

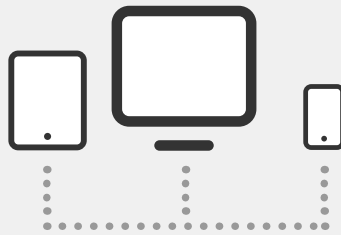


How we build high performing websites

Avenue

We create websites utilising a leading-edge 'headless' development model that delivers significant benefits over the older, traditional web development build approach.

OLD 'TRADITIONAL' MODEL



With the old, traditional development model, the Website Design (HTML templates), Content Management System and Content are all deeply interconnected together.

This approach delivers slower websites with far less flexibility.

Antiquated model

- Slower
- Less Secure
- Less Scalable
- More Expensive to Modify
- Less Flexibility
- Less Reliable

The term "headless" comes from the concept of removing the "head" (front-end) of the website from the "body" (the back-end CMS and the content repository).

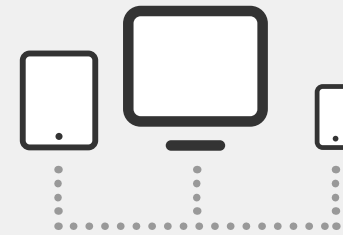
The headless approach delivers enormous benefits, specifically around page load speed and security.

The separation of the front-end from the back-end means it is significantly easier to change your back-end CMS and functionality platforms in the future. Similarly, if you want to update your front-end visual design, you can do this without impacting the back-end functionality and site content.

As websites using a traditional development model are so closely interconnected, you cannot make a change to either functionality or design without impacting the other major element. As such, they are more monolithic in their approach and far less flexible.

Avenue sets up all hosting as client owned accounts, giving clients ownership and control of the website's hosting accounts, allowing full access and peace of mind.

NEW 'HEADLESS' MODEL



Presentation Layer

Front-end HTML templates developed on either Gatsby or Next.js React frameworks.

Hosting Servers:

Flexible, next-generation web hosting with multiple servers via global CDN (Content Delivery Network).

Web-servers dynamically connected via Git to deploy content updates.

Back-end

Content Management System and Content.

Hosting Server:

Flexible, dedicated Cloud based Hosting on platforms such as Amazon AWS.

High-performing model

- 10x Faster Page Speed via CDN
- Faster speed assists SEO
- More Secure
- Highly Scalable
- Version Control
- More Flexibility
- More Reliable
- Easier to Update & Modify

We don't build traditional WordPress websites.

We create custom, leading-edge websites that use WordPress as the CMS.

'Headless' website solution

In short, with headless solutions, the visual design ("front-end") is separated or decoupled from the CMS functionality ("Back-end"). This provides significant advantages including allowing breakthrough user-experiences and innovation, blistering site speed and improved security.

Gatsby React Framework

We develop sites using Gatsby (a cutting edge performance first React framework) to deliver significantly fast websites. This case study shows how [Youfit uses Gatsby to increase lead generation by 60%](#).

No template themes

All of our websites are **custom designed** to expertly communicate your brand values and meet **leading practice UX and UI Design**.

There's no cheap, slow and poorly coded WordPress themes around here.

Fastest page load possible

A static site hosted on a CDN is often 10 times faster time-to-first-byte than a site built with a traditional database served CMS.

Version Control and Rollbacks

Every time some content is saved in the website CMS, a snapshot of the website is made. Since all the pages are built static HTML pages, it is extremely easy to rollback the website to a previous version.

Minimal plug-ins

Too many WordPress websites utilise a tonne of cheap, poorly coded plug-ins to provide functionality. These are often extremely buggy, significantly slow down the speed of websites, and can cause security threats.

Accordingly, we only utilise a very small, select range of safe and proven, industry standard plugins (such as Yoast for SEO).

The website is cached on CDN distributed globally

If users are viewing your website in Sydney, the website will be served from a server in Sydney. Similarly, if users are in New York, their website will be served from a server in New York.



In an Avenue website, if you need functionality, we build quality, custom coded solutions to deliver these needs for you. Safe, Fast and Tested.

Security

'Headless' websites dramatically improve website security

When a user requests a page from a headless website, the server just sends them the file for that web page, instead of building that page from various database requests each time.

This “no build” process means standard hacking attacks like scripting or database security exploits don't work.

Other security aspects in Avenue websites

Installation of regular updates

The website software has a patching program in place to ensure all major software patches are installed.

Protection against brute force attack

WordPress' Brute Force Protection is activated.

Only required services are exposed

Additional services are protected through the use of IP whitelisting and/or VPN connectivity to restrict access to trusted hosts.

Use of TLS V1.2

Transport Layer Security (TLS); a cryptographic protocol used to increase security over computer networks, is used instead of SSLv2 and v3 on the web server.

Regular backups and disaster recovery

The website database and files are backed up to an Amazon s3 bucket periodically.

Since the website is built with JAMstack every CMS content change generates a new website build which has a snapshot taken of it. Even if the WordPress server is completely destroyed, the website will not go down.

If the WordPress server is compromised and a website build is made with no pages, all the previous snapshots can be rolled back to with a click of a button.

HTTP protection headers

HTTP protection headers are configured to assist in hardening the overall security posture of the associated web application.

Auto complete password fields disabled

Where user credentials are used, all password fields have auto complete disabled.

Hostname Disclosure Protection

The website front-end development is protected by Netlify load balancers, and [Cloudflare](#) is used to hide the origin IP address of the WordPress instance.

Cross-Site Scripting - Non-Persistent

Cross site scripting filtering is enabled, and the content security policy is configured to reduce chance of a successful cross site scripting or cross site injection attack.

Prevent querying by remote users

Remote users are prevented from querying for version and type information, as these aspects are never exposed due to the use of Gatsby for the website front-end (which is not a traditional WordPress front-end).

Enforced strong passwords

The iThemes Security plugin can be installed to enforce strong passwords for all the users on the website.

Malware protection

The iThemes Security plugin has scheduled malware scans.

Two factor authentication

Two factor authentication can be enabled for website administrators through the iThemes Security plugin.



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