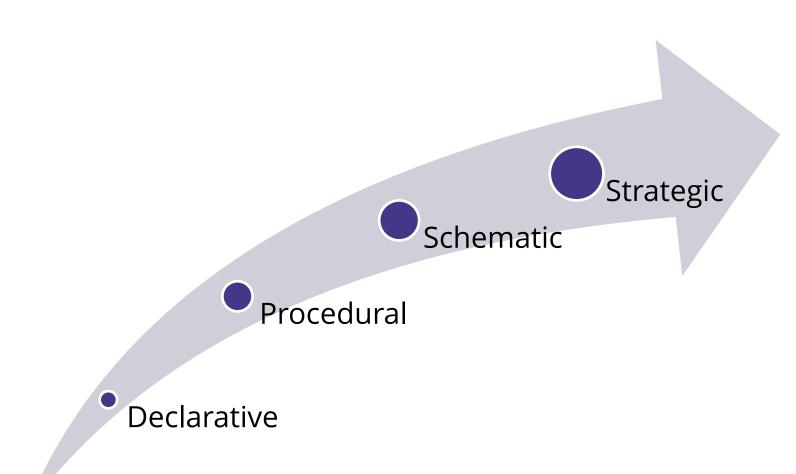


#### Knowledge Development: Ways of Knowing, Reasoning, and Sense-Making



#### Knowledge Development

# Declarative

 "Knowing That"—Having factual and concept-based knowledge about something.

### Procedural

 "Knowing How" to do something step-bystep or condition-then-action.

# Schematic

 "Knowing Why"—Having a mental model that builds on and connects declarative and procedural knowledge to the why—can then reason about, predict and explain.

## Strategic

 "Knowing When and Where" to apply knowledge and how to check if the application or innovation is working reasonably.