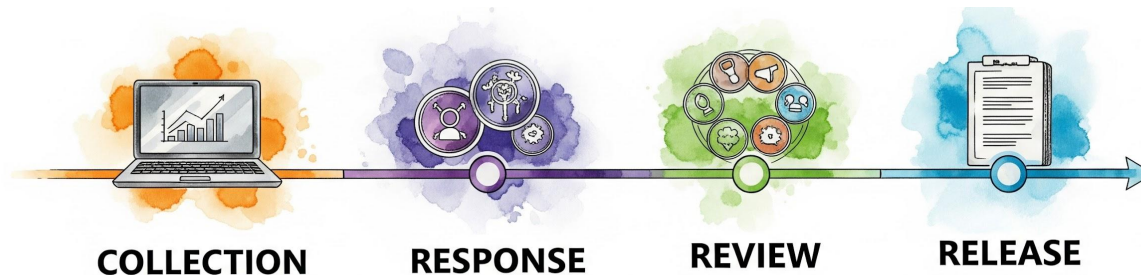# AI Use Demo: Response to Comments (RTC) Chatbot

Office of Information Management and Technology

What's the Problem?

- 2-week window for constituents to submit feedback (emails, public hearing transcripts)
- MDE must respond to each comment
- MDE permit engineers currently *manually* draft each response (must undergo review before release to public)
- Timeline 1-4 months *minus potential AG review*
  - Inefficient
  - Costly

COLLECTION   **RESPONSE**   **REVIEW**   **RELEASE**

[Horizontal timeline: Collection, Response, Review, Release. "Sketch" style.]

Breakdown Per Administration

Per comment-generating permit:

Air & Radiation

- 1 month

- 4 people

- 70-80 hrs

5-10 comment-generating

permits/year

Water & Science

- 1 month

- 2 people

- 80 hrs

50-70

comment-generating

permits/year

Land & Materials

- 1-4 months

- 1-2 people

- 128-512 hrs
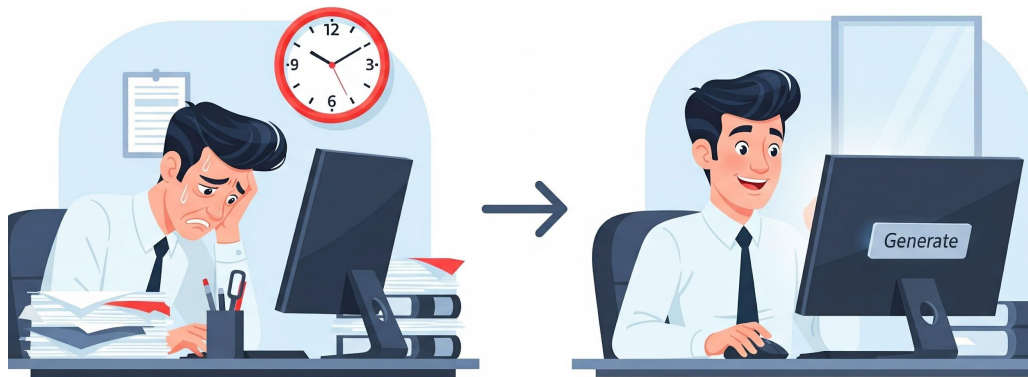
2 comment-generating

permits/year

Why the AI RTC Chatbot?

Automates the manual RTC process especially as MDE aims to *increase* current public engagement

Goals:

- Streamline and expedite the responding
- Maintain/improve overall accuracy and depth
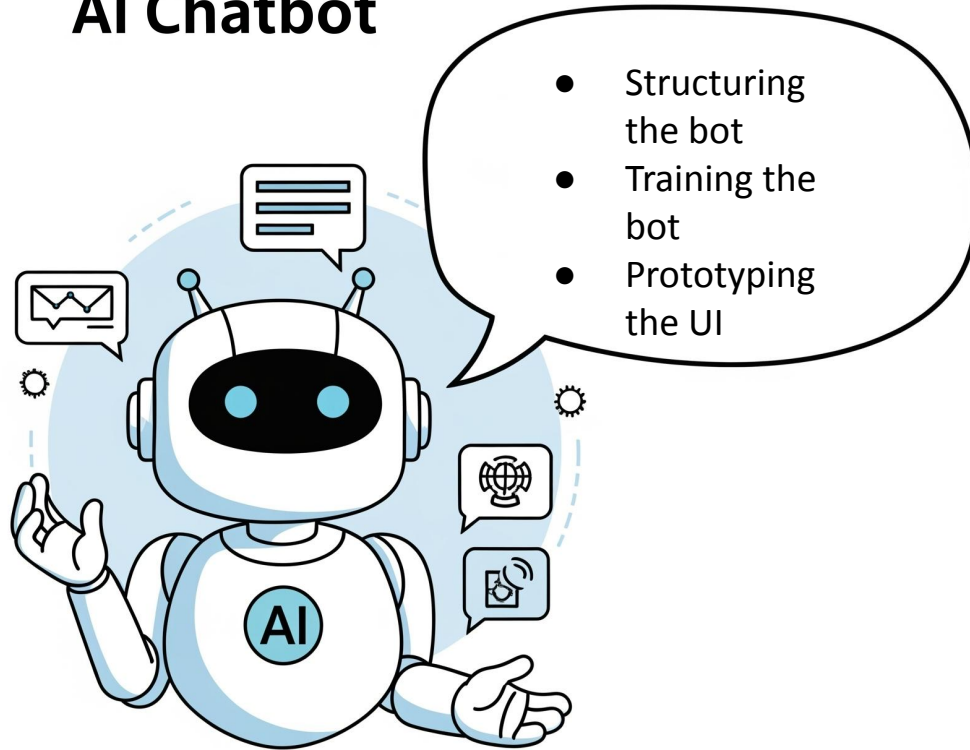- Scale across MDE

[Situation 1: stressed employee over desk computer. Arrow to Situation 2: relieved employee, computer with "Generate" button. "Vector art" style.]

Frameworks

AI Chatbot

- Structuring the bot
- Training the bot
- Prototyping the UI

[AI chatbot, speech bubble with bullet points: Structure, Training, UI Prototype, white background. "Vector art" style.]

Context: The Knowledge Base

What is a knowledge base?

- Chatbot reference repository
- Customizable
- Agile, mobile
- Specific, highly applicable content generation

Structure: Filtering for Big Categories

Using Gemini to filter for the most common types of concerns

- Multiple rounds of filtering
- Organize output in spreadsheet

Major Categories ∨		Comments		Monitoring & Enforcement	∨	Human Health	∨	Environmental Justice	∨	New Category	∨	Uncategorized	∨
Source Document	∨												
US Wind		All comments pertaining to each permit										Comments that aren't relevant to ANY categories	
Vaughn Greene													
Aligned Data Centers													
Allan Myers													
Stancills													
Grace & Co													

The Big Categories

Most Common Concerns

- Monitoring & Enforcement
- Regulatory Standards and Updates
- Human Health
- Location
- Technical Specifications
- Communication & Community Engagement
- Broader Environmental Concerns
- Environmental Justice
- Trust & Reliability
- Unpleasant Smells/Noises
- Proces & Methodology
- Property & Livelihood
- Climate Change
- Emissions
- Operation Hours
- Compensation

Training: Developer Prompts

Specialized training tools to teach chatbot how to be MDE's RTC chatbot.

- Created *and tested* with Gemini

	Prompt	
Location	Draft an empathetic and firm response to concerns that the proposed operation is in a residential area. - Clarify MDE cannot specify location or base review on land use; permit approval is legally determined by environmental impact. - Clarify local issues (e.g., land use) are under local authority (e.g., Baltimore City) and undergo local review.	

User Interface (UI) Prototype

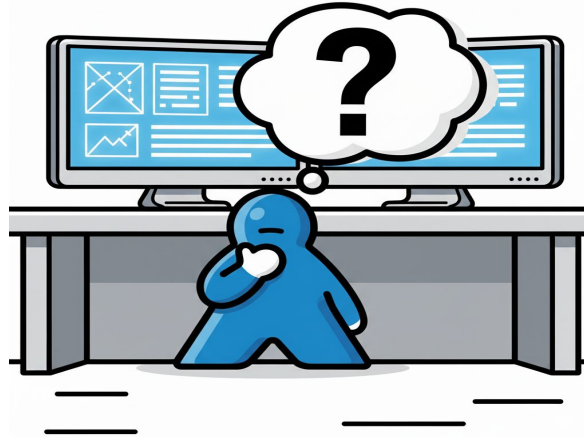CSS, HTML local web application created with Gemini

Provided Gemini with:
- Project requirements
- Screenshot of sample color scheme

MDE AI Response to Comments Chatbot   C Restart Chat

Welcome to the MDE AI Response to Comments Chatbot!

Please upload any additional comments documentation, or begin generating responses.

⬆ Upload Comments Documentation

Type Message...

Next Steps

- Partnership with MD Think

  - MD Think to set up the Sandbox Environment for testing purposes.

  - MD Think & MDE - Configure the Chatbot and Knowledge Base.

  - Internal Testing

  - Decision point - Where to host production - MD Think vs Internal to MDE

About Your Presenter

Ande Xin

- University of Massachusetts, Amherst
- Junior
- English, Political Science

Q&A

[Colorful multitude of question marks, white background.]