

# Enhancing the Execution Phase of the PPBE Process

*With the use of AI*

**Error 404: Group Name not found:**

*Heather Robertson, Jenah Coble, Joshua Mullasserimannil,  
Natalia Flores, Tobey Peralta, Zoni Bajwa, & Carolina Calderon*

# Motivation

- **PPBE Execution:** Plans → Actions
- **Problem:** Delays + Poor Oversight → Wasted Budget
- **Opportunity:** AI to Track Training + Approvals
- **Goal:** Faster + Smarter Execution



# Major Challenge & Resolution



**Challenge:** Modeling Complex Workflows



**Solution:** Refined Ontology + Dashboard



**Result:** Real-Time, Actionable Training Oversight

# Desired Outcomes

## **Faster Training Delivery**

- Streamlined processes to ensure timely completion of training programs.

## **Enhanced Accountability and Compliance:**

- Improved tracking and reporting mechanisms to ensure adherence to standards and regulations.

## **Real-Time Monitoring and Insights:**

- Continuous oversight with instant feedback to identify and address issues promptly.

## **Risk Reduction by Early Identification of Process Gaps:**

- Proactive detection of potential problems to mitigate risks and enhance overall efficiency.

# Inputs Used

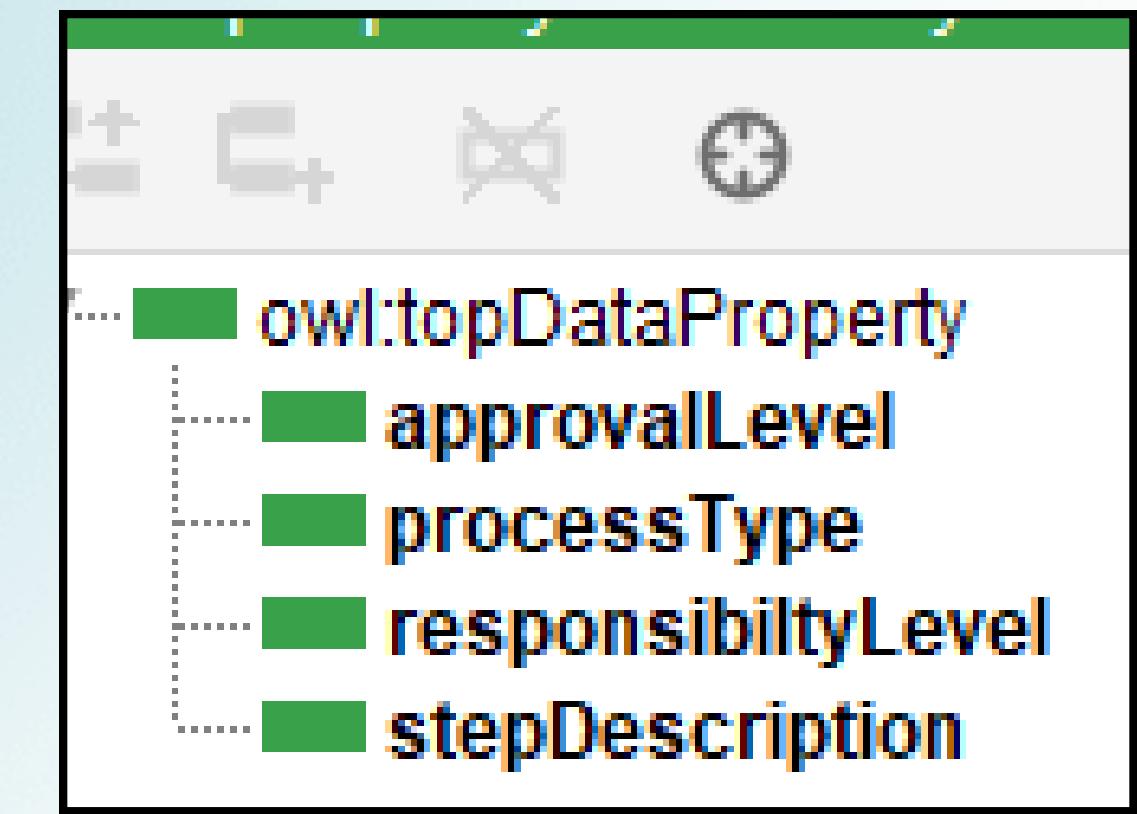
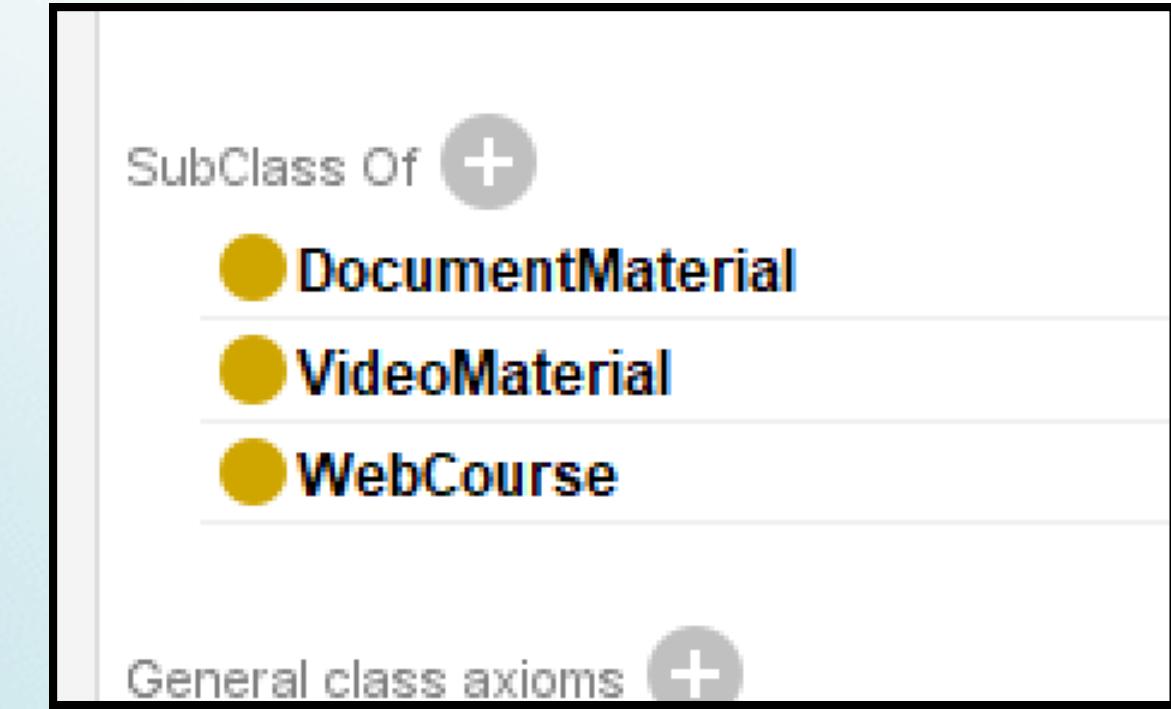
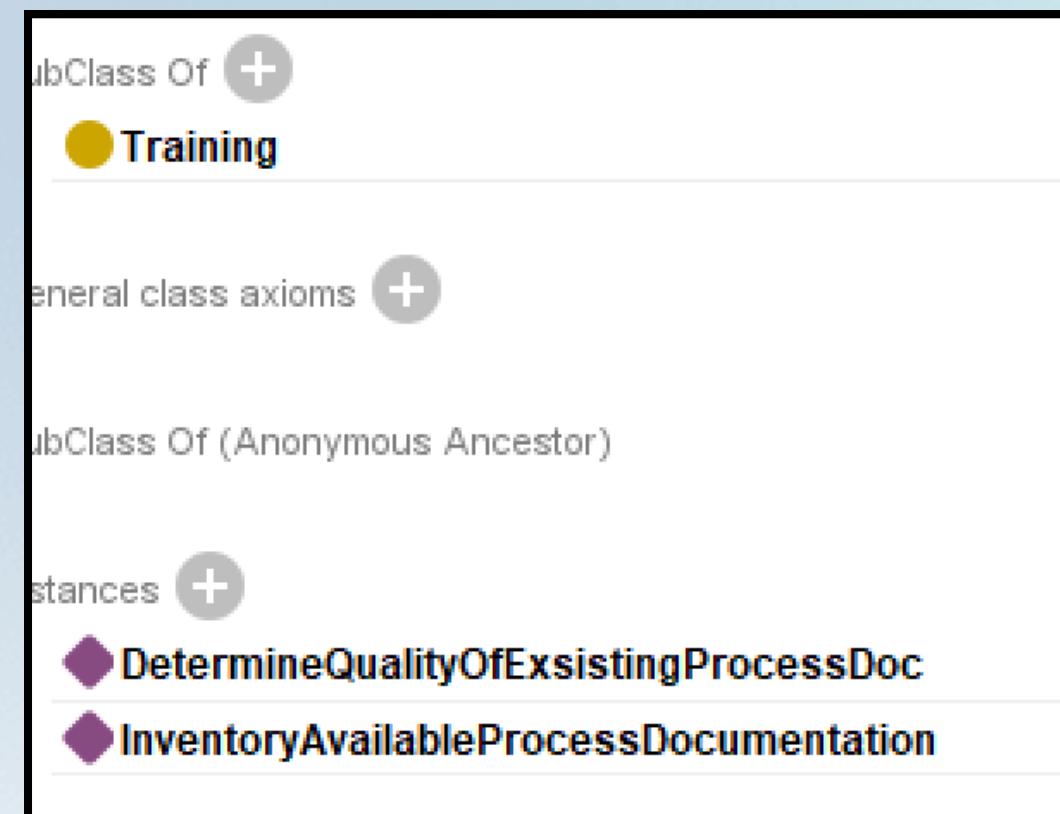
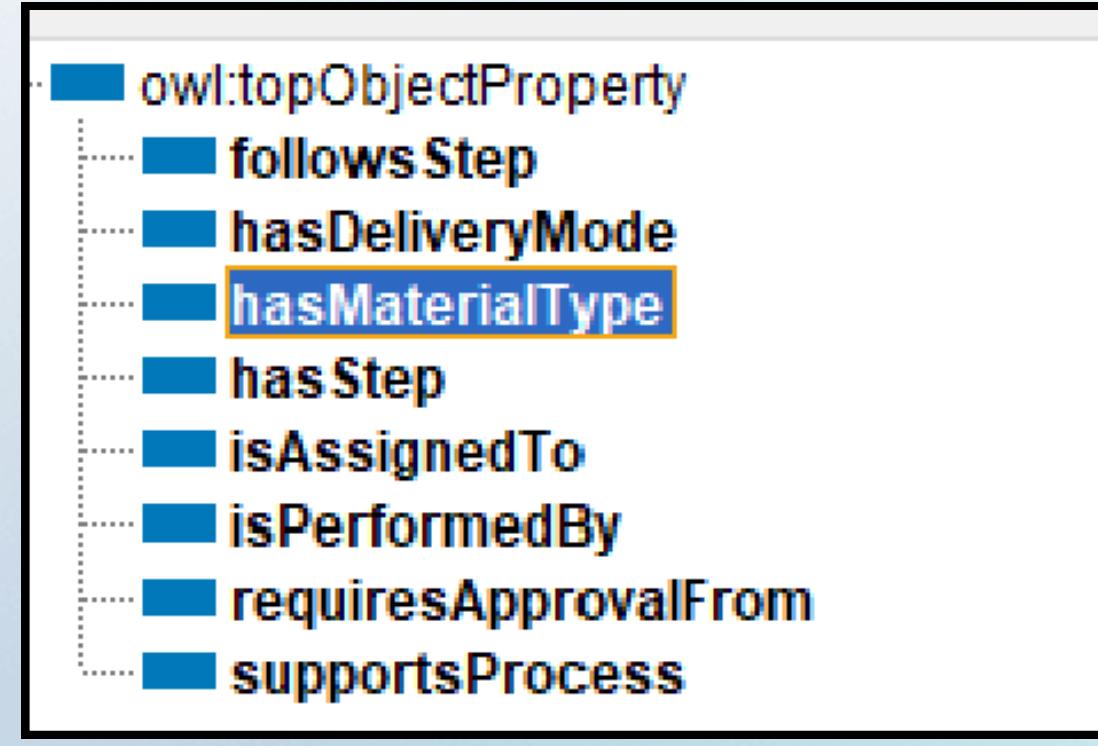
## Tangible Inputs

- Training materials catalog
- SME availability and scheduling
- Approval timelines
- Feedback and completion tracking

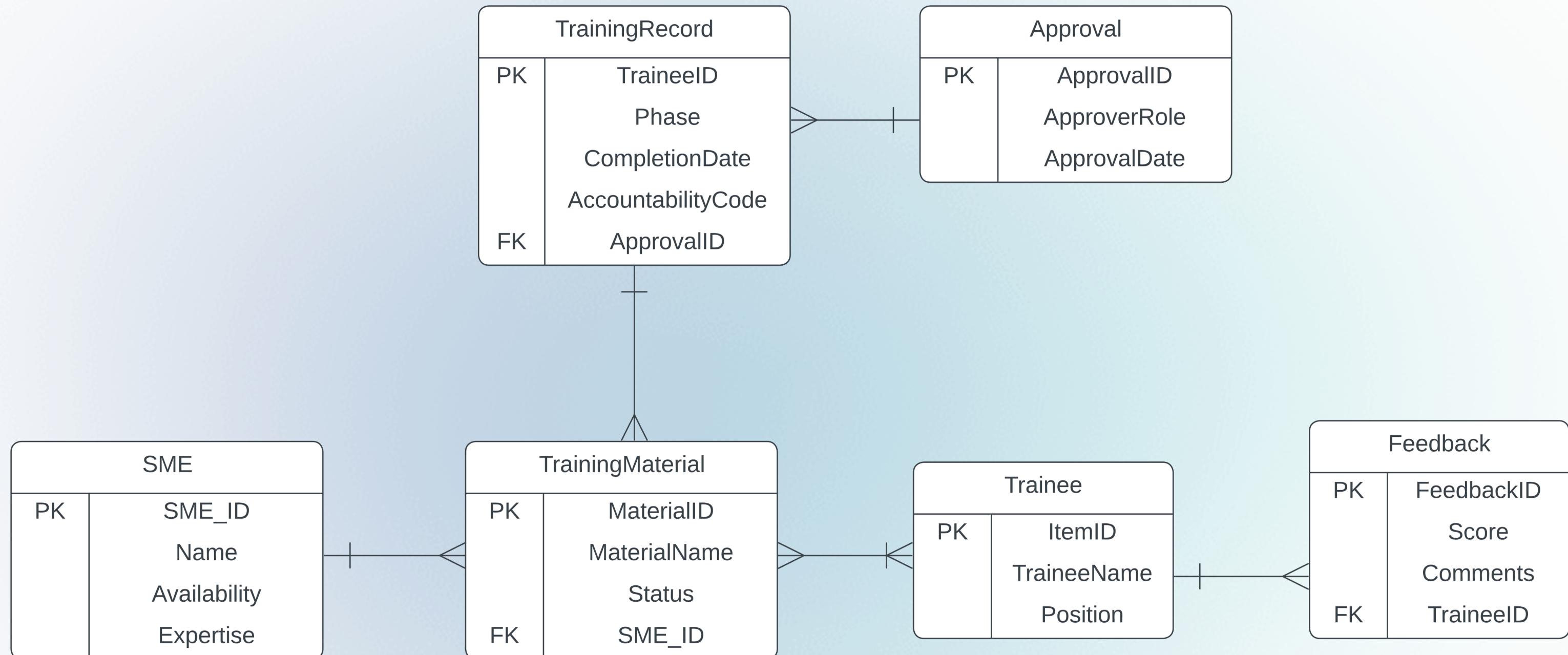
## Intangible Inputs

- Clarifications
- Context
- Feedback
- Style Preference

# Ontology



# ERD



# Demo – Work Product Showcase

Share

## Training Monitoring Dashboard

Total Trainings: 4   SMEs Available: 2   Average Feedback Score: 4.12

Quick Summary

⚠️ 2 training(s) delayed or still pending completion!

[Manage app](#)

# Team Accomplishments

- **Developed a Detailed Ontology of the Training Subprocess.**
  - Created a comprehensive model to represent the training workflows and their components.
- **Built a Working Dashboard Simulating Real-Time Training Oversight.**
  - Implemented a functional dashboard to monitor and manage training activities in real-time.
- **Created AI Reasoning Use Cases.**
  - Developed scenarios where AI can provide valuable insights and support decision-making processes.
- **Showed Actionable Insights from AI, Not Just Data Visualization.**
  - Demonstrated how AI can generate practical recommendations and improvements, beyond mere data presentation.

# Progress Timeline

- **Brief 3–4:** We focused on research and choosing tools like Protégé, ChatGPT, and Streamlit.
- **Brief 5–6:** We analyzed the Execution Phase and did a SWOT analysis to find strengths and weaknesses.
- **Brief 8–9:** We built the ontology (the training process model) and created mock data to simulate real scenarios.
- **Brief 10–11:** We finalized the system, cleaned everything up, and expanded the dashboard for better tracking.

# Key Insights Driving Business Value

## Real-Time Monitoring Matters

- Early alerts (e.g., delayed approvals) are crucial to prevent mission gaps and maintain execution timelines.

## Clear Roles Strengthen Accountability

- Modeling responsible and approval roles clarified who owns each training step.

## AI as Decision Support, Not Just Automation

- AI helped flag delays and recommend improvements — it didn't just automate tasks, it supported smarter human decisions.

## Structured Reasoning Improves System Logic

- Using clear classes, properties, and rules made our system explainable, measurable, and expandable for future growth.

# AI Use Cases in Action

## Use Case 1

### Delayed Training Detection

- Trigger: Approval > 10 business days overdue
- Actors: AI System, SME, FM Leader
- Outcome: Alerts for delayed approvals, ensures timely intervention

## Use Case 2

### SME Assignment Optimization

- Trigger: New training enters creation phase
- Actors: Scheduler, AI, SME Database
- Outcome: Matches SME by availability & expertise, reduces assignment delays

## Use Case 3

### Feedback-Driven Improvements

- Trigger: Training session completed
- Actors: Trainee, AI System, SME
- Outcome: Feedback is analyzed, and low scores trigger content review recommendations

Canva

# Final System Model Overview

- **Data Inputs:** Training data, SME availability, approvals, and feedback.
- **AI Interpretation:**
  - Detect Delays
  - Recommend matching SMEs
  - Suggest Improvements
- **System Outputs:**
  - Real-time alerts
  - Reassignment suggestions
  - Improvement tracking

# Reflections

## **Successes:**

- Strong team collaboration
- Technical growth in AI system design

## **Challenge:**

- Turning abstract AI concepts into real system features

## **Surprises:**

- Depth of AI reasoning and feedback analysis
- How much the system improved with small tweaks

## Future Recommendations

- Expand coverage to all PPBE phases
- Add real-time data integrations for faster updates
- Strengthen system security and user role management
- Keep improving dashboard interactivity for easier insights

# Access to Final Work

## Final Project Submission

Team Name: Error 404: Group Name Not Found

### Working Demo Link:

<https://ppbe-dashboard-xc83vwlmakft58wskskqif.streamlit.app/>

### Source Code Repository:

<https://github.com/Heather-code334/ppbe-dashboard>



If viewing on video scan  
me! To view the  
interactive dashboard.

Thank you