

# **Guest Finder Agent**

## **AI-Powered Podcast Guest Discovery**

**AIToday Live Podcast**

Intelligent Guest Search & Management

# What is the Guest Finder Agent?

## **Purpose:**

Find potential Dutch AI podcast guests automatically

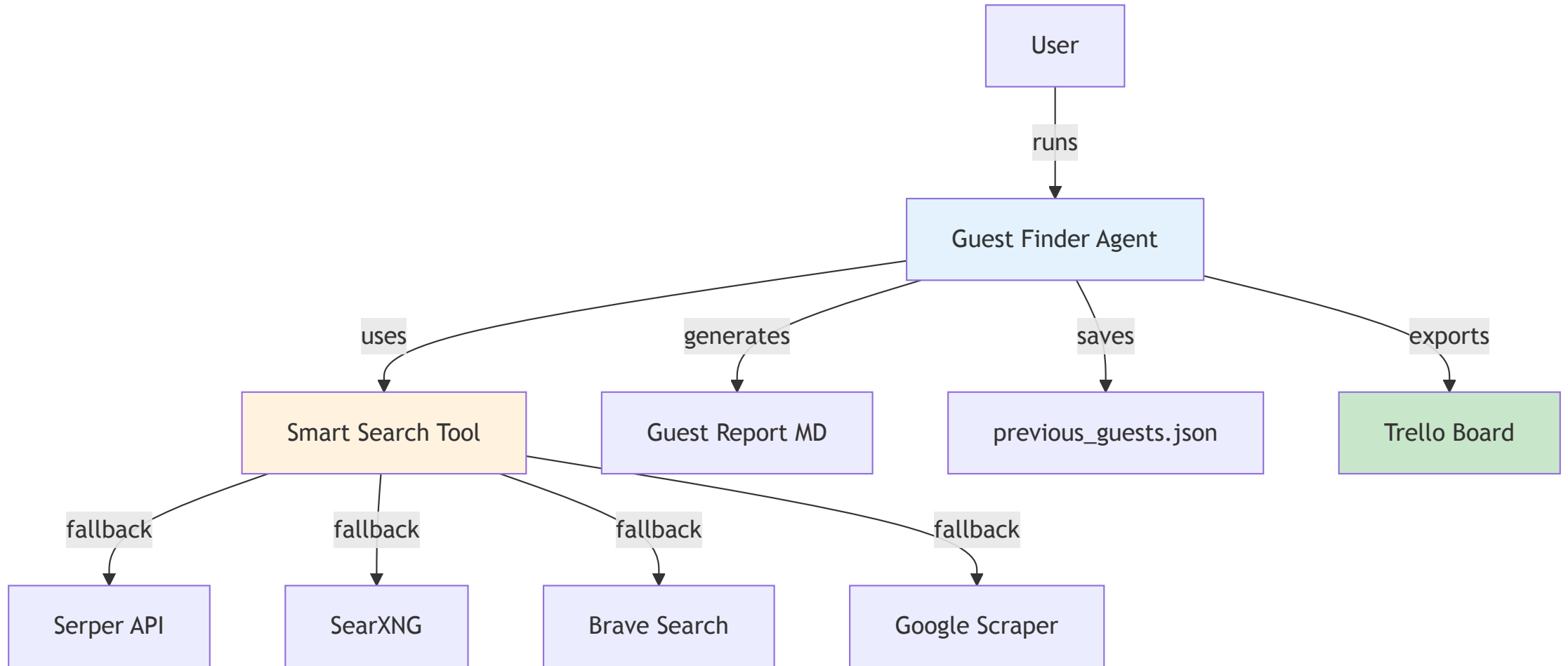
## **Powered by:**

- Claude Sonnet 4 with extended thinking
- Multi-provider web search
- Smart deduplication system

## **Output:**

- Curated guest list with context
- One-click Trello export
- Source verification

# System Architecture



# How It Works: 3 Phases

## Phase 1: Planning 🧠

- Analyze current AI trends in NL
- Identify underrepresented sectors
- Create strategic search queries (8-12)
- Consider recent events

## Phase 2: Search & Analysis 🔍

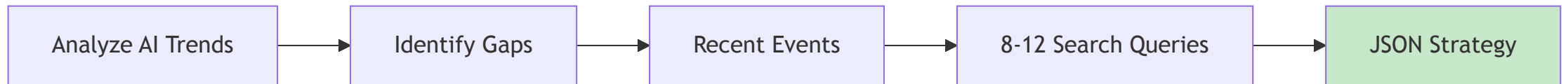
- Execute multi-provider search
- Fetch full page content
- Extract person names & roles
- Check deduplication

## Phase 3: Report & Export 📋

- Content enrichment (new!)
- Generate markdown report

# Phase 1: Strategic Planning

What the agent does:

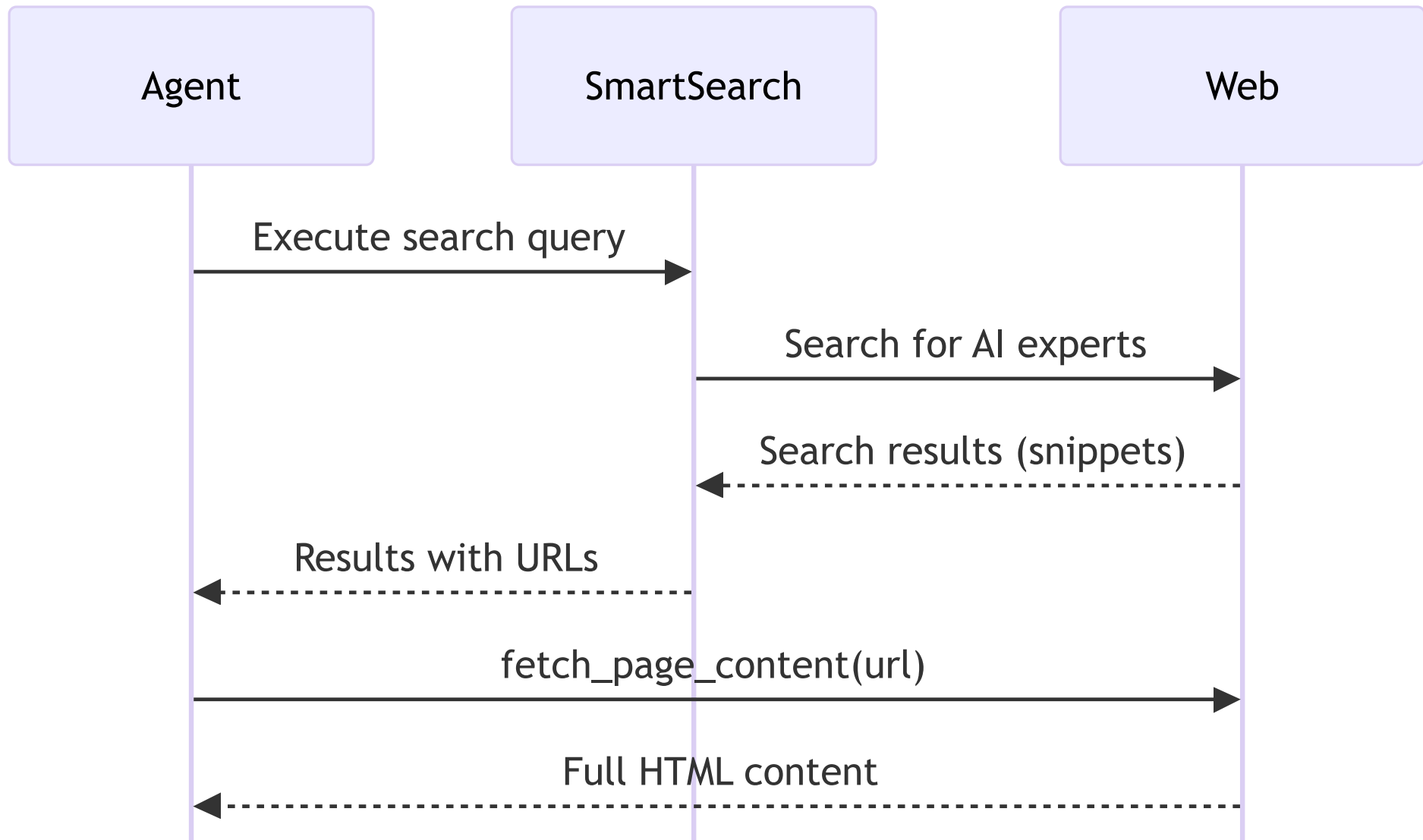


Example Queries:

- "AI healthcare startups Netherlands 2025"
- "Dutch AI ethics researchers universities"
- "Nederlandse AI consultancy founders"
- "AI Act implementatie Nederland experts"

**Output:** Prioritized JSON strategy with rationale

## Phase 2: Search & Analysis



# Smart Search Tool

## Multi-Provider Fallback:

### Primary:

#### 1. Serper API

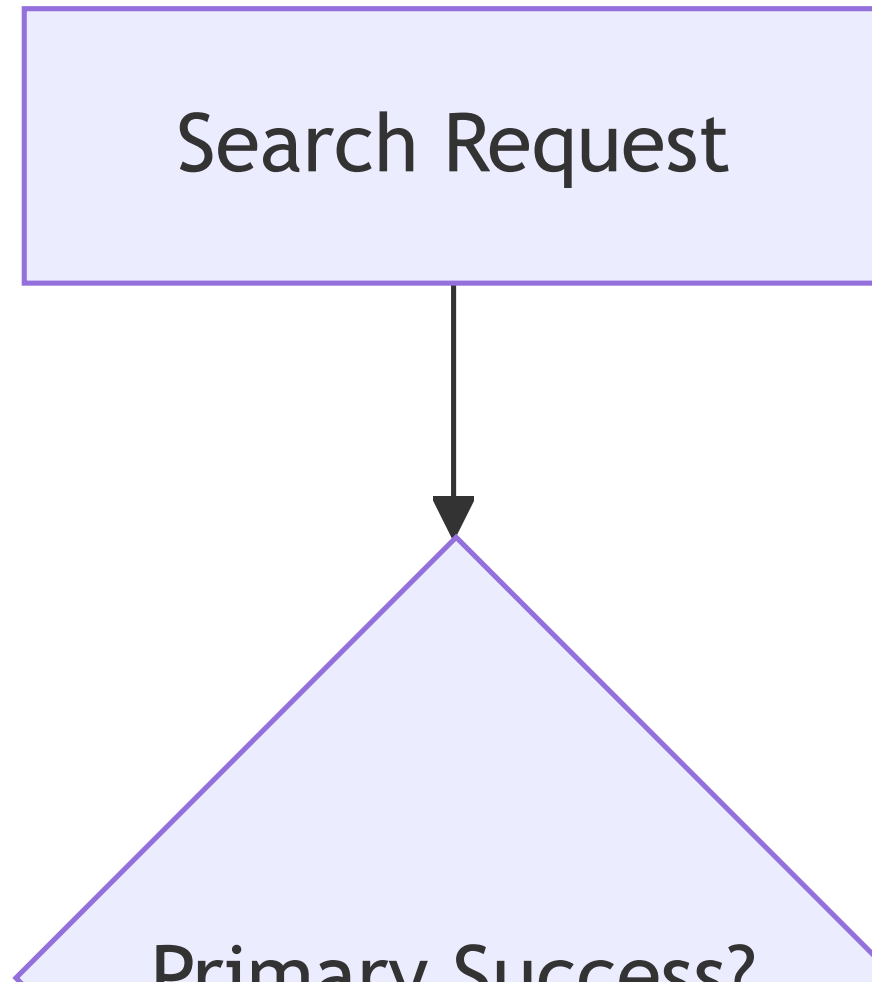
- Best quality
- 2,500/month free

### Fallbacks:

2. **SearXNG** - Free, no key
3. **Brave** - 2,000/month free
4. **Google Scraper** - Last resort

# Smart Search Features

Intelligent Handling:









# Deduplication System

## Smart Guest Tracking:

```
{  
  "name": "Dr. Sarah Veldman",  
  "organization": "TNO",  
  "date_added": "2025-10-12",  
  "source_url": "https://tno.nl/...",  
  "why_now": "Published AI Act guide"  
}
```

## Rules:

-  Won't recommend same guest within **12 weeks**
-  Tracks URLs to avoid duplicate sources
-  Stores context (why\_now) for future reference
-  Manual override possible via JSON edit

# Phase 3: Report Generation

Generates Markdown Report:

```
# AI Guest Recommendations – Week 41 2025

## Dr. Sarah Veldman
**Senior AI Advisor bij TNO**

**Waarom interessant:**
Specialist in AI Act implementatie...

**Mogelijke onderwerpen:**
– Praktische AI Act compliance
– EU AI regulering voor bedrijven





**Bronnen:**
– [AI Act Praktijkgids](https://tno.nl/...)
```

Includes:

• Role & organization

# Interactive Selection UI

## Features:

-  Rich terminal rendering
-  Full source URLs
-  Contact info display
- ✓ Duplicate warnings
-  Multi-select support

## Commands:

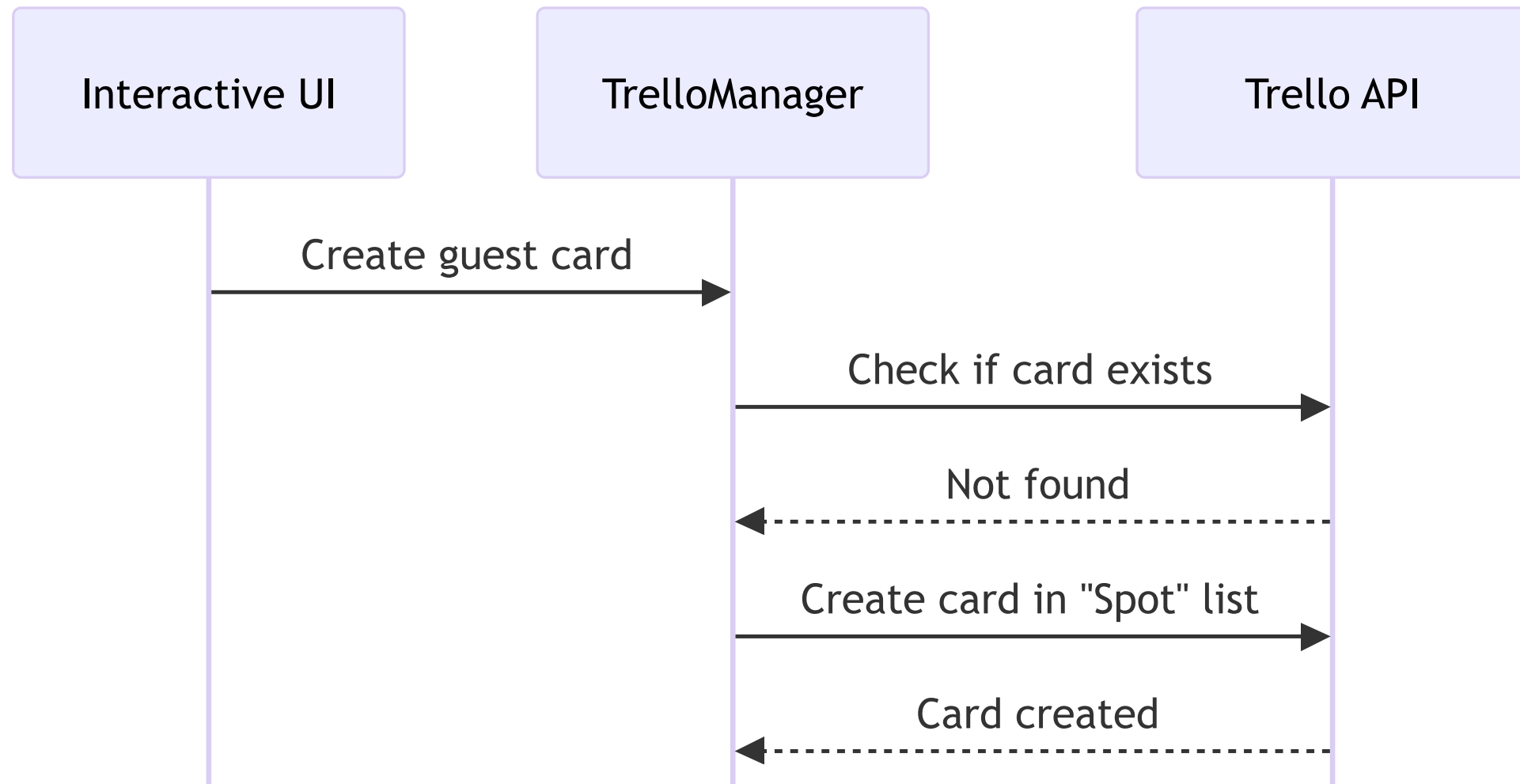
- Enter numbers: `1,3,5`
- Select all: `all`
- View in terminal first
- One-click Trello export

## Workflow:

1. Review all candidates
2. Select by number
3. Export to Trello
4. Cards auto-created

# Trello Integration

## Direct API Implementation:



# Trello Card Format

## Auto-Generated:

**\*\*Senior AI Advisor bij TNO\*\***

**\*\*Waarom interessant:\*\*** Expert in AI Act implementatie, praktische ervaring NL.

**\*\*Context:\*\*** Recent uitgebreide gids gepubliceerd over AI Act compliance.

**\*\*Onderwerpen:\*\***

- AI Act compliance bedrijven
- EU AI regulering praktijk

**\*\*Contact:\*\*** s.veldman@tno.nl  
LinkedIn: [linkedin.com/in/sarahveldman](https://www.linkedin.com/in/sarahveldman)

**\*\*Bron:\*\*** [\[AI Act Gids\]\(https://...\)](#) (12 oct)

# Configuration

## Environment Variables:

```
# Required
ANTHROPIC_API_KEY=key

# Recommended (≥1)
SERPER_API_KEY=key
BRAVE_API_KEY=key

# Optional
TRELLO_API_KEY=key
TRELLO_TOKEN=token
```

## Settings:

- TARGET\_CANDIDATES = 5
- EXCLUDE\_WEEKS = 12
- MAX\_SEARCH\_ITERATIONS = 10

## Trello (Optional):







- Connect to board
- Export to "Spot" list
- Duplicate detection

# Usage

## Complete Workflow:

```
python guest_search.py
```

## What Happens:

1.  Planning Phase → Strategy summary
2.  Search Phase → Progress bar with candidate count
3.  Report Generation → MD file saved
4.  Optional: View report in terminal
5.  Interactive Selection → Browse & select guests
6.  Trello Export → Create cards in "Spot" list

## Alternative Commands:

# Output Files

## Directory Structure:

```
output/  
├── reports/  
│   └── week_41_20251012.md      # Guest report  
  
data/  
├── previous_guests.json        # Deduplication DB  
└── candidates_latest.json     # Latest search results
```

## Report Naming:

- Format: `week_{week}_{date}.md`
- Example: `week_41_20251012.md`
- Automatically dated
- Git-friendly markdown



# Testing Coverage

166 Tests - All Passing 

## Infrastructure:

- API integration (30)
- Search providers (35)
- File operations (25)
- JSON parsing (20)

## More Infrastructure:

- Date logic (15)
- Configuration (10)

## Integrations:

- Web scraping (18)

# Performance & Costs

## API Usage per Run:

### Token Breakdown:

- Planning: ~1,000 tokens
- Search: ~20,000 tokens
  - 8-12 search queries
  - Page content fetching
- Report: ~5,000 tokens

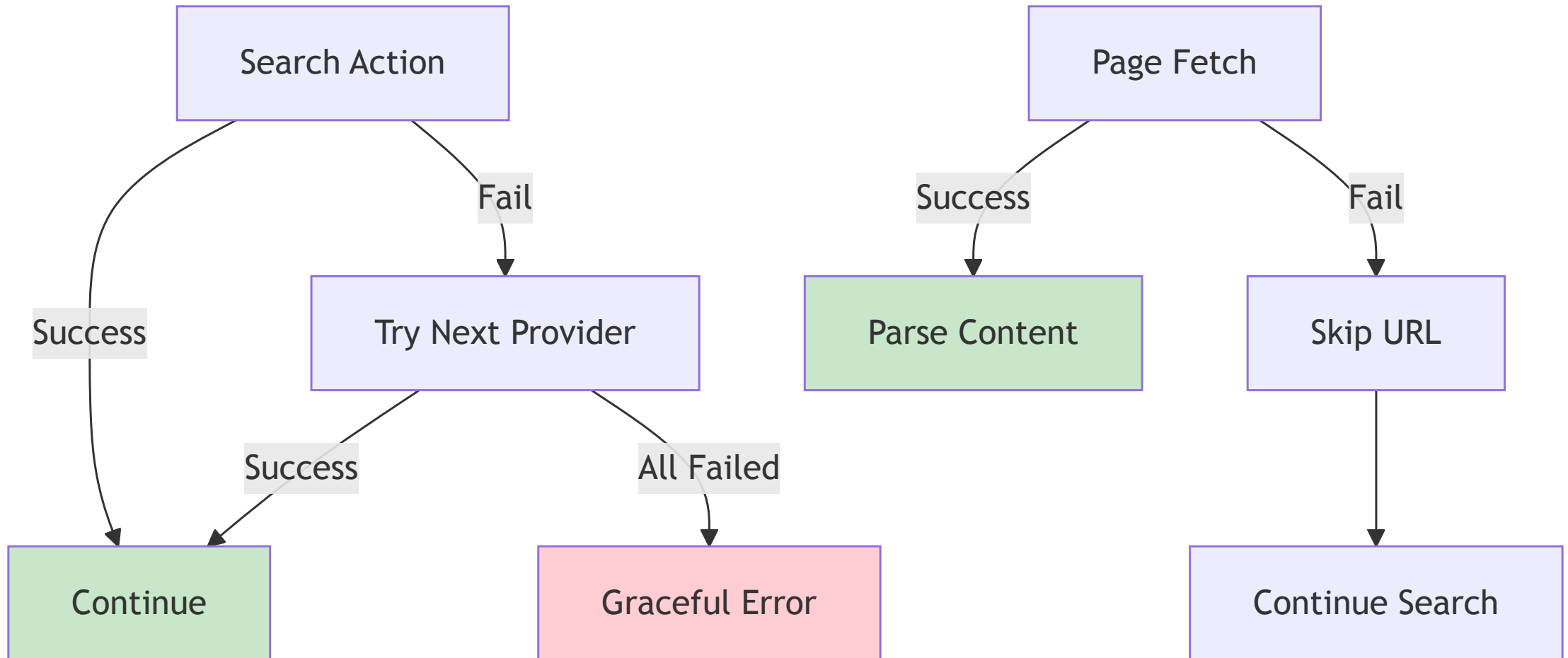
**Total: ~26,000 tokens/run**

### Estimated Costs:

- Claude Sonnet 4: ~\$0.40/run
- Search APIs: Free tier sufficient
- **Total: ~\$0.40 per guest search**

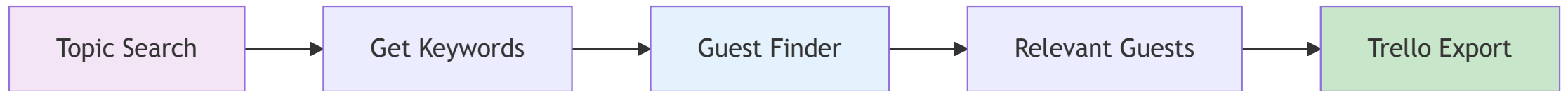
# Error Handling

## Robust Fallback System:



# Integration with Topics

## Workflow: Topics → Guests



## Example Flow:

1. Topic: "RAG implementation in healthcare"
2. Keywords: "RAG, retrieval augmented generation, healthcare AI"
3. Guest Search: Finds Dutch consultants implementing RAG
4. Export: Relevant guests to Trello




**Result:** Topic-aligned guest recommendations

# Best Practices

## Recommended Workflow:

1. **Morning:** Run topic search (separate tool)
2. **Review:** Check topics and extract keywords
3. **Search:** Run guest finder with topic keywords
4. **Select:** Use interactive UI to review candidates
5. **Export:** Send selected guests to Trello
6. **Weekly:** Clean up Trello board (Spot → Contacted)

## Tips:

-  Verify URLs before outreach
-  Update previous\_guests.json manually if needed
-  Keep API keys secure in .env

# Tech Stack

## Core Technologies:

- Python 3.10+
- Anthropic Claude Sonnet 4
- Rich (Terminal UI)
- BeautifulSoup4 (HTML parsing)
- Requests (HTTP client)

## Search Providers:

- Serper API
- SearXNG
- Brave Search API
- Google Scraper (fallback)

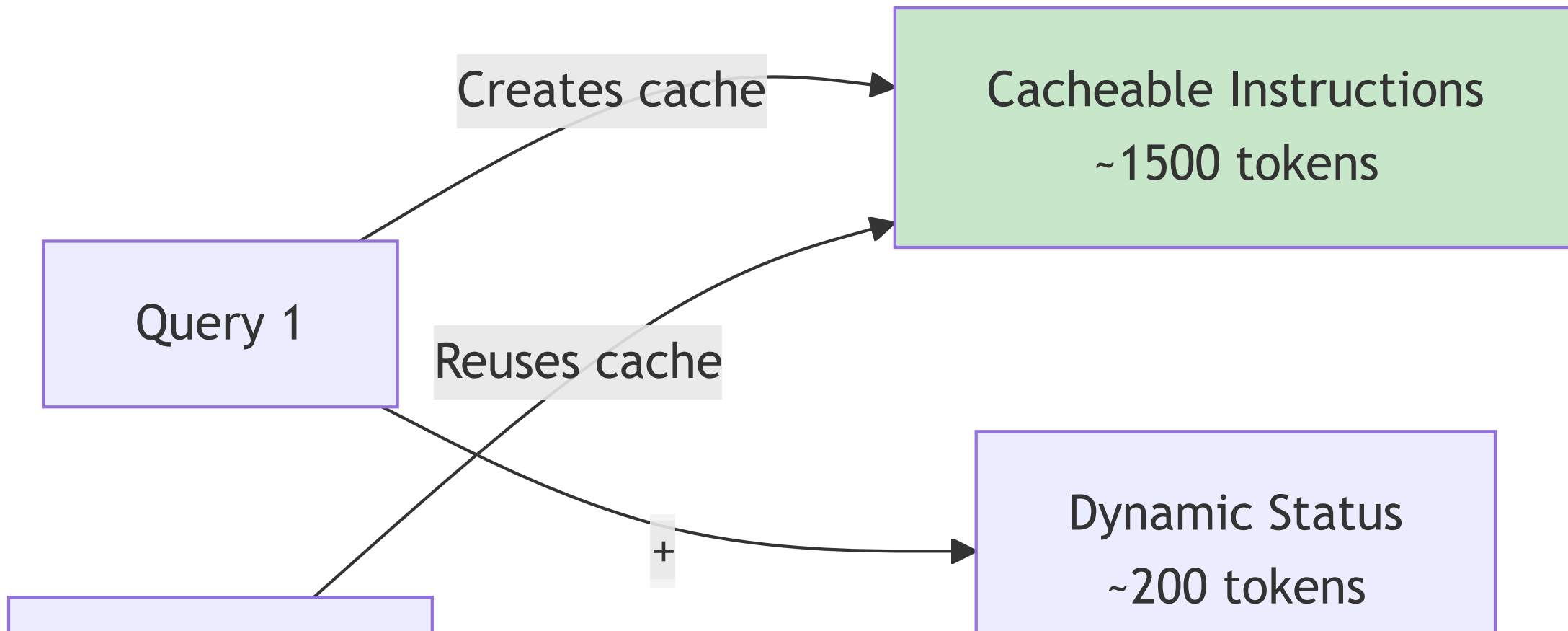
## Testing:

- Pytest (166 tests)
- Unittest.mock

## 💰 Prompt Caching: Cost Optimization

**Problem:** Search phase repeats same ~1500 token instructions 8-12x

**Solution:** Anthropic prompt caching with split prompts



## ✨ Content Enrichment: Rich Trello Cards

**Problem:** Reports had detailed content, but Trello cards only showed basic data

**Before:**

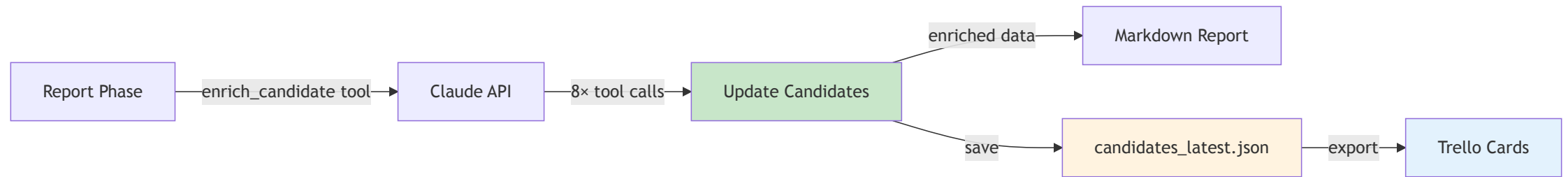
```
{  
  "topics": ["AI", "regelgeving"],  
  "relevance": "Expert op gebied van AI wetgeving"  
}
```

**After (via enrich\_candidate tool):**

```
{  
  "topics": [  
    "Praktische implementatie van de EU AI Act in Nederland",  
    "Privacy- en databeschermingsregels voor AI-systemen"  
  ],  
  "relevance": "Professor Global ICT Law met focus op praktische toepassing van nieuwe AI wetgeving. Expertise op snijvlak van juridische compliance en ethische AI-ontwikkeling..."  
}
```














# Content Enrichment Flow



**Result:** Same rich content in reports AND Trello cards!

# Key Features Summary





## What Makes It Special:

-  **AI-powered strategic planning** - Not just keyword search
-  **Content enrichment** - Rich details for Trello cards
-  **Prompt caching** - 70-80% cost reduction via Anthropic caching
-  **Multi-provider fallback** - Never fails due to rate limits
-  **Automatic name extraction** - Regex-based person detection
-  **Multi-turn conversations** - Proper tool call sequences
-  **Smart deduplication** - 12-week guest tracking
-  **Beautiful terminal UI** - Professional & user-friendly
-  **One-click Trello export** - Seamless workflow with enriched content
-  **Comprehensive testing** - 192 tests, all passing
-  **Cost effective** - \$0.01 per search (with caching)





# Future Enhancements

## Potential Features:

### Integration:

-  LinkedIn profile search
-  Email finder integration
-  Automated outreach drafts
-  Slack/Discord notifications

### Intelligence:







-  Analytics dashboard
-  Weekly scheduled runs
-  Custom search profiles
-  Multi-language support

**Contributions welcome!**

Repository: [https://github.com/Joopsniider/quest\\_search](https://github.com/Joopsniider/quest_search)

# Documentation

## Available Resources:

-  [README.md](#) - Quick start & overview
-  [USAGE.md](#) - Complete usage guide
-  [RATE\\_LIMIT\\_HANDLING.md](#) - Search details
-  [TRELLO\\_SETUP.md](#) - Trello configuration
-  [TEST\\_COVERAGE\\_SUMMARY.md](#) - Test details
-  [architecture.md](#) - Arc42 documentation

**All docs:** Maintained and up-to-date

# Demo Time!

**Let's see the Guest Finder in action:**

1. Strategic Planning Phase
2. Multi-Provider Search
3. Report Generation
4. Interactive Selection UI
5. Trello Export

## Questions?

**Repository:** [https://github.com/Joopsnijder/guest\\_search](https://github.com/Joopsnijder/guest_search)

**License:** MIT

**Built with:** [Claude Code](#) by Anthropic

**Thank You!** 🎉

**Happy Guest Hunting!** 🔍 🎤