

Methodology: SEO vs. GEO Impact

Transitioning from Search Engines to Answer Engines

1. Study Scope Standardization

To ensure a statistically valid comparison, the analysis is strictly confined to a fixed set of competitors and a standardized keyword baseline.

A. The Competitive Set

The algorithm tracks 9 pre-defined market players to ensure consistent benchmarking over time:

- **Core Process Mining:** Celonis, UiPath, Appian, Pega Systems.
- **Enterprise Giants:** SAP, Microsoft, IBM, ServiceNow, Palantir.

B. Strategic Topic Clusters

The Brand Intelligence Engine is architected to monitor market perception across five high-value strategic pillars. While the system supports multi-keyword analysis, this report focuses on the ****Primary Core Capability**** to establish the initial calibration:

1. **Process Mining (Current Baseline)**
2. Enterprise AI
3. Digital Transformation
4. Supply Chain Transformation
5. Digital Twin

C. Query Construction Strategy

For the active baseline, the system programmatically generates two distinct query types. All metrics in this specific analysis are measured against the high-intent focus keyword: **"Process Mining"**.

2. X-Axis: Traditional SEO (Visibility Score)

The X-Axis measures the brand's visibility in organic search ("Blue Links") via the Google Search API.

Attribution Strategy (Domain Matching)

To ensure accuracy, rankings are only counted if the result links directly to the brand's **owned domain** (e.g., celonis.com). Third-party mentions (e.g., Wikipedia or G2 Reviews) are excluded to isolate direct brand authority.

The "Click-Curve" Scoring Model

Since user click-through rates (CTR) drop exponentially on search result pages, we apply a **non-linear scoring model**. A linear scale would falsely imply that Rank 10 is "half as good" as Rank 5, which contradicts user behavior.

Organic Position	Assigned Score	Rationalization
Rank 1	100 pts	Maximum Visibility (30% CTR)
Rank 2	70 pts	High Visibility
Rank 3	50 pts	Above the Fold
Rank 4–5	30 pts	Visible without scrolling
Rank 6–10	15 pts	First Page presence (Low CTR)
Rank > 10	5 - 0 pts	Marginal Visibility

3. Z-Axis: Semantic Footprint (Bubble Size)

The size of each bubble represents the brand's total volume of content within the topic cluster ("Share of Topic").

Logarithmic Normalization

Raw search volume data spans several orders of magnitude (e.g., Microsoft: 10^6 results vs. Specialized Vendors: 10^3). To visualize this disparate data on a single chart without distortion, we apply **Logarithmic Scaling**.

$$\text{Bubble Size (px)} = 10 + (10 \times \log_{10}(\text{Total Results}))$$

This mathematical transformation ensures that niche market leaders remain visible next to global conglomerates, providing a fair visual comparison of relative market presence.

4. Y-Axis: GEO / Perplexity (Recommendation Score)

The Y-Axis represents the "Referral Probability" in AI answer engines. We utilize the **Perplexity API** to simulate a high-intent buyer asking for a vendor shortlist.

A. Simulation Prompting

The system acts as a "Technical Market Researcher" and issues the query: *"Who are the top 5 leading software providers for [Keyword]?"*. The AI is strictly instructed to judge based on current market relevance and authority.

B. Deterministic Parsing Scoring

The system parses the raw JSON output to extract the explicit ranking. Since inclusion in the "Top 5" is the primary goal of GEO, the scoring is tiered:

AI Recommendation	GEO Score	Strategic Value
Rank 1	100 pts	"The Best Solution" (Primary Rec.)
Rank 2	80 pts	Top Contender
Rank 3	60 pts	Podium Finish
Rank 4–5	40 pts	Shortlisted
Not Mentioned	0 – 20 pts	Invisible / Hallucination

5. Strategic Interpretation (The Matrix)

By correlating SEO (Legacy Search) and GEO (AI Search), we classify market position:

- **High SEO / High GEO:** The Market Authority (Maximum Trust).
- **Low SEO / High GEO:** The "Hidden Gem" (AI favorite, technically strong).
- **High SEO / Low GEO:** The "Legacy Giant" (Good links, but AI prefers modern alternatives).