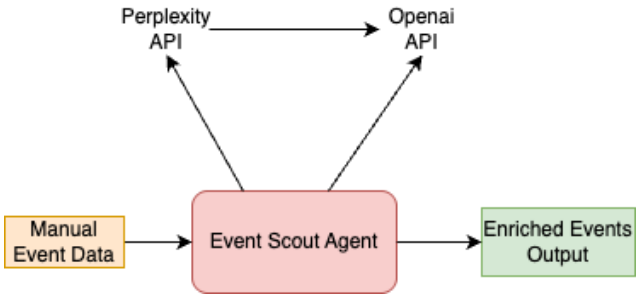
GTM Case Study - Harshit Singh [hs58@illinois.edu]

The DuPont Tedlar AI Agentic System is an end-to-end, multi-agent workflow designed to automate B2B lead generation in the signage and graphics industry. It begins by **scouting high-relevance trade shows**, **extracting exhibitor data**, and **enriching companies with revenue, industry, and strategic fit insights via GPT and Perplexity. Stakeholders** are then identified using **simulated LinkedIn** and **Hunter.io logic. GPT-**generated **outreach messages** are **tailored** to each **contact's profile and business context**. Leads are scored across seven weighted criteria for commercial alignment. The system outputs production-ready files used in **targeting, dashboards, and CRM workflows**. Fully autonomous, resilient, and modular, this pipeline transforms manual prospecting into a scalable AI-driven engine.

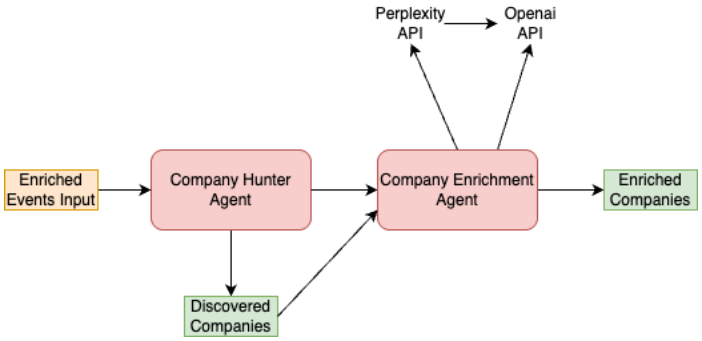
Implementation Breakdown

(1) Event Discovery Layer [event_scout_agent.py]



1. Sources high-potential industry expos by analyzing both **manually** curated events and **real-time AI-sourced** trade shows (**via Perplexity**).
2. Evaluates **event relevance** to DuPont Tedlar's business verticals using smart model choosing (3.5/4) based on **Event Relevance Score** and **GPT-based scoring** (0–10) and strategic reasoning.
3. Generates structured leads (**latest_leads.csv**) with metadata like **URLs, relevance scores, and qualitative justifications.**
4. Filters for **signage, vehicle wrap,** and **graphics** events to ensure downstream agents focus on highly aligned commercial targets.

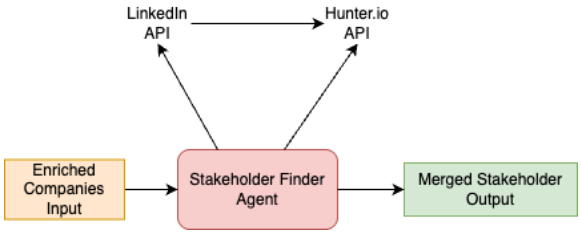
(2) Company Layer [company_hunter_agent.py + company_enrichnment_agent.py]



1. Extracts **exhibitor** and **sponsor** data from event websites using keyword-driven scraping and curated backup lists for high-relevance expos.
2. Applies **intelligent filters** and **deduplication** to retain only **unique, qualified companies tagged with event metadata.**

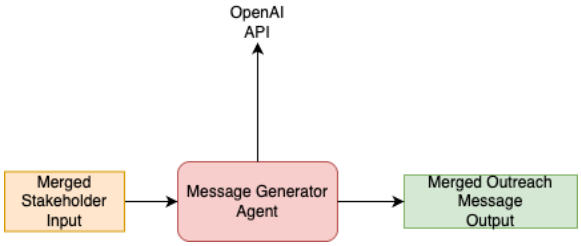
3. Cleanses and standardizes company names using **regex and domain-based heuristics** to remove irrelevant noise.
4. Enriches companies via **Perplexity AI,** retrieving **estimated revenue, employee size, industry, and core offerings.**
5. Uses **GPT** to evaluate each company's **industry fit, strategic relevance, and market activity** in relation to **DuPont Tedlar's goals.**
6. Produces a structured enriched_companies2.csv file containing complete context for **downstream stakeholder discovery.**

(3) Stakeholder Identification Layer [stakeholderfinder_agent.py]



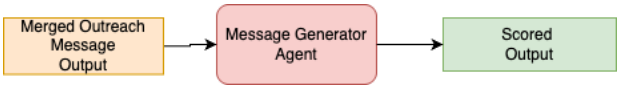
1. Iterates over enriched company data to **identify potential decision-makers** (VPs, Directors, Heads of Product etc) relevant to **signage, wraps,** and **graphics.**
2. Uses a **dummy** implementation simulating **LinkedIn Sales Navigator API** to generate stakeholder names, titles, and profile URLs.
3. Emulates **Hunter.io email finder API** by creating synthetic but realistic emails based on company domains and stakeholder names.
4. Adds **5 high-confidence** stakeholders per company or flags if no relevant individuals are found.
5. Appends stakeholder metadata (**Decision_Maker, Title, Email, LinkedIn**) directly to each company row.
6. Outputs a clean dataset **enriched_companies_with_stakeholders.csv** that becomes the foundation for personalized outreach.
7. *Disclaimer: It currently uses a subset of enriched company data for the following three events only [ISA Sign Expo 2025, PRINTING United Expo and Sign & Digital UK 2025]*

(4) Outreach Message Generation Layer [message_agent.py]



1. Reads **stakeholder-enriched company data** and generates tailored outreach messages using **OpenAI's GPT model (gpt-3.5-turbo or gpt-4).**
2. **Crafts personalized B2B messages** that connect **DuPont Tedlar's protective film** solutions to each stakeholder's **industry, products, strategic relevance, and event context.**
3. Applies a **structured prompt with fallback** and **error-handling** to ensure **professional tone, relevance, and completeness** and **ending each message with a branded sign-off.**
4. Stores all outputs in a new outreach_message column within enriched_companies_with_stakeholders_outreach.csv, enabling direct use in marketing workflows.

(5) Lead Scoring Layer [lead_scoring_agent.py]



1. Ingests enriched stakeholder message data and evaluates each lead across **7 weighted criteria: industry fit, revenue, employees, strategic relevance, event engagement, market activity, and decision-maker presence.**
2. Applies a robust scoring algorithm to assign a lead_score (0–75 scale), **prioritizing companies most aligned with DuPont Tedlar's business goals and market opportunities.**
3. **Cleans missing values,** ensures **scoring logic** resilience, and **sorts leads in descending order** of total score for immediate qualification insight.
4. Outputs a production-ready qualified_leads_scored.csv file—**used for final targeting, dashboard display, and downstream outreach.**