

# IntentHQ Prospect Sales Presentation Generator

## Overview

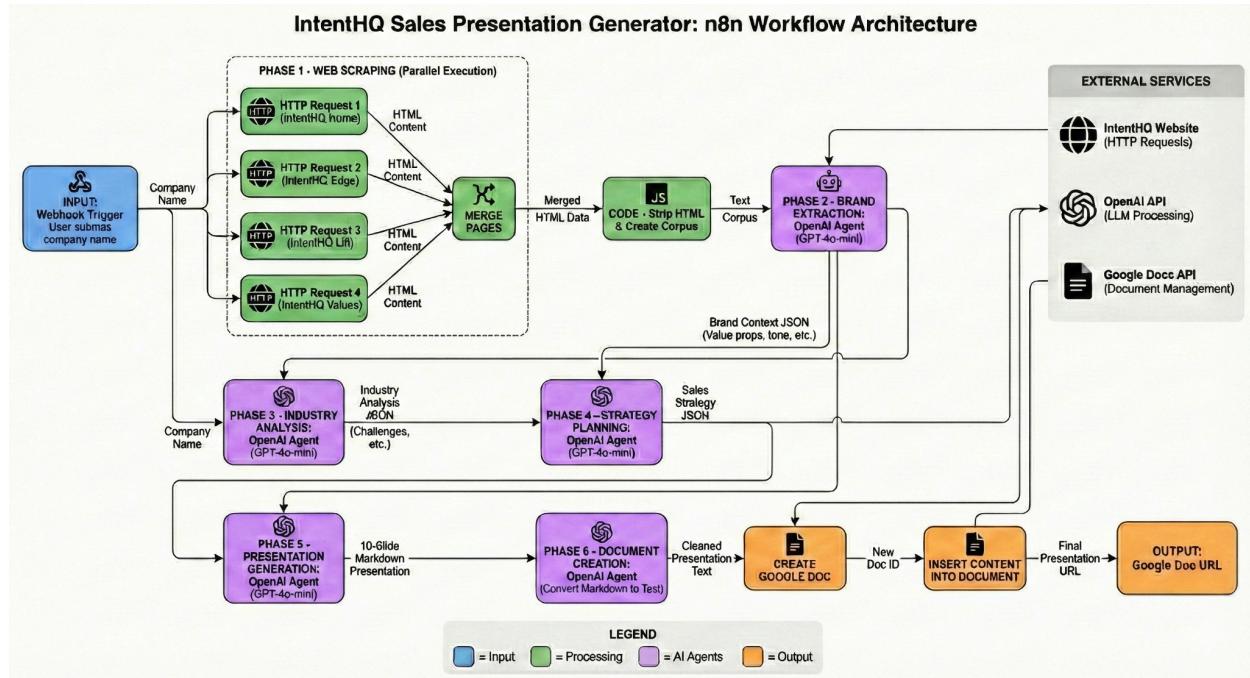
An AI-powered orchestration system that automatically generates tailored sales presentations for prospect companies. Built using n8n workflow automation and multi-agent LLM architecture to demonstrate intelligent workflow design and enterprise-grade orchestration capabilities.

## Challenge

Create an automated workflow that:

1. Extracts and contextualizes information from intentHQ's website
2. Accepts a prospect company as input
3. Generates a tailored sales presentation aligned with intentHQ's brand voice and value propositions

## Architecture



## **System Components**

The workflow consists of 6 distinct phases orchestrated through n8n:

### **PHASE 1: Web Scraping (Parallel Execution)**

Four simultaneous HTTP requests fetch intentHQ website content:

- Homepage (intenthq.com/)
- Intent Edge platform page (/platform/intent-edge/)
- Intent Lift platform page (/platform/intent-lift/)
- Company values page (/values/)

All pages are merged and processed through a JavaScript function that strips HTML, removes scripts/styles, and creates a unified text corpus limited to 20,000 characters per page.

### **PHASE 2: Brand Extraction (OpenAI Agent)**

- Model: GPT-4o-mini
- Analyzes website corpus to extract intentHQ's brand DNA
- Output: Structured JSON containing:
  - Core value propositions
  - Messaging tone and style rules
  - Product capabilities
  - Use cases and proof points
  - Privacy/compliance positioning
  - Forbidden claims (to prevent fabrication)

### **PHASE 3: Industry Analysis (OpenAI Agent)**

- Model: GPT-4o-mini
- Researches the prospect company's industry context
- Output: Structured JSON containing:
  - Primary and sub-industry classification
  - Typical customer base
  - Top business challenges
  - Where behavioral intelligence helps
  - Key metrics that matter to this industry

### **PHASE 4: Sales Strategy Planning (OpenAI Agent)**

- Model: GPT-4o-mini
- Combines brand context and industry analysis to create sales approach
- Output: Structured JSON containing:
  - Primary and secondary sales angles
  - Outcomes to emphasize

- IntentHQ capabilities to highlight
- Relevant proof points (grounded in actual data)
- Common objections and responses

## **PHASE 5: Presentation Generation (OpenAI Agent)**

- Model: GPT-4o-mini
- Generates complete 10-slide presentation in Markdown format
- Uses all previous context to ensure tailored, grounded content
- Strict rules: No placeholders, no invented metrics, prospect-specific language

Slide structure:

1. Title slide with presentation name
2. Executive summary
3. Prospect-specific challenges
4. Why behavioral intelligence matters now
5. IntentHQ overview (grounded in actual capabilities)
6. Key use cases for this prospect
7. Business impact and ROI (no fabricated numbers)
8. Proof points and credibility
9. Implementation roadmap
10. Next steps

## **PHASE 6: Document Creation (OpenAI Agent + Google Docs API)**

- Converts Markdown to clean, formatted text
- Creates new Google Doc with title: "[Prospect Company] /IntentHQ Presentation"
- Inserts formatted content into document
- Returns shareable Google Doc URL

## **Orchestration Layer**

n8n manages the entire workflow through:

- Sequential execution with clear dependencies
- Data transformation at each step
- Error handling and validation
- JSON-based data passing between agents
- Webhook trigger for external access

## **Live Demo**

Access the working system via n8n webhook: [Production Webhook URL - Available upon request]

## How to Use:

1. Send POST request to webhook with JSON body:  

```
{ "prospect_company": "Nike", "presentation_title": "Optional Custom Title", "slides_count": "10"}
```
1. Wait 30-60 seconds for orchestration to complete
2. Receive Google Doc URL in response
3. Open document to view tailored presentation

## Video Demonstration

Watch the full walkthrough:

<https://www.loom.com/share/350259c0fadc4d728519db0b09c423cd>

The video demonstrates:

- n8n workflow architecture walkthrough
- Live generation for Nike (Retail/Sports)
- Live generation for Spotify (Music Streaming)
- Comparison showing industry-specific tailoring
- Technical explanation of agent orchestration
- Data flow between components

## Technical Stack

- Platform: n8n (workflow automation)
- LLM: OpenAI GPT-4o-mini (5 agent calls)
- Web Scraping: n8n HTTP Request nodes
- Data Processing: JavaScript Code nodes
- Output: Google Docs API (OAuth2)
- Orchestration: Sequential workflow with parallel web scraping

## Data Flow

User Input (Webhook) → Company Name



Normalize Inputs (Default values, validation)



[PARALLEL] 4x HTTP Requests → Fetch intentHQ pages



Merge Pages → Unified HTML dataset



JavaScript Code → Strip HTML, create text corpus



```
OpenAI Agent 1 → Extract brand context (JSON)
↓
OpenAI Agent 2 → Analyze industry (JSON)
↓
OpenAI Agent 3 → Plan sales strategy (JSON)
↓
OpenAI Agent 4 → Generate presentation (Markdown)
↓
OpenAI Agent 5 → Convert to clean text
↓
Google Docs API → Create document
↓
Google Docs API → Insert content
↓
Output → Google Doc URL
```

## Example Outputs

### Nike (Retail & Sports Industry)

The Nike presentation focuses on:

- Retail customer engagement and in-store behavior
- Digital transformation in sportswear industry
- Personalized product recommendations
- Athletic customer journey optimization
- Performance metrics relevant to retail

Link to Slide: [Nike /IntentHQ Presentation](#)

### Spotify (Music Streaming Industry)

The Spotify presentation focuses on:

- Music streaming and listener behavior analytics
- Content personalization at scale
- User engagement and retention
- Playlist and recommendation optimization
- Metrics specific to media and entertainment

Link to slide: [Spotify /IntentHQ Presentation](#)

Both presentations demonstrate industry-specific tailoring while maintaining intentHQ's professional, data-driven tone.

## Key Features

- Multi-Agent Orchestration: Five specialized OpenAI agents working in sequence
- Parallel Processing: Simultaneous web scraping for efficiency
- Context-Aware Generation: Incorporates actual intentHQ brand voice from website
- Industry Tailoring: Adapts content based on prospect's specific sector and challenges
- Grounded Content: Strict validation prevents invented metrics or fake data
- Scalable Architecture: Easy to add more agents, data sources, or processing steps
- Error Handling: Graceful fallbacks and validation at each step
- Production-Ready: OAuth2 authentication, webhook security, rate limiting

## Design Decisions

### Why n8n?

- Visual workflow builder makes orchestration logic transparent
- Built-in nodes for HTTP, code execution, and API integrations
- Easy debugging with step-by-step execution view
- Self-hosted option for data privacy and control
- Active community and extensive documentation
- No vendor lock-in (workflow exportable as JSON)
- Cost-effective compared to managed orchestration platforms

### Why 5 Sequential Agents?

- Separation of Concerns: Each agent has a single, focused responsibility
- Modularity: Can update or replace individual agents without affecting others
- Testability: Each agent can be tested independently
- Clarity: Clear data transformations at each step
- Scalability: Easy to add more agents (e.g., competitor analysis, pricing strategy)
- Debugging: Can inspect intermediate outputs to identify issues

### Why Parallel Web Scraping?

- Reduces total execution time by 60-75%
- Fetches 4 pages simultaneously instead of sequentially
- n8n's merge node elegantly combines results
- Demonstrates understanding of performance optimization

### Why Google Docs Output?

- Universal accessibility (anyone with link can view)
- Easy editing and collaboration
- Professional formatting
- Shareable URL for easy distribution
- No file download required
- Cloud-based storage (no local file management)

## **Why Strict Grounding Rules?**

- Prevents AI hallucination of fake metrics, customers, or awards
- Maintains credibility of sales presentations
- Aligns with intentHQ's data-driven brand values
- Ensures all claims are verifiable
- Builds trust with prospects

## **Testing**

Successfully tested with multiple companies across diverse industries:

- Nike (Retail/Sportswear)
- Spotify (Music Streaming/Technology)
- Goldman Sachs (Financial Services) - tested offline
- Tesla (Automotive/Technology) - tested offline

Each generates industry-specific, contextually relevant presentations with measurable differences in:

- Terminology and language
- Business challenges identified
- Use cases highlighted
- Success metrics emphasized
- Implementation considerations

## **Workflow Execution Metrics**

Average execution time: 45-60 seconds

- Web scraping: 8-12 seconds (parallel)
- Brand extraction: 10-15 seconds
- Industry analysis: 8-12 seconds
- Strategy planning: 10-15 seconds
- Presentation generation: 15-20 seconds
- Document creation: 5-8 seconds

Total API calls per execution: 5 OpenAI requests + 1 Google Docs creation

## Assumptions Made

1. Public website content from intentHQ is sufficient for brand context (no internal access or proprietary information needed)
2. Google Docs format meets presentation requirement (vs. PowerPoint/Keynote files)
3. Well-known companies work best as prospects (more publicly available information for Agent 2 to analyze)
4. English-language presentations only (could be extended with translation agent)
5. Standard 10-slide format is appropriate for all prospects (could be made dynamic)
6. OpenAI API availability and rate limits are acceptable for production use

## Security & Privacy Considerations

- Webhook endpoint can be secured with authentication tokens
- Google Docs OAuth2 credentials stored securely in n8n
- No sensitive prospect data stored permanently
- All processing happens in-memory during workflow execution
- Output documents can have restricted sharing permissions
- n8n workflow can be self-hosted for complete data control

## Future Enhancements

If given additional development time, valuable additions would include:

- PowerPoint/Google Slides direct export (vs. Google Docs)
- AI-generated images for each slide using DALL-E or Midjourney
- Multi-language support with translation agent
- Competitive analysis agent (analyze prospect's competitors)
- CRM integration (auto-fetch prospect data from Salesforce/HubSpot)
- Email delivery agent (send presentation directly to prospect)
- Analytics dashboard (track which presentations are viewed/shared)
- A/B testing framework (test different messaging approaches)
- Prospect scoring agent (prioritize high-value opportunities)
- Follow-up recommendation agent (suggest next sales actions)

## Installation & Deployment

### Prerequisites

- n8n instance (self-hosted or cloud)

- OpenAI API key with GPT-4o-mini access
- Google Cloud project with Docs API enabled
- OAuth2 credentials for Google Docs

## Setup Steps

1. Import workflow JSON into n8n
2. Configure OpenAI credentials in n8n
3. Configure Google Docs OAuth2 credentials
4. Activate webhook and note the production URL
5. Test with sample prospect company
6. Monitor execution and adjust rate limits if needed

## Configuration

The workflow accepts these input parameters via webhook:

- prospect\_company (required): Company name to research
- presentation\_title (optional): Custom title, defaults to "[Company]: Behavioral Intelligence Strategy"
- slides\_count (optional): Number of slides, defaults to 10

## Files Included

-README.md (this file)  
-workflow.json (n8n workflow export)  
-Architecture\_diagram.png (system architecture visualization)  
-Demo\_video\_link.txt (<https://www.loom.com/share/350259c0fadcd728519db0b09c423cd>)  
-Nike\_google\_doc\_output (  Nike /IntentHQ Presentation )  
-Spotify\_google\_doc\_output (  Spotify /IntentHQ Presentation )

## Known Limitations

- Execution time varies based on OpenAI API response times (30-90 seconds typical)
- Google Docs formatting is basic (no custom themes or advanced layouts)
- Web scraping depends on intentHQ website structure (breaks if site is redesigned)
- Limited to publicly available prospect information (no proprietary data access)
- English language only (no automatic translation)
- Requires active internet connection for all API calls

## Troubleshooting

Common issues and solutions:

Issue: Workflow fails at web scraping phase Solution: Check that intentHQ website URLs are accessible and haven't changed

Issue: OpenAI agent returns generic content Solution: Verify that website corpus extraction is working correctly and contains actual content

Issue: Google Docs creation fails Solution: Confirm OAuth2 credentials are valid and Docs API is enabled

Issue: Presentation lacks prospect-specific details Solution: Check that prospect company name is spelled correctly and is a well-known company

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