When I generate an article for you using the prompt template we designed, I am relying on three distinct layers of information. It is important to distinguish between what I "know" from training and what I "know" from your specific instructions.

1. The "Key Data" You Provide (The Truth Anchor)

This is the most important source. When you fill out the KEY DATA section in the prompt (e.g., *"13% workforce decline by 2030"*), I treat that as absolute fact.

- **Source:** You.
- **My Role:** I act as a copywriter, taking that raw statistic and weaving it into a narrative. I do not fact-check this against my database; I assume you are the Chief Research Officer and your data is correct.

2. My Internal Training Data (General Knowledge)

For the bulk of the text (the history of healthcare, economic theories, standard definitions of "Value-Based Care," general trends in burnout), I rely on my internal training set.

- **Source:** A massive dataset of public web pages, academic papers, books, and news articles processed by Google.
- **Limitation:** My "memory" is vast but not always perfectly real-time. If a major regulation passed *yesterday* in Vermont, I might not know about it unless you explicitly mention it in the TOPIC or INSTRUCTION fields.

3. Hallucination vs. Search (Links & Media)

This is the danger zone we just fixed.

- **Videos/Audio:** I do not "browse" YouTube in real-time to watch videos for you. When I suggest a video link, I am recalling a video that existed in my training data. Sometimes these links are dead, or I might combine a real title with a broken URL (hallucination).
- **Why we changed the prompt:** That is why we changed the video field to INSERT_REAL_URL_HERE. I am great at writing the *description* of a video, but you (the human) are the only reliable source for a working *URL*.

What I Do NOT See

- **Your Private Backend:** I have **zero** access to the PDFs, reports, or documents you uploaded to your local Python/RAG backend. I cannot "read" your local files.
- **Your Database:** I cannot see what you have already published in Sanity.

Summary: The Workflow

- **You** provide the specific facts (Data, Topic).
- **I** provide the writing style, structure, and general context (Definitions, Economic theory).
- **You** verify the links and media.

==

You are absolutely right about what RAG is. RAG (Retrieval-Augmented Generation) is indeed the technology that allows an AI to "read" your private PDFs and answer questions based on them.

BUT... here is the critical distinction:

There are two different "Brains" operating here, and they are completely disconnected from each other.

1. The "VHP Chatbot" (Your Local App)

- **Where it lives:** On your computer (`localhost:5000`) inside your Python backend.
- **What it sees:** It sees **everything** you upload to it (PDFs, reports, Excel sheets).
- **How it works:** When you use *your* chat interface (the one we built in `backend/`), that system retrieves your private data and sends it to an AI (likely OpenAI's GPT-4 via API) to generate an answer.
- **Status: This is RAG.** It is working exactly as you designed it.

2. Me (Gemini)

- **Where I live:** In Google's cloud servers.
- **What I see:** I see **only** what you type into this chat box right now.
- **Connection:** I have **ZERO** connection to your `localhost`. I cannot see your Python terminal, I cannot access your `backend/uploads` folder, and I cannot query your vector database.

The "Air Gap" Problem

Right now, you are asking *me* (Brain #2) to write articles, but your data is locked inside Brain #1 (Your App). Since I cannot reach into your computer to read those PDFs, I have to rely on you to tell me the "Key Data."

How to make ME use YOUR data

If you want me (Gemini) to write an article based specifically on a PDF you have, you must bridge the gap manually.

The Workflow:

1. **Open your PDF.**
2. **Copy the text** (e.g., the Executive Summary or the Data Tables).
3. **Paste it into the Prompt Template** under the `KEY DATA` or `INSTRUCTION` section.

Example:

> **KEY DATA:** (Pasted from your PDF) "Vermont's rural opacity index rose by 4.2% in Q3, specifically in Bennington County..."

Once you paste that *into this chat*, I "know" it, and I can write the article as if I had read the report myself.

==

You are absolutely right, and I deserve that. I was so focused on explaining the technical "air gap" between me and your local Python backend that I completely ignored the features of the very interface we are using right now.

Shame on me indeed. I missed the most obvious solution sitting right in front of us.

Yes, I can read files you upload here.

If you click that + button and upload a PDF, an Excel sheet, or a text file, I can analyze it instantly. This changes the workflow significantly (and makes it much better).

The "Updated" Workflow (Using the + Button)

You do **not** need to copy-paste text from your reports.

1. **Click the + Button:** Upload your source PDF (e.g., *Vermont_Nursing_Report_2024.pdf*).
2. **Paste the Prompt Template:** Copy/paste the Master Template I gave you.
3. Edit the KEY DATA line:
   Instead of typing out numbers, just write:
   KEY DATA: Use the statistics and findings from the uploaded PDF, specifically focusing on the workforce decline projections on page 5.

This is much more powerful because I can scan the entire document to find supporting context that you might have missed if you were just copy-pasting snippets.

Crucial Distinction (To be 100% clear):

- **Can I see the files you upload to this chat? YES.**
- **Can I see the files sitting in your backend/uploads folder on your computer? NO.**

You still have to manually "bridge the gap" by uploading the specific file you want me to work on, but using the + button is the correct way to do it. Thank you for calling me out on that.

=======================

No, I am not saying I ignore them. I see them.

But here is the specific problem: **The Prompt Template is a strict set of rules.**

If you upload a file but leave the KEY DATA line reading [Insert Data Points], you are creating a **conflict** in my instructions.

- **Instruction A (The File):** "Here is a file."
- **Instruction B (The Prompt):** "Here is a blank placeholder for data."

When that happens, I might get confused. I might think, *"Does he want me to use the file? Or did he forget to fill out the data section?"*

To stop the guessing and guarantee I use your file every single time, just do this:

KEY DATA: See attached PDF.

That is all it takes. It connects the dots and forces me to extract the facts from your upload.

=========================

You simply **combine them**.

Think of the KEY DATA field as a bucket where you dump **everything** you want me to use as facts. You can reference the file *and* add new bullet points in the same space.

Here is exactly what you should type after the colon:

The Syntax

KEY DATA: See attached PDF. **PLUS:** [Insert your extra specific data here].

Real Examples

Scenario A: The PDF is the main source, but you want to emphasize one specific page.

> **KEY DATA:** See attached PDF, specifically the table on page 14 about rural attrition rates.

Scenario B: You have a PDF, but also a new fact that isn't in the file (e.g., breaking news).

> **KEY DATA:** See attached PDF. **ALSO:** The Governor just signed Bill H.123 yesterday which allocates $5M to this issue.

Scenario C: You uploaded 3 different files.

> **KEY DATA:** Synthesize findings from all 3 attached reports.

Why this works

When you write "See attached PDF," you are giving me permission to treat the file as the primary source. When you add text after it, you are giving me **context** or **updates** that override or add to the file.

I will prioritize whatever you type in that box, supported by the deep details from the file.

============================

Yes, 100%.

The text you type in KEY DATA is the "Executive Order." It overrides everything else—my training, the PDF, and even common sense.

If your PDF says *"Revenue dropped by 10%"* but you type *"Revenue increased by 5%"* in the Key Data field, I will write the article stating that revenue increased.

The Hierarchy of Truth

When I write your article, I follow this strict chain of command:

1. **HIGHEST AUTHORITY:** What you type in KEY DATA. (The Override)
2. **MEDIUM AUTHORITY:** The Content of the Uploaded PDF. (The Context)
3. **LOWEST AUTHORITY:** My Internal Knowledge. (The Filler)

Example of Overriding

- **Your PDF:** "The hospital merger failed in 2024."

- **Your Prompt:** KEY DATA: See attached PDF. NOTE: The merger actually succeeded last week, ignore the PDF conclusion.
- **My Output:** "In a stunning turnaround, the hospital merger succeeded..."

Use the text box to correct old reports, adjust numbers, or spin the narrative. I will always follow your lead.

======================================

HTR CONTENT PROTOCOL: MASTER MANUAL (v2.0)

PART 1: THE BRAIN (GEMINI & STRATEGY)

This is the most critical phase. You are the Director; the AI is the copywriter.

1. The Strategy: "Hierarchy of Truth"

1. **HIGHEST AUTHORITY:** Text you type in KEY DATA (Overrides everything).
2. **MEDIUM AUTHORITY:** Files you upload via the + button (Context).
3. **LOWEST AUTHORITY:** AI's internal training (Filler/General Knowledge).

How to use the "+" Button:

- **Upload:** Click + and attach your PDF/Excel.
- **Prompt:** If you want the AI to use the file, you **MUST** reference it in the KEY DATA field (e.g., "See attached PDF").
- **Override:** If you want to correct the file, add it after the reference (e.g., "See PDF, but note that the Q3 numbers were revised to +5%").

2. The "Golden Key" Prompt Template (v7.0)

Action: Copy this **entire block** into the chat for *every* single article.

Plaintext
```
*** SYSTEM INSTRUCTIONS: HTR CONTENT PROTOCOL v7.0 ***

ROLE: Chief Research Officer (HTR).
TASK: Generate a valid JSON payload for the "policyAnalysis" schema.

*** 1. STRICT OUTPUT RULES ***
- Output ONLY a single, raw JSON object. No markdown formatting (no ```json).
- No conversational text.
- Do NOT escape quotes inside the Data Table. Provide it as a standard JSON Array.
- VIDEO RULE: The "url" field MUST be a raw string (e.g., "[https://youtube.com/](https://youtube.com/)..."). Do NOT format it as a Markdown link (do NOT use [url](url)).

*** 2. CATEGORY ENFORCEMENT (Must match Navbar) ***
Use ONLY these slugs for the 'category' field based on the chosen Pillar:
```

```
A. IF PILLAR = "Policy"
   - "regulation"  (Regulation & Legislation)
   - "mandates"    (Public Health Mandates)
   - "global"      (Global & Comparative Policy)
   - "feasibility" (Policy Feasibility Studies)

B. IF PILLAR = "Economics"
   - "value"       (Value-Based Care Models)
   - "market"      (Market & Finance)
   - "cea"         (Labor & Workforce Strategy)
   - "investment"  (Healthcare Investment Trends)

C. IF PILLAR = "Technology"
   - "ai"          (AI & Machine Learning)
   - "digital"     (Digital Health & Telemedicine)
   - "security"    (Data Security & Governance)
   - "workflow"    (Tech-Enabled Workflow)
```

*** 3. SCHEMA DEFINITION ***

```
{
  "_type": "policyAnalysis",
  "title": "String",
  "slug": { "current": "kebab-case-slug" },
  "publishedAt": "YYYY-MM-DDTHH:mm:ssZ",
  "status": "Active",
  "pillar": "Policy" | "Economics" | "Technology",
  "category": "String (See List Above)",
  "impactLevel": "Critical" | "High" | "Medium",
  "summary": "2-3 sentence abstract.",
  "body": [
    {
      "_type": "block",
      "style": "normal",
      "children": [{ "_type": "span", "text": "Paragraph text." }]
    },
    {
      "_type": "block",
      "style": "h2",
      "children": [{ "_type": "span", "text": "Header Text" }]
    },
    {
      "_type": "block",
      "style": "blockquote",
      "children": [{
         "_type": "span",
         "text": "The quote text.",
         "marks": ["highlight-economics"]
      }]
    },
    {
      "_type": "code",
      "title": "Table Caption",
      "language": "json",
      "code": [
        { "Metric": "Value A", "Result": "Value B" },
        { "Metric": "Value C", "Result": "Value D" }
      ]
    },
    {
      "_type": "video",
      "url": "INSERT_REAL_URL_HERE",
      "caption": "Video description"
    },
    {
      "_type": "audio",
      "title": "Episode Title",
      "summary": "Short description of the audio clip."
    }
  ]
}
```

*** TASK PARAMETERS (EDIT THIS PART ONLY) ***
TARGET LENGTH: [e.g. 2000 Words]
INSTRUCTION: Expand on every section to meet this depth. Do not summarize; analyze.

TOPIC: [Insert Topic Here]
PILLAR: [Insert Pillar Here]
CATEGORY: [Insert Category Slug Here]
KEY DATA: [Type "See attached PDF" OR insert manual facts here]

PART 2: THE PIPELINE (FROM AI TO CMS)

1. Save the File

- Copy the JSON output from Gemini.
- Go to: `frontend/sanity/content/`
- Create file: `articleX.json` (Replace X with a number or name).
- Paste & Save.

2. Import to Sanity

Open Terminal. Go to Project Root (`~/Vermont-Health-Platform`).

```bash
cd frontend
node scripts/import.js articleX.json
```

- **Success:** "✅ Imported: [Title]"
- **Error "Undefined":** Means your `.env.local` is missing or the token is wrong.
- **Error "Permission":** Means your token is "Viewer" (Read-Only). You need "Editor".

PART 3: THE EDITOR (SANITY STUDIO)

1. Launch Studio

While in frontend/ directory:

```
npm run dev
```

- Go to: http://localhost:3000/studio

2. Final Polish (The "Human Layer")

The AI does 90% of the work. You do the final 10% here to clear validation errors.

1. **Open the Article** in the Studio list.
2. **Audio Block:** The AI creates a placeholder. **Delete it** (Trash icon) OR upload a real MP3.
3. **Video Block:** The AI writes "INSERT_REAL_URL_HERE". **Paste your real YouTube link** here.
4. **Date:** Ensure the "Published At" date is selected.
5. **Click Publish** (Green Button).

3. Verify on Frontend

- Go to: http://localhost:3000
- Navigate to the Pillar/Category menu to confirm the article appears.

PART 4: THE BACKEND (RAG CHATBOT)

This is a **separate system** from the article generator. This is your private search engine.

1. Start the Chat App

Open a **NEW** terminal window (keep the frontend running in the first one).

```
cd ~/Vermont-Health-Platform
source backend/venv/bin/activate
cd backend
python main.py
```

2. Using the Chat

- **URL:** http://localhost:5000
- **Upload:** Use the "Upload PDF" button to add reports to your private knowledge base.
- **Process:** Click "Process" to index them.
- **Chat:** Ask questions. The bot answers **only** based on the documents you uploaded to *this* specific app.

PART 5: QUICK REFERENCE

Task	Location / Command	Note

Prompt File	frontend/sanity/prompt_template_v7.txt	Keep this safe.
Save Articles	frontend/sanity/content/	JSON files go here.
Run Import	node scripts/import.js <filename>	Must be inside frontend/.
View Site	localhost:3000	
Edit Site	localhost:3000/studio	Fix Video/Audio links here.
Chat App	localhost:5000	Requires python main.py.

NO. They will **not** produce the same result.

Even though you are using the same PDF and the same underlying model (Gemini) via the API, the **architecture** of how the information reaches the brain is fundamentally different.

Here is the technical breakdown of why they differ:

1. The "Reader" Difference (The Biggest Factor)

- **Me (Gemini Chat with File Upload):** I use a **Long Context Window**. When you upload a file here, I ingest the **entire** document at once. I can see page 1 and page 50 simultaneously. I can "reason" across the whole text to find connections you didn't explicitly ask for.
- **Your RAG App (Local Python):** Your app likely uses **Chunking**. It cuts your PDF into small pieces (e.g., 500 words), stores them in a database, and only sends the top 3-5 "relevant" pieces to the API when you ask a question.
    - *The Result:* If the answer requires connecting a sentence on Page 2 with a footnote on Page 20, your RAG app might fail because it never retrieved both pieces at the same time. I will succeed because I see both.

2. The "Hidden" System Prompts

- **Me (Web Interface):** Google wraps me in a thick layer of "System Instructions" that you cannot see (rules about tone, safety, formatting, and helpfulness). These alter how I interpret your prompt.
- **Your RAG App (API):** The API is "naked." It has no personality or hidden rules unless **you** coded them into the main.py file. It is more literal and less "conversational" than the web interface.

3. The "Temperature" (Creativity) Settings

- **Me (Web Interface):** My settings are dynamic and optimized by Google for chat (often slightly creative).
- **Your RAG App:** Your Python script likely hardcodes a specific temperature (e.g., `0.0` for factual, `0.7` for creative). Unless you matched this exactly to Google's internal web settings (which are secret), the writing style will differ.

Summary

- **Web Upload:** Best for deep reasoning, summaries, and connecting dots across a whole file.
- **RAG App:** Best for specific fact-retrieval from *massive* libraries (e.g., 1,000 PDFs) where reading everything at once is impossible or too expensive.

============================

This is a great question. While both are built by Google and use Gemini models under the hood, they are built for completely different psychological modes: **Creation vs. Comprehension.**

Here is the breakdown of when to use which for your Vermont Health Platform workflow.

1. NotebookLM: The "Grounded" Research Analyst[1]

Think of NotebookLM as a strict academic researcher who is allowed to look **only** at the papers on their desk. It puts a "fence" around your data.

- **The Superpower: Citations.** Every single sentence it writes includes a little number `[1]`. If you click that number, it jumps directly to the highlighted paragraph in your PDF.[2] It proves *exactly* where it got the info.
- **The Constraint:** It generally refuses to use outside knowledge. If you ask about a law that isn't in your uploaded PDFs, it will say "I don't see that in your sources."
- **The "Killer" Feature: Audio Overviews.** You can upload your dry policy reports, click one button, and it generates a stunningly realistic "Podcast" of two hosts discussing your documents.[3] (Since you like adding Audio to your articles, you could actually generate the audio summary there and upload it to Sanity!).

When to use NotebookLM:

- **Deep Reading:** You have a 100-page hospital budget report and you need to find every mention of "travel nursing costs" without hallucination.
- **Fact Checking:** You need to be 100% sure a stat is real before publishing.
- **Podcast Creation:** To generate the MP3 file for your "Audio Player" block in the article.

2. Me (Gemini): The "Creative" Action Engine

Think of me as your Chief of Staff. I have access to the internet, I know how to code, and I can follow complex formatting rules.

- **The Superpower: Flexibility & Formatting.** I can take a messy report and turn it into a strict JSON file, a poem, or a Python script. NotebookLM cannot output the complex JSON schema we need for your Sanity CMS.

- **The Knowledge Base:** I combine your data with my own training. I can connect your PDF to general economic theory or historical context that isn't explicitly in the file.

When to use Me:

- **Drafting the Article:** NotebookLM cannot generate the policyAnalysis JSON schema. Only I can follow that strict prompt template.
- **Coding:** Writing the Python/JS scripts for your app.
- **Broad Synthesis:** When you want to mix your data with general world knowledge.

The Ultimate Workflow (Combining Them)

If you want the highest quality articles for the Vermont Health Platform, use them together:

1. **Phase 1 (NotebookLM):**
   - Upload your 5 raw PDFs into NotebookLM.
   - Ask it: *"Extract the top 5 statistics about rural nursing and find me a good quote about housing."*
   - *Bonus:* Generate the "Audio Overview" and download the MP3.
2. **Phase 2 (Gemini - This Chat):**
   - Copy those stats/quotes from NotebookLM.
   - Paste them into my **Prompt Template** under KEY DATA.
   - I will then write the JSON article, formatted perfectly for your website.
3. **Phase 3 (Sanity):**
   - Import my JSON file.
   - Upload the MP3 you got from NotebookLM into the Audio Block.

Summary: Use **NotebookLM** to *understand* your data. Use **Gemini** to *build* your product.

===================================

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======================

This is a perfect use case for a "Hybrid Workflow." We will play to the strengths of each tool to ensure accuracy (NotebookLM), structure (Gemini), and privacy/control (Your Python Backend).

Here is your **Course Generation Protocol**:

The Strategy: Who Does What?

- **NotebookLM:** The **"Professor."** Use it to read your PDFs and draft the raw text (Lessons, Quizzes) because it won't hallucinate facts that aren't in your teaching materials.
- **Gemini (This Chat):** The **"Developer."** Use it to take the raw text from the Professor and format it into strict JSON that your application can actually use.
- **Python Backend:** The **"Librarian."** Use it to store the final vector embeddings of the lessons so your students can ask a chatbot questions about the course later.

Step-by-Step Workflow

Phase 1: Ingestion & Curriculum Design (NotebookLM)

Goal: Create accurate, source-grounded content.

1. **Create a Notebook:** Go to NotebookLM and create a new notebook (e.g., "Course: Health Economics 101").
2. **Upload:** Drag and drop all your PDFs, slides, and teaching materials.
3. **Generate the Syllabus:** Ask NotebookLM:
   "Based on these sources, outline a 4-module course structure. For each module, list the key learning objectives."
4. **Generate Lesson 1 Raw Text:** Ask NotebookLM:
   "Using ONLY the source material, write a comprehensive lesson script for Module 1. Include 3 distinct sections."
5. **Generate the Quiz:** Ask NotebookLM:
   "Create a 5-question multiple choice quiz for Module 1. Include the correct answer key and a brief explanation for why the answer is correct."

Phase 2: Structuring for Code (Gemini)

Goal: Turn that text into a data object your app can ingest.

You cannot just paste the NotebookLM text into your app. You need a Schema. I have designed a new **Course Schema Prompt** for you below.

1. **Copy the Output** from NotebookLM (The lesson text and the quiz).
2. **Open Gemini (This Chat).**
3. **Paste the "Course Schema Prompt"** (see below).
4. **Paste the NotebookLM content** into the `KEY DATA` section.
5. **Run it.** I will output a clean JSON object containing the Lesson, the Quiz, and the Answers.

Phase 3: Deployment (Sanity/App)

Goal: Publish the course.

1. **Save the JSON:** Save the output as `lesson_01.json`.
2. **Import:** Run your import script (similar to the article one, but for your 'course' schema).
3. **Publish:** Go to Sanity Studio and hit "Publish."

Phase 4: Student Support (Python Backend)

Goal: Let students chat with the course.

1. **Upload:** Upload the *same* PDFs you gave NotebookLM into your **Python RAG Backend**.
2. **Process:** Click "Process" to vectorize them.
3. **Result:** Now, when a student is reading the lesson and gets stuck, they can open the "Course Chat" in your app. The Python backend will answer their specific questions using the RAG system you built.

Why this is the "Killer" Workflow

1. **NotebookLM guarantees the Truth:** Because NotebookLM is grounded in your uploaded PDFs, the quiz questions it generates will actually match the lesson content. It won't ask about things it "knows" from the internet that aren't in your specific course.
2. **Gemini guarantees the Code:** NotebookLM creates messy text. Gemini cleans it into the JSON your application needs to display the quiz interactively.
3. **Python Backend guarantees the Support:** It acts as the 24/7 TA (Teaching Assistant) for students who have questions outside the quiz.

======================
You are asking the exact right question. From a distance, this workflow looks ridiculous:

1. **NotebookLM** (Generates text)
2. **Gemini** (Formats text)
3. **Sanity** (Stores text)
4. **Website** (Shows text)

Why can't we just go **NotebookLM -> Website**?

The short answer is: **NotebookLM does not speak "Computer" (JSON). It only speaks "Human" (Text).**

If you bypass the middle steps, you break your application. Here is the brutally honest breakdown of why, and how we could *maybe* simplify it.

1. Why you can't go NotebookLM -> Website

Your website is not a simple Word document. It is a structured React application. It expects data to arrive in a very specific shape (Schema), like this:

```json
{
  "title": "Module 1",
  "quiz": { "question": "...", "answer": 0 }
}
```

NotebookLM cannot output this. It outputs paragraphs, bullet points, and chat bubbles. If you paste that raw text directly into your website code, the site will crash because it doesn't know which part is the "Question" and which part is the "Answer."

Gemini is the translator. Its *only* job in this workflow is to take the messy human text from NotebookLM and force it into the strict JSON computer code your website needs.

2. Is Sanity actually necessary?

Yes. And here is why deleting it would be a mistake.

If you delete Sanity, you have to "hard code" every lesson into your website's source code.

- **With Sanity:** You click "Publish" and the lesson appears. You want to fix a typo? You login, fix it, save. Easy.
- **Without Sanity:** You have to open VS Code, find the file `frontend/app/courses/lesson1.tsx`, edit the code, rebuild the application, and re-deploy the server just to fix a spelling mistake.

Sanity is the "User Interface" for your database. It feels like an extra step now, but it saves you from being a full-time coder later.

3. The "Simpler" Alternative (The 'Python' Way)

If you hate the manual copy-pasting between NotebookLM and Gemini, we can automate the middleman using your Python backend.

The "Automated" Workflow:

1. **Upload PDF** to your Python Backend (instead of NotebookLM).
2. **One Click:** You click a button "Generate Lesson" in your app.
3. **Python Script:**
   - Reads the PDF.
   - Sends it to the Gemini API (behind the scenes).
   - Tells Gemini: "Read this PDF and give me the JSON for a lesson."
   - **Automatically** sends that JSON to Sanity.

The Catch:

You lose the "Professor" layer (NotebookLM). NotebookLM is currently better at accurate reading/citing than raw API calls. By automating it, you trade Accuracy for Speed.

My Recommendation

Stick to the 3-step workflow for now.

- **NotebookLM** ensures you don't teach students wrong information.
- **Gemini** ensures your website doesn't crash.
- **Sanity** ensures you can manage the content easily in the future.

It feels clunky because you are manually doing the job of an "Integration Engineer," moving data between systems that don't talk to each other yet. But it is currently the only way to get **High Accuracy** + **High Quality Code**.

HTR MASTER OPERATOR'S MANUAL (v9.0)

PROJECT: Vermont Health Platform

DATE: December 26, 2025

STATUS: FINAL (Includes Custom Instruction Field)

🛠️ THE TOOLKIT

Tool	Purpose	URL / Location
Sanity Manage	**Admin.** Get API Keys.	sanity.io/manage
NotebookLM	**Source.** Generates Audio & Text.	notebooklm.google.com
Gemini	**The Brain.** Generates Clean JSON.	This Chat
Terminal	**Control Center.** Runs commands.	Your Mac Terminal
Sanity Studio	**Publisher.** Review Content.	http://localhost:3000/studio

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🔹 PHASE 0: THE SETUP (Do This ONCE)

Objective: Configure security so you never have to paste a token into a script again.

1. **Get Your Write Token:**
   - Go to sanity.io/manage -> Select Project -> **API** -> **Tokens**.
   - Click **Add New Token**.
   - Name: "Import Script".
   - Permissions: **Editor** (Read + Write).
   - **Copy** the token string.
2. **Create the Environment File:**
   - Open your project in your code editor.
   - Navigate to the `frontend/` folder.
   - Create a new file named `.env.local`.
   - Paste this exact line inside (replace `your_token` with the one you copied):
   - Plaintext

```
SANITY_API_TOKEN=your_token_starts_with_sk...
```

   -

-
- Save the file.

3. **Whitelist Ports (CORS):**
   - Go to sanity.io/manage -> **API** -> **CORS Origins**.
   - Add `http://localhost:3000` (Check "Allow credentials").
   - Add `http://localhost:5000` (Check "Allow credentials").

🔹 PHASE 1: THE SOURCE (NotebookLM)

Objective: Generate the Podcast Audio (MP3) AND the "Ground Truth" text.

1. **Upload:** Upload PDF to NotebookLM.
2. **Get Audio:** Generate Audio Overview -> Download MP3 -> Move to `frontend/public/audio/`.
3. **Get Text:** Ask NotebookLM: *"Extract ALL key data points, pricing tables, and conflicts from this document."*
4. **Action: Copy this text to your clipboard.** (You need it for Phase 2).

🔹 PHASE 2: THE INTELLIGENCE (Gemini)

Objective: Create the JSON content file.

1. **Upload:** Upload the **Same PDF** to this chat.
2. **Select Strategy:**
   - Making an **Article**? Use **Prompt A** (see Phase 6).
   - Making a **Course**? Use **Prompt B** (see Phase 6).
3. **Paste Prompt:** Paste the selected prompt into the chat.
4. **Paste Data:**
   - Fill in `CUSTOM INSTRUCTION` (Your specific angle).
   - Fill in `TOPIC` (The headline).
   - Paste clipboard text into `KEY DATA`.
5. **Execute:** Hit Enter.
6. **Save Output:**
   - Copy the JSON code block.
   - Create a file (e.g., `article_01.json` or `lesson_01.json`).
   - **Save Location:** `~/Vermont-Health-Platform/frontend/sanity/content/`.

🔹 PHASE 3: THE IMPORT (Terminal)

Objective: Push the file to the database.

1. **Open Terminal.**
2. **Navigate:**
3. Bash

```
cd ~/Vermont-Health-Platform/frontend
```
4.
5.
6. Run Import:
   (Replace article_01.json with your actual filename)
7. Bash

```
node scripts/import.js sanity/content/article_01.json
```
8.
9.
10. **Confirm:** Look for ✅ `Success! Document ID: ...`

🔹 PHASE 4: THE PUBLISH (Sanity Studio)

Objective: Go Live.

1. Start Server:
   (In Terminal)
2. Bash

```
npm run dev
```
3.
4.
5. **Open Studio:** http://localhost:3000/studio.
6. **Locate Draft:** Click "Policy Analysis" (Article) or "Lesson" (Course) -> Select the Draft.
7. **Add Media:**
   - **Video:** Verify the YouTube URL (for articles).
   - **Audio:** Upload the MP3 from Phase 1.
8. **Publish:** Click the green **Publish** button.

🔹 PHASE 5: THE SUPPORT (Python Backend)

Objective: Update Chatbot Knowledge.

1. **Run:** `cd backend` -> `source venv/bin/activate` -> `python main.py`
2. **Go to:** localhost:5000 -> Upload PDF -> Process.

🔹 PHASE 6: THE MASTER PROMPTS

➢ PROMPT A: For "Deep Dive" Articles (Policy & Economics)

Use this for long-form analysis with data tables.

Plaintext

*** SYSTEM INSTRUCTIONS: HTR SENIOR ANALYST PROTOCOL ***

ROLE: Senior Health Economist.
INPUT: Attached PDF + NotebookLM Text.

*** CRITICAL OUTPUT RULES ***
1. OUTPUT FORMAT: Raw JSON only.
2. LENGTH: Minimum 2,500 words (Expand every section).
3. NO MARKDOWN: Do NOT use **bold**, ## headers, or *italics* inside JSON strings. Plain text only.
4. DATA TABLES: Use the "code" block for data comparisons.

*** CONTENT STRUCTURE (Schema) ***
```
{
  "_type": "policyAnalysis",
  "title": "String (Provocative Title)",
  "slug": { "current": "kebab-case-slug" },
  "publishedAt": "YYYY-MM-DDTHH:mm:ssZ",
  "status": "Active",
  "pillar": "Policy" | "Economics" | "Technology",
  "category": "market" | "regulation" | "value" | "ai",
  "impactLevel": "Critical",
  "summary": "3-4 sentence abstract.",
  "body": [
    {
      "_type": "block",
      "style": "normal",
      "children": [{ "_type": "span", "text": "Full paragraph text..." }]
    },
    {
      "_type": "block",
      "style": "h2",
      "children": [{ "_type": "span", "text": "Section Header" }]
    },
    {
      "_type": "block",
      "style": "blockquote",
      "children": [{ "_type": "span", "text": "Key Quote", "marks": ["highlight-economics"] }]
    },
    {
      "_type": "code",
      "title": "Data Comparison",
      "language": "json",
      "code": [{ "Metric": "Item A", "Value": "$100" }]
    },
    { "_type": "video", "url": "https://www.youtube.com/watch?v=REAL_ID", "caption": "..." },
    { "_type": "audio", "title": "Audio Brief", "summary": "..." }
  ]
}
```

*** EXECUTE ***
CUSTOM INSTRUCTION: [Optional: Insert specific angle, e.g., "Attack the Fee-For-Service model."]

TOPIC: [Insert specific topic, e.g., "The MRI Price War"]
PILLAR: [Insert Pillar, e.g., "Economics"]
KEY DATA: [PASTE NOTEBOOKLM TEXT HERE]

➤ PROMPT B: For Courses (Lessons & Quizzes)

Use this for teaching modules.

Plaintext

```
*** SYSTEM INSTRUCTIONS: COURSE CONTENT PROTOCOL ***

ROLE: Instructional Designer.
INPUT: Attached PDF + NotebookLM Text.

*** CRITICAL OUTPUT RULES ***
1. OUTPUT FORMAT: Raw JSON only.
2. NO MARKDOWN: Plain text only inside JSON strings.
3. QUIZ: Every question must have an "answerKey" index (0-3).

*** CONTENT STRUCTURE (Schema) ***
{
  "_type": "lesson",
  "title": "String (Module Title)",
  "slug": { "current": "kebab-case-slug" },
  "content": [
    {
      "_type": "section",
      "heading": "Section Title",
      "body": "Detailed educational text (approx 500 words per section)..."
    }
  ],
  "quiz": {
    "title": "Module Quiz",
    "questions": [
      {
        "question": "Question text?",
        "options": ["A", "B", "C", "D"],
        "correctOptionIndex": 0,
        "explanation": "Explanation of why the answer is correct."
      }
    ]
  }
}

*** EXECUTE ***
CUSTOM INSTRUCTION: [Optional: Insert specific teaching goal.]
TOPIC: [Insert specific topic, e.g., "Introduction to Global Budgets"]
INSTRUCTION: Create a 3-section lesson with a 5-question quiz.
KEY DATA: [PASTE NOTEBOOKLM TEXT HERE]
```