

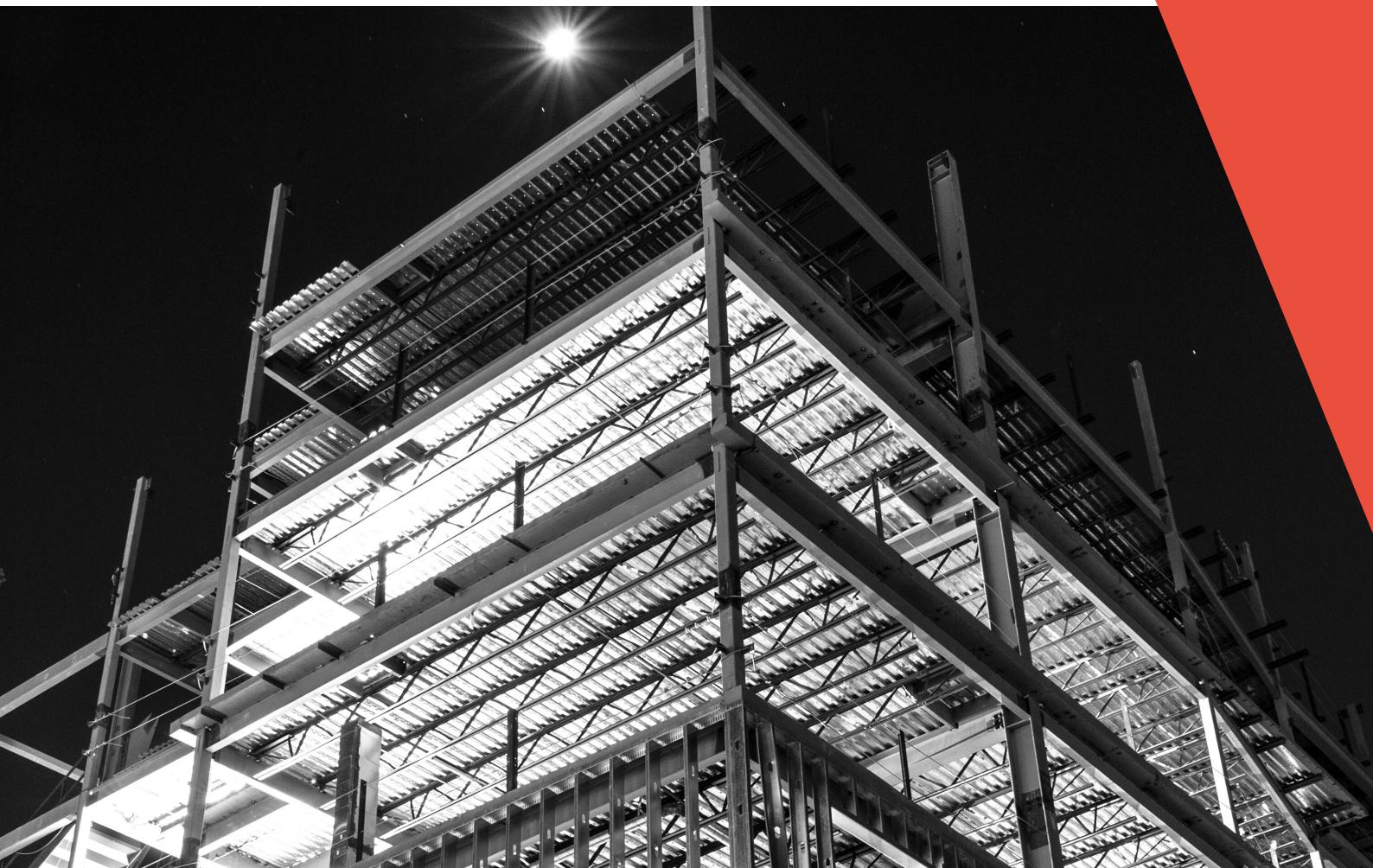
BROUGHT TO YOU BY

The Static WordPress
Hosting Experts

 strattic

STATIC-FIRST WORDPRESS

AN APPROACH TO BUILDING STATIC
READY WEBSITES WITH WORDPRESS



WHY GO STATIC-FIRST WITH WORDPRESS?

In this guide we'll go over a “static-first” approach to building websites with WordPress. This approach allows any WordPress site to be easily converted to and launched as a static site.

Static websites do not require database connections or server side programming and therefore have three major benefits: speed, scalability and security.

FASTER SITES

Static sites don't need to waste time grabbing content from a database, since the content is already pre-rendered as static files and is therefore faster than sites relying on a database (ie traditional WordPress sites). Faster sites provide a more enjoyable experience for visitors and have proven to increase revenues, conversion rates, and lowering bounce rates.

- Aldo shoe brand noticed a 327% increase in revenue between a slow running site and faster (source).
- The outdoor brand Rossignol saw a 94% increase in conversion when improving their site speed (source).
- The coupon site Radins.com reduced bounce rate 25% with an improvement in their page load time (source).

SCALABILITY

Static sites also do not suffer from scalability issues. Traditional WordPress sites choke with too many visits at the same time. Static sites do not have the same bottleneck of an underlying processing server ,and therefore far outperform traditional WordPress sites when it comes to lots of traffic.

SECURITY

Possibly the best feature of a static site is that there is no database to hack. A static site is completely isolated from the content management system that powers it. WordPress is infamous for security risks due to being outdated or running insecure plugins. More than 70% of WordPress sites are vulnerable to attack (source). A static site does not have any of these issues or concerns.

**STATIC SITES
ARE FAST, SCALABLE
AND MORE SECURE THAN
TRADITIONAL WORDPRESS**

IMPORTANT TERMS

1

A Static Website is one that is composed entirely of HTML, CSS and JavaScript. It does not require a database or server side programming to function. The benefits of static websites are speed, scalability and security.

2

A Traditional WordPress Website is one where visitors access the WordPress site directly. Server side PHP and the WordPress database are required for the functionality of the site. The benefits of a WordPress site are ease of use and a vast ecosystem of themes and plugins.

3

A Static WordPress Site is one that uses WordPress to build the website and manage the content. Then a “static site generator” converts the traditional WordPress site into a static website. This offers the combined benefits of a static site and a WordPress site.

4

A Static Site Generator is software that builds a static website. A variety of static site generators exist, but only a few are designed to convert traditional WordPress sites into static sites.



MAKING THE LEAP FROM TRADITIONAL WORDPRESS TO STATIC WORDPRESS

When building a website with WordPress there are certain considerations that need to be taken for the site to work as a static site. Not all traditional WordPress sites can be passed through a static site generator and continue to work properly as static sites.

In this guide we show how to build WordPress sites with a “static-first” approach so they work as traditional WordPress sites and as static WordPress sites. This will give you a consistent toolset and workflow for all of your WordPress projects, regardless of whether they launch as static sites or traditional WordPress sites.

MAKING & CHOOSING STATIC-COMPATIBLE WORDPRESS THEMES

In general, most WordPress themes handle the conversion process to a static site with no problems. So, you can choose from any of the free themes in WordPress.org repository or premium themes in from theme marketplaces or from individual theme creators.

Some themes do include features that may not work after being converted to a static site. This does not mean you cannot use the theme at all, but you may need to replace certain theme features with static-compatible plugins or third-party tools.

Theme features that do not work after being converted to a static site are usually those that require live communication with the WordPress database.

This is most commonly done using a process called AJAX where JavaScript communicates with PHP on the WordPress side and possibly the WordPress database.

THEME FUNCTIONALITY THAT MAY NOT WORK ON A STATIC SITE

- Infinite Scroll that uses AJAX
- Like or Up Vote buttons
- Relative timestamps using PHP (ie Posted 3 days ago)
- A related posts section that require AJAX
- Loading content using AJAX
- Pagination navigation that doesn't refresh the page
- Search that requires the database or query parameters (ie <https://site.com/?q=searchterm>)
- Forms that are not static compatible

If you are unsure whether a theme will work as a static site, you can contact the developer with the following message:

Hi! We are planning to launch this WordPress theme as a static site. We are wondering if this theme includes any AJAX features that might require access to the WordPress database to work?

STATIC-FRIENDLY ALTERNATIVES TO THEME FUNCTIONALITY

Besides the types of features mentioned here, most WordPress themes work out of the box when converted to static websites.

INFINITE SCROLL

- YITH Infinite Scrolling
- WP EasyScroll Posts

LIKES AND UP VOTES

- Commento
- Hyvor Talk

RELATED POSTS

- Toolbelt
- Similar Posts

RELATIVE TIMESTAMPS

- JavaScript solutions like Moment JS

SEARCH

- Algolia is the search engine we implement on static sites at Strattic

FORMS

- Hubspot is a great out-of-the-box static-friendly solution.

We cover forms in-depth under the "Choosing Your Plugins" section.

WHICH STATIC SITE GENERATORS SUPPORT WORDPRESS THEMES?

Not all static site generators are the same.

Static site generators that are built for WordPress will support most themes. These include hosted solutions like Strattic that host your WordPress site and static site as well as stand-alone plugins like WP2Static that just convert the WordPress site to HTML files.

Static site generators not built for WordPress, like Gatsby and Hugo do not work with any WordPress themes. These static site generators require you to build and design your site using JavaScript, React or a custom templating language.

We assume for a static-first approach to WordPress you will use a static site generator designed to support WordPress and WordPress themes. Static site generators are discussed in more depth in the final section.

At Strattic, we use the theme's 404 page. For other static site solutions you may need to configure custom 404 pages.

MAKING NATIVE WORDPRESS FEATURES STATIC-COMPATIBLE

Once you have chosen your theme, you want to look at native WordPress functionality that will not work when converted to a static site.

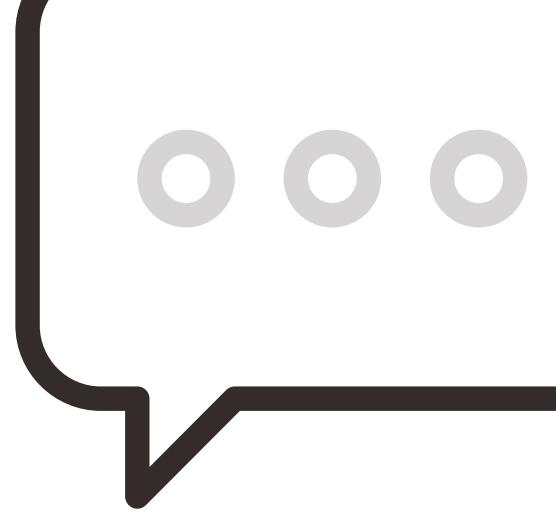
This includes two native WordPress features:

1. Comments
2. Search.

By default, WordPress comments require communicating with the WordPress database whenever a comment is submitted.

Similarly, WordPress search also requires querying the WordPress database each time a search is submitted.

STATIC-FIRST COMMENTS



The simplest approach to going static-first with comments is to not include them at all. You will find that some WordPress projects can be simplified and made static ready by simply disabling comments when not needed.

Disabling comments for all new posts can be done in the Settings > Discussion section. Then previous posts must have their comments disabled as well. There is a helpful plugin called Disable Comments that makes the entire process simple.

For static projects that require comments, third party solutions are best. as they run on client side JavaScript and do not require the WordPress database. They also offer comment moderation, spam filtering and social sign- in options as core features.



Commento

Disqus has been a long time popular solution in the world of third party comments. However, code bloat and privacy concerns have led to the rise of lightweight and privacy first options like **Commento**, and **FastComment**.



HYVOR TALK

Other comment options include **Hyvor** and **Muut**, which offer additional features like forums, messaging, and react with emojis. Facebook integration also exists with **Facebook Comments**.

STATIC-FIRST SEARCH

If your site require search, hosted search services like Algolia and Elasticsearch are great options.

These can keep an index of your entire site and provide a fast and powerful search interface you can add directly into WordPress. They also provide better search results compared to native WordPress search.



The native WordPress search feature requires querying the WordPress database based on the search terms requested. This will not work with a static site that does not have access to the WordPress database.

With a static-first approach to WordPress you would consider if your site needs search at all. Many WordPress sites do not require search, especially for brochure style sites or sites without a lot of content buried beyond the main navigation.

If your site does not require search then make sure that search features in your theme are disabled via theme settings, removed via PHP, or simply hidden with CSS.

At Strattic we automatically replace native WordPress search with Algolia!

ADDITIONAL NATIVE FEATURE CONSIDERATIONS

There are a few additional native WordPress features to consider when going static:



User login is not possible on static WordPress sites.

Site editors can login to WordPress to manage content, but this functionality is not possible through the static site. In the plugins section we discuss user and membership tools that do work with static WordPress.



Private posts and pages only show up when a user is logged in via WordPress. **Because a static site does not support user login, private posts and pages do not work on static WordPress sites.**



Password protected content require the user to enter in a password to access the content. **At Strattic, we have developed support for native password protected posts and pages.** This lets you avoid having to use third-party tools for simple content protection.

HOW TO FIND STATIC-COMPATIBLE WORDPRESS PLUGINS

In this section we explore how to apply a static-first approach to assessing various types of plugins.

The primary consideration is if a plugin needs to access the WordPress database or server-side PHP after the page has loaded. As explained in the Choosing a Theme section, this process usually involves AJAX. Plugins that require this live communication with the WordPress database or server will not usually work.

Luckily, every plugin category has static-friendly options. We suggest exploring our Directory of Tools for Static Sites to get familiar with some of the most commonly used and tested static-friendly plugins.

At Strattic we have enabled support for several plugins on our platform that do not generally work with static sites. This is one of the benefits of a hosted static WordPress platform like Strattic.

PLUGINS THAT GENERALLY WORK GREAT

Many WordPress plugins work great on static sites, particularly if they do not require AJAX interactions with the WordPress database.

Here is a list of types of plugins that generally work great on static WordPress sites:

- SEO
- Custom Post Types
- Custom Field
- Blocks
- Post Duplication
- Breadcrumb
- Shortcodes
- Image optimization
- Gallery and Slideshow
- File manager
- Popups and Modules
- Admin enhancing
- GDPR
- Live Chat
- Social Share

There are also plugins that work for the most part, but may not support all features or possibly require custom code.

- Multilingual - *Strattic supports WPML*
- Redirect - *Several redirect plugins work with Strattic*
- AMP - *Strattic offers post and page support*
- Analytics - *Tracking code usually works, WP dashboard widgets may not*



If you are not sure if a plugin will work it is always a good idea to test it to make sure.

Not all plugins are coded in the same way, so you may find one plugin does work with your static site and another similar plugin does not work.

PLUGINS THAT YOU NO LONGER NEED

When building a static WordPress site there are certain types of plugins that you'll no longer need. The need for these types of plugins is removed just by converting a traditional WordPress site to a static site.

- **Security** - These are not necessary because there is no WordPress admin or database available to prevent access to.
- **Caching** - These attempt to convert certain pages into HTML / static-like pages, which is redundant when your entire site is static HTML files.
- **Performance** - These plugins often include caching options and other optimizations that are also not necessary when database calls are no longer necessary.
- **Minification** - These plugins may still help improve the load time of your site, but are generally not necessary with static sites.

The major benefits of static sites are speed, security and scalability. Most of the plugins above attempt to mimic the benefits of static sites with traditional WordPress sites.

PLUGINS THAT REQUIRE SPECIAL ATTENTION

- Page Builders
- Forms
- Events
- Multilingual
- Membership
- Ecommerce
- Redirection

In addition to plugins that work and plugins you likely won't need, there are **certain types of plugins that may or may not work depending on how the plugins are coded.**

Once again, if a plugin works usually depends on if it requires communication with the WordPress database after the page is loaded.

Keep in mind that If you are using a hosted static WordPress solution, like Strattic, support for certain plugins may be available that would not be available with other static site approaches.

PAGE BUILDERS

Page builder plugins like Elementor, Beaver Builder and Divi are great tools for making it easier to design sites with WordPress. **Most page builder elements work great for designing static sites as well.** There are a few options you want to look at though.



Evaluate the necessity of non-static modules

First decide if all page builder elements are necessary. If there are certain elements that will not work on a static site, then remove them. Most page builders offer an option to hide or remove certain elements.



Page Builder Forms

Some page builders offer widgets with plugin-like functionality, for example contact forms or newsletter signup forms. These features wouldn't work out of the box on a static site, but there are workarounds to get them to work. First, you could consider alternatives such as Hubspot or Mailchimp forms.

If you'd like to use the page builder's built-in forms, you can try to do so by using a form processing service like Form Backend. At Strattic we include custom support for many of the page builder contact forms.

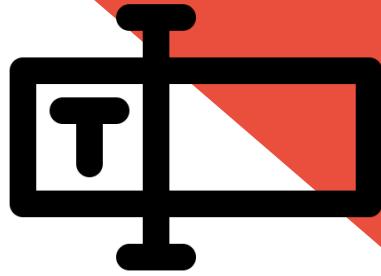


Page Builder AJAX-based Modules

Some page builders offer AJAX-based modules, such as Divi's posts module with AJAX powered pagination. These module will not work on a static site because it requires communication with the WordPress database.

Luckily, you can easily change the settings to use standard pagination so that it works seamlessly on the static site. Another example is Elementor's AJAX-based menu navigation option. Often this option is used since it seems faster, but with a static site, that's no longer needed, and it's faster to just use standard menu navigation.

FORMS



Forms are a part of WordPress sites that need special consideration when taking a static-first approach. Some WordPress form plugins work with static sites and some do not.

THERE ARE THREE GENERAL TYPES OF WORDPRESS FORM PLUGINS:

1. Form plugins that send an email but do not save the form entry in the WordPress database (ie Contact Form 7)
2. Form plugins that send an email and save the entry in the WordPress database (ie Gravity Forms)
3. Form plugins that send an email and save the entry in a third-party database (ie Hubspot Forms)

SENDING FORM SUBMISSIONS

The first two types of plugins depend on the WordPress server to send emails by default. This is generally not reliable and therefore not recommended. At Strattic, we have a Forms API that will redirect Contact Form 7 and Gravity Forms to send email through a more reliable email sending service.

If you are not using Strattic you will have to set up a third party service like SendGrid or FormBackend for delivering form submission notification emails.

STORING FORM SUBMISSIONS

Form plugins that save entries in the WordPress database, like Gravity Forms, need custom development in order to work properly with a static WordPress site. At Strattic, our Forms API will save form submission and display them in the WordPress admin for you automatically. This is another benefit of using an all inclusive static WordPress service like Strattic.

The third type of form plugin mentioned above will handle both the sending of emails and saving of submissions for you outside of WordPress. This makes a tool like Hubspot a great solution for any static WordPress site since it is designed to work on static sites by default without any special configuration or custom coding. Their WordPress plugin also gives you direct access to your full Hubspot admin.



MEMBERSHIPS

Membership plugins offer the ability to register, login and access protected content. They may also include payment options for one-time or recurring membership fees.

Many WordPress plugins offer memberships features for traditional WordPress sites. However, each step of the sign up, sign in, and show content based on user credentials generally involves a connection to the WordPress database, which won't work on a static site.



MemberStack



MemberSpace

Luckily, there are several third-party membership services that can integrate with your static site to provide memberships, including handling payments. Options like MemberStack and, MemberSpace include features like those below.

- Protect specific pages and sections of your site
- Create custom sign up forms
- Free, one-time, recurring and trial memberships
- Drip content
- Customize onboarding
- User profiles
- Export data, own your data
- GDPR, CCPA, & SCA compliant
- Membership analytics
- Integrations with Zapier
- API Access
- Easy installation process
- Support if issues arise
- Help with migrations

ECOMMERCE



Traditional WordPress Ecommerce solutions rely heavily on server side PHP and the WordPress database. Plugins like WooCommerce are popular on traditional WordPress sites but they do not work in a static environment without a lot of custom coding and some functionality, like inventory may not stay up to date.

When taking a static-first approach to Ecommerce options for your static site, you generally want to look at third-party services. These use JavaScript for keeping track of changing data like inventory, sales and cart status.

Most of these options provide customizable carts that integrate directly with your static site. Checkout takes place in a popup module on your static site or on a third party secure URL. Either way, the processing of orders takes place through secure third party servers.



Several types of static-friendly Ecommerce services exist.



Ecwid offers a full range of features out of the box and tight WordPress integration.



Payhip and Gumroad specialize in selling digital products.



Snipcart and Foxy let you add a form or link to your site and automatically get products, cart and checkout.



More advanced API driven services like Commerce Layer and Elastic Path allow for completely custom Ecommerce experiences.



You can even integrate a Shopify store with your static site using WP Shopify.



STATIC SITE GENERATORS



A few different types of static site generators exist. Some of them are WordPress specific, and others are generic static site generators that can pull from different content sources, such as WordPress.

In this section we will look at three types of static site generatoris.

- 1.Hosted Static Site Generators for WordPress
- 2.Static Site Generator Plugins
- 3.Code From Scratch Static Site Generators

HOSTED STATIC SITE GENERATORS FOR WORDPRESS

The most specialized static site generator is a no-code, hosted service like Strattic. A service like this hosts the WordPress install, runs your site through a custom static site generator and delivers your static site globally via a CDN. With Strattic you also get custom integrations with several WordPress plugins that would not normally work on a static site.



The WordPress install is hosted in a secure environment that is protected from remote connections. When no one is editing the site, the WordPress install and database are taken offline completely. WordPress is then brought back online when an authorized user accesses the WordPress admin. Hosting WordPress in this way provides the highest level of security and prevents the malicious attacks WordPress is known for.



Generating your static site involves pressing a single button in the WordPress admin. This will first run your site through a static site generator, making sure all of the recent edits are reflected in the static site. Then your static site is automatically updated in the CDN responsible for serving your site to the public.

At Strattic you also have a preview static site you can test before publishing your live static site.



When taking a static-first approach to WordPress development, a hosted static site generator solution like Strattic is your best bet. Options like this support the most themes and plugins out of the box and take care of the entire static WordPress pipeline: hosting WordPress, developing the static site generator, and delivering your static site via a CDN.

STATIC SITE GENERATOR PLUGINS

Next on the list of WordPress specific static site generators are WordPress plugins that generate your static site and export it for you to deploy. A great example of this is the WP2Static plugin.



WP2Static

With this option you have to host WordPress on your own and ensure its security. Some people run their WordPress install locally on their computer, but this does not work well for teams and is not as reliable as a hosted solution.



The static site generator plugins themselves are often simple to configure. You tell the plugin the name of your final URL and then click a button. It will then give you a .zip download of your static site for you to deliver wherever and however you like. There are also options to integrate with hosting providers like Amazon, Netlify or Cloudfront.

A static site generator plugin will work best for projects where you want to set up and manually control each step of the static site generation and delivery process. This is likely not the case for the majority of WordPress projects. However, if you build your site with a static-first approach, your site will be ready to use with a static site generator plugin.

CODE FROM SCRATCH STATIC SITE GENERATORS

There is a final category of static site generators that can work with WordPress, but are not designed specifically for WordPress. These get data from WordPress via the REST API or WPGraphQL and then custom code a static site with the raw data. With this approach you use WordPress solely to manage your content, not determine how it is displayed.

We have not emphasized this approach in our static-first guide to WordPress, because it does not support WordPress themes. You have to code and design a completely separate front-end for your site, usually using React or a custom templating language.

You will also have to write custom integrations for each WordPress plugin you want to add support for. Luckily there are some libraries to help integrate WordPress with these code from scratch static site generators. Several third party static-friendly services work with these types of static sites as well.

» Frontity



A code from scratch approach really only works best when you want a completely custom front-end to your site built outside of WordPress. Some developers prefer to build their site templates with React and API calls to WordPress rather than PHP and the WordPress template hierarchy. If this approach works best for you, check out Frontity and Gatsby.

Note that with this approach you will have to handle hosting WordPress so it is protected from outside access as well as setup continuous integration with a server or CDN.

CHOOSING

WHEN TO GO STATIC

With a static-first approach to WordPress, you start with the assumption that you will launch as a static site. This ensures you get a fast, virtually unhackable WordPress install that can scale to millions of visits without issues.

As you plan features and functionality, explore how static-friendly plugins and services can meet each of your project needs. Falling back to traditional WordPress would only happen if you can find no static-friendly solutions.

You may find a few common instances when a static site will not work for your project. The first is if you have an existing site with features that need to be shifted to different plugins and services and you do not have the bandwidth . However, this will not likely be the case with new projects.

Examples of sites that would not be a good fit for static WordPress:



- Sites with user generated WordPress content. This would require access to the WordPress database.
- If you have a project that is completely dependent on the website having access to the WordPress database then a static option may not be the best approach.
- Multisite WordPress install. Generally these are not supported with static site generation tools and platforms.
- Sites with Advanced Search with querying and filtering

With a static first approach, many WordPress projects can be launched as static sites. However, there are some WordPress projects that may present more difficulties and will work best as traditional WordPress sites.

PREPARING TO GO STATIC-FIRST WITH WORDPRESS



With the help of this guide you should now have a solid understanding of how to take a static first approach to your WordPress projects.

Going static brings the major benefits of security, speed and scalability.



DAVID BITTON, SENIOR PRODUCT
MANAGER OF CORALOGIX

Our WordPress site is business-critical and we depend on it for generating leads. We were suffering from slower than 6 second load time. We considered investing in a brand new website but decided to try Strattic instead. We were amazed that Strattic got our page load time to over 50% faster and we didn't have the hassle of rebuilding our site.