A BEGINNER’S GUIDE TO STRUCTURED DATA AND SCHEMA MARKUP
INTRODUCTION

While we’ve covered parts of structured data and schema markup in various places on the Click Consult site, and expressed its importance in a whole host more, we wanted to put together an easy to access, easy to comprehend guide, so that the information you need is all in one place.

Technology is moving exceedingly quickly – Google, at I/O18 (the most recent I/O at the time of writing), demonstrated the ability of the Google Assistant to book appointments in an almost alarmingly human manner, for example. However, while AI and machine learning are progressing quickly, they and search engines still lack the ability to parse, infer and categorise quickly and with only partial information.

As a result, while it won’t be like this forever, marketers operating within the digital sphere presently need to provide some assistance to the various algorithms that serve up the search engine results pages (SERPs). This is where structured data comes in.

While search engines are getting better and better at determining relevance to a search by language – freeing up writers to write rather than focusing on various outmoded tactical devices such as keyword density – there is still work to do for them to understand specific structures of information without help. In this eBook, we’ll be looking at tackling a few of the more popular types of these in detail.
WHAT IS STRUCTURED DATA?

Rather than being a specific subset or variety of data, when we refer to ‘structured data’ we are talking about an organisational construct of data. While prose may convey information, it tends to do so in an organic way - conveying information in a looser, more conversational manner. However, if you were to study the prose, and distil its meaning into, for example, a table – this would represent ‘structured’ data, essentially the same information in an easier to digest format.

Where search engines are concerned, it is easier for an algorithm to parse information if it is offered within a scaffold or framework of structural information. This tends to be done using HTML, microdata and JSON-LD cues that provide the search engine with additional pointers that it can use to determine the nature of the data it is processing.
WHAT IS SCHEMA MARKUP?

The result of collaboration between Yahoo, Bing and Google back in 2011, there came in to being a site called schema.org, this site seeks to unify the language used by webmasters to provide metadata on pages which can be easily read by search engine spiders and parsers. Schema markup is how we refer to the microdata code that provides this metadata.

If structured data is, to extend the metaphor, the scaffolding that allows for better understanding of information, then markup is the individual scaffolding poles. With hundreds of varieties of possible markup types, the aim is to create a machine readable internet – or in the words of the creator of the world wide web, Tim Berners-Lee, a semantic web:

"I have a dream for the Web [in which computers] become capable of analysing all the data on the Web – the content, links, and transactions between people and computers. A “Semantic Web”, which makes this possible, has yet to emerge, but when it does, the day-to-day mechanisms of trade, bureaucracy and our daily lives will be handled by machines talking to machines. The “intelligent agents” people have touted for ages will finally materialize."
WHY USE STRUCTURED DATA?

A lot of the schema markup is particularly useful for inclusion in various types of what Google refer to as ‘rich results’ – these refer to the local packs, the content cards and other various SERPs features that pull directly from the web page of one URL in the SERP rather than from the defined meta description and meta title tags for that URL.

While this is not the only reason to implement structured data, the improved chances of featuring in these eye catching SERPs features are undoubtedly a major reason to do so. However, structured data also benefits the end user through increased relevance in SERPs and can benefit your brand through reducing the amount of irrelevant traffic.

WHAT ARE RICH RESULTS?

‘Rich results’ is the collective term (at least in Google parlance) for a number of various SERP features that aim to improve the user experience (UX) of results pages. These include (but are not limited to):

- Image packs
- Site links
- Featured snippets
- Shopping results
- Thumbnails
- Top stories
- People also ask
- Knowledge panels
- Videos

For the purposes of this eBook, we’ll focus on a few of the popular schemas and some of the rich results they relate to.
While Google My Business allows you to appear in branded searches with vital business information, and is something you should definitely lay claim to, ‘LocalBusiness’ schema is a fantastic opportunity for physical businesses to improve relevance to local search queries and potentially capture the business of the growing number of consumers that will search while shopping – whether for goods, services or just for a nearby coffee.

LocalBusiness schema has a large and growing number of properties which can be used to highlight important information on your site. For the purposes of illustration, however, we’ll focus – as we will for all subsequent schemas – on some of the more common requirements for a brand’s site. While there is a great Google resource that can help you generate your markup (Structured Data Markup Helper), we’ll look at how to implement it without to give you a better idea. You will, however, need the testing tool (Structured Data Testing Tool).

I would absolutely insist on testing all code on the structured data testing tool after any change you make.

It will highlight errors as well as any required fields that you missed. But bare in mind it only syntax and requirement checks it does not check the value of the data presented (i.e. you could put a letter as a price and it would work even though it’s wrong).

Andrew Whyman, Senior Organic Search Executive

OPENINGHOURS

As you would expect, most SMEs have opening times – it’s rare for a brand to be open all hours, and even if you are, it’s something you should make a point of noting – so the first one we’ll look at is openingHours.

To begin with, your schema will tend to go in the header code of your site, and – as with any coding project – should be written according to my favourite coding adage:
Write code as though the person editing or maintaining it will be a violent psychopath that knows where you live.

So comment your schema sections and make it as easy to find and edit them as you can – this will save you numerous headaches when you need to change them.

There are two aspects of opening hours that you’ll need to state – days and times. These are done as follows.

**DAYS**
Days are denoted using two letter abbreviations – Mo, Tu, We, Th, Fr, Sa, Su.

**TIME**
Time uses the 24 hour clock, to that 9am to 5pm would be 9:00-17:00.

**EXAMPLE**
Your example markup for this would therefore be:

```json-ld
<script type="application/ld+json">
{
  "@context": "http://schema.org/",
  "@type": ["Supermarket"],
  "name": "My Shop",
  "description": "My shop what sells stuff."
  "openingHours": ["Mo-Fr 09:00-17:00"]
}
</script>
```

```microdata
<div itemscope itemtype="http://schema.org/LocalBusiness">
<h1 itemprop="name">My Shop</h1>
<p itemprop="description">My shop what sells stuff</p>
<p>Open: <span itemprop="openingHours" content="Mo-Fr 09:00-17:00">Monday-Friday 9am-5pm</span></p>
</div>
```
PRODUCT

Product markup, while not completely necessary to run an eCommerce site, is absolutely necessary for the best integration with your brand’s Google Merchant Center account – allowing the best possible chances for success with Google Shopping Campaigns, but also for appearance in search (separate from paid search).

As with local business markup, product markup is large and growing as Google and other search engines look to offer a better UX and shopping offering directly in SERPs, but we’ll look at a couple of the possibilities only – with the express advice, especially for eCommerce sites, that all schema relevant to fields in your Google Merchant Center product feed are implemented.

EXAMPLE

This time, we’re going to give the example in a slightly different way – below you’ll see the markup directly from the product schema, then we’ll try to explain what each section means:

JSON-LD

```json
<script type="application/ld+json">
{
  "@context": "http://schema.org",
  "@type": "ItemList",
  "url": "http://multivarki.ru?filters%5Bprice%5D%5BLE%5D=39600",
  "numberOfItems": "315",
  "itemListElement": [{
    "@type": "Product",
    "image": "http://img01.multivarki.ru.ru/c9/f1/a5fe6642-18d0-47ad-b038-6fca20f1c923.jpeg",
    "url": "http://multivarki.ru/brand_502/",
    "name": "Brand 502"
  },
  {
    "@type": "Product",
    "name": "...
  }
],
  "offers": {
    "@type": "Offer",
    "price": "4399 p."
  }
}
</script>
```
### MICRODATA

The microdata – as you’ll see from the first example – is responsible for delivering the same as the JSON-LD, but using inline HTML markup:

```html
<div itemscope itemtype="http://schema.org/ItemList">
  <link itemprop="url" href="http://multivarki.ru?filters%5Bprice%5D%5BLTE%5D=39600" />
  <span itemprop="numberOfItems">315</span>
  <div itemprop="itemListElement" itemscope itemtype="http://schema.org/Product">
    <img alt="Photo of product" itemprop="image" src="http://img01.multivarki.ru.ru/c9/f1/a5fe6642-18d0-47ad-b038-6fca20f1c923.jpeg" />
    <a itemprop="url" href="http://multivarki.ru/brand_502/">
      <span itemprop="name">BRAND 502</span>
    </a>
    <div itemprop="offers" itemscope itemtype="http://schema.org/Offer">
      <span itemprop="price">4399 р.</span>
    </div>
  </div>
  ...
</div>
```

<table>
<thead>
<tr>
<th>Markup</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;script type=&quot;application/ld+json&quot;&gt;</code></td>
<td>Notifies the web browser what language you’ll be using to speak to it</td>
</tr>
<tr>
<td><code>&quot;@context&quot;: &quot;http://schema.org&quot;</code></td>
<td>Tells it from where to look to contextualize the data you provide</td>
</tr>
<tr>
<td><code>&quot;@type&quot;: &quot;ItemList&quot;</code></td>
<td>Which specific type of schema markup you’ll be using</td>
</tr>
<tr>
<td><code>&quot;url&quot;: &quot;http://multivarki.ru?filters%5Bprice%5D%5BLTE%5D=39600&quot;</code></td>
<td>Defines the URL of the product</td>
</tr>
<tr>
<td><code>&quot;numberOfItems&quot;: &quot;315&quot;</code></td>
<td>Defines the number of product in stock</td>
</tr>
<tr>
<td><code>&quot;ItemListElement&quot;: []</code></td>
<td>Shifts to a new type of schema markup</td>
</tr>
<tr>
<td><code>&quot;@type&quot;: &quot;Product&quot;</code></td>
<td>Indicates you are beginning to define a product</td>
</tr>
<tr>
<td><code>&quot;image&quot;: &quot;http://img01.multivarki.ru.ru/c9/f1/a5fe6642-18d0-47ad-b038-6fca20f1c923.jpeg&quot;</code></td>
<td>Provides the image for the product</td>
</tr>
<tr>
<td><code>&quot;url&quot;: &quot;http://multivarki.ru/brand_502/&quot;</code></td>
<td>The URL for the product</td>
</tr>
<tr>
<td><code>&quot;name&quot;: &quot;Brand 502&quot;</code></td>
<td>The brand associated to the product</td>
</tr>
<tr>
<td><code>&quot;@type&quot;: &quot;Product&quot;</code></td>
<td>Begins another product</td>
</tr>
<tr>
<td><code>&quot;name&quot;: &quot;...&quot;</code></td>
<td>Names the product</td>
</tr>
<tr>
<td><code>&quot;offers&quot;: {}</code></td>
<td>Indicates you will begin to define any offers</td>
</tr>
<tr>
<td><code>&quot;@type&quot;: &quot;Offer&quot;</code></td>
<td>Sets the schema you’ll draw from</td>
</tr>
<tr>
<td><code>&quot;price&quot;: &quot;4399 р.&quot;</code></td>
<td>Sets the new price</td>
</tr>
<tr>
<td><code>&lt;script&gt;</code></td>
<td>Ends the script</td>
</tr>
</tbody>
</table>

---

**MICRODATA**

The microdata – as you’ll see from the first example – is responsible for delivering the same as the JSON-LD, but using inline HTML markup:
THE FUTURE IS VOICE SEARCH

The future of search is voice activated – this is something that has been made abundantly clear through actions from both of the main search engines (especially during Google’s I/O 18), but also through the rapid rise of digital assistants and smart speakers.

This may not – in the mid to long term – rely on structured data as algorithms, machine learning and AI begin to better understand the human visible properties of a website or page, but for the moment offering additional signposts to assist the understanding of various crawlers is vital to succeeding in a voice interactive world.

To this end, some of the most important tools available to brands for future-proofing revolve around the ability to better communicate with these crawlers and bots. These include Google Tag Manager for better, simpler implementation of schema and structured data, and have been buoyed by announcements from Google on the improvements that have been and continue to be made in the ability of the search engine to understand JavaScript.

With voice search likely reach 50% of all searches (according to ComScore) by 2020, the search marketing industry needs to get ready for a pivot to ‘voice first’ far better than it did to mobile first – and schema and structured data is one of the primary ways that the industry and, indeed, all brands operating in the digital sphere, need to be on top of.
CONCLUSION

As previously mentioned, while it may not be the way of the far future, structured data and schema markup is certainly the way of the present and the near future to ensure that you are allowing search engines and various digital assistants to correctly apportion relevance to your content.

As the ability of AI and machine learning algorithms grows, it may be that we can abandon the practice of planting such microdata signposts for search engines to follow, but for the time being there are both short and long term gains to be had from offering this helping hands to the various bots, spiders and crawlers that wander daily over our sites.

Whether it’s improved relevance to search, or better visibility – both of which can have a tremendous impact on your bottom line – there are plenty of reasons to ensure that you’re employing structured data and schema markup, but there should be few reasons more convincing than that in an industry where things are so prone to change and change quickly, markup may be one of the few things we can reasonably infer, from the actions of the big search engines, will help to future-proof your search marketing.
ABOUT US

Located in North West England, Click Consult is a multi award-winning search marketing agency with a focus on organic (SEO) and paid search (PPC), with over 70 professionals employed and with a portfolio of over 60 clients from across the UK, Europe, Americas and Australia.

Click was named Search Agency of the Year 2018, adding to its long list of other awards and accolades, and also ranks within both RAR’s and Econsultancy’s 'Top 100 Digital Agencies', and Prolific North’s 'Top 50 Digital Agencies'.

ADDITIONAL RESOURCES

Blog
Click Consult regularly posts actionable insights on its blog – dealing with all aspects of search marketing. From technical SEO to PPC, content marketing and Analytics advice, the Click Consult blog has something for everyone of any ability.

eBooks
Click Consult produces in depth eBooks on aspects of search marketing on a regular basis, dealing with the latest best practices, changes to standard practices, methods of improvement and more.

Infographics
Sometimes what you need is a quick point of reference about complex subjects. Thanks to its team of highly talented designers, Click Consult is also able to distil its vast experience into easy to understand visual content.

Follow us on Google+, Facebook, Twitter or LinkedIn, or to find out what Click Consult can do for you, call: 0845 205 0292

OUR ACCREDITATIONS

OUR AWARDS

OUR TECHNOLOGIES