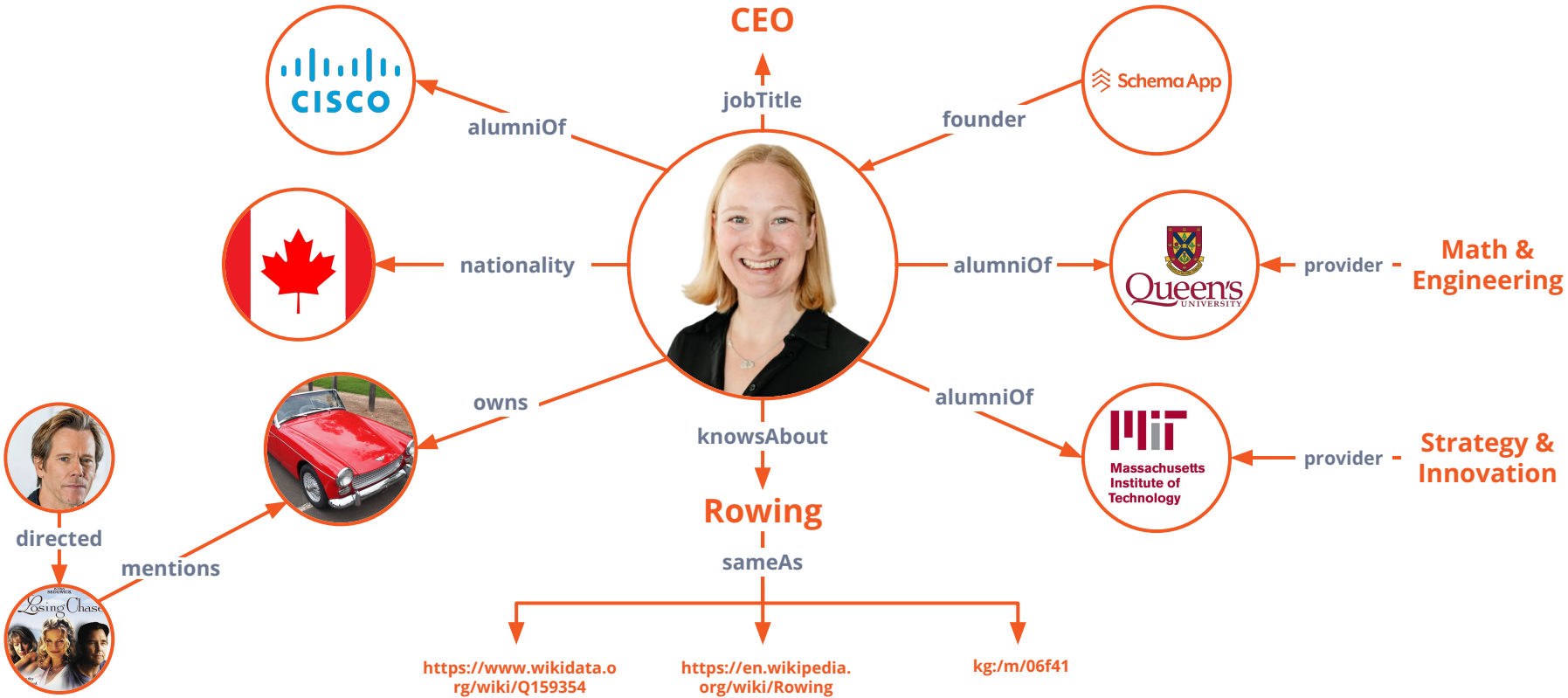
Owning AI Search with Knowledge Graphs

Actionable Strategies to Move from Schema Markup to Market Impact

Martha van Berkel

Schema App

Martha van Berkel's Knowledge Graph



Do you have Schema Markup on your website today?

Schema Markup

(aka Structured Data)

is Data for AI

```
<script type="application/ld+json">
{
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    "@id": "https://www.schemaapp.com/#Organization",
    "url": "https://www.schemaapp.com/",
    "name": "Schema App",
    "legalName": "Hunch Manifest Inc",
    "description": "Schema App is an end-to-end schema markup solution",
    "telephone": "+18554448624",
    "knowsLanguage": "http://www.wikidata.org/entity/Q1860",
    "areaServed": "http://www.wikidata.org/entity/Q13780930",
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        "https://twitter.com/schemaapptool",
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    ],
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        "name": "Schema App Address",
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        "postalCode": "N1G 3X7",
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        "addressLocality": "Guelph",
        "addressCountry": "Canada"
    }
}
</script>
```

Schema Markup Is the Bridge Between Your Brand and AI Understanding.

Schema App

AI Chatbots drive higher quality traffic than Google

Feb 2025

Mar 2025

Google confirmed they're using Schema Markup for Gen AI

Microsoft confirmed that Schema Markup LLMs understanding

Google still has no measure for AIO

John Mueller – Structured Data can improve targeting

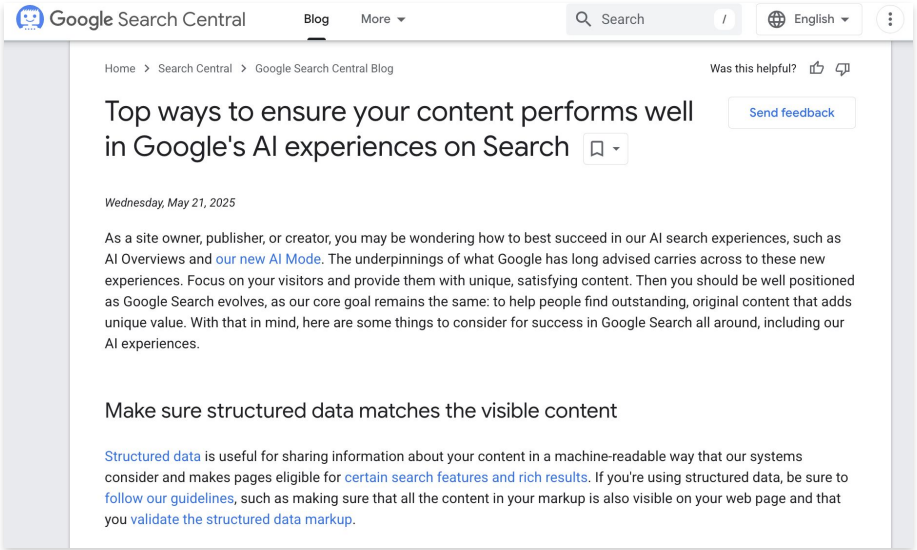
Apr 2025

May 2025

Google and Microsoft say structured data helps with AI experiences.

May 2025

Google reiterated the importance of Structured Data for ensuring your content performs well on their AI experiences



Source: Google Search Central Blog, May 21, 2025 – [Top ways to ensure your content performs well in Google's AI experiences on Search]

Schema App

Bing

Structured Data plays a vital role in IndexNow

- IndexNow tells search engines *that* something has changed, while structured data tells them *what* has changed.

Source: Microsoft Bing, May 20, 2025 – [IndexNow Enables Faster and More Reliable Updates for Shopping and Ads]

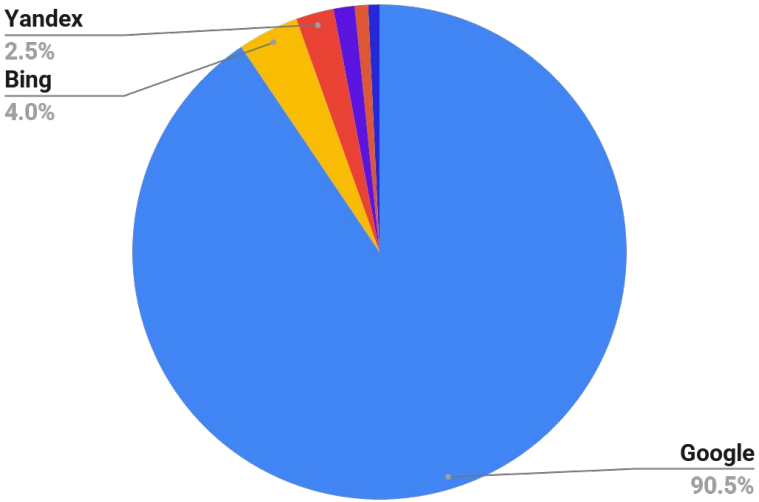
When paired with IndexNow, structured data plays a vital role. IndexNow tells search engines *that* something has changed, while structured data tells them *what* has changed. Together, they improve both speed and accuracy in indexing.

To maximize indexing and visibility, we recommend including:

- **title** (name in JSON-LD)
- **description**
- **price** (list/retail price)
- **link** (product landing page URL)
- **image link** (image in JSON-LD)
- **shipping** (especially important for Germany and Austria)
- **id** (a unique identifier for the product)
- **brand**
- **gtin**
- **mpn**
- **datePublished**
- **dateModified**

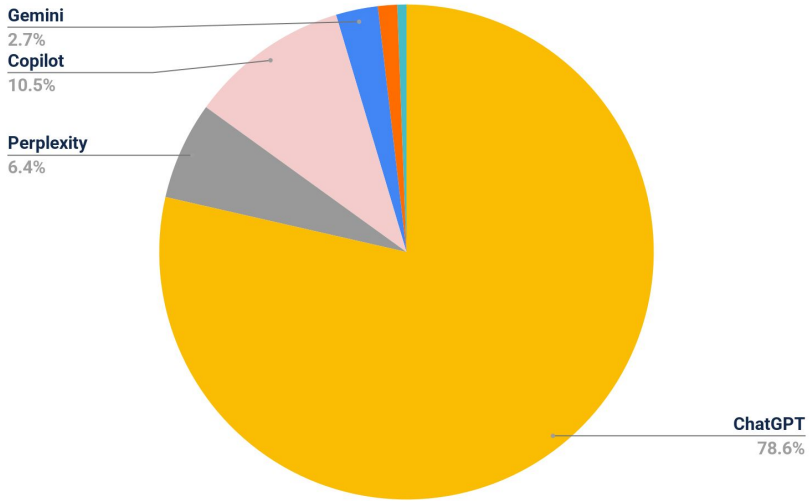
Google & ChatGPT are dominating the search space

Search Engine Worldwide Market Share



Source: statcounter, July 2025 – Search Engine Market Share Worldwide | Statcounter Global Stats

AI Chatbot US Market Share



Source: statcounter, August 2025 – AI Chatbot Market Share Worldwide | Statcounter Global Stats

Schema App

aiso

Pages with Schema Markup were more accurately understood, summarized, and sourced by AI.

Source: Get AISO, January 6 2025, [Schema Markup vs No Schema: A Real ChatGPT Experiment Reveals Surprising Results]

📊 Experiment Results

We asked ChatGPT identical questions about both versions and analyzed the responses for accuracy, completeness, and presentation quality.

Results Summary

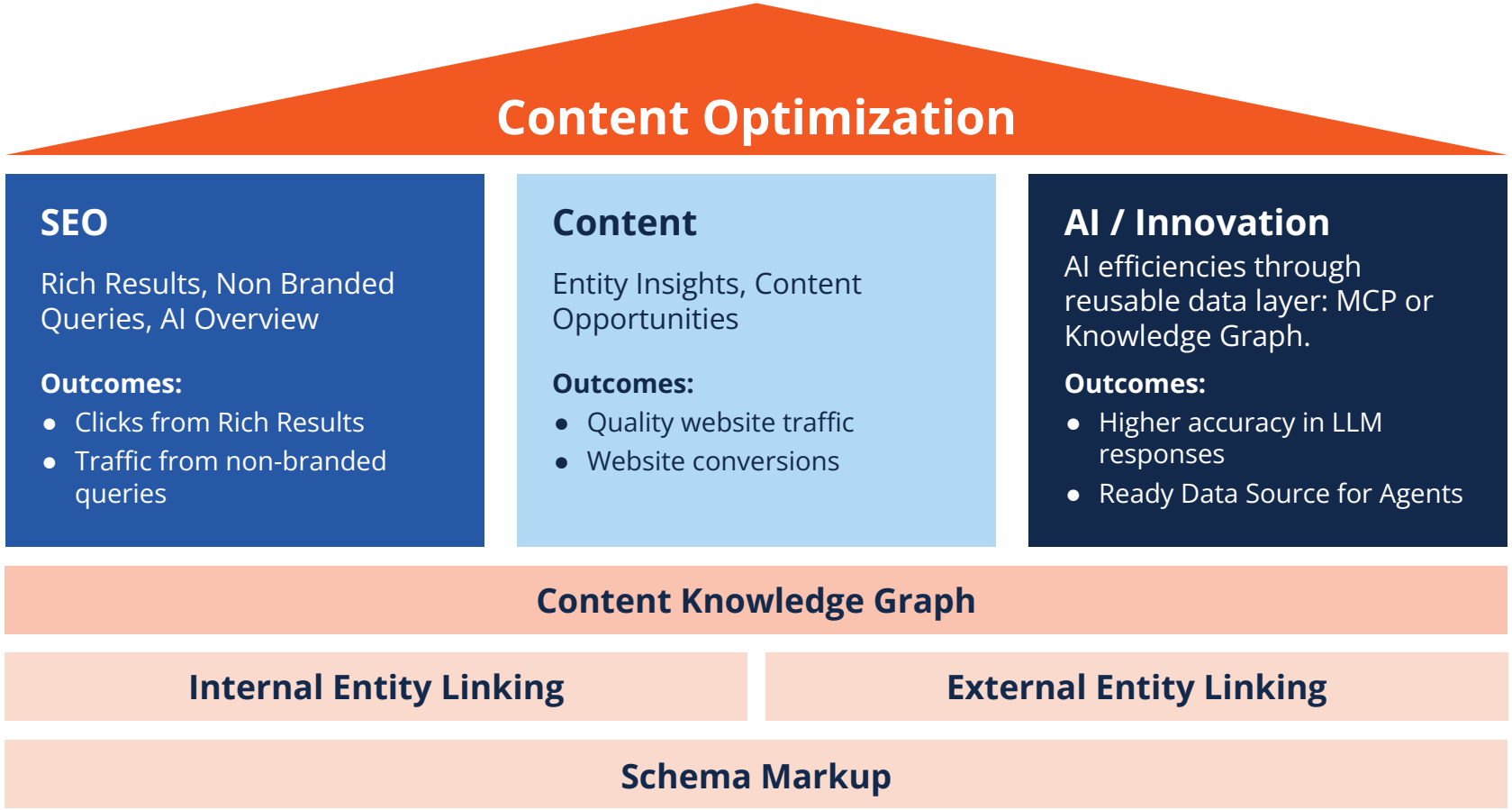
Company Overview	Product Pricing	CEO Background	Awards & Recognition	Contact Information
7/10 Without Schema	6/10 Without Schema	7/10 Without Schema	6/10 Without Schema	7/10 Without Schema
VS	VS	VS	VS	VS
9/10 With Schema	9/10 With Schema	8/10 With Schema	9/10 With Schema	8/10 With Schema

Schema Markup Average: 8.6/10

No Schema Average: 6.6/10

📈 **30% Improvement with Schema Markup**

Schema App


Content Optimization
SEO
Rich Results, Non Branded Queries, AI Overview
Outcomes:
Clicks from Rich Results
Traffic from non-branded queries
Content
Entity Insights, Content Opportunities
Outcomes:
Quality website traffic
Website conversions
AI / Innovation
AI efficiencies through reusable data layer: MCP or Knowledge Graph.
Outcomes:
Higher accuracy in LLM responses
Ready Data Source for Agents
Content Knowledge Graph
Internal Entity Linking
External Entity Linking
Schema Markup

Schema App

Advanced Schema Markup Best Practices

Schema App

#1.

Ensure your Schema Markup has both *depth* and *breadth* across your entire site to optimize for AI understanding

Schema App

Breadth = Implementing Schema Markup on all key pages on your website

Don’t limit Schema Markup implementation only to rich result–eligible pages.

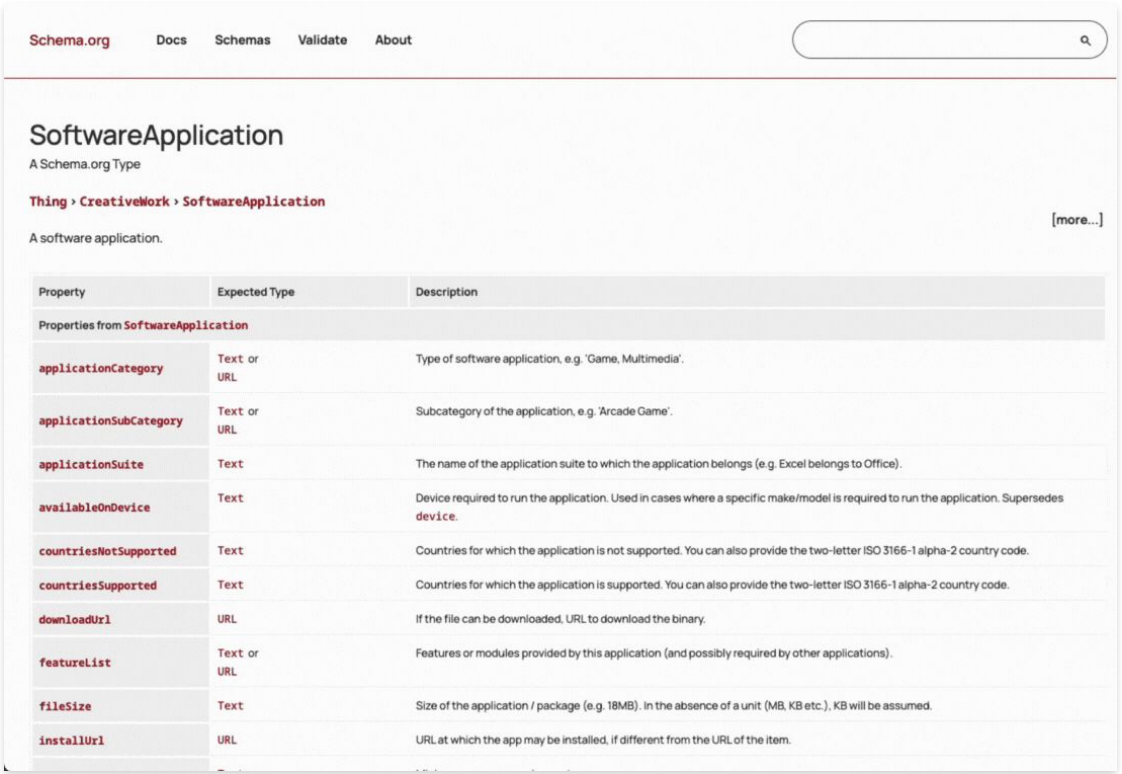
Schema App

Depth = Describing the content and entity relationships on your key pages using Schema Markup

Avoid basic Schema Markup focused only on rich results.

Schema App

Maximize the Properties available



Schema.org Docs Schemas Validate About

SoftwareApplication

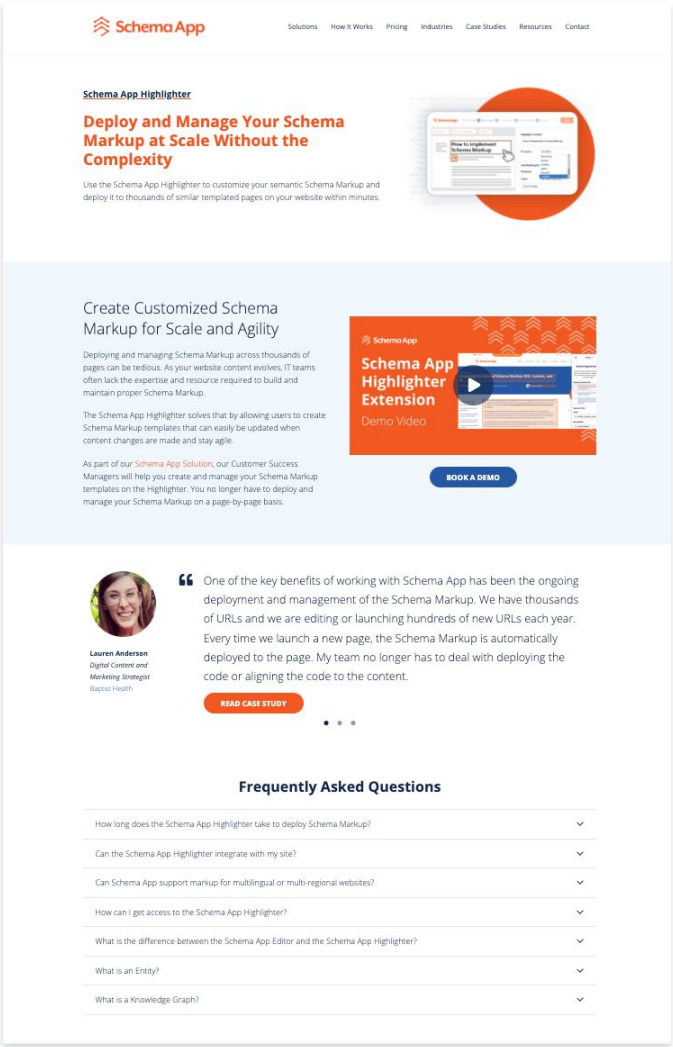
A Schema.org Type

Thing › CreativeWork › SoftwareApplication

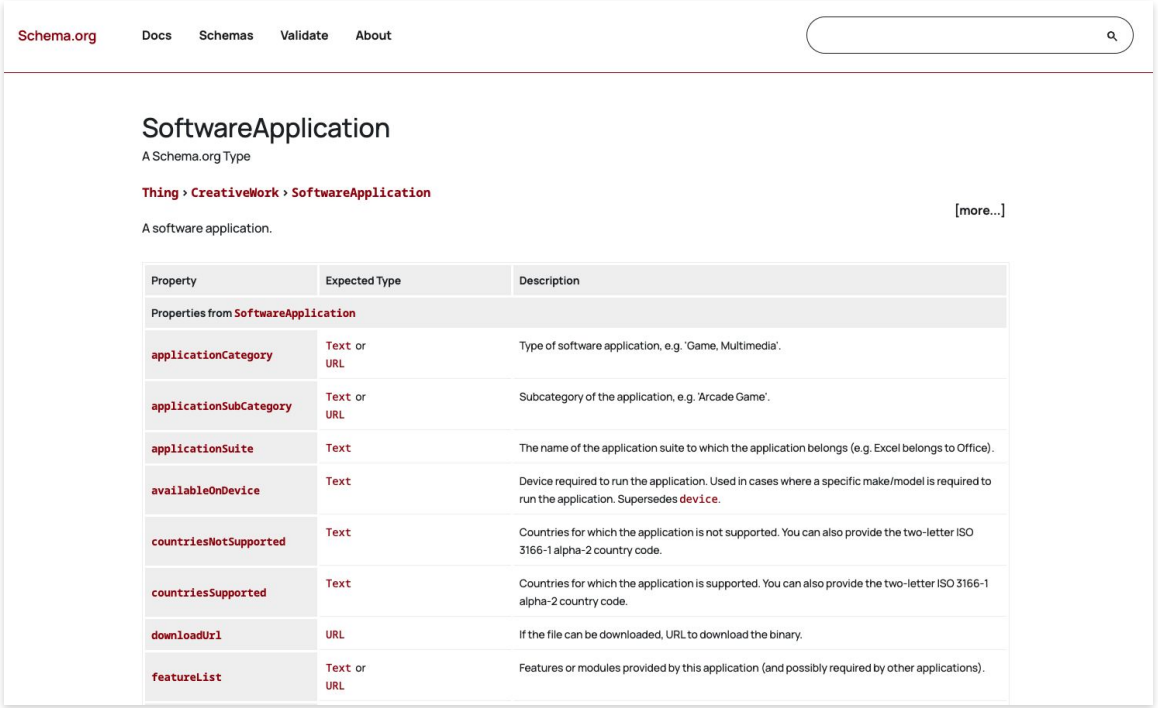
A software application. [more...]

Property	Expected Type	Description
Properties from SoftwareApplication		
applicationCategory	Text or URL	Type of software application, e.g. 'Game, Multimedia'.
applicationSubCategory	Text or URL	Subcategory of the application, e.g. 'Arcade Game'.
applicationSuite	Text	The name of the application suite to which the application belongs (e.g. Excel belongs to Office).
availableOnDevice	Text	Device required to run the application. Used in cases where a specific make/model is required to run the application. Supersedes device.
countriesNotSupported	Text	Countries for which the application is not supported. You can also provide the two-letter ISO 3166-1 alpha-2 country code.
countriesSupported	Text	Countries for which the application is supported. You can also provide the two-letter ISO 3166-1 alpha-2 country code.
downloadUrl	URL	If the file can be downloaded, URL to download the binary.
featureList	Text or URL	Features or modules provided by this application (and possibly required by other applications).
fileSize	Text	Size of the application / package (e.g. 18MB). In the absence of a unit (MB, KB etc.), KB will be assumed.
installUrl	URL	URL at which the app may be installed, if different from the URL of the item.

Example


Schema App
Solutions
How It Works
Pricing
Industries
Case Studies
Resources
Contact
Schema App Highlighter
Deploy and Manage Your Schema Markup at Scale Without the Complexity
Use the Schema App Highlighter to customize your semantic Schema Markup and deploy it to thousands of similar templated pages on your website within minutes.
Create Customized Schema Markup for Scale and Agility
Deploying and managing Schema Markup across thousands of pages can be tedious. As your website content evolves, IT teams often lack the expertise and resource required to build and maintain proper Schema Markup.
The Schema App Highlighter solves that by allowing users to create Schema Markup templates that can easily be updated when content changes are made and stay agile.
As part of our Schema App Solution, our Customer Success Managers will help you create and manage your Schema Markup templates on the Highlighter. You no longer have to deploy and manage your Schema Markup on a page-by-page basis.
Schema App
Schema App Highlighter Extension
Demo Video
BOOK A DEMO
Lauren Anderson
Digital Content and Marketing Strategist
Baptist Health
One of the key benefits of working with Schema App has been the ongoing deployment and management of the Schema Markup. We have thousands of URLs and we are editing or launching hundreds of new URLs each year. Every time we launch a new page, the Schema Markup is automatically deployed to the page. My team no longer has to deal with deploying the code or aligning the code to the content.
READ CASE STUDY
Frequently Asked Questions
How long does the Schema App Highlighter take to deploy Schema Markup?
Can the Schema App Highlighter integrate with my site?
Can Schema App support markup for multilingual or multi-regional websites?
How can I get access to the Schema App Highlighter?
What is the difference between the Schema App Editor and the Schema App Highlighter?
What is an Entity?
What is a Knowledge Graph?

Leverage Schema.org properties to describe the content



Schema.org Docs Schemas Validate About

SoftwareApplication

A Schema.org Type

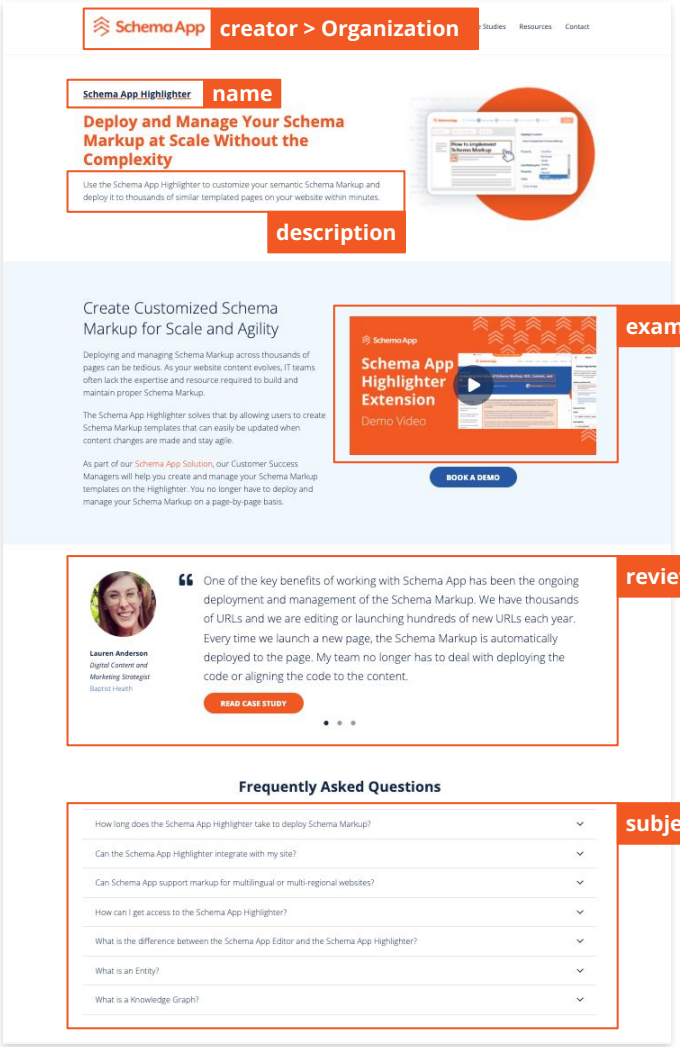
Thing › CreativeWork › SoftwareApplication

A software application. [more...]

Property	Expected Type	Description
Properties from SoftwareApplication		
applicationCategory	Text or URL	Type of software application, e.g. 'Game, Multimedia'.
applicationSubCategory	Text or URL	Subcategory of the application, e.g. 'Arcade Game'.
applicationSuite	Text	The name of the application suite to which the application belongs (e.g. Excel belongs to Office).
availableOnDevice	Text	Device required to run the application. Used in cases where a specific make/model is required to run the application. Supersedes device.
countriesNotSupported	Text	Countries for which the application is not supported. You can also provide the two-letter ISO 3166-1 alpha-2 country code.
countriesSupported	Text	Countries for which the application is supported. You can also provide the two-letter ISO 3166-1 alpha-2 country code.
downloadUrl	URL	If the file can be downloaded, URL to download the binary.
featureList	Text or URL	Features or modules provided by this application (and possibly required by other applications).

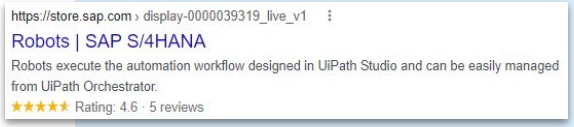
Schema App

Properties used to describe the SoftwareApplication and its relationship to other things on the page/the website



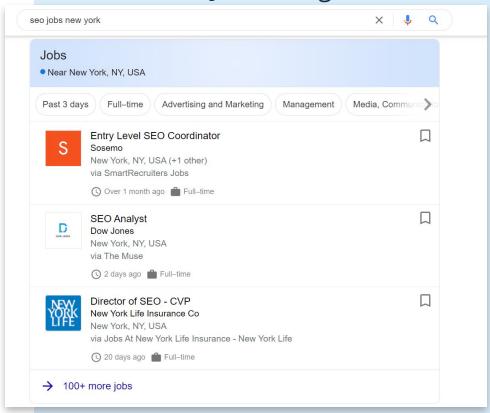
Schema Markup drives Rich Results

Review Snippet

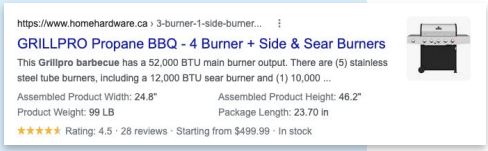


Recipe Rich Result

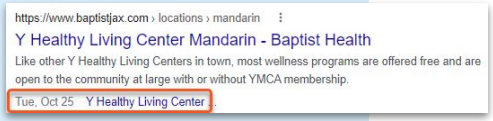
Job Listing Rich Result



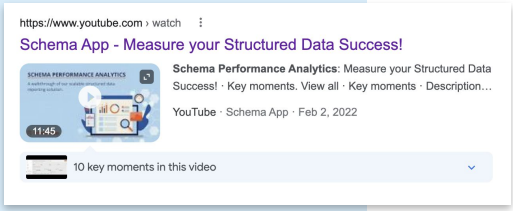
Product Rich Result



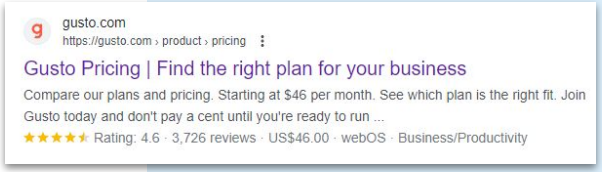
Event Rich Result



Video Rich Result

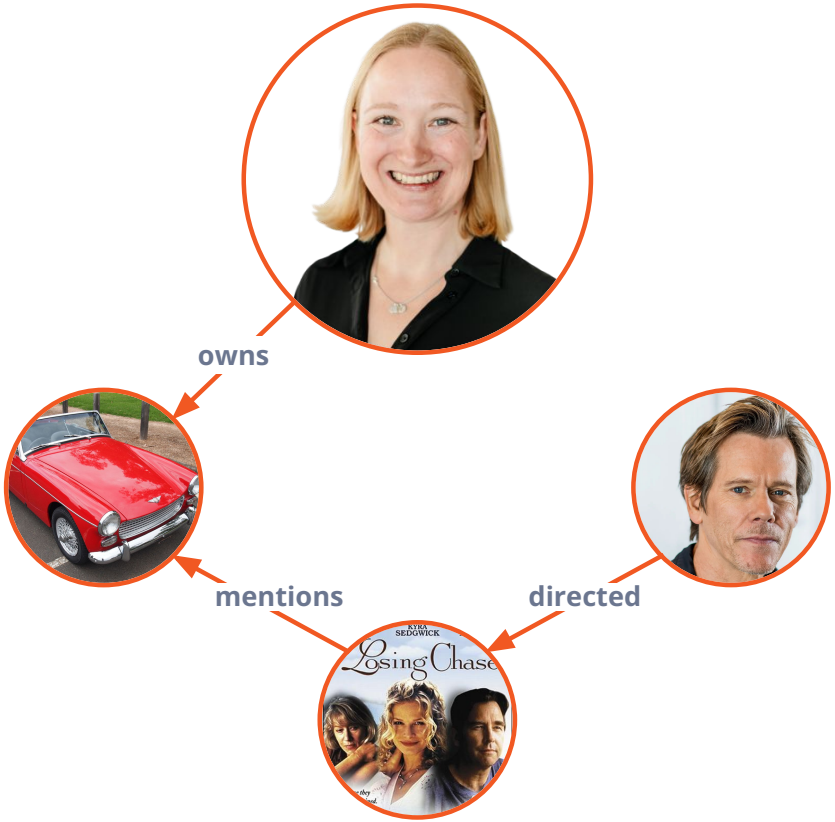


Software App Rich Result



Machines need to be able to ***infer*** things to answer questions

How? By understanding the relationship between things.



Schema App

Schema Markup
to achieve
Rich Results

Schema Markup
to build a *Content*
Knowledge Graph

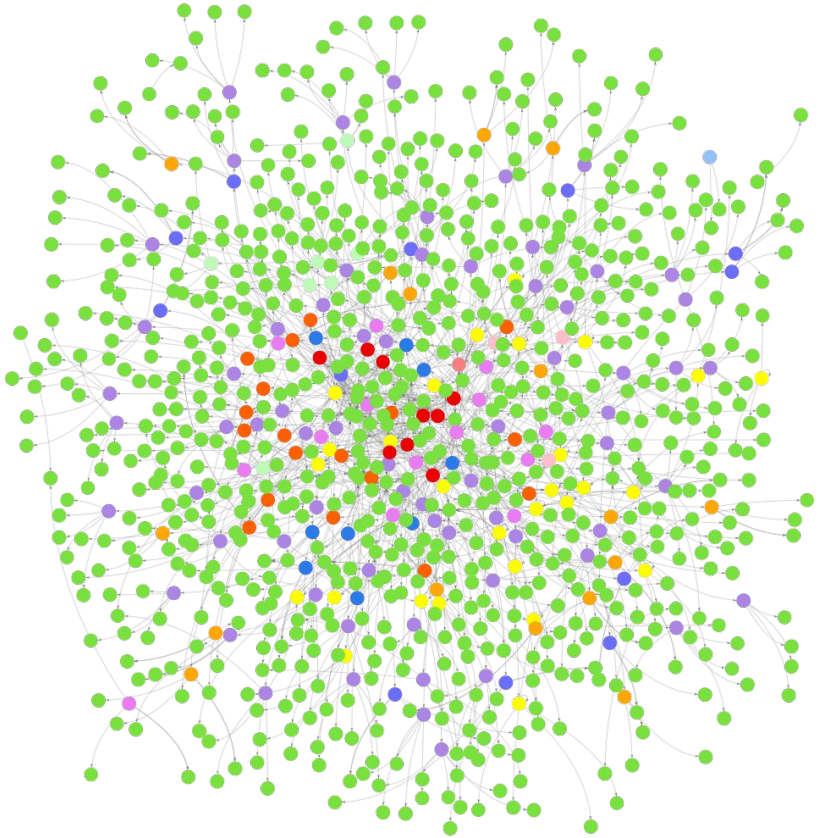
Schema App

What is a **Content Knowledge Graph**?

A collection of relationships between the ***entities defined within the content on your website*** using a standardized vocabulary, from which new knowledge can be gained through inferencing.

Schema App

Schema Markup
builds a Content Knowledge Graph
from your content



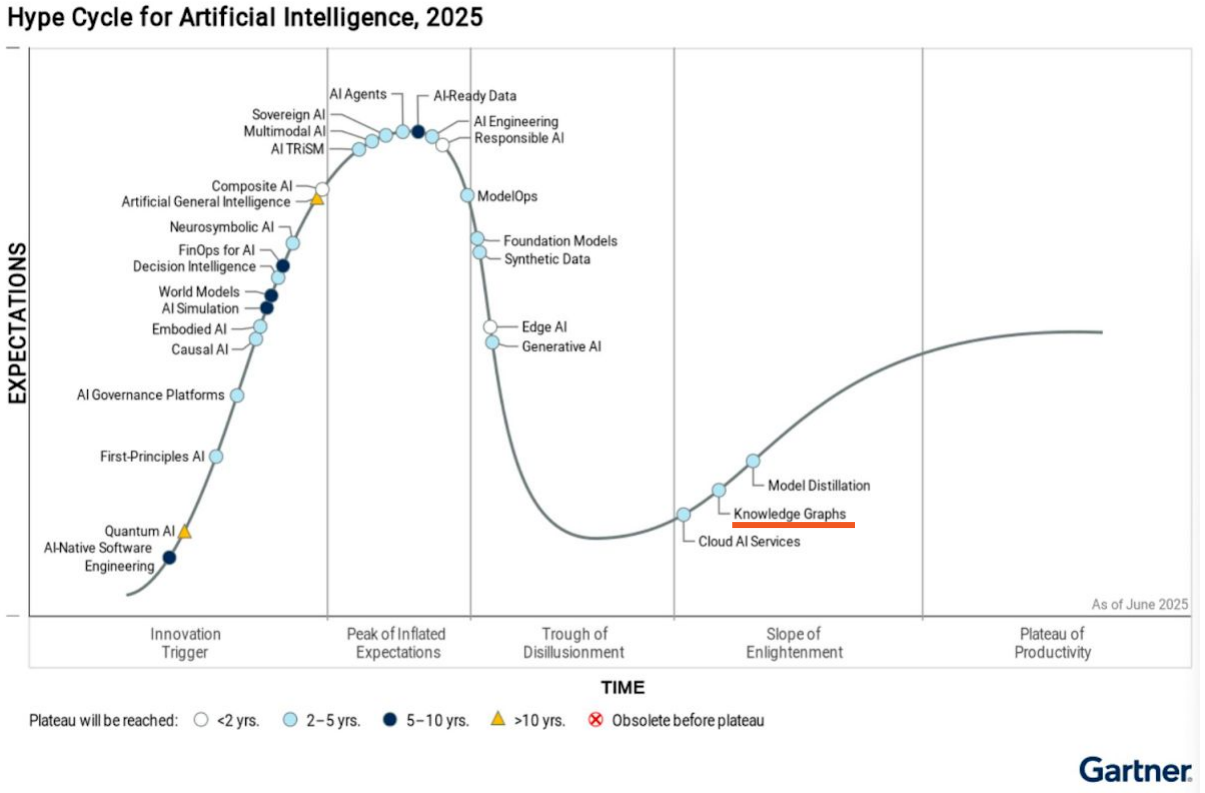
Schema App

Gartner

Knowledge Graphs are on the rise

GraphRAG = Gen AI + KG

- Enhances accuracy and contextual relevant of AI outputs



Source: Gartner Research, 11 June 2025, Hype Cycle for Artificial Intelligence

#2.

Connect the entities on your site to build a content knowledge graph that provides context

Schema App

What's an Entity?

An entity is a thing with specific attributes

(i.e. price, color, parent organizations etc.)

Schema App

Keywords	Entities
Words or phrases users type into a search engine	**Unique, well-defined concepts or things (people, places, brands, etc.)**
Example: "best pizza in Chicago"	Example: Chicago (City), Pizza (Food)
Helps search engines match exact words but doesn’t convey deeper meaning or relationships	Helps search engines understand and connect concepts through additional context
Can be ambiguous (e.g., What do we mean by "Apple"?)	Disambiguated through structured data (e.g., Apple Inc. vs. apple the fruit)

Schema App

Schema Markup = Language to ***define*** ***Entities*** on your website

Schema App

Entity Linking is the process of ***identifying the entities*** mentioned in your content and ***connecting them to corresponding entities*** on the web & your website.

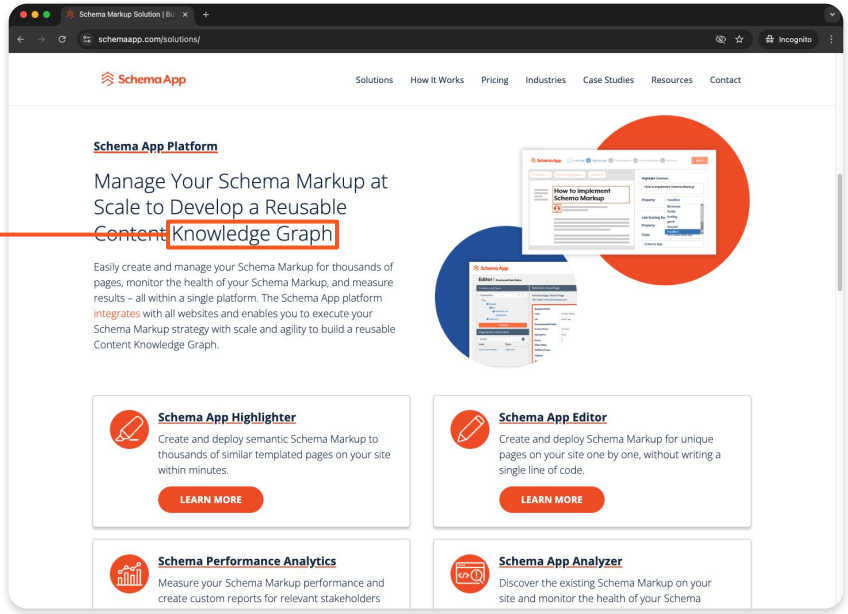
Schema App

Benefits of Entity Linking

- Ensures you have a highly descriptive Content Knowledge Graph
- Provide clarity to AI and search engines

External Entity Linking

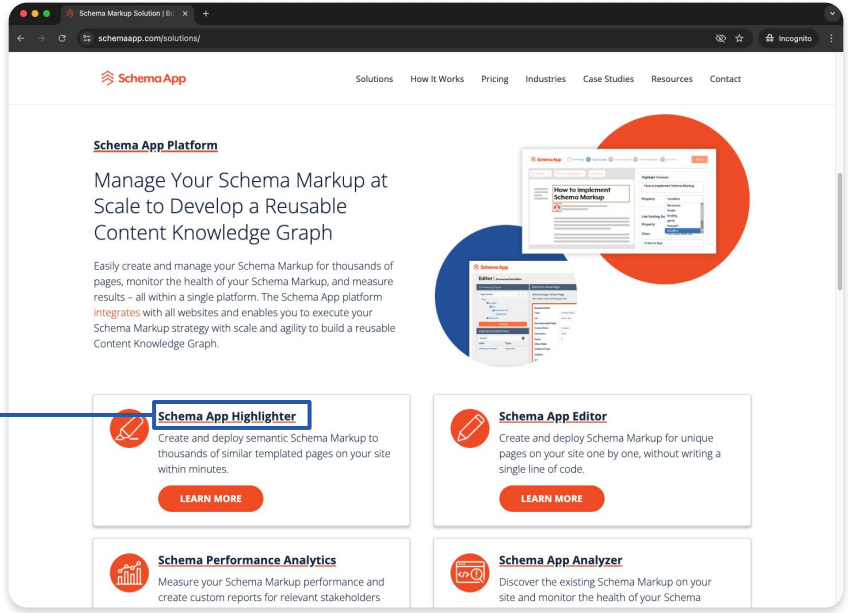
Identify the entities mentioned in your content and **connect them to corresponding entities** on the web.




```
"mentions": {
  "@type": "Thing",
  "name": "knowledge graph",
  "sameAs": "http://g.co/kg/g/11jtypdlnf",
  "sameAs": "https://en.wikipedia.org/wiki/Knowledge_graph",
  "sameAs": "http://www.wikidata.org/entity/Q33002955",
}
```

Internal Entity Linking

Identify the entities defined on your website and defining the relationships between them.




```
"hasPart": {
  "@type": "SoftwareApplication",
  "name": "Schema App Highlighter",
  "@id": "https://www.schemaapp.com/solutions/schema-app-highlighter/#SoftwareApplication",
 }
```

Old Way of Thinking

Schema Markup

Tactic for rich results

New Way of Thinking

Schema Markup

Strategy for building a reusable data layer for AI

Schema App

BRIGHTEDGE

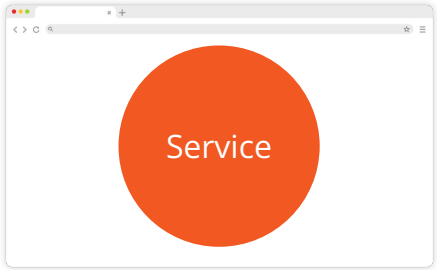
Essential AI Search Metric:

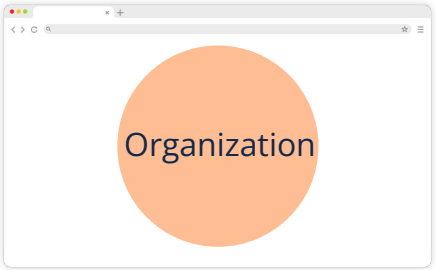
Citation Authority

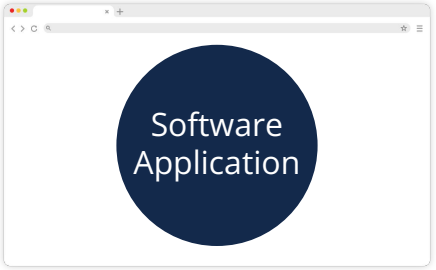
- Pages with robust Schema Markup see higher citation rates in AIO.
- Adopt Entity-Based SEO to build comprehensive topic authority.
  - **Authoritative content is 3x more likely to be cited in AI responses** than narrowly focused pages.
  - Use Schema Markup to help search engines understand your brand and content / increase authority.

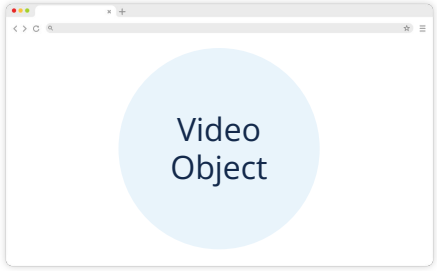
Source: Search Engine Journal / BrightEdge, May 12, 2025 – The Triple-P Framework: AI & Search Brand Presence, Perception & Performance

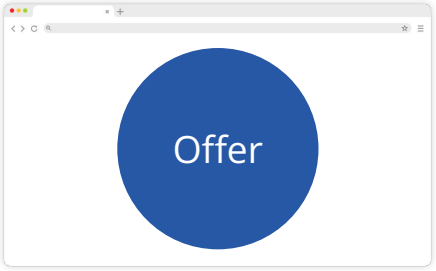
Schema App

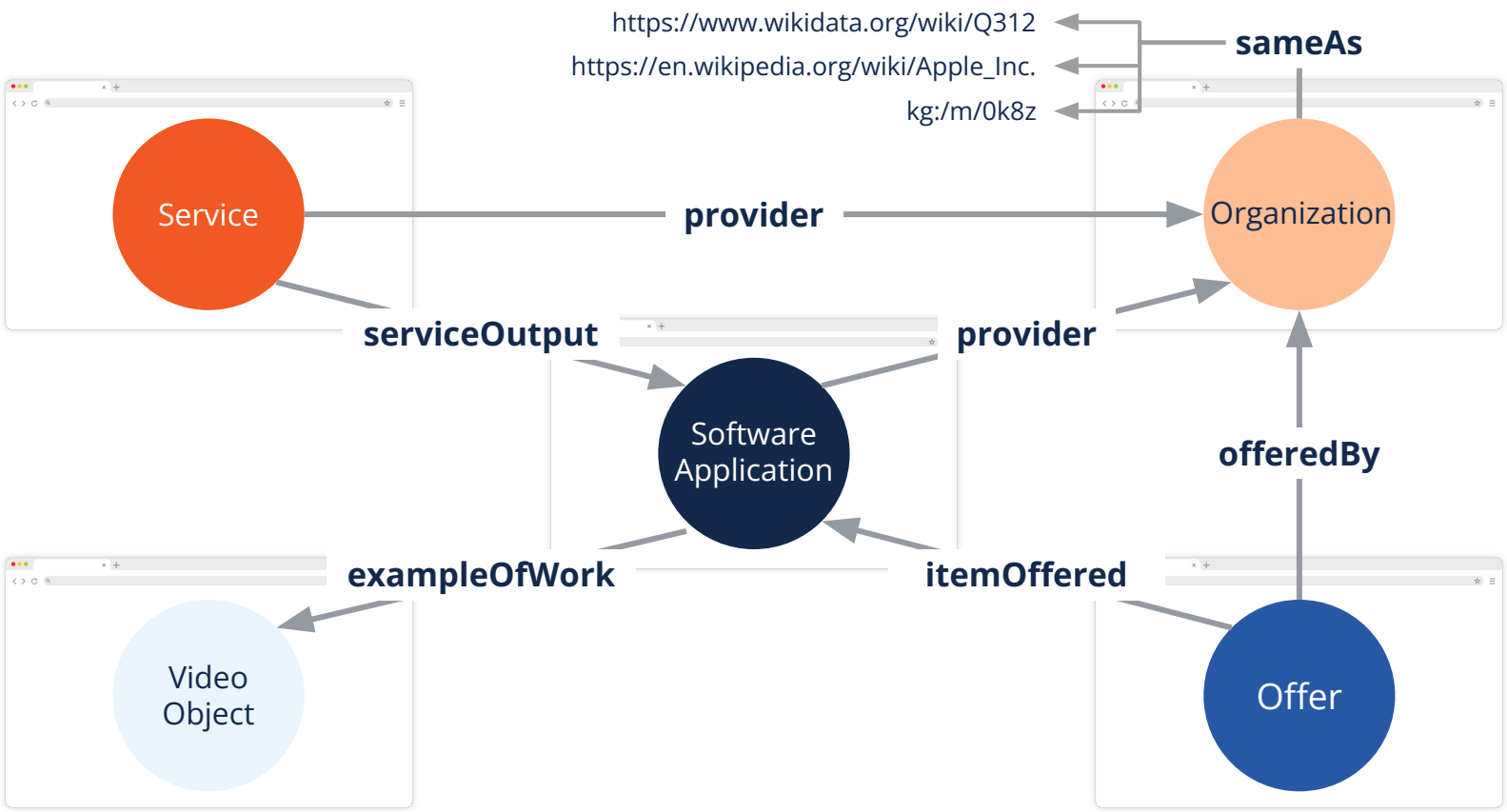

Service


Organization


Software
Application


Video
Object

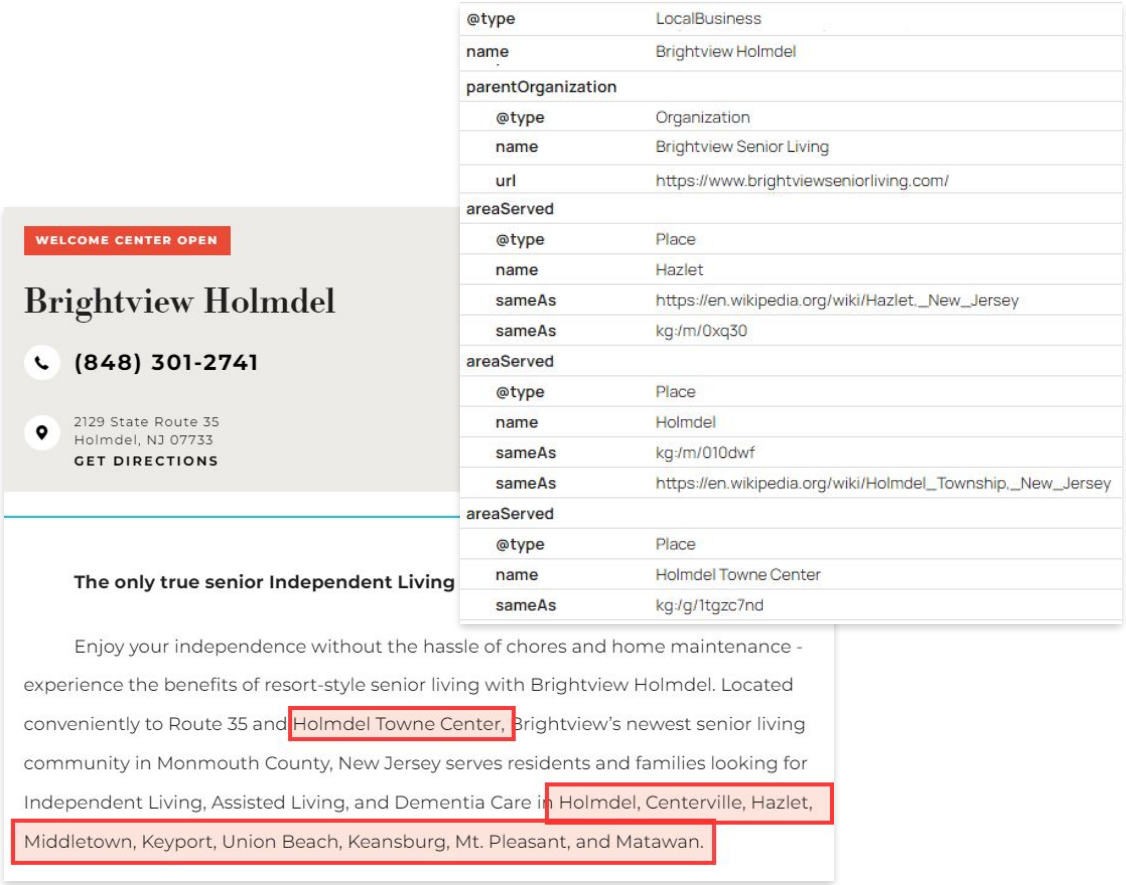

Offer


https://www.wikidata.org/wiki/Q312
https://en.wikipedia.org/wiki/Apple_Inc.
kg:/m/0k8z
sameAs
Service
provider
Organization
serviceOutput
provider
Software Application
offeredBy
exampleOfWork
itemOffered
Video Object
Offer

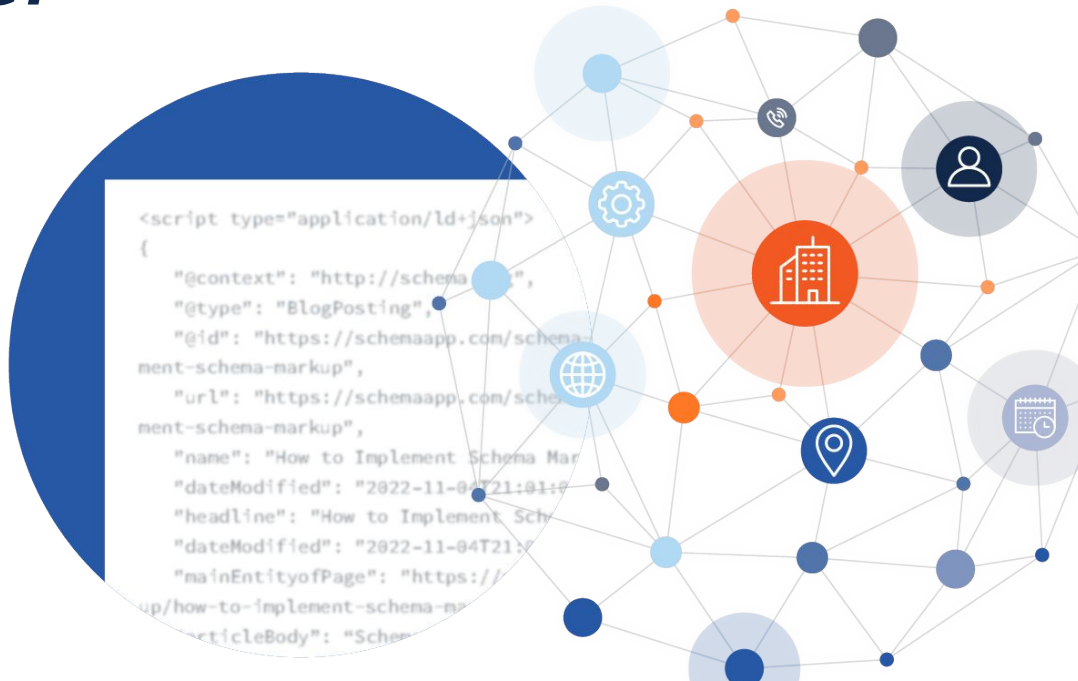
BRIGHTVIEW
SENIOR LIVING

Stronger Performance on Non-Branded Queries after doing Entity Linking

25%↑ in clicks for non-branded queries on pages with the “assisted living” entity



Your Content Knowledge Graph is the ***data layer*** that powers AI

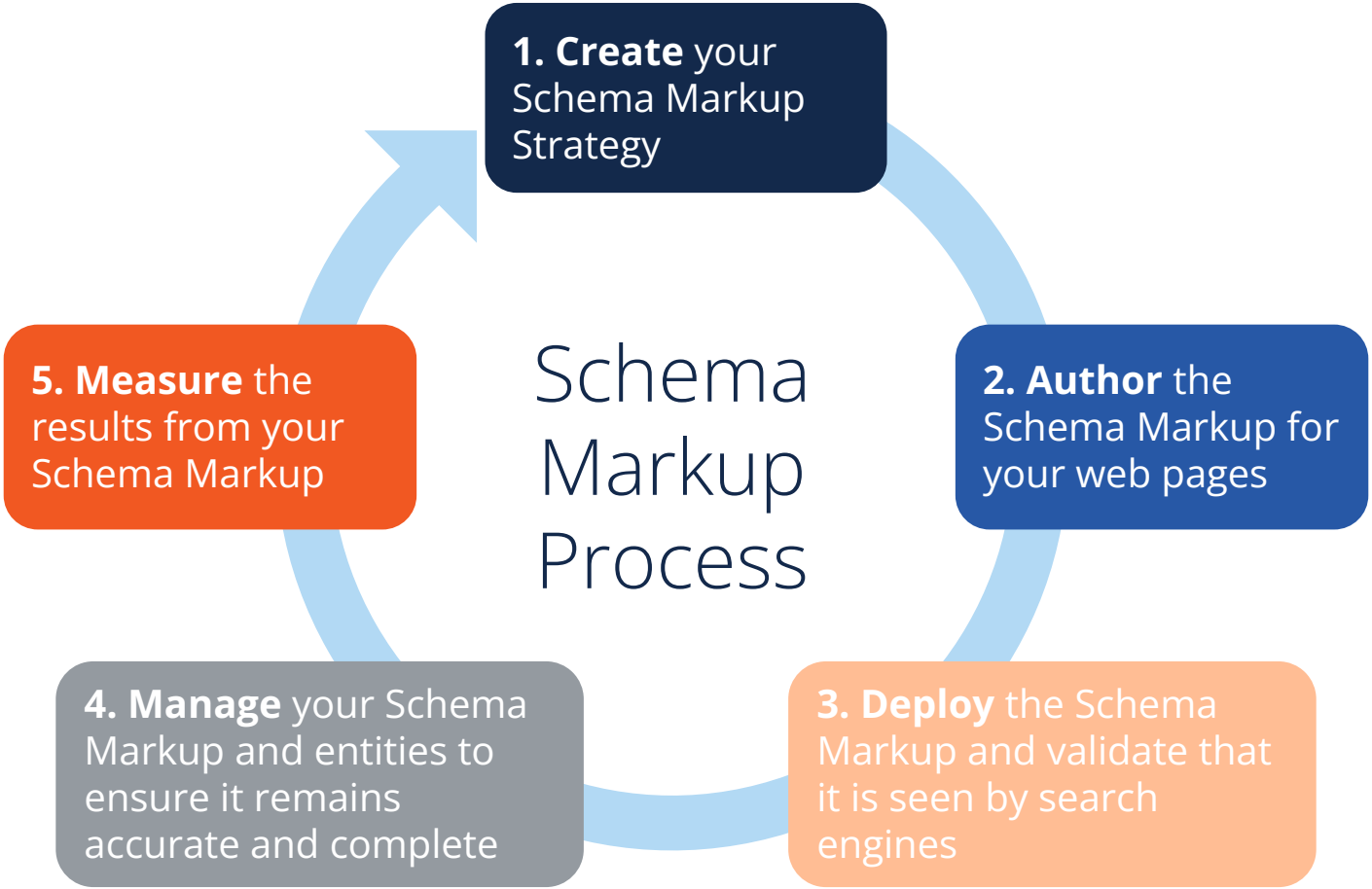


#3.

Managing the quality of your Schema Markup is crucial

Because it is your brand's way of informing AI.

Schema App


1. Create your Schema Markup Strategy
2. Author the Schema Markup for your web pages
3. Deploy the Schema Markup and validate that it is seen by search engines
4. Manage your Schema Markup and entities to ensure it remains accurate and complete
5. Measure the results from your Schema Markup
Schema Markup Process

Gartner®

> **Without AI-ready data foundations** and practices, CIOs will be unable to deliver value from AI investments. In fact, **most CIOs struggle to create trusted data foundations** (i.e. data governance, data literacy, greater data collaboration) to enable AI-driven business outcomes.

Source: Gartner, February 17, 2025 – The Top CIO Challenges, According to 12k+ of Your CIO Peers

Schema App

“The Semantic Web will enable machines to comprehend semantic documents and data, and enable software agents roaming from page to page to execute sophisticated tasks for users.”

Tim Berners-Lee, Ora Lassila, and James Hendler
The Semantic Web, Scientific America ,2001

What is the **Agentic Web?**

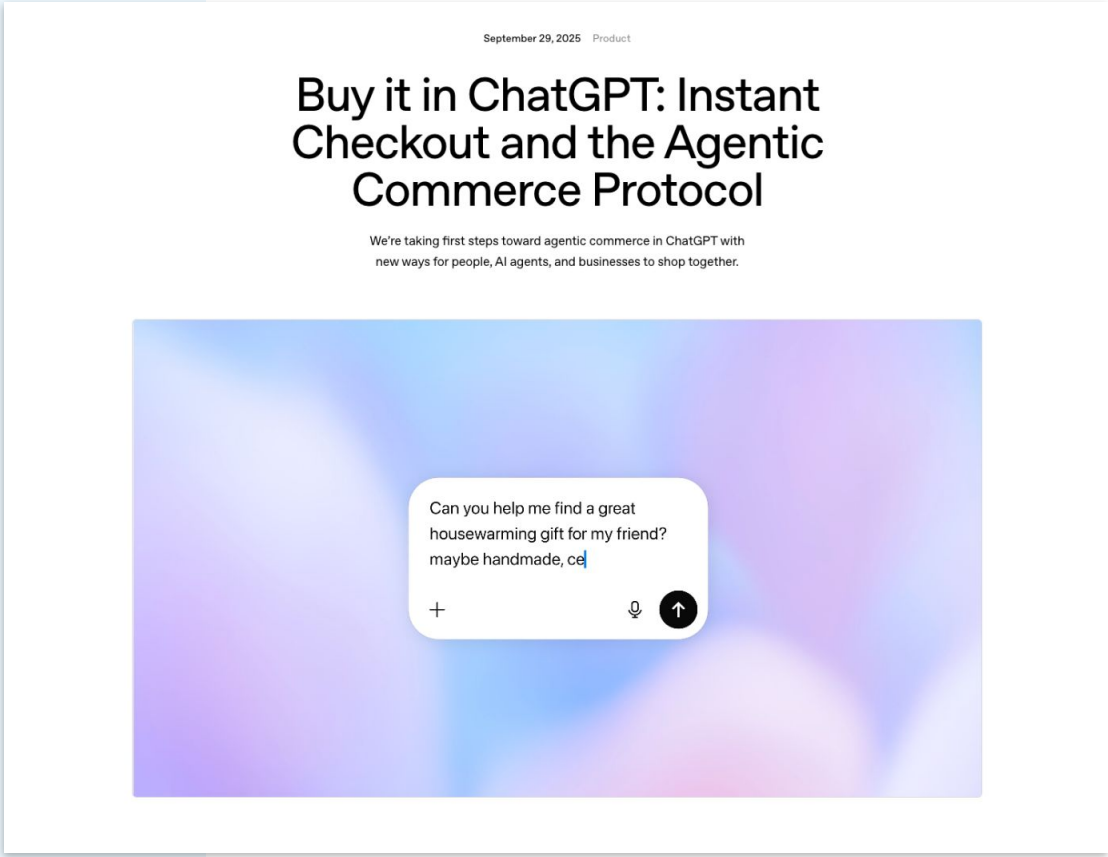
It’s the Semantic Web in motion.

It’s when AI-powered agents don’t just look up information, but actually do things for us — coordinating tasks, connecting services, and making recommendations on behalf of your customers.

Schema App

Agentic Commerce Protocol Developed by OpenAI & Stripe

An open standard model for enabling structured, secure commerce flows between buyers, AI agents, and businesses.

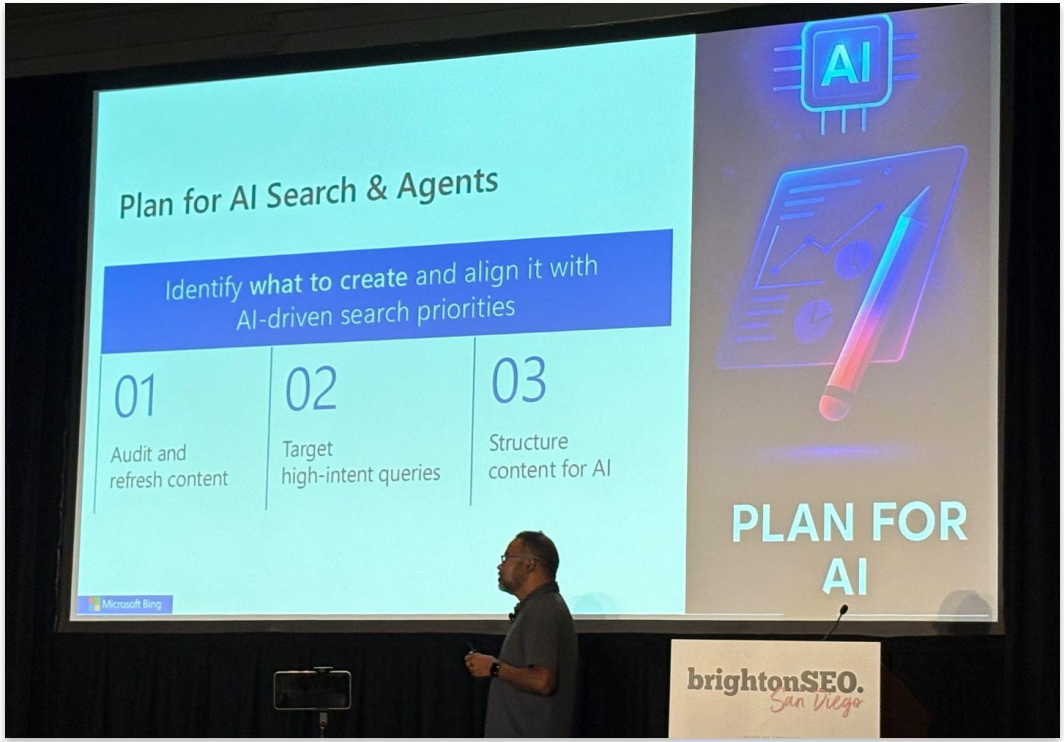


Schema App

Microsoft shares how to prepare for Agents

"Use Structured Data" to help the machines understand

Krishna Madhaven
Principal Product Manager (Senior Director)
@ Microsoft AI, Bing Web Data Platform



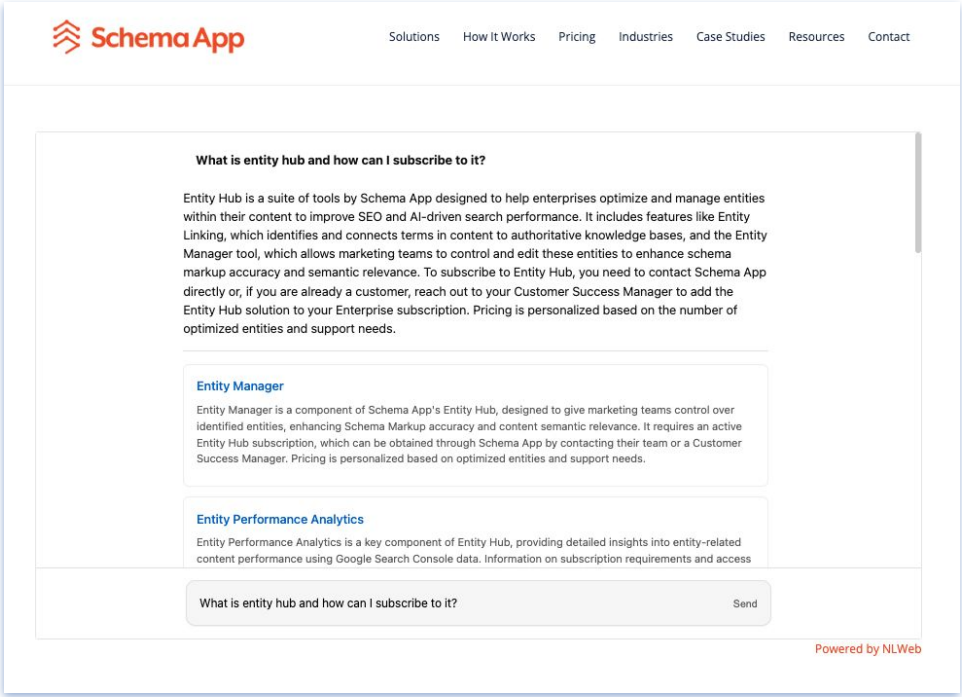
Source: BrightonSEO San Diego, Sep 24, 2025

Schema App

Microsoft

NLWeb

- Goal: Make it easy for any web publisher to create an intelligent, natural language experience for their site.
- Leverages semi-structured formats like Schema.org, RSS and other data that websites already publish.
- Created by RV Guha, who created Schema.org.



Example of NLWeb on the Schema App Website

Source: Microsoft, May 19, 2025 – [Introducing NLWeb: Bringing conversational interfaces directly to the web]

Schema App

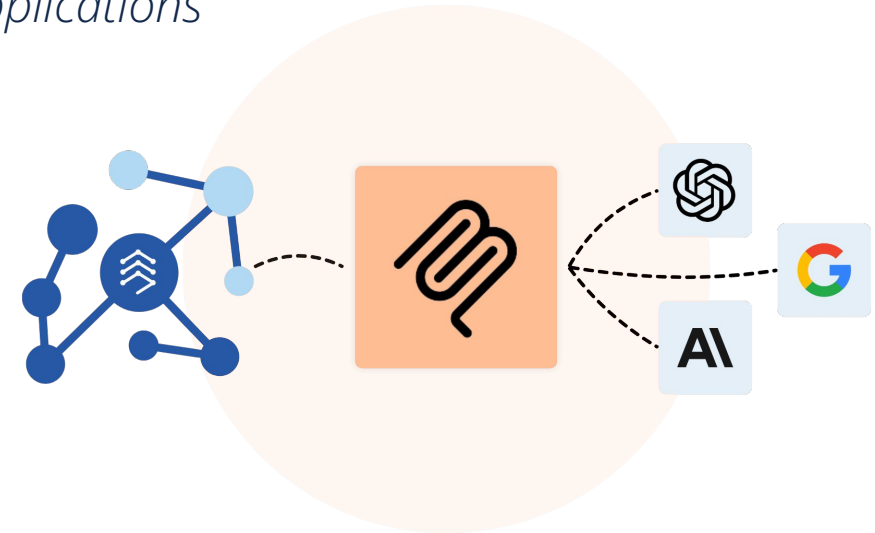
Guha created NLWeb to be the open standard for agents to discover endpoints on websites and interact with the data.

“No hallucinations because it uses Schema Markup”
– R.V. Guha

Model Context Protocol

Think of MCP as the USB-C port for AI Applications

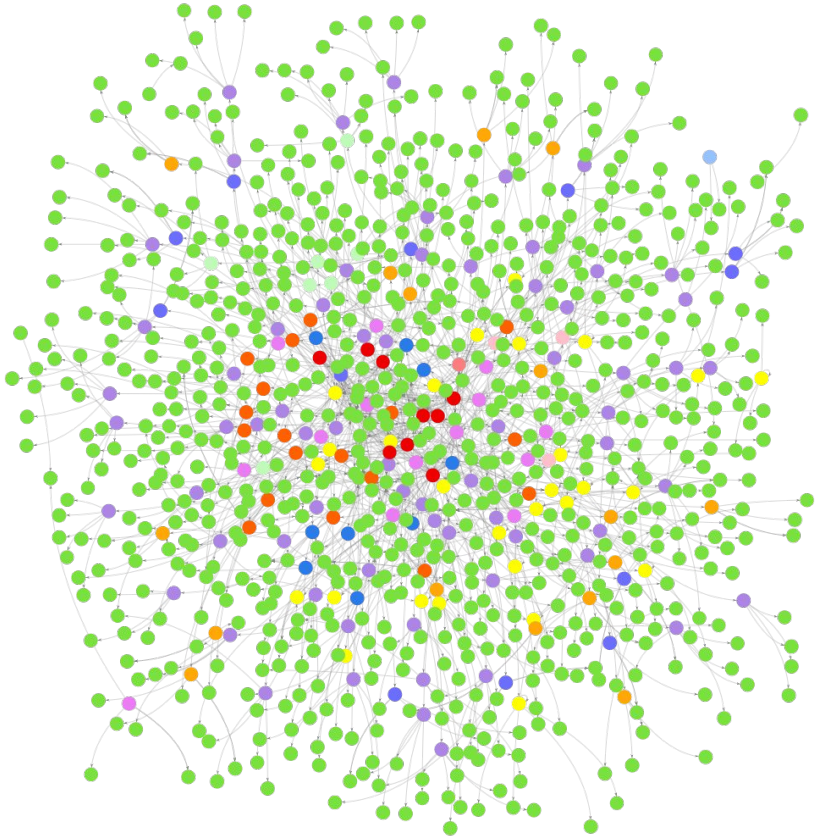
MCP is an open protocol that provides a standardized way to connect AI models to different data sources and tools.



Learn More: https://modelcontextprotocol.io/introduction

Schema App

Schema Markup **builds a Content Knowledge Graph** preparing your website for the Agentic Web



Schema App

Questions?

Get in touch with me!

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