

# Process Capability & Launch Readiness Copilot

Phase 2 Tech Insights & Recommendations  
EPD 522 Capstone Project  
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# Business Context:

- Engineers manually extract data and run capability analysis
- Process behavior and capability are interpreted differently across teams
- Leadership receives inconsistent summaries for launch decisions

# Relevance:

- Slow response to quality risks
- Increased chance of misinterpreting unstable processes
- Limited ability to scale reviews across processes

# Pilot Purpose Anchor

## Decision Boundary:

Is this process stable and capable enough to support a product launch or volume ramp?

## System Constraints:

- Does not approve launches
- Does not automate corrective actions
- Does not replace engineering judgment

# Pilot Scope used for evaluation

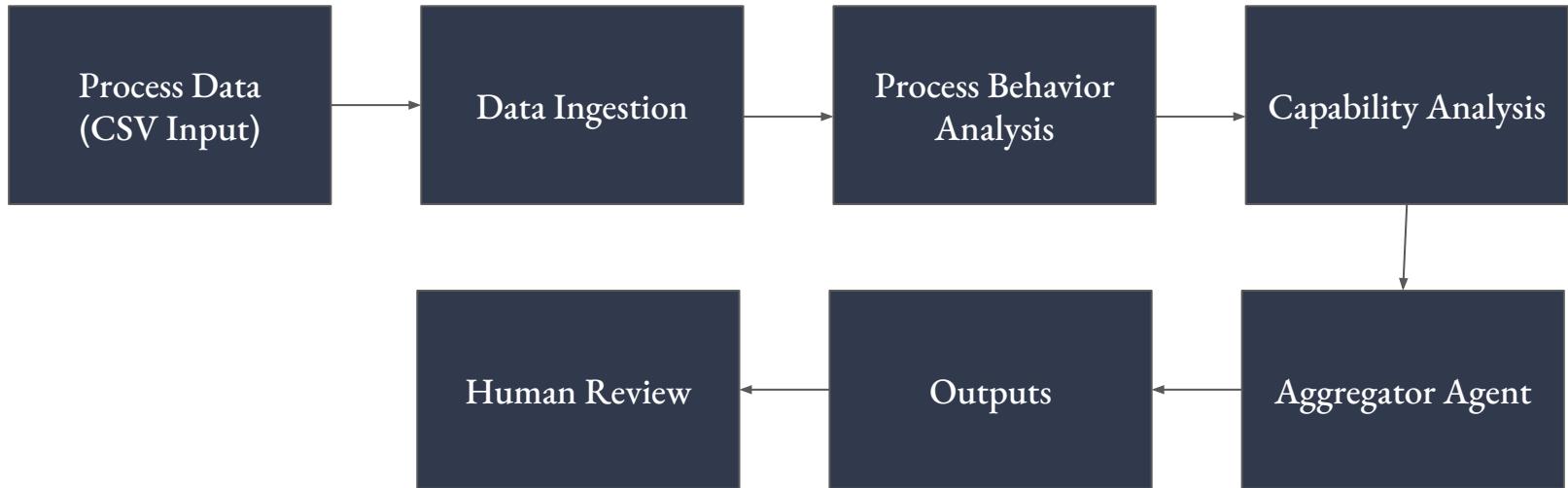
## In Scope:

- One product family
- One critical process characteristic
- Two representative datasets
- Structured engineering and management outputs

## Out of Scope:

- Production system integration
- Autonomous decisions
- Automated process changes

# Implemented Workflow

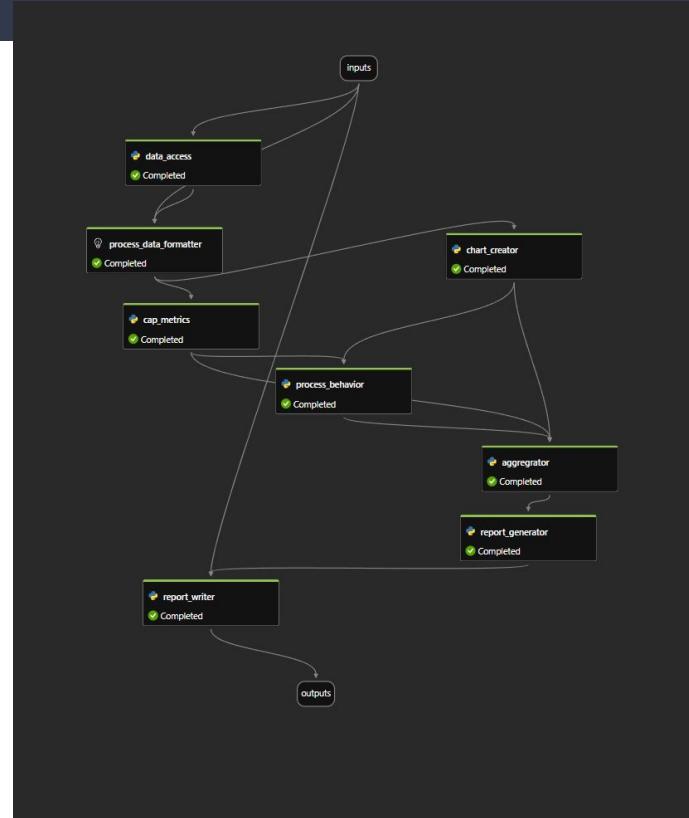


## Key Principle:

- Behavior evaluated before capability

# Implemented AI Design

- Tools handle all numeric calculations
- AI focuses on interpretation and communication
- Internal capability guidelines used as reference



# Test Scenarios

The screenshot shows the Azure Storage Explorer interface. At the top, there's a navigation bar with 'Home > processcapabjamalapuram | Containers >' followed by the container name 'process-data-jama'. Below the navigation bar is a toolbar with various actions: Add Directory, Upload, Change access level, Refresh, Delete, Copy, Paste, Rename, Acquire lease, Break lease, and Edit columns. On the left, there's a sidebar with 'Overview', 'Diagnose and solve problems', 'Access Control (IAM)', and 'Settings'. The main area shows a list of blobs under the container 'process-data-jama'. The list includes 'Hot\_Metal\_Delivery\_Times.csv' (modified 12/16/2025, 3:57:21 PM, Hot tier, 865 B) and 'Hot\_Metal\_Delivery\_Times\_OOC.csv' (modified 12/17/2025, 12:09:41 AM, Hot tier, 867 B). There are also buttons for 'Add filter' and 'Search blobs by prefix (case-sensitive)'.

Name	Last modified	Access tier	Blob type	Size	Lease state
Hot_Metal_Delivery_Times.csv	12/16/2025, 3:57:21 PM	Hot (inferred)	Block blob	865 B	Available
Hot_Metal_Delivery_Times_OOC.csv	12/17/2025, 12:09:41 AM	Hot (inferred)	Block blob	867 B	Available

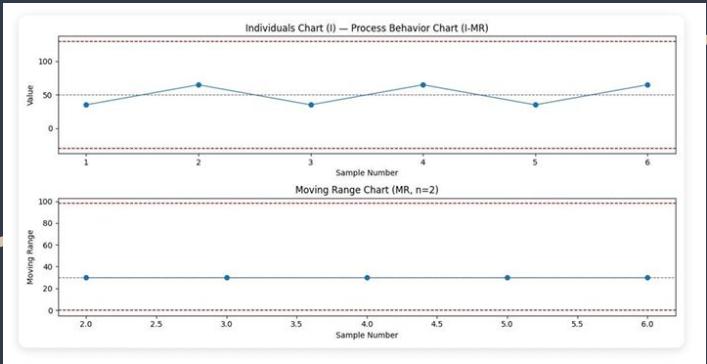
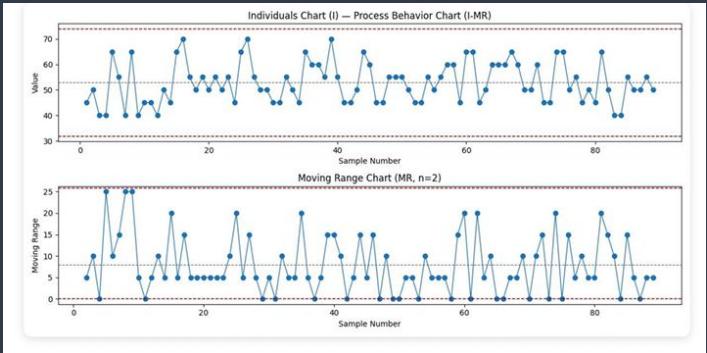
**Scenario 1**  
**(Hot\_Metal\_Delivery\_Times.csv):**

- Stable process behavior
- Misconfigured specification limits
- Capability metrics flagged as invalid

**Scenario 2**  
**(Hot\_Metal\_Delivery\_Times\_OOC.csv):**

- Unstable process behavior
- Capability conclusions deferred

# Key Results & Limitations



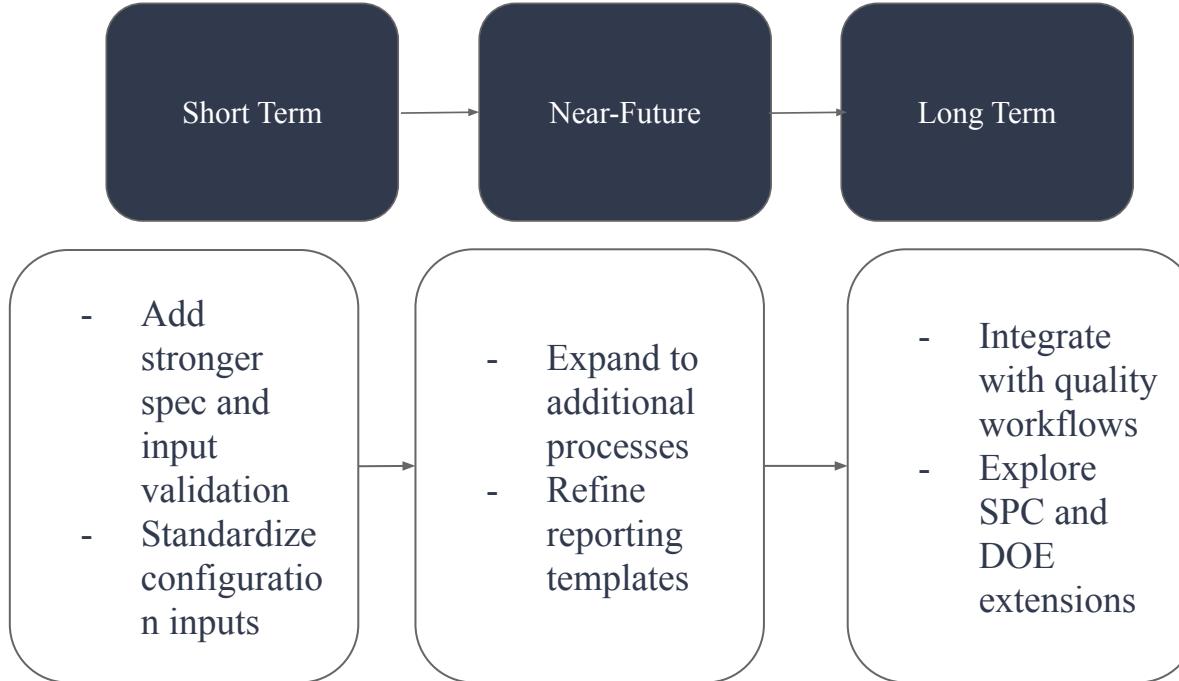
## Results

- Stability enforced before capability
- Reports explained assumptions clearly
- Executive summaries were readable

## Limitations

- Spec configuration strongly affects results
- Input quality drives output quality
- More validation needed

# Next Steps & Final Recommendation



Final Recommendation:

- Proceed with modifications; Validation needed before scaling

# Thank You

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