Search Engine Land's







Since it first debuted in 2011, Search Engine Land's Periodic Table of SEO has become a globally recognized tool that search professionals have relied on to help them understand the elements essential to a winning SEO strategy.





"I teach SEO and use Search Engine Land's SEO Periodic Table to help students learn best practices," said one person on our annual survey.

long with advice from the experts, it can also help those new to SEO and or SEO clients understand the many factors at play: "Love the periodic table. It helps non-SEO folks understand the complexity of SEO."

And this year we've expanded our Periodic Table even further to encompass even more in SEO. Along with the regular annual updates of individual elements, we've made some major changes and added a new Niches section. While the overall SEO Periodic Table gives you an idea of the overarching best practices, the Niches section focuses on the nuances of SEO for three new areas: Local, Publishing and Ecommerce.

With this relaunched infographic, we offer both long-time SEOs and those new to the industry an overview of what's essential when you're looking to achieve success in SEO. It isn't all about rankings, but it is about achieving positive results from greater visibility in search engines.

Suppose you've seen the previous iterations of this chart. In that case, you will be familiar with the overall concept – each element in the table represents a factor that you need to consider to be successful in SEO. Depending on your vertical, the relative importance of factors may vary. Still, this updated Periodic Table provides a foundational understanding of the space as it exists in 2021, with its content based upon the contributions of our editors as well as info and opinions gleaned from a survey of our audience.

While SEO is indeed an art, it is also a science. We hope this refreshed tool serves as an essential reference for your experiments.

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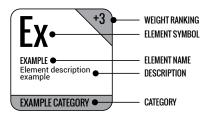
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Search engine optimization seems like alchemy to the uninitiated. This guide to success factors, best practices and potential pitfalls can build the framework for your SEO strategy.



Search Engine Land





Rs

An

DEPTH Shallow content fails Aim for substance.

Kw

Fr

KEYWORDS Build target keywords into your pages.

Create timely conten refresh or retire stagnant pages.

MULTIMEDIA Images, video and audio can set your content apar









Dd

Sp

Ps

HTTPS
Https ensures security
for website visitors.







Ds

DESCRIPTIONS





Au

Tr

AUTHORITY

Authority is everything Covet links, shares, and other signals.



Qt















Ux

Ly





Ar

lv

INTRUSIVENESS Ad-heavy content, intrusiv interstitials are a bad idea













Lc

LOCATIONS

Ci

The searcher's location plays into what results show up in a local search

















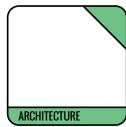




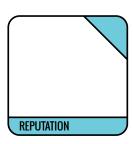


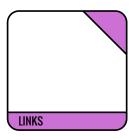


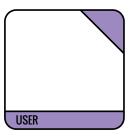












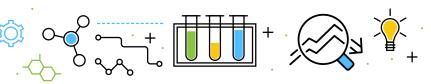
'e organize the table's elements into groups of similar factors, and each component is weighted based upon its overall importance to SEO. Those weightings are shown in the top right-hand corner of the element's symbol. Weights run from +1 to +5 on the positive side and -1 to -5 on the negative side. The elements are also organized with the most essential – highest weighted – items at the top of each group.

An element with a weight of +1, for example, wouldn't have as much of an impact as one weighted at +5. Negative numbers are associated with Toxins. A -5 weighting indicates the practice can do maximum damage to your strategy, while a -1 could be harmful but isn't generally as dangerous as a -4 or -5.

The main table consists of six positive groups - Content, Architecture, HTML, Reputation, Links and User. The Toxins represent practices that can harm your SEO, even getting you penalized by the search engines. They're therefore weighted with negative numbers. To the right, the new Niches group illustrates some of the areas of SEO that are different but still important for those individual niches. We'll explore each of these groups in more detail below.

The main table consists of six positive groups - Content, **Architecture, HTML, Reputation,** Links and User. The Toxins represent practices that can harm your SEO, even getting you penalized by the search engines.









ver since February 2011, when Google's Panda algorithm update took the web by storm and affected nearly 12% of U.S. results, web admins have been on notice that content counts – and it counts a lot. Panda was said to be Google's way of weeding out "content farms" – groups of sites with thin content that was often even copied from other places. But, because the algorithm's emphasis was on penalizing shallow and low-quality content, it meant that efforts to develop in-depth, high-quality content would be rewarded. In the Content element grouping, we explore the facets of high-quality, in-depth content. It starts with tried-and-true methods like performing keyword **Research (Rs)** to identify what users are looking for and then incorporating those **Keywords (Kw)** into your content. More important, however, is **Quality (Qu)** – which indicates how critical it is to have well-written pages that provide value to readers. Additionally, search engines reward **Freshness (Fr)**, ranking sites higher if they're frequently updated.

Images and video – **Multimedia (Mm)** – are important ways of delivering high-quality content with **Depth (Dt)**, especially as the prevalence of higher-bandwidth connections makes it easier to consume these formats, even when users are browsing on their phones. And, speaking of new ways to access content, the **Answers (An)** element represents the value of explicitly answering users' questions on your pages. We added this because, if you do so well enough, your page may be displayed as a featured snippet or returned as a voice search result on Google Assistant.









CONTENT



CONTENT





CONTENT











ow your site is built helps search engines know what your pages are about. It also helps ensure these platforms that users will be greeted with a fast-loading, malware-free landing page if they click through from a search engine results page (SERP). These elements include everything from the URLs you use and the page load speed to your security and crawlability.

The most critical element here is **Crawl (Cr)**. If a search engine can't crawl and index your pages, you've got no hope of appearing in the search results at all, let alone ranking well. Next comes **Mobile (Mo)**, which represents optimizing your content so that mobile searchers can see everything that desktop users see on your site. As early as 2015, Google noted that more searches took place on mobile devices than on desktop computers, and mobile devices have only grown in importance since then. Google is aggressively migrating to a mobile-first indexing framework. Hand in hand with Mobile is **Speed (Sp)**. Not only do page load delays frustrate users and decrease conversions, but Google has also made it clear that speed is a ranking factor.

More nuts-and-bolts architecture concerns include the proper handling of **Duplicate (Dd)** content by setting canonical URLs – this gets back to the above-mentioned algorithmic crackdown on sites simply copying other sites' content without their permission. Additionally, using appropriate contextual keywords in your pages' permalinks sends a signal to the engines and users that the page contains the info they're seeking.

This year we've also added two new elements to keep up to date with search engine changes like Core Web Vitals and the page experience update. **Structure (St)** is all about the information architecture of your site. It not only tells search engines how to navigate your property, but also gives your website users an idea of what you do, how to find what they're looking for, and simplifies complex sites.

We've also added **Parity (Pr)** which means that your site should offer the same user experience regardless of what device a searcher or website user is on. This one pairs up with mobile-friendliness in helping make sure that if you have two separate sites for mobile and desktop that there is parity in the content and experience for users including parity in links, navigation, structured data, content, images, and between the mobile and desktop UI.





Mo +4

MOBILE FIRST
Optimize for smartphone and tablets.

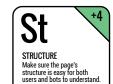
none

DUPLICATE
Be smart. Use canonicals, redirects.

ARCHITECTURE

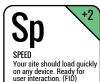
ARCHITECTURE

ARCHITECTURE



ARCHITECTURE

ARCHITECTURE

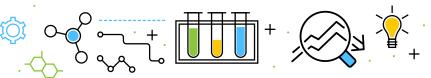






A SITE USING ENCRYPTION, OR HTTPS (PS), MAKES USERS FEEL SECURE ENOUGH TO INPUT PERSONAL INFORMATION. AND, SINCE GOOGLE'S CHROME BROWSER BEGAN WARNING THAT SITES WITHOUT HTTPS COULD BE INSECURE. THIS HAS RISEN IN URGENCY.









hese elements encompass the HTML tags you should use to send clues to search engines about your content and enable that content to render quickly. Are you describing movie showtimes? Do you have ratings and reviews on your e-commerce pages? What's the headline of the article you've published? In every case, there's a way to communicate this with HTML. Search engines look for familiar formatting elements like Titles (Tt) and Headings (Hd) to determine what your page's content is about, figuring that these cues to human readers will work just as well for them. But search engines also utilize particular fields like Schema (Sc) markup and Meta Descriptions (Ds) as clues to the meaning and purpose of the page.

As Google has removed the AMP requirement, we've gotten rid of that element and added two new ones: Image Alt (ALT) and Content Shift (CLS). ALT text for images improves accessibility and image SEO. Screen readers use ALT text to help those with visual disabilities understand the images on the page. Alt text for images can also help with image search -- surfacing your site in image search results. Content Shift (CLS) focuses on the elements of visual stability. Cumulative Layout Shift, which is part of the Core Web Vitals and overall page experience update, refers to unexpected changes in a page's layout as it loads — it's annoying for users at a minimum and can cause real damage depending on the severity of the shift and content of the page.



CONTENT SHIFT Minimal content shift upon page load improves user experience. HTML

HTML

SCHEMA

Structured data and schema can turn data into enhanced listings.

HTML

DESCRIPTIONS Meta tags should describe what pages are about.

HTML

Build keywords into your headers and subheaders.

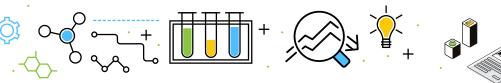
HTML

Alt text for images

improves accessibility and image SEO.

HTML









ou may have heard of EAT — Expertise, Authoritativeness and Trustworthiness — as a method that Google uses to gauge the value and relevance of sites. Of course, Google has never explicitly said EAT is a ranking factor, but it hasn't been silent on what it considers good content either.

Expertise (Ex) and Trust (Tr) speak directly to these signals, encompassing how your site fits into its niche – is it the most authoritative in its field and has it established that reputation by being around for many years? That's the ideal when it comes to these elements. Authority (Au) is all about being the go-to person or site for a topic. Authority garners your site links, mentions, shares, and more for your knowledge on a topic.



EXPERTISE

Expertise shows that you have the knowledge to be a thought leader on a given topic.

REPUTATION



AUTHORITY

Authority is everything. Covet links, shares, and other signals.

REPUTATION



Established sites that have operated the same way for years carry weight.

REPUTATION









f all of the elements, this group has been around the longest. When Google burst onto the scene with its then-revolutionary PageRank algorithm in 1998, the company made clear that links were a factor in how well a website would perform in search. The higher Link Quality (Lq) and more relevant the sites that link to your own are, the better it is for your SEO.

After all, sites of outstanding quality usually provide their audiences with links to equally high-value sites and avoid linking to stinkers. Next, is Anchors (An) – the text that other sites use when linking to yours. Are they linking with words like "the foremost authority on butterflies," or is the link text more like "disseminating incorrect information on Lepidoptera"?

In the end, the greater the Quantity (Qt) of good links to your sites, the better it will be for your SEO. Link building businesses, after all, were born on this principle.

REPRESENTS THE OUALITY AND REPUTATION OF THE SITES THAT ARE LINKING TO YOU.



Link anchor text words should be relevant to the destination URL of the link.

LINKS

The more high-quality links, the better.

LINKS









ser-specific factors will also affect how you rank in a particular Country (Cy) or Locality (Ly), and, while this is important, there's not much you can do about it other than to make sure your site speaks to users in the area where your audience resides. For example, use hreflang to indicate your site's language (eng-us for the U.S. and eng-gb for Britain, for example) and, if you're a local business targeting specific cities or neighborhoods, make sure you include your address as well as mentions of the towns or neighborhoods you serve.

The way users interact with your site, User Experience (Ux), is also essential. Intent (It) is important here, too, as the extent to which your page meets the searcher's intent will play a role in how your site is ranked for similar searches. Engagement (Eg) is all about making sure that you meet that user intent and not requiring searchers to go back to SERPs to find what they were actually looking for.





conducting a specific search.

USER





ENGAGEMENT Visitors should spend time with your pages, not bounce. **USER**







nyone entering the realm of search engine optimization is likely to encounter some questionable or downright detrimental tactics, or Toxins, as we call them here. These are shortcuts or tricks that may have been sufficient to guarantee a high ranking back in the day when the engines' methods were much less sophisticated. And, they might even work for a short time now -- at least until you're caught. However, we recommend staying far away from these tactics because employing them could result in a penalty or ban, which will achieve the exact opposite of what you intended.

Cloaking (CI) involves setting up your site in such a way that the search engines' crawlers see something different than the actual humans visiting. This is a big no-no, as - apart from things like structured data markup - you should be building your site for people, not for search engines, and the more sophisticated the engines' systems become, the less likely it is that you'll be able to fool them. Three of these Toxins – link Schemes (Sc), keyword Stuffing (Sf) and Hiding (Hi) – represent ways to turn the search engines' signals against them. As we've talked about previously, seeking links and incorporating keywords are perfectly legitimate practices, but paying for links and going overboard with keywords can get you in trouble. The Piracy (Ar) Toxin involves hosting stolen content - either items scraped from other sites or copyright-violating downloads of music or videos - which is flat-out illegal as well as bad for SEO. And being Intrusive (Iv) by delivering popups or invasive ads of any format, damages your user experience.

This year we've added two new toxins to our table, Bad Content (Bc) and Malicious Behavior (Mb): Search engines punish automated/ generated content, scraped content, and doorway pages. And, Malicious Behavior like phishing, trojans, malware and hacking will get you kicked out of the index.



showing searchers

ENIXOT



Obfuscating your keywords

is a spam tactic.

Buying links, spamming blogs and so on are tactics

that can get you penalized





generated content, scraped

content, and doorway pages

BAD CONTENT Google punishes automated

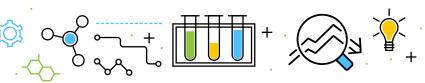
TOXINS

Phishing, trojans, malware and hacking will get you kicked out of the index.

TOXINS





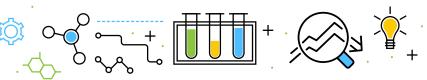






he new addition to our SEO Periodic Table this year is the Niches section. We know that some SEO factors are different or completely separate based on the niche they serve. Search engines have different signals for these niches than are important to the overall practice of SEO. These niches include local SEO, publishing, and ecommerce.









ith local SEO we know the key to showing in the local maps pack is to focus on Locations (Lc) and ensure your Citations (Ci) are set up and accurate. This includes NAP (NAP) consistency across platforms and citation sites and a complete GMB (GMB) profile -- including choosing the right categories, keeping your listing updated, and engaging with your listing regularly. A key element of GMB listings is, of course, Reviews (REV). Not only is it critical to have a strategy to solicit reviews from your customers but also to ensure you're asking the right questions to get keywords in those reviews. Plus, it's critical to respond to those reviews -- whether they're good or bad.



GOOGLE MY BUSINESS A Google My Business listing is required to get found on the local map.

LOCAL

LOCATIONS

The searcher's location plays into what results show up in a local search.

LOCAL

CITATIONS

Citations show search engines you're a real business.

LOCAL

REVIEWS

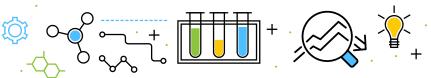
There is a direct correlation between the number and quality of reviews and local SEO rankings.

LOCAL

Name, address, and phone number must be consistent across all digital citations.

LOCAL









ews and publishing present a unique opportunity and challenge when it comes to SEO. A publishing site often produces large quantities of content every day so it's critical that Archives (Av) are in order. A strong, welloptimized Archive acts as a content pillar in your industry or coverage area. News also benefits from investments in Top Stories (Ts) and Discover (Dc). Optimizing your site to show in Top Stories can be a goldmine of organic traffic for publishers, and Google's Discover feed personalizes news for readers. This means more qualified website visitors who will stay on your site and return again later. Another element key to showing up in these features is Image Required (Ir). Every news page is required to include at least one image to show in the above-mentioned news search results. Images should be at least 1200 pixels wide if the height is 800px.

Finally, with publishing and subscriptions, search engines recommend having a set Flexible Sampling (Fs) lead-in. If your news is behind a subscription, experiment with metering to bring in readers and give them free articles.

Optimizing your site to show in Top Stories can be a goldmine of organic traffic for publishers.

PUBLISHING

DISCOVER

Google's Discover feed personalizes news for readers. This means more qualified website visitors.

PUBLISHING

ARCHIVES

A strong, well-optimized archive acts as a content pillar in your industry.

PUBLISHING

IMAGE REQUIRED

Every page is required to include at least one image. Images should be at least 1200 pixels wide if the height is 800px.

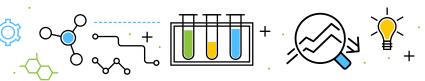
PUBLISHING

FLEXIBLE SAMPLING

If your news is behind a subscription, experiment with metering and lead-ins.

PUBLISHING









ur final new niche is ecommerce. Ranking in retail can be much different from ranking a "regular" page in search results. Your Product Descriptions (Pd) should be detailed and thorough, but easy to understand. Most importantly, though, they should be unique. Don't just use the manufacturer's content!

Your Product Architecture (At) needs to be intuitive and give buyers easy access to what they need. This includes making sure category pages are optimized and there is a comprehensive strategy to cover product, mfg., category, and larger informational keywords, too. In a similar vein, Pagination (Pg) should be considered in ecommerce SEO: Ensure that important product pages are not being orphaned and prevent unnecessarily deep site structures while providing positive UX.

A good ecommerce SEO strategy will include being a part of Google's Merchant Center (Mc) to manage how your inventory displays in Google product search. It's also important that SEOs ensure the URL structure (URL) is easy to read and tells buyers where they came from on the site. For example, the URL structure company.com/category/product/ is much easier to navigate than one with SKUs and elements that are only useful to the company. In sum, make your URL structure user friendly. Lastly, it's critical to keep your Structured Data (Sd) up to date for products, offers and reviews



PRODUCT DESCRIPTIONS Product descriptions should be detailed and thorough, but easy to understand.

ECOMMERCE



STRUCTURED DATA

Include structured data for products, offers & reviews.

ECOMMERCE



ARCHITECTURE

Product architecture should be intuitive and give buyers easy access to what they need.

FCOMMFRCF

Ensure URL structure is easy to read and tells buyers where they came from.

ECOMMERCE

MFRCHANT CENTER

Manage how your inventory displays in Google search.

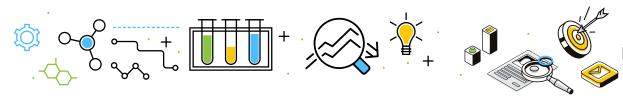
ECOMMERCE

PAGINATION

Ensure that important product pages are not being orphaned and prevent unnecessarily deep site structures while providing positive UX.

ECOMMERCE





CONCLUSION

nd there you have it, the science — and art — of SEO, decoded, We hope the SEO Periodic Table serves you well as the first visual aid you turn to when trying to plot out an SEO strategy for the properties you own or manage. But, as a reminder, let's agree that what's emerging today will be foundational tomorrow. That's the case in science and tech and it's just as accurate in search marketing. What elements will be discovered next year? We'll see.

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Search Engine Land

earch Engine Land is a leading daily publication covering all aspects of the search marketing industry, serving search marketers as its sister publication, MarTech, delivers information and insights to digital marketers. Daily news coverage includes breaking stories, industry trends, feature announcements and product changes to popular platforms used by search marketers to reach consumers and business decision-makers online.

In addition to the editorial news staff coverage, Search Engine Land features contributed articles by subject matter experts across all digital marketing disciplines, filled with practical tips, tactics and strategies for running successful marketing programs. All sites are published by Third Door Media, which also produces Digital Marketing Depot, our research center for digital marketers, and the Search Marketing Expo - SMX and MarTech conference series.

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