



From AI Innovation to Scalable Trust: Why Authoritative Data Matters More in the AI Era

Digital Reporting Europe
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BANGARANGA

AI has changed the game.
Trust changes the outcome.



From AI innovation
to scalable trust.

More data. More speed. More generation.
In the AI era, authenticity is our greatest advantage.

Trust is the foundation for
confident decisions, resilient
systems and sustainable growth.



ACCELERATING
INNOVATION

Leveraging AI
to unlock new
possibilities.



EXPANDING
POSSIBILITIES

More connections.
More potential.



INCREASING
UNCERTAINTY

Complexity grows.
Risk multiplies.



BUILDING
TRUST

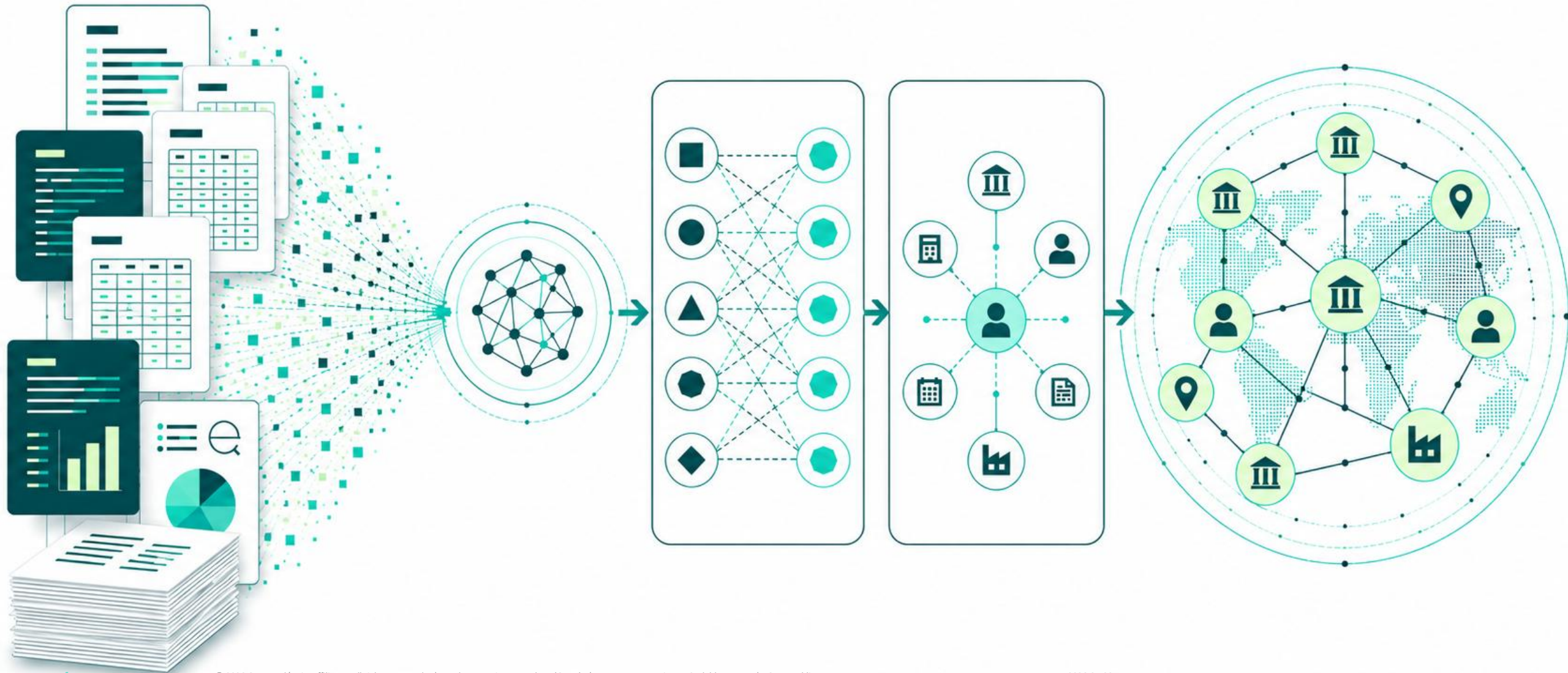
Corroboration.
Confidence. Clarity.





Automating Parent-Subsidiary Relationship Extraction from Unstructured Annual Reports

Relationships are where complexity begins





Click to upload PDF

Ready to extract consolidated subsidiary companies.

The system is pre-configured with a specialized prompt for subsidiary extraction.

1. Extraction Method

Native PDF (Default)

Sends the raw PDF file. Best for digital documents.

All Pages as Images

Converts pages to images. Good for scanned docs.

Page-by-Page Images

Processes each page individually.

2. Model

Flash

Flash-Lite

Enable Self-Reflection

AI fixes its own mistakes. Slower but more accurate.

Run Extraction



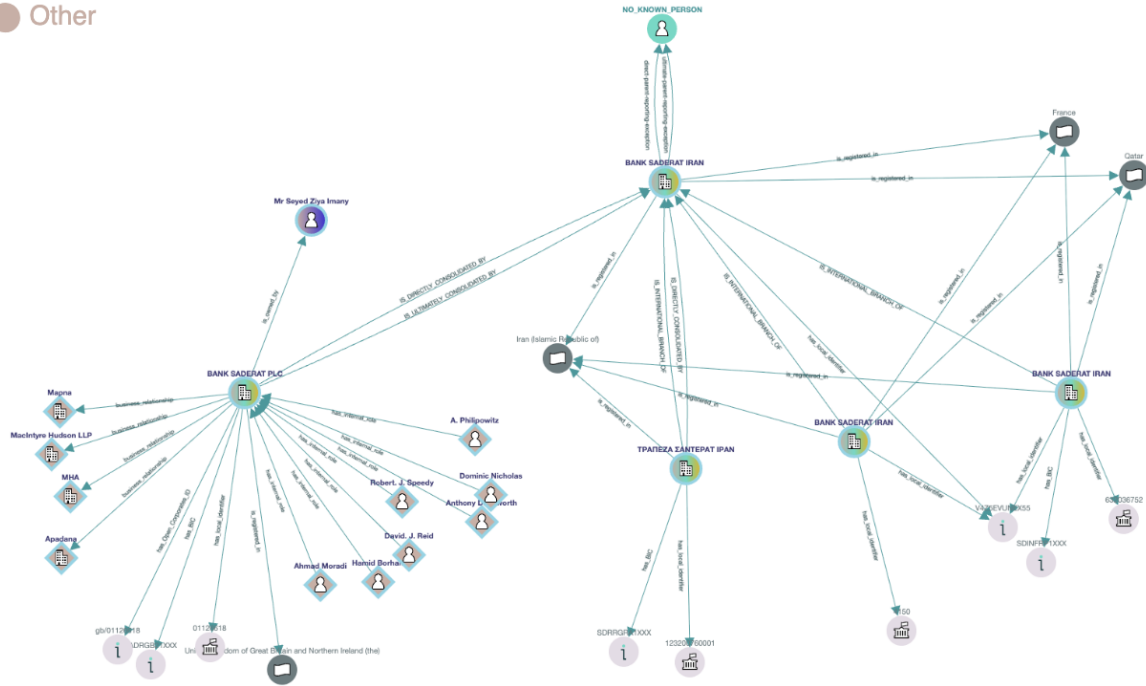
Upload a PDF to begin extraction



The Transparency Fabric

- GLEIF
- Open Ownership
- Open Sanctions
- Other

- ◇ AI-extracted
- AI-confirmed



Nothing selected

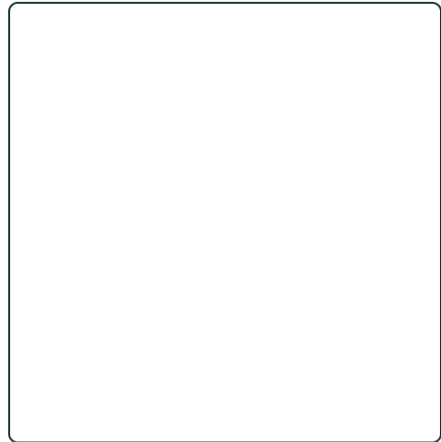


- Select a node to display additional information!
- Click on a node and hold it in order to drag the node around
- You can also zoom in or out with the mouse wheel
- Click anywhere on the canvas and hold to move the graph around

Source URLs



AI-extracted insights



Source: <https://transparencyfabric.gleif.org/>

Click to highlight information source!

Click to highlight sanction risks!

Click to reset the plot!

Network has been enriched!

GEPA – Genetic Pareto Reflective Prompt Evolution

When to use

- Labelled data or reliable human feedback is available.
- Cost & time constraints must be met.

What it is

- Optimizes prompts by natural language reflections on full system rollouts.
- Uses **genetic search** to propose numerous improved prompt variants.
- Uses **pareto selection** to keep multiple best trade-offs.
- Applies Test & Merge approach:
 - Evaluates on labelled data & folds back the winners.
 - Fast and efficient performance lift with labelled data or human feedback.
 - **Measurable quality gains without retraining a model.**



GEPA – Genetic Pareto Reflective Prompt Evolution

Optimized prompt achieved a better performance with a smaller and cheaper model. Mean F1 improved +0.165.

Initial Prompt

```
INITIAL_INSTRUCTION = """
You are an expert annual report analyst.

Task:
Analyze the provided annual report to identify the parent company
(owner of the report)
and extract ALL subsidiaries belonging to that parent.

Subsidiary definition (STRICT):
- A subsidiary is a separate legal entity controlled by the parent
  and included in the parent's consolidated financial statements
  (accounting consolidating parent-child relationship).
- Branches are part of the same legal entity as their head office and are NOT subsidiaries.
- Non-consolidated entities (associates, joint ventures, unconsolidated investments)
  are NOT subsidiaries.

Extraction Hints:
- Use consolidation scope/notes, group structure diagrams, and "Consolidated subsidiaries" tables.
- Prefer explicit mentions of inclusion in consolidated accounts.
- Provide exact legal names as listed in the report.

Output Format (STRICT):
Return ONLY a valid JSON array (no prose/markdown).
Each item must be: {"Name","Page","Explanation"}.
"""
```

Optimized prompts provide detailed instructions, guiding the model to an improved performance

Optimized Prompt

```
GEPA_OPTIMIZED_INSTRUCTION = """
You are an expert annual report analyst specializing in corporate structures.

Your task is to analyze the provided annual report to identify the parent company (the company that the report is about) and then extract a comprehensive list of ALL its subsidiaries.
You must adhere strictly to the definitions and rules below.

### Subsidiary Definition (STRICT)
A subsidiary MUST meet all of the following criteria:
1. Separate Legal Entity: It must be a distinct legal entity (e.g., ending in Ltd., Inc., S.p.A., GmbH, PLC).
2. Controlled by Parent: The parent company must have control over it (typically >50% voting rights).
3. Consolidated: It MUST be included in the parent company's consolidated financial statements.
   This is the most important rule. An entity is only a subsidiary for this task if its financials are consolidated on a line-by-line basis with the parent's.

### Crucial Exclusions (What NOT to extract)
You must be extremely careful to EXCLUDE the following, even if they are mentioned in the report:
- Non-Consolidated Entities: Associates, joint ventures, joint operations, or any other investments accounted for using the equity method are NOT subsidiaries.
- Branches: Branches, agencies, or representative offices are part of the same legal entity as their head office and are NOT separate subsidiaries.
- Structured Entities (SEs) / Special Purpose Vehicles (SPVs): Do not extract securitization vehicles, investment funds, trusts, or similar entities, even if they are consolidated.
   The focus is on traditional operating and holding company subsidiaries.
- Brand/Trading Names: Only extract full, official legal entity names. Do not extract brand names, divisions, or business segments (e.g., "Company X's Retail Arm").
- Future/Past Entities: Do not include entities that were acquired or disposed of after the reporting period ended.

### Extraction Strategy & Hints
1. Identify the Parent: First, confirm the name of the parent company publishing the report (usually on the cover page).
2. Locate the Definitive List: The most reliable source is a dedicated list or table within the report. Search thoroughly for sections titled:
   - "Scope of Consolidation" or "Basis of Consolidation"
   - "List of Group Companies" or "Group Undertakings"
   - "Principal Subsidiaries" or "Significant Subsidiaries"
   - "Consolidated Entities"
   These lists are almost always found in the Notes to the Consolidated Financial Statements, which can be very late in the document (e.g., page 150 or later). Be persistent.
3. Verify Consolidation Status: Do not simply extract any entity called a "subsidiary". You must find explicit proof that it is consolidated. A table listing "consolidated companies" is the best evidence.
4. Use Diagrams with Caution: Corporate structure diagrams are useful starting points, but you MUST verify each entity from the diagram against a list or note that confirms its consolidation status.
   Diagrams alone are not sufficient proof.
5. Be Precise: Extract the exact, full legal names as they appear in the report.

### Output Format (STRICT)
- You MUST return ONLY a valid JSON array.
- Do not include any introductory text, explanations, or markdown formatting like ```json. Your entire response must be the JSON array itself.
- Each object in the array must contain three string keys: "Name", "Page", and "Explanation".

- "Name": The exact legal name of the subsidiary.
- "Page": A string containing the primary page number(s) where you found the evidence for its inclusion.
- "Explanation": A concise sentence that directly proves the entity meets the definition. It must state the type of evidence found.
   - Good Example: "Explanation": "Listed in the 'Scope of Consolidation' table on page 215, which details all fully consolidated companies."
   - Bad Example: "Explanation": "Mentioned as a subsidiary on page 30." (This is too vague).
"""
```

Takeaway

Do not guess better prompts – Use the LEI data to evolve them.



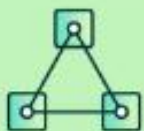


Search is evolving

METRIC IN MOTION

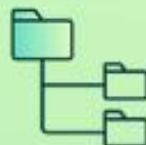
The Trust Gap in a Data-Driven World

Unlocking Trusted Entity Data for Seamless Global Interoperability



Growing Complexity

Navigating interconnected global economies requires high-quality information.



The Accessibility Barrier

Trusted data is often fragmented across different APIs, databases, and documents.



The AI Trust Paradox

Users only trust AI-generated answers when they are rooted in high-quality data and transparent citations.

The Solution

GLEIF AI Search

Transforming Data into Opportunities

GLEIF AI Search is a coordinated system designed to deliver **clear, well-sourced,** and **verifiable** answers.

It moves users from fragmented information to **actionable insights** that are easy to understand and check.



GLEIF AI Search: Smarter Discovery, Trusted Answers

How It Works

Three Layers of Intelligent Discovery



Chat Interface



Orchestration Layer



Connectors (MCP Servers)



GLEIF
Website



Document
Search



GLEIF
API



Business
Statistics

Why Quality Matters



Transparent Attribution

Users see exactly where an answer comes from.



Verifiable Discovery

Information is grounded in authoritative references.



Lowered Barriers

Experts and non-experts alike can benefit from complex LEI data.



ON THIS PAGE

How does it work?

Available connectors

Getting Started (Examples)

Try these prompts

Privacy & data

Troubleshooting

Feedback

Available connectors



LEI Search (GLEIF API)

Good for asking:

- Find the LEI for Apple Inc.
- Where can I obtain an LEI in Switzerland?
- List the subsidiaries of Volkswagen AG.

Paste these into your assistant's connector form:

Name

GLEIF LEI Search



Description

Search the global LEI database, look up entities, and explore corporate relationships.



Server URL

https://mcp.gleif.org/gleif-api/mcp



Optional connector icon:



Download icon



Statistics (Global LEI Index)

Good for asking:

- How many active LEIs are there worldwide?
- Top 10 countries by LEIs issued last quarter.
- LEI growth rate in Germany over the past year.

Paste these into your assistant's connector form:

Name

GLEIF Statistics



Description

Query LEI count metrics, growth rates, and trends across jurisdictions and issuers.



Server URL

https://mcp.gleif.org/lei-statistics/mcp



Optional connector icon:



Download icon

Takeaway

Do not let AI guess
– Connect it to
trusted LEI data.



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