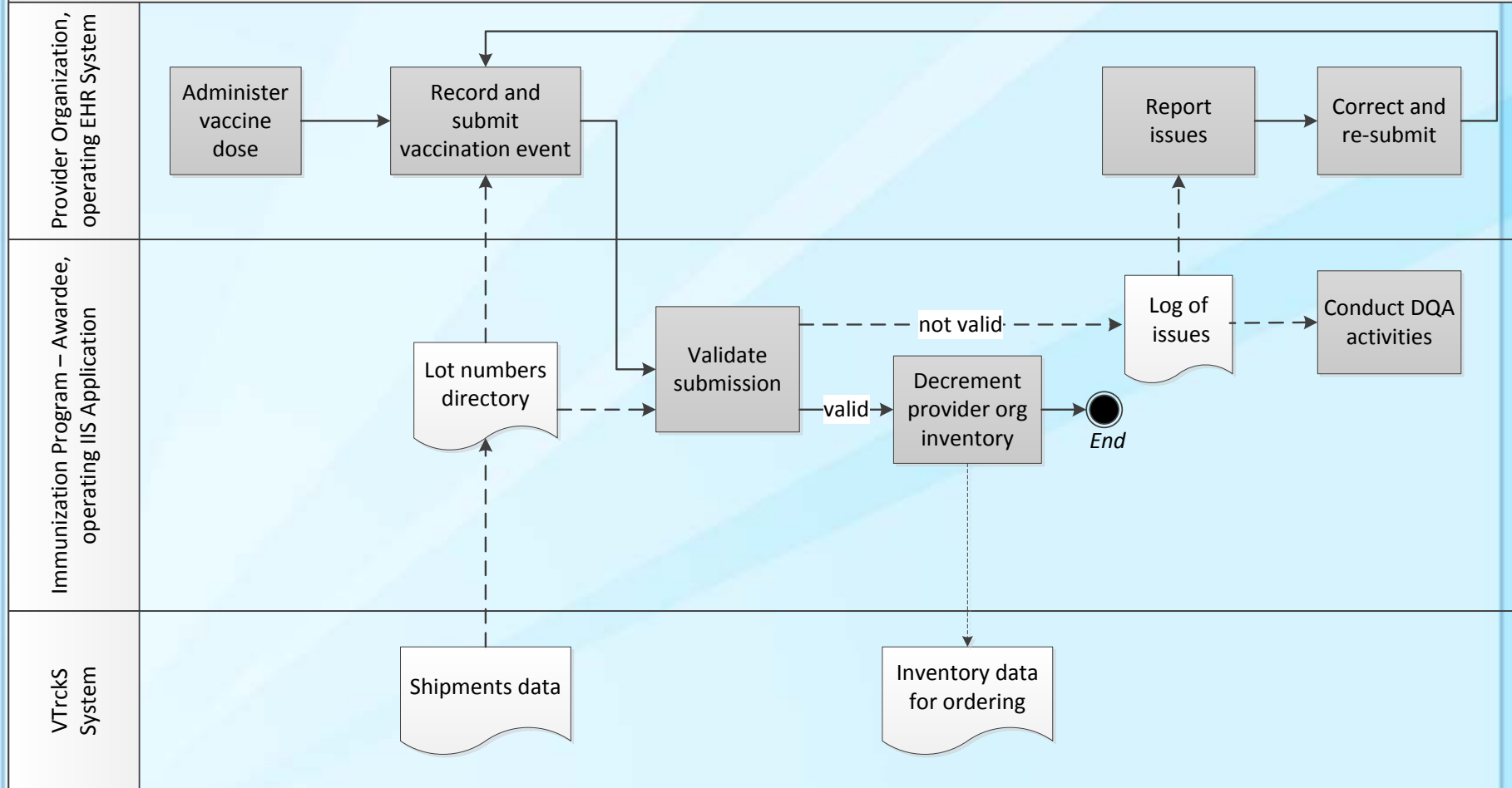
Interactive Workshop

❑ Facilitator: Warren Williams

❑ Small groups' facilitators: Members of the MIROW SC

❑ Objective: Gather inputs from a larger spectrum of subject matter experts across the IIS community for a best practices guidance document (under development) on decrementing vaccine inventory via electronic data exchange.

❑ Focus areas:

- Correction of missing inventory data by providers (when information in the electronic message does not match the IIS inventory)

- Avoiding manual updates

- Pre-certification of providers during the on-boarding process as one of possible interventions

- Management of inventory funding sources and patient eligibility information.

Workshop: Process sketch

Decrementing inventory via EDE process: High-level simplified sketch

Revision date: 02-06-2015

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Debrief

- Overall impressions
- What did we do well?
- What can we do better?

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National Center for Immunization & Respiratory Diseases
Immunization Information Systems Support Branch

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