Bridging Gaps with AI:

ENHANCING ANALYSIS, EVALUATION AND COMMUNICATION IN ENGINEERING PROJECTS

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Briefing

- MISSION 1: Find Gap and Evaluate Impact Faster
- MISSION 2: System Models Translation Into Business Language
- Special agent-based software
- Code name: Gen AI
- Debriefing

Operational Team

TOBE FREEMAN
Data Science Expert
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AI and LLM Applications, Data
Management and Governance,
DevOps and Machine Learning
Pipelines (ML Ops)

PIERO CIANCIA
Systems Engineering Expert
Ciancia Consulting Partner

Requirements Engineering,
Systems Architecture, System of
Systems, Model-based Systems
Engineering (MBSE)

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MISSION 1: Find Gap and Evaluate Impact Faster

- Regulated environments require documentation
- Project documentation is extensive
- Finding critical points is of utmost importance

MISSION 1: Find Gap and Evaluate Impact Faster

- Requirements and architecture change
- Efficient analysis of the effects
- Identification of new risks and opportunities

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MISSION 2: System Models Translation Into Business Language

MBSE Promise

- System models = technical descriptions
- Traceability improves analysis
- Single source of truth

MBSE Challenge

- Model creators "own" their models
- Communication is still an obstacle
- Large models are difficult to navigate

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Special agent-based software:
Use Gen AI to explain System Models
to all Stakeholders

Step 1: Securely upload an XMI file of your Model

Loading · Indexing · Storing · Querying · Evaluating

Loading XMI file...

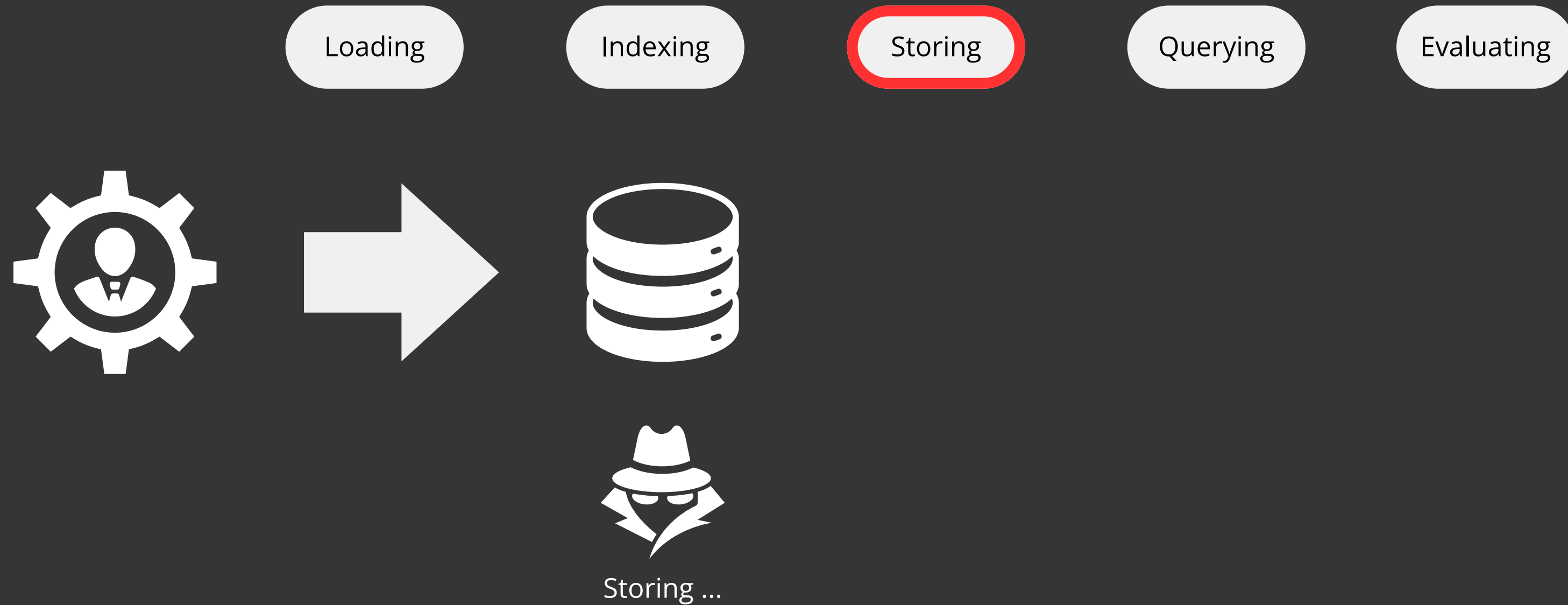# Step 2: Agent-based software indexes Model

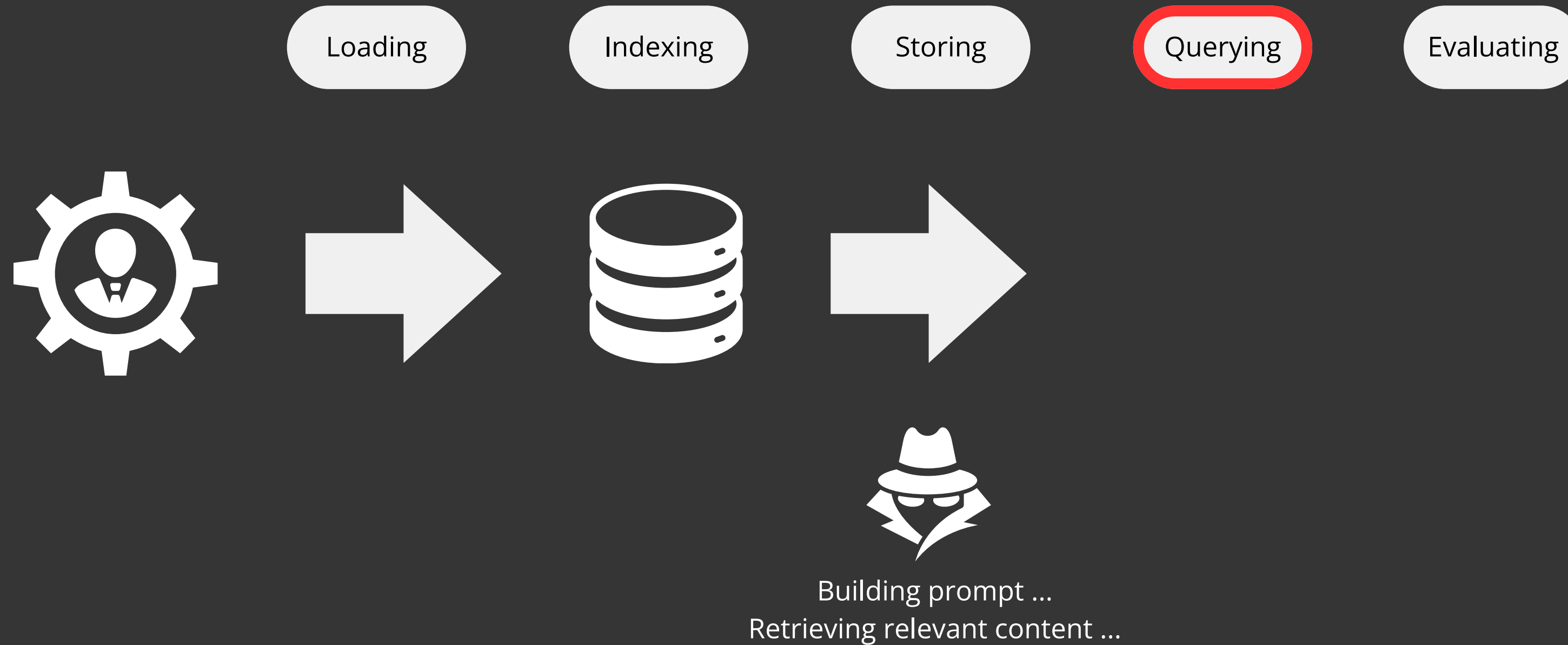Loading   Indexing   Storing   Querying   Evaluating
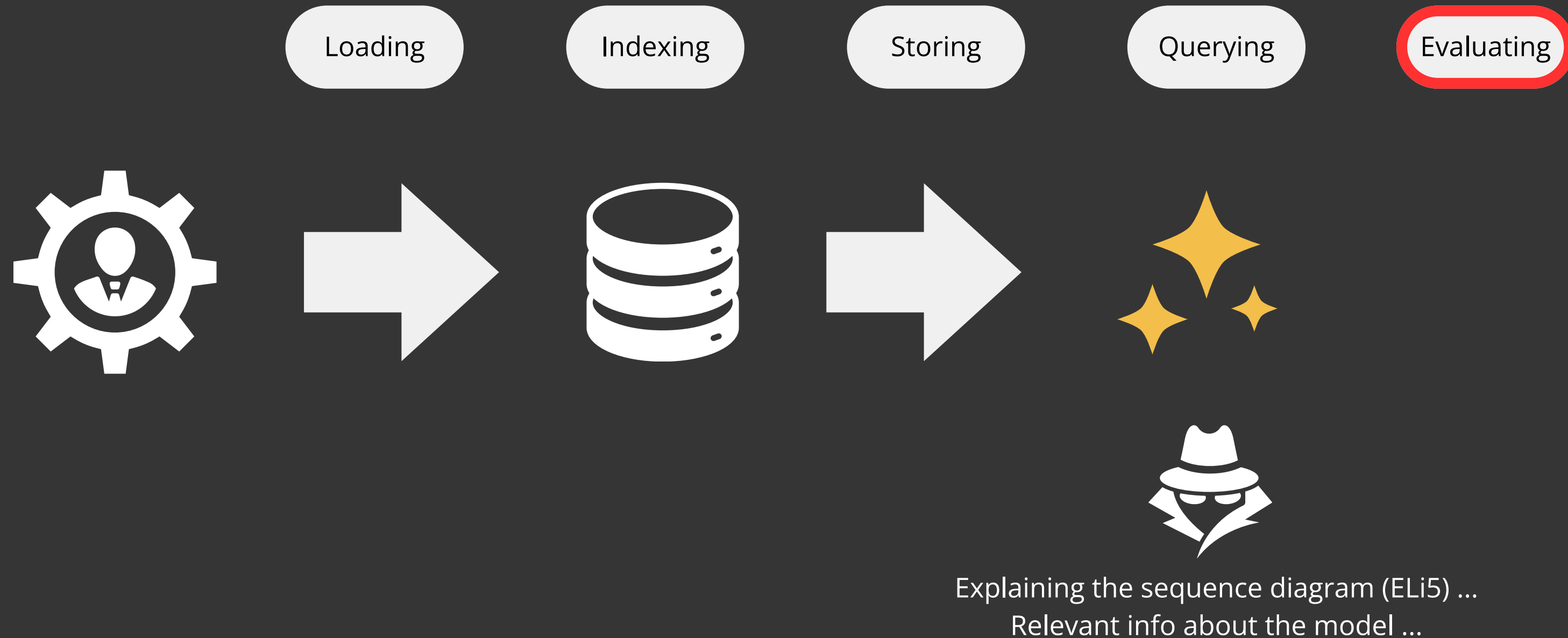
Indexing ...

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Step 3: Indexed data stored in a secure database

Loading   Indexing   **Storing**   Querying   Evaluating

Storing ...

Step 5: Gen AI produces factual content

Loading → Indexing → Storing → Querying → **Evaluating**

Explaining the sequence diagram (ELi5) ...
Relevant info about the model ...

With Special Agent software:
Intelligence in == Intelligence out

Loading → Indexing → Storing → Querying → **Evaluating**

Intel report ...
Filing evidence ...

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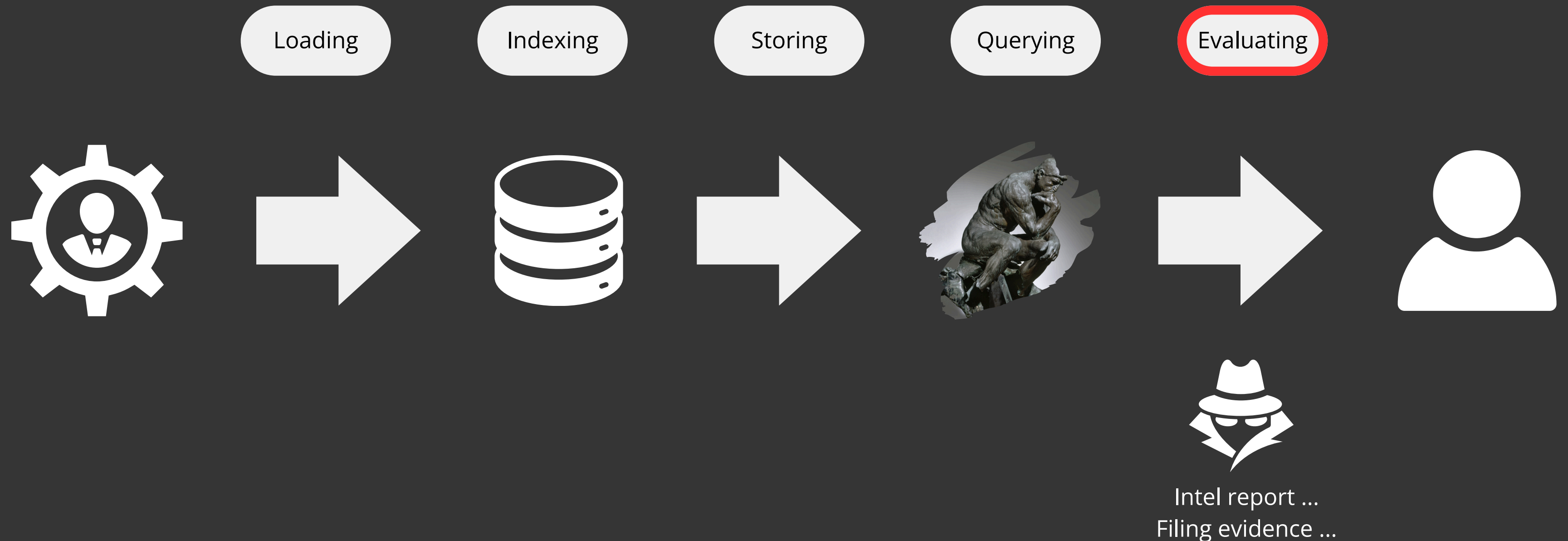
Without Special Agent software:
Garbage in == Garbage out

Debriefing

Data Security

Traceability

"Model-based" Vision

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Q&A Session