Assessing State EHDI Programs' Capability for Standards-Based Health Information Exchange

James Jellison, MPH
Deb Bara, MA

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Topics

1. Electronic information exchange between clinicians and public health

2. Barriers to this exchange

3. A path to overcoming those barriers

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PHII's Mission

To improve health outcomes worldwide by transforming health practitioners' ability to apply information effectively.

We do:

- Business process analysis, systems requirements
- Evaluations, recommendations
- Training
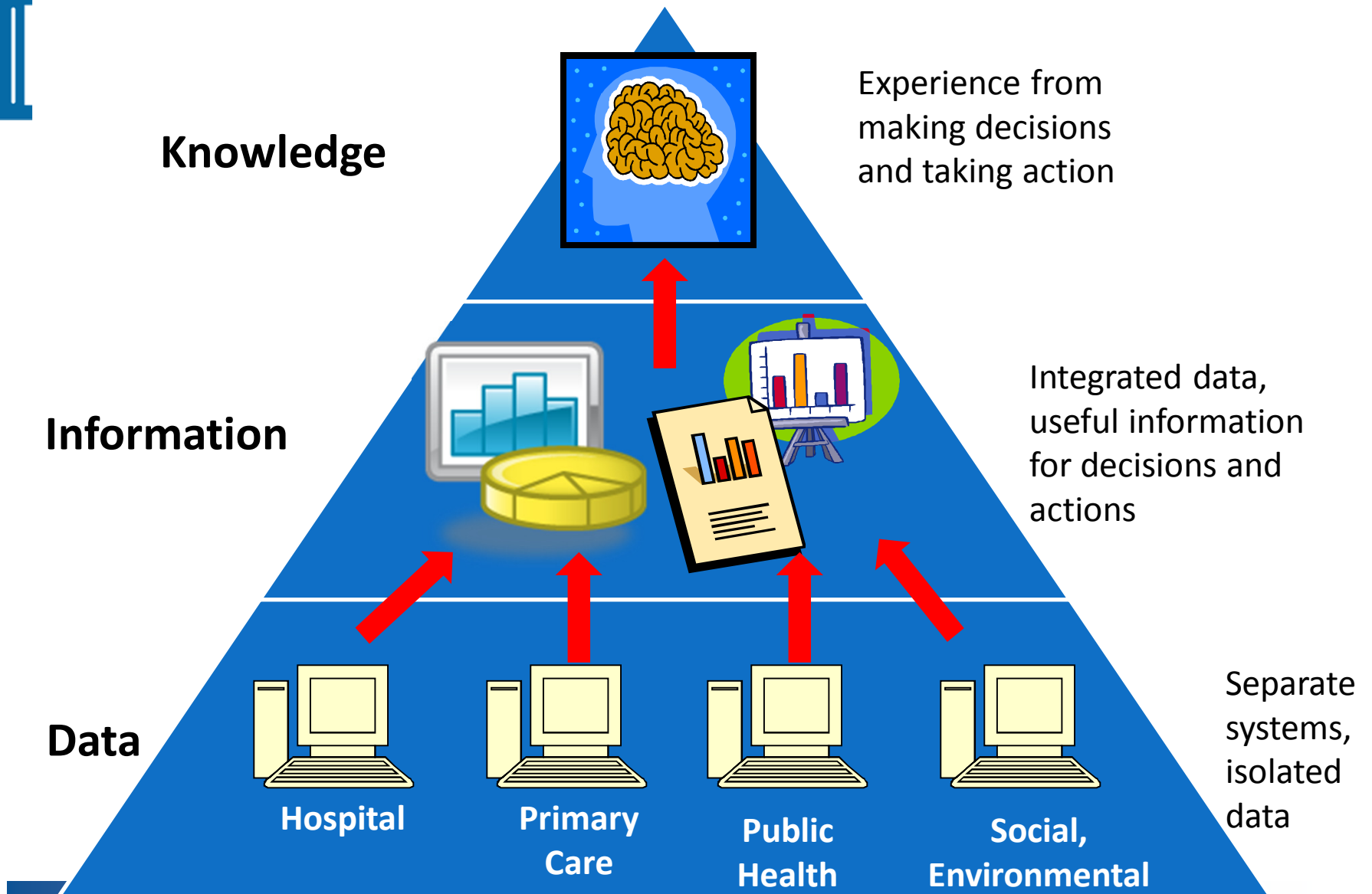
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Improving EHDI Information Exchange

- *CDC EHDI has partnered with PHII*

- *Goal: Improve information exchange with clinical partners' EHRs*

- *How? Help state EHDI programs:*
  - *Engage health IT*
  - *Build relationships*
    - IT Unit, Leadership, Clinicians
  - *Chart a roadmap to interoperability*

Information Hierarchy & Interoperability

Knowledge

Experience from making decisions and taking action

Information

Integrated data, useful information for decisions and actions

Data

Separate systems, isolated data

Hospital

Primary Care

Public Health

Social, Environmental

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Interoperability

Sending System
- Database → Create Message → Send Message

Message
- Vocabulary Term | Vocabulary Term | Vocabulary Term
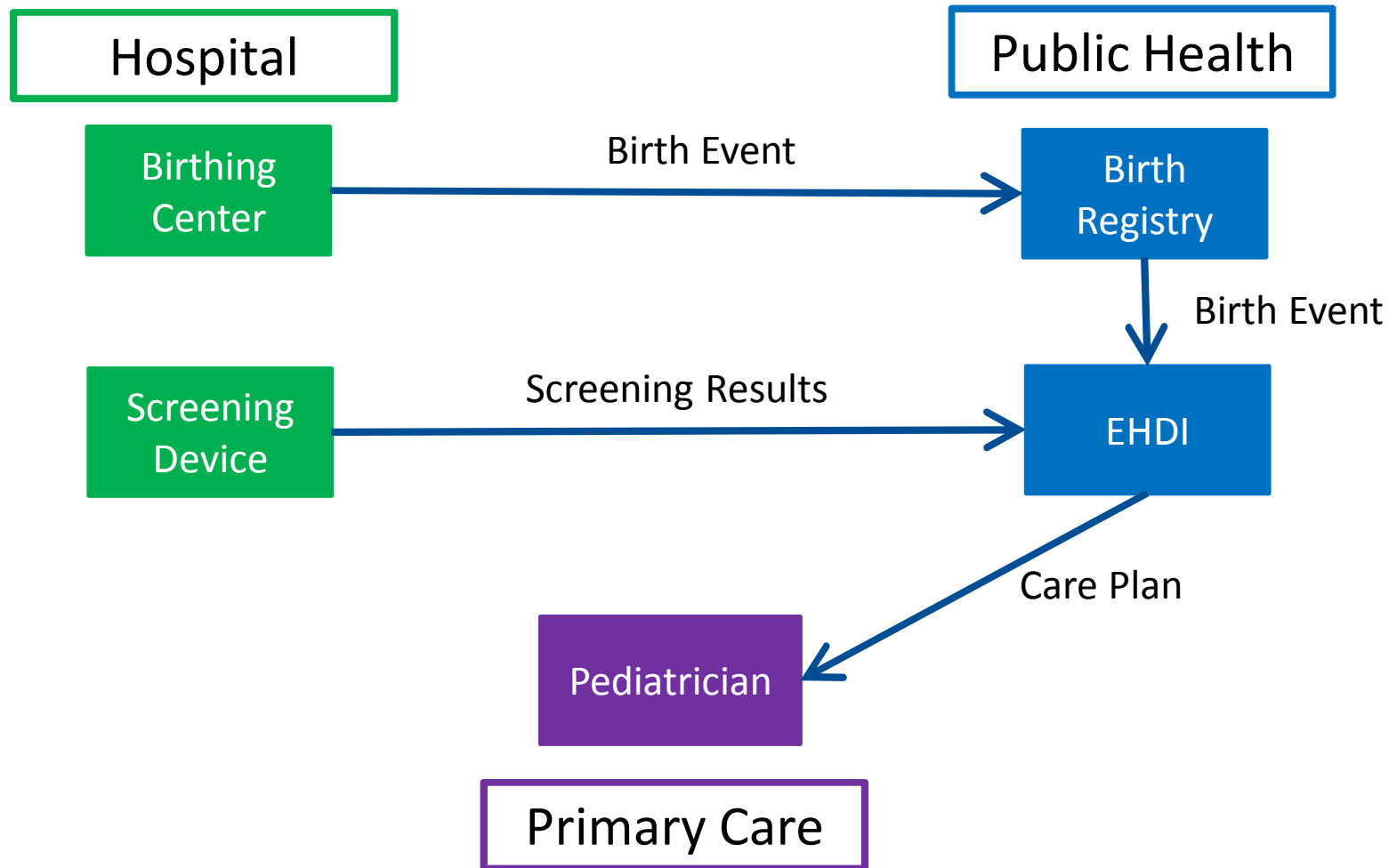
machine to machine

Receiving System
- Receive Message → Process Message → Create Report

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EHDI Information Exchange Context

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Electronic Health Record Standards

Software Product (EHR, EHDI)

| IHE Profile | IHE Profile | IHE Profile | IHE Profile | IHE Profile |

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EHDI Information Exchange Standards (IHE Profiles)

Hospital

Public Health

Birthing Center → Newborn Admission Notification Information → **Birth Registry**

Birth Registry → (Birth Event) → **EHDI**

Screening Device → Device Enterprise Communication* → **EHDI**

EHDI → Early Hearing Care Plan* → **Pediatrician**

Primary Care
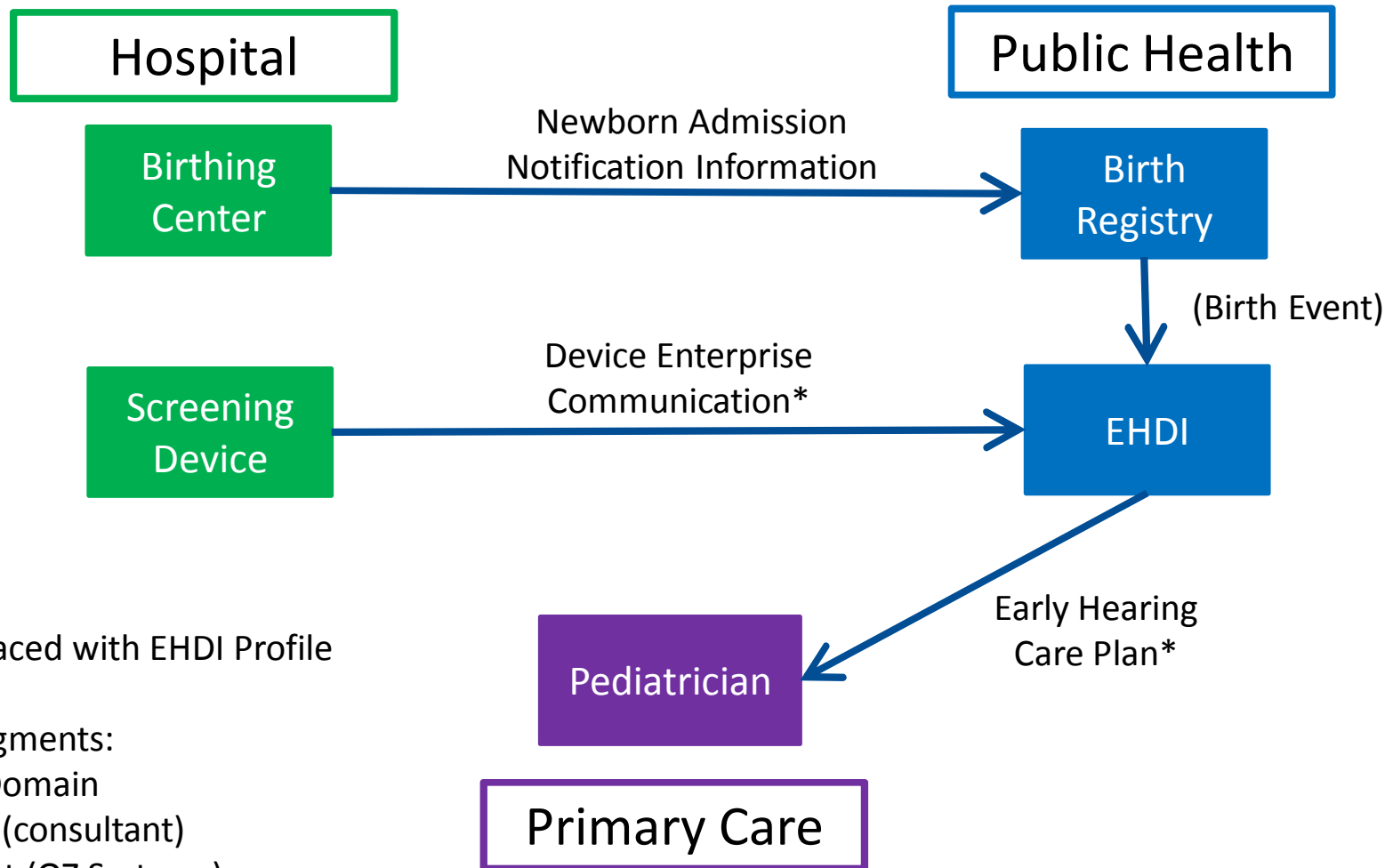
*To be replaced with EHDI Profile

Acknowledgments:
IHE QRPH Domain
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Lura Daussat (OZ Systems)

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So Why Are We Not Interoperable ???

- Don't understand IHE, HL7 stuff
- Agency priorities are MU, not EHDI
- Don't have the staff
- Not using EHRs, EHDI-IS
- Doing well enough, why bother

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Performance Improvement Tool

Receiving notices

Sending care plans

De-duplicating events

Workflow

Informatics strategy

Data sharing agreements

Privacy, confidentiality

Policies

Interoperability

Workforce

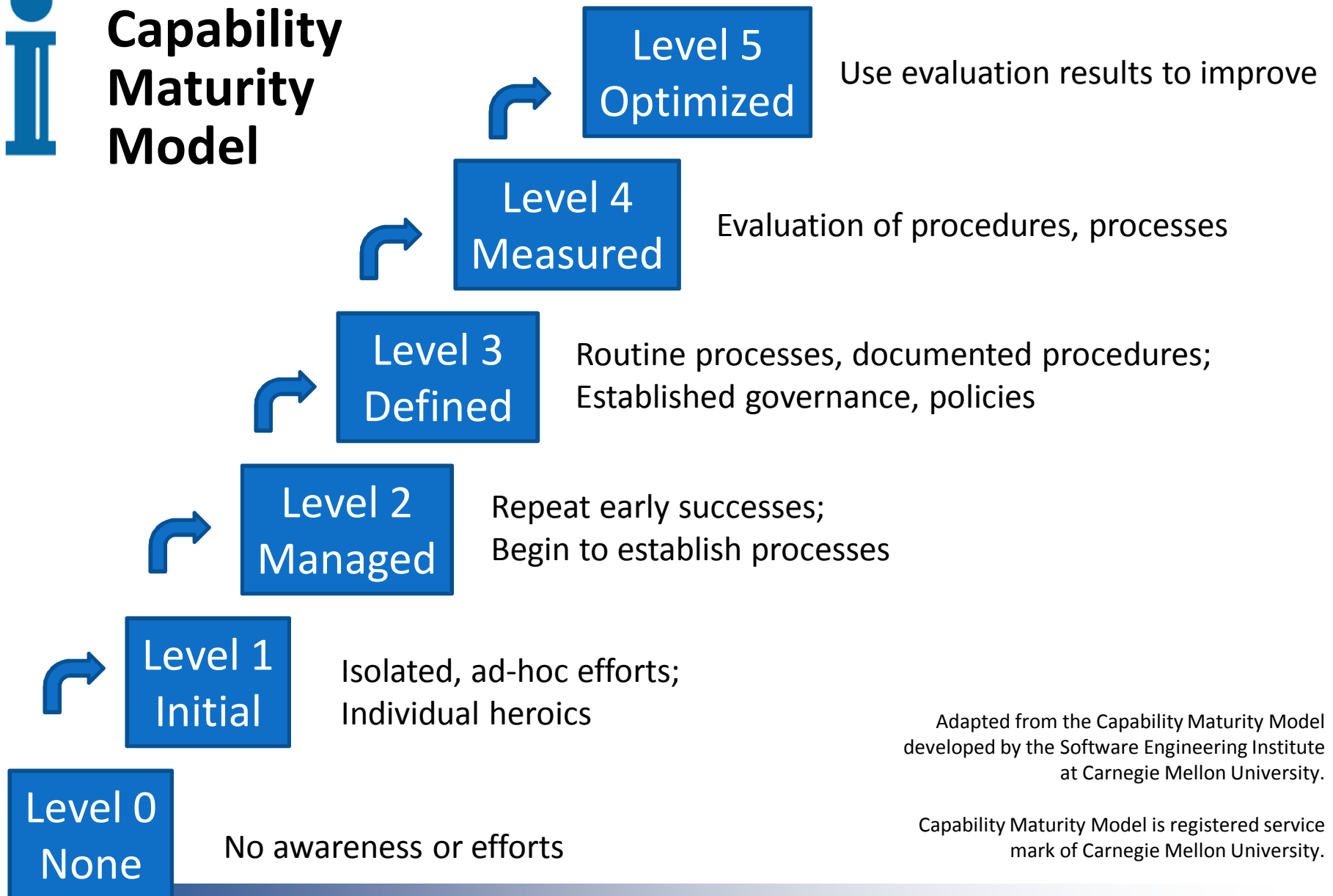IT Architecture

HIE

Infrastructure

SNOMED, LOINC

HL7

IHE

Data & Standards
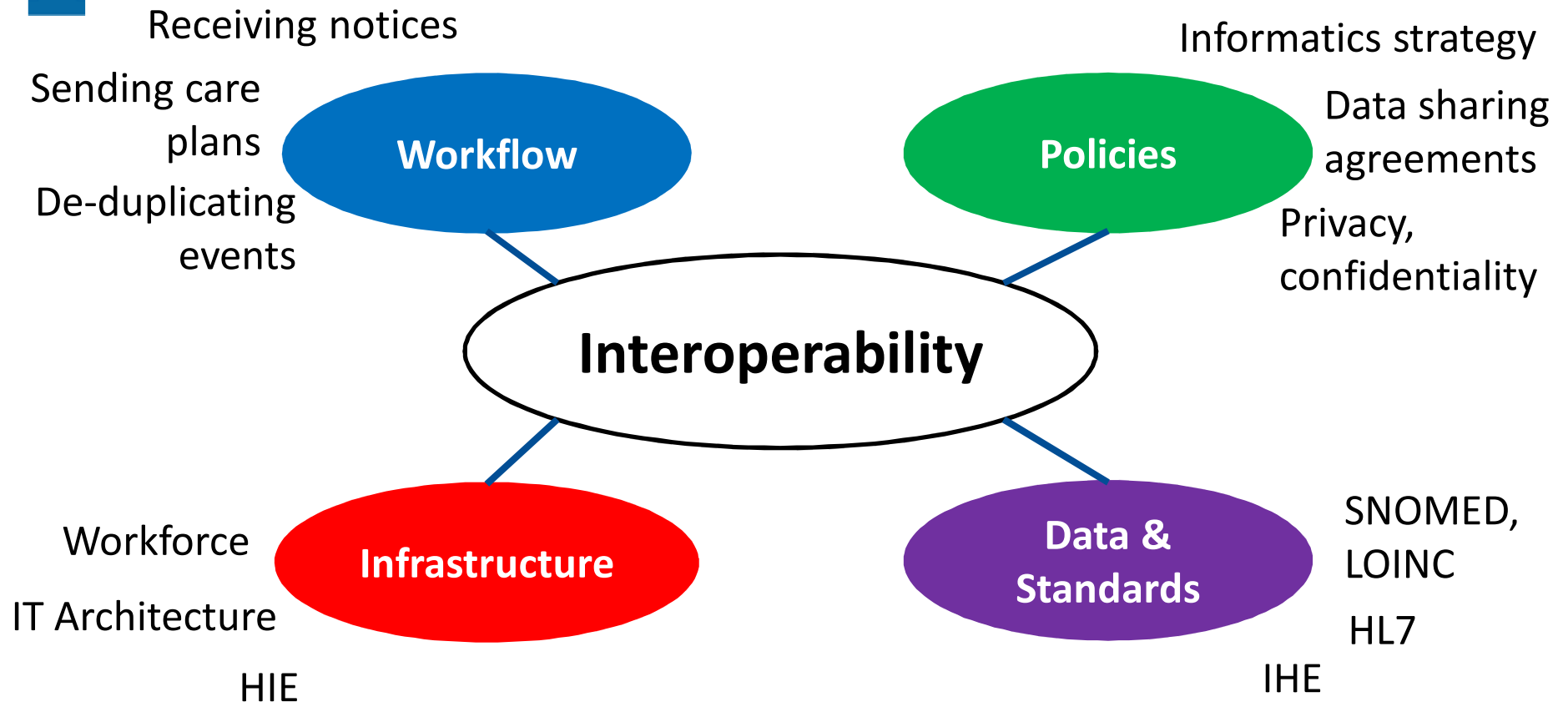
Adapted from C4ISR AWG Architectures Working Group, Department of Defense. 1998.
Levels of Information Systems Interoperability (LISI). Washington, D.C.: United States Department of Defense.

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Capability Maturity Model

Level 5
Optimized — Use evaluation results to improve

Level 4
Measured — Evaluation of procedures, processes

Level 3
Defined — Routine processes, documented procedures; Established governance, policies

Level 2
Managed — Repeat early successes; Begin to establish processes

Level 1
Initial — Isolated, ad-hoc efforts; Individual heroics

Level 0
None — No awareness or efforts

Adapted from the Capability Maturity Model developed by the Software Engineering Institute at Carnegie Mellon University.

Capability Maturity Model is registered service mark of Carnegie Mellon University.

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Workflow

Can the EHDI program identify all live birth events in its jurisdiction?

Level 5 Optimized — Use of evaluation findings to improve live birth event identification process.

Level 4 Measured — Evaluation of automated live birth event identification process.

Level 3 Defined — Automated approaches; Consistently good results; Few unresolved duplicate birth events.

Level 2 Managed — Combine manual, automated approaches; Inconsistent results; Some unresolved duplicates.

Level 1 Initial — Manual; Inconsistent results; Many unresolved duplicate birth events.

Level 0 None — Unable to conduct these activities.

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Policies

Does your agency have a governance process that guides IT projects?

Level	Description
Level 5 Optimized	Agency uses evaluation findings to improve governance of information systems development.
Level 4 Measured	Agency has established such a governance process and evaluates how well it guides IT projects towards agency objectives.
Level 3 Defined	Agency has established such a governance process and exercises it regularly.
Level 2 Managed	Agency has made sustained attempts at governing information system projects.
Level 1 Initial	Agency has made isolated, ad-hoc efforts to govern information systems projects.
Level 0 None	No such governance structure.

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Benefits to Your EHDI Program

- *Better understanding of current interoperability readiness*

- *Evidence for additional resources*

- *More collaboration between EHDI, IT, agency leadership*

- *More informed national strategy for capacity building*

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Thank you!

For additional conversation

please contact

Jim Jellison

jjellison@taskforce.org

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