

EBOOK

# Composable MarTech best practices for modernizing marketing websites

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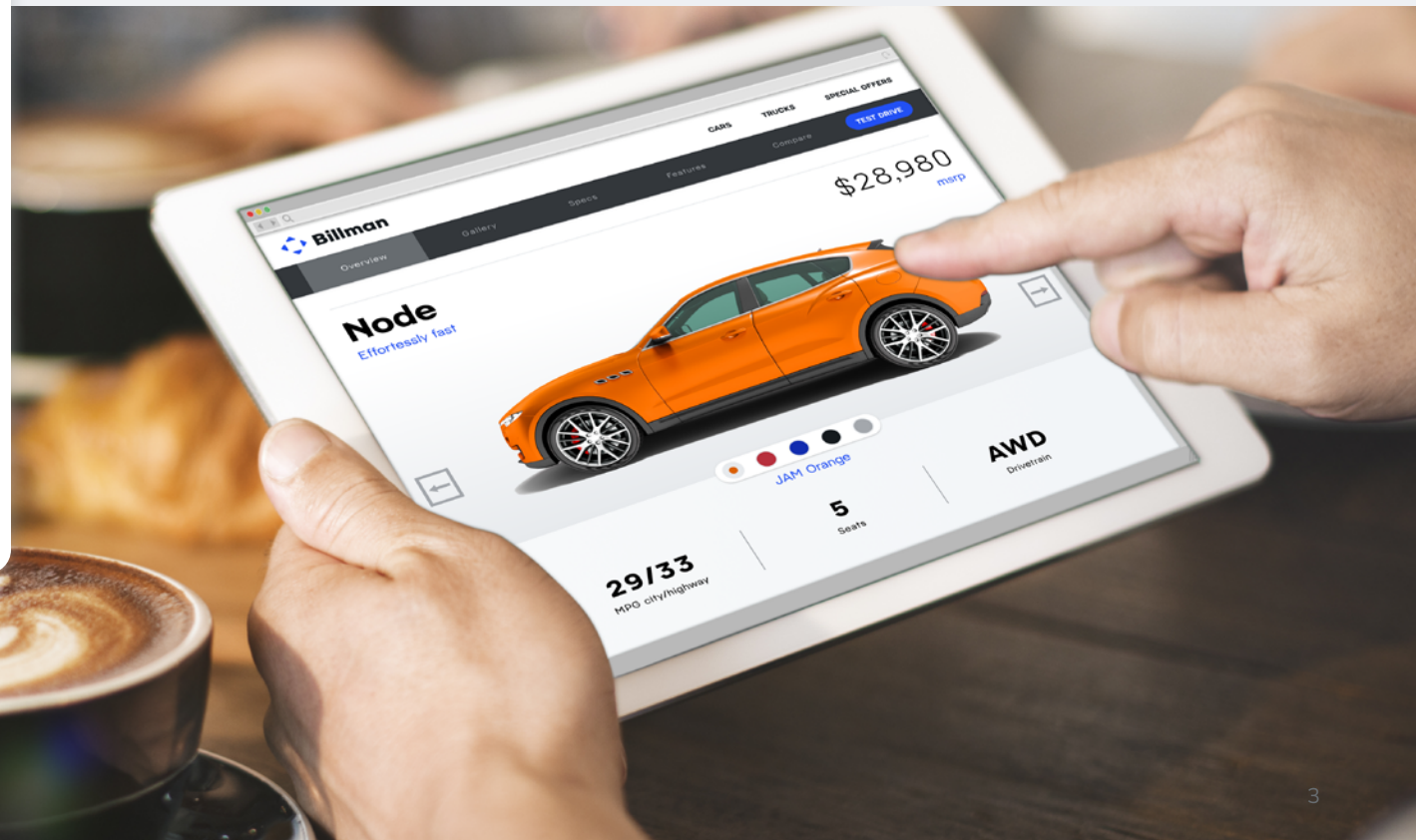
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EVENTS  PREMIERED  
ONLINEPRINT / TV  PROMOTED  
ONLINEMEDIAL  
TOURS  REVIEWED  
ONLINEDEALERSHIPS  ORDERED  
ONLINEDEALERSHIPS  FINANCED  
ONLINESERVICE CENTER  SUPPORTED  
ONLINEDEALERSHIPS  TRADE-INS  
ONLINE

# Brand execution IS online execution

**Your marketing site is the biggest lever you have to increase reach, revenue, and adoption of your company and products.**

Of course it's not at all unexpected for a B2B software company to make their website the centerpiece of their customer acquisition strategy. But recently, even automotive giants like Volvo are premiering, promoting, customizing, and selling new vehicles entirely online. Almost the entirety of marketing's surface area-and focus and budget-has moved to the web. Marketing teams aiming to remain competitive are quickly learning to look, work, and hire like software teams.





## Legacy marketing site stacks hold teams back.

The processes and tech stack web teams built, deployed, and maintained their marketing site worked well for rapidly shipping a brand page, but as they try to compete in an increasingly competitive environment or deliver against new aggressive growth targets, the same processes and tech stack crack. The tools used to get a brand page up are not the same tools that web teams need to create a marketing site that is optimized for quickly delivering new online experiences, minimizing costs at scale, or driving web performance to increase conversions.

## Six reasons your legacy web stack is holding your web dev team back.

### 1 Many marketing team members can't self-serve.

Rapidly growing companies quickly hire many new specialized marketing functions. Now, a small development team needs to help 1) growth marketers rapidly experiment, A/B test, optimize performance, and review granular behavioral analytics, 2) product marketers self-serve new content and updates daily and connect visitors to conversion and product usage, 3) demand generation teams quickly spin up event and campaign pages, and 4) HR get dozens of new job postings live as soon as possible.

### 2 Platform security vulnerabilities keep popping up.

As your company grows, the security team needs to ensure that all paths are secure. In addition to integrating single sign-on (SSO), web teams on monoliths such as WordPress now need to spend a significant portion of their time patching and updating the site platform, plugins, and themes and fix everything that broke in the process.

*"I don't have the time to concern myself with hosting, or setting servers up, and more to the point, things like security and DDoS attacks. We have an SRE team, but we should spend their time on the actual product"*



**David Longworth**  
Design Director, Stack Overflow

### 3 It requires complex infrastructure.

Growth stage companies often have in house DevOps or site reliability engineer (SRE) teams that focus on the SaaS product but support the marketing site as a side project: helping build and fix a complex CI/CD pipeline for the marketing site. Now that the product is scaling, they have less time for marketing and become a blocker to getting new microsites and web updates to market.

### 4 Makes collaborating with designers and developers challenging.

Companies that enter the growth stage have figured out who they are and how they want to position their brand, and the marketing site is the best place to share their brand. But, a significant brand uplift requires web teams to optimize collaboration with design, quickly onboard new team members (either internal or contractors), and automate site previews while in development, all while they support the existing site.

### 5 Can't optimize core web vitals to increase SEO & conversion.

One way to lift SEO across the entire site and improve conversion is to improve the three main core web vitals that makeup Google's performance score: 1) make the site load faster, 2) be immediately interactive, and 3) prevent visual "jumpiness" (scored as cumulative layout shift by Google). But, rigid and cumbersome platforms like Webflow and WordPress make it extraordinarily time consuming or impossible for web teams to make technical tweaks that maximize each core web vital.

### 6 Can't personalize or localize without compromising speed.

As growth specialists spend tens of thousands of ad dollars on ads that convert on the marketing site, they pull in the web team to figure out how to implement personalizations so the company can reduce its cost per new user acquisition. At the same time, there's often an initiative to enter new international markets. Web developers now need to figure out workflows for translations, routing international visitors to the correct version of the site, and making sure that the site is just as performant in Japan as it is in San Francisco.



## Checklist to modernize your web architecture

With most marketing investment funneling to the web, companies that invest in the marketing site as a product will increase site performance and team productivity, ultimately increasing the number of prospects that discover your company and convert to paying customers. Treating the marketing site as a product means that the marketing site needs to become a priority in the organization and that web developers working on it should:

- ✓ Select an open-standards, web architecture where new tools and services can be easily added or removed.
- ✓ Apply best practices in modern software development to the marketing site.
- ✓ Prioritize making it easier for marketing team members to self-serve.
- ✓ Monitor and operationalize core web vitals to increase traffic from SEO.
- ✓ Choose a stack built to support personalization and localization of content.
- ✓ Automate the testing and release cycle of web updates to keep the site secure, fast, and error-free.

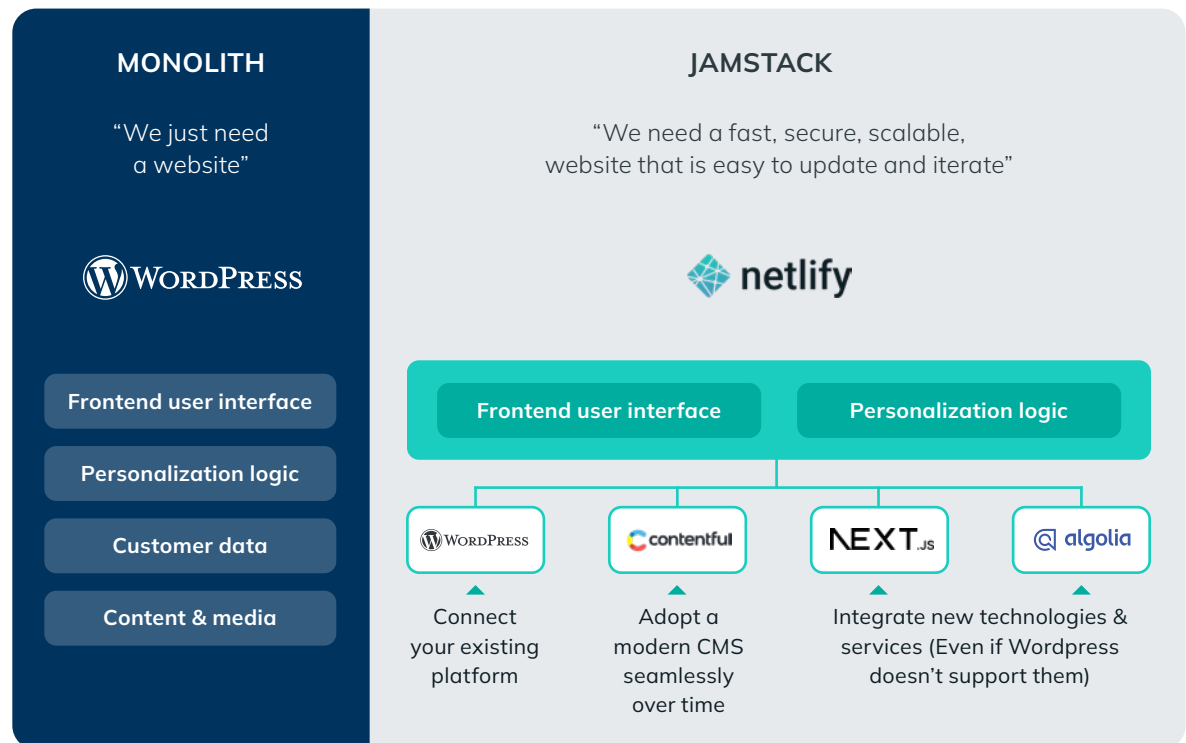
# Optimize your architecture for open web standards

Because web monoliths such as WordPress, Drupal, and Sitecore tightly couple the frontend and backend, they come with significant amounts of backend code that is difficult to read, edit, and debug when something goes wrong. And they lock you into a set of tools and services you use on each. You depend on the platform when you want to add or remove a service, and if the platform and service don't natively integrate, wiring up everything can be a complicated, messy task. One web development leader in a growth stage SaaS company describing troubles with his company's WordPress marketing site said, "I can't even figure out how to solve some of the issues because the site has become a Rube Goldberg of plugins."

## Decouple your site with Jamstack architecture.

Jamstack is an architectural approach that decouples the frontend from data and business logic. This approach makes it faster for developers to make changes that don't accidentally break other components on the site. And, because web developers integrate individual services through APIs instead of via rigid platform connections, you can easily add or remove services as needs evolve.

As a result, web teams can move more quickly because they have more flexibility to create and iterate reusable components at scale and more confidence that changes in one place won't break something in another. Using the Jamstack approach also makes the site more secure because there isn't a single point of entry available to anyone on the web, and teams no longer need to spend significant amounts of time updating the core platform, plugins, and themes.





# MACH



**MICROSERVICES**



**API FIRST**



**CLOUD NATIVE SAAS**



**HEADLESS**

## Include open tools certified by the MACH Alliance in tech evaluations.

The MACH Alliance is an industry body that advocates using this composable approach “in which every component is pluggable, scalable, replaceable, and can be continuously improved through agile development to meet evolving business requirements.” To ensure that your site continues to be easy to build, iterate, and optimize, each component, such as the CMS, search, and personalization tools, should be modular. The MACH Alliance conducts a thorough MACH tech check on each technology provider so you can feel confident that each technology in the alliance will continue to be easy to implement, scale, and swap out if necessary.

**M:** Individual pieces of business functionality that are independently developed, deployed, and managed.

**A:** All functionality is exposed through an API.

**C:** SaaS that leverages the cloud, beyond storage and hosting, including elastic scaling and automatically updating.

**H:** Front-end presentation is decoupled from back end logic and channel, programming language, and is framework agnostic.



# Use modern software development practices to ship marketing site changes faster

Marketing sites are notorious for growing into unwieldy behemoths. From low-code site builders like Webflow and Wix to CMS's like Wordpress and Drupal, these solutions begin to break when you try to customize code, work with dynamic API-driven data or optimize your site.

For marketing teams, the difference between a site that was optimized to get up and running and one optimized to be continuously built on has a measurable impact on the business.

## TO ACCELERATE THE DEVELOPMENT AND DELIVERY OF THE MARKETING SITE, WEB TEAMS SHOULD:

### Use modern tools to streamline review cycles with design and QA.

Web teams don't have spare cycles to create multiple staging environments or manually track QA and feedback comments across Slack, email, and their project management applications. One web leader at Wealthsimple, an online investment management service, said, "Now that we aren't colocated, the designer and developer can't sit in front of a computer and do QA late in a process anymore... and we can't keep using checklists in Google docs." Both are symptoms of poor review processes dictated by legacy tools and platforms.

Netlify collaborative Deploy Previews allow web developers to create deploy previews from a single command, and built-in collaboration features on the preview enable anyone to leave comments, take screenshots and videos, or test responsiveness. Feedback automatically synchronizes to developer productivity tools like GitHub, Gitlab, Jira, Linear, Shortcut, and Trello so they can be tracked and resolved.

*"Deploy previews make it so much faster to collaborate with designers and product managers"*



**Nael Khan**  
Engineering Manager, Frontend, Gemini

## Implement a seamless workflow to get to production faster.

One web development leader in a growth stage SaaS that used a low-code builder stated, “Now, our marketing site deserves the attention that other parts of the company get. We need to rebuild it the right way with version control, code review processes, and the flexibility to optimize performance.”

With Netlify, each time a developer creates a pull request, they get a fully functional version of the entire site as a deploy preview. Once the deploy preview is approved and the branch is merged, the site will automatically deploy to the production environment. Previously complex steps such as handling cache invalidation and distribution across a global content delivery network are automatically handled.

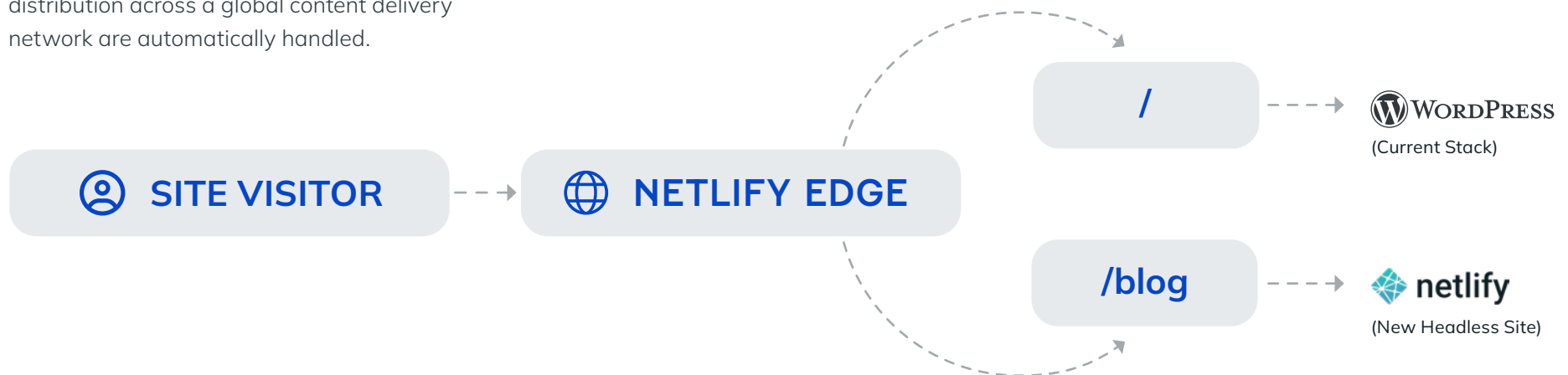
## Approach site redesigns with an agile migration strategy.

Even for marketing sites with limited functionality, site redesigns can evolve into lengthy endeavors where teams work for six months before flipping a big switch and hoping everything goes well.

Most teams going through a site redesign with Netlify iteratively port over segments to the modern architecture. For example, many start by migrating their blog or a less-trafficked international site to Netlify, using Netlify Redirects and Proxies to show the new version of the blog on the same domain where the remainder of the monolith resides.

## Automate infrastructure management and tasks with a purpose-built platform.

Often companies rely on internal DevOps & SRE teams to support the infrastructure for the marketing site as a side project, but when something in the pipeline breaks or needs to be optimized, waiting for resources can block the web team from delivering on their roadmap. Using a platform purpose-built to develop and deploy fast sites, developers on the marketing team can unburden DevOps, ship with confidence, and spend less time SSH'd into EC2 instances resizing the root volume (or other not-so-fun DevOps activities). If something goes wrong, they can immediately roll back to the site's previous version.



# Prioritize stakeholder enablement to expedite routine tasks

In growth stage companies, a small web development team typically needs to support a large marketing team. There's a growing set of initiatives from across the entire company. To avoid becoming the bottleneck, web developers shift their focus from developing new pages to enabling others to self-serve.

**TO HELP WEB DEVELOPMENT TEAMS SUPPORT AN EXTENSIVE LIST OF MARKETING INITIATIVES, WEB DEVELOPERS IN MARKETING TEAMS:**

## Enable content teams to publish and update content independently.

To burn down a massive backlog, developers need to offload the process of deploying and fixing typos. Netlify has pre built integrations with most headless CMSes so content teams can create content, view a live staging environment of the site with the content in it, and deploy the content to the production environment without any developer intervention.

*"It's inevitable that things will break... when that happens, you can roll back to a previous deploy with Netlify. This allows us to ship with confidence. If something breaks, it isn't going to be broken for very long."*



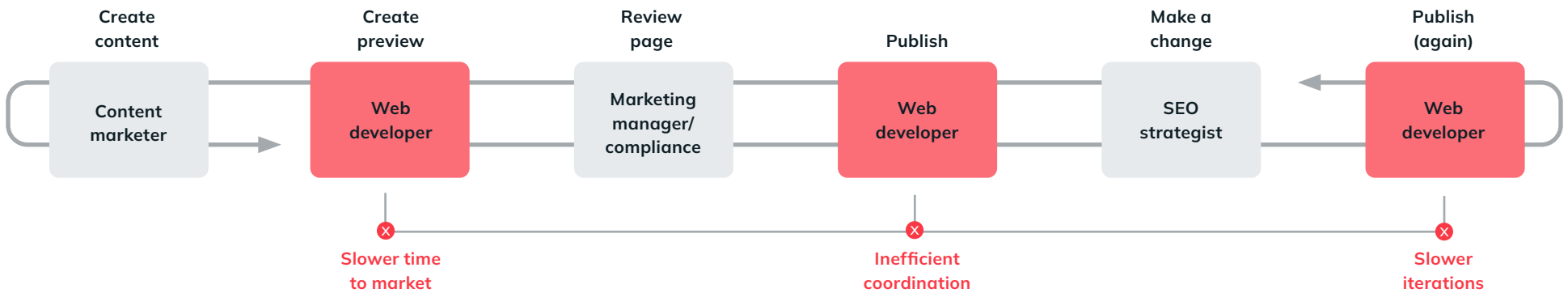
Contentful

*"Usually if you're going to a decoupled approach, you're looking for teams to do their own updates. So the web team can do what they're good at, and the content teams can do what they're good at."*

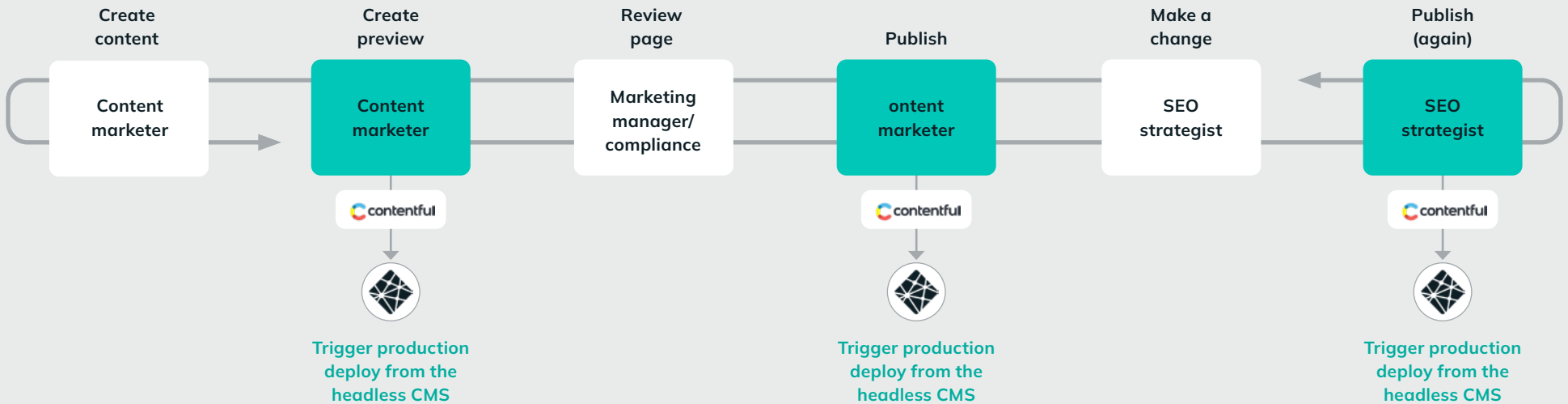


Director of Web Development  
SaaS Company

## Before Netlify



## With Netlify



## Help marketing teams quickly spin up new landing pages.

By decoupling and creating reusable components connected to the CMS, web teams can enable growth marketing teams to set up new pages. For example, at Netlify, marketing team members can go into the Sanity headless CMS and create and deploy a new landing page for a webinar that connects to a HubSpot form and the webinar platform.

## Get event microsites to market efficiently.

Teams in growth mode often have enough customers to host entire events. By standardizing the process for deploying new sites and using Netlify webhooks, teams can quickly get new microsites to market and enable event team members to make changes rapidly. For example, a three-person web development team within marketing at Medallia had to support an event site while supporting the main marketing site and fourteen other sites. Before the Jamstack with Netlify, every speaker and agenda change required work from the web team. But with the Jamstack and Netlify, they got a webhook set up to the event platform, so any time the events team added an agenda item, a speaker bio, or modified an abstract, they could just deploy right away. In peak pre-event planning, those deploys might happen 30 or 40 times a day.

*"More than 60 people in the company can now deploy pages without any communication with the website development team. They build in the CMS with pre-built components and then five minutes later, it's live on the website."*



**Brandon Ortiz**

Vice President of Content Marketing, Celonis

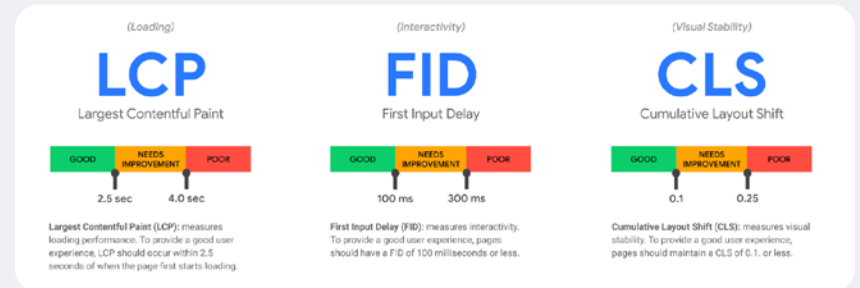
### CASE STUDY:

#### **Medallia's shift to Jamstack and Netlify enabled them to keep up with marketing requests.**

Rob Kristie, the Global Head of Web Development at Medallia, found that, as the company accelerated, the marketing requests from across the company for web updates compounded and eventually bottlenecked at his team. Kristie identified that Medallia's WordPress web stack was restraining the marketing organization and that shifting their marketing sites to the Jamstack architecture could solve several problems simultaneously. After making the shift, Kristie's team gets custom pages and microsites up faster, increasing deployment speeds by 30x, and has supported SEO and conversion optimization efforts by improving core web vitals by 50%. Now, with just three developers in marketing, they efficiently manage 14 sites, rapidly experiment with microsites and campaign pages, and enable marketing teams to self-serve web updates.

# Optimize core web vitals to lift all SEO efforts

Improving core web vitals for a growth stage company's marketing site has a measurable effect on SEO; the better the core web vitals, the more likely Google will rank your site higher than a competitor with the same content. For example, one growth stage company attributed a 10% increase in site visits due to increased core web vitals enabled by their Jamstack architecture and Netlify's High-Performance Edge network.



## Decrease time to Largest Contentful Paint (LCP) with an enterprise-grade edge network.

Largest Contentful Paint represents how quickly the main content of a web page is loaded. Teams that serve content to visitors closer decrease Time to First Byte (TTFB) and, as a result, LCP. Having more global nodes increases the likelihood that, for example, someone in Sydney will get content served from Sydney, instead of waiting for content from Europe to make its way across the world. Using an enterprise-grade Edge network like the Netlify High-Performance Edge significantly increases the number of nodes to more than 70 across the globe, so content is as close to your users as possible, no matter where they are.



## **Further decrease LCP and Cumulative Layout Shift (CLS) by optimizing images with modern frameworks and developer tools.**

Images are usually the largest thing that marketing sites need to render on each page. By delivering images in the most optimized format for the browser (i.e. WebP for the Chrome browser), you can reduce the media size by more than 25%, and effectively decrease the LCP time by as much.

Modern web frameworks like Next.js have built in image optimizations that, when used with the Netlify platform, automatically chooses the right image size and enforce rules for developers to set a height or width so the browser window saves the right amount of space for the image to load into- reducing the CLS of the page.



## **Improve First Input Delay (FID) by deferring analytics tags and chatbots.**

As the marketing team grows, so will the number of analytics tags, ad tags, and chatbots that the marketing team adds to the site. Often, each tag you add slows down the site and prevents visitors from interacting with it for longer. Using modern web frameworks, teams can defer tags to worker threads so they don't block the main thread and decrease the FID time. For example, web developers can use the Partytown library to automatically run third-party scripts from a web worker.



## Choose a stack built to support personalization and localization.

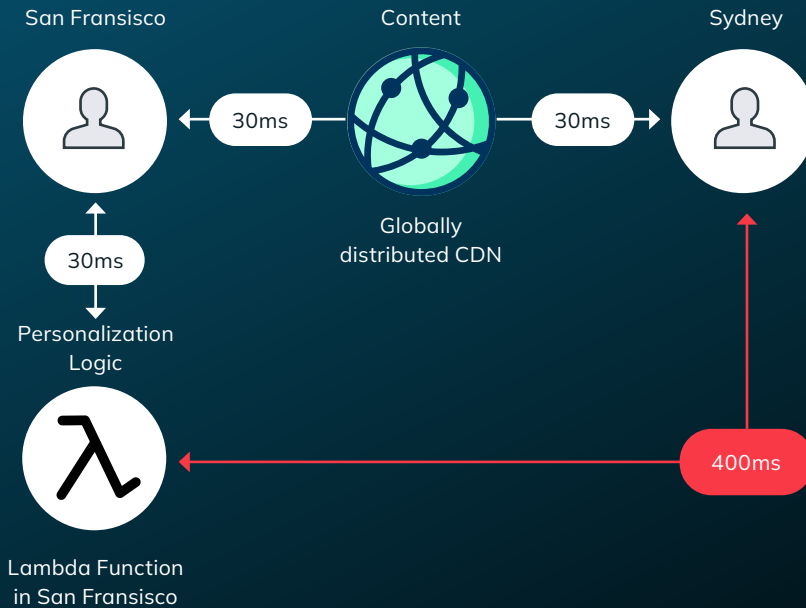
Companies that shift to viewing their marketing site as a growth driver add personalizing and internationalizing the web experience to their roadmap. But, many continuously defer the initiatives because their current stack limits them. Neither legacy monoliths like WordPress or Drupal sites nor site builders like Webflow support personalization and internationalization in a scalable way.

Whether personalization or internationalization is weeks, months, or a year away, developers should choose a web stack that supports it natively.

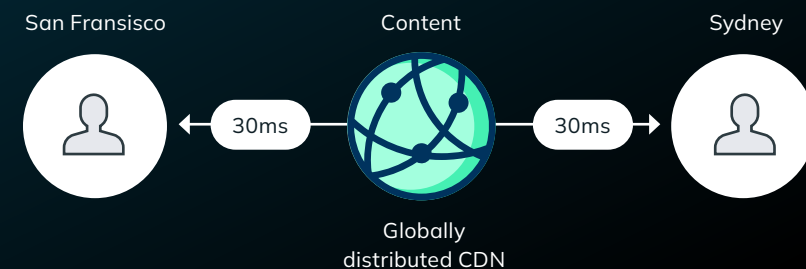
### Executes personalization and experimentation logic at the edge.

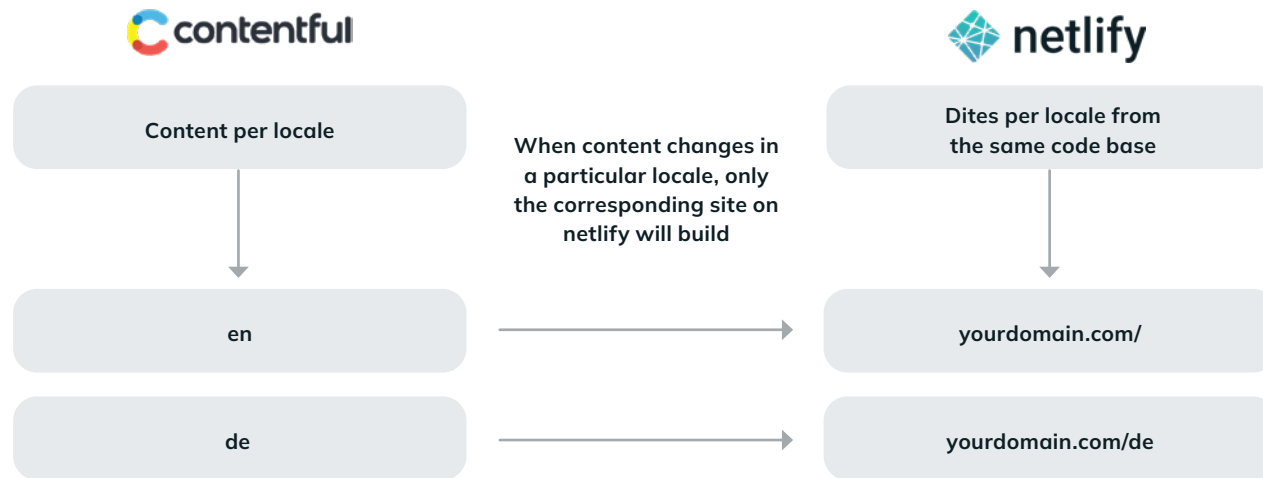
The “personalization paradox” is where teams try to increase web conversion by personalizing the site, but by doing so, they slow down the site, which decreases conversion. To get the best of both worlds, teams should deliver personalization and A/B testing logic directly from the Edge, so it can execute on the node closest to the visitor instead of going back to a single server that might be across the world. Netlify’s Edge Functions lets web teams run globally distributed functions for the fastest possible response times worldwide.

#### Before Netlify



#### With Edge personalization





## Has a headless CMS with support for localization.

Trying to internationalize on a monolithic CMS quickly becomes a game of whack-a-mole where one small developer change can break translations on an international version of the site. For example, when a developer at Sonosite made a slight change to the monolith Drupal codebase, it accidentally broke even simple translations across the site. Most headless CMSes like Contentful, Prismic, and Sanity have built-in support or easy-to-use plugins for localization and translations. For example, Contentful has pre-built localization fields and extends functionality with purpose-built localization providers like Smartling to further streamline translation workflows for marketing and content teams.

## Builds quickly.

To keep sites fast, web development teams using the Jamstack approach often statically generate as much as possible before distributing it to the Edge. However, as the team adds more international versions of the site, the time it takes to build the site for each market multiplies.

Choosing a platform that can build quickly or supports on-demand builder functionality that defers the generation and persistence of some of your pages until they are first requested can drastically reduce build times, which is especially important for teams that deploy frequently. Netlify's High Performance Build and On-Demand Builders are two options.

# Automate the testing and release cycle to keep the site secure, fast, and error-free

Web teams working on the marketing site should optimize workflows for scale to support a growing team. To continue delivering on their roadmap beyond a new site launch, web teams should automate workflows to keep the site performant and easy to iterate without getting weighed down.

REPLACE IMAGES IN CODEBASE WITH  
OPTIMIZED FORMATS



PREVENT DEPLOY IF LIGHTHOUSE  
PERFORMANCE IS < 90



CHECK FOR SECURITY  
VULNERABILITIES



LOOK FOR BROKEN LINKS THAT  
NEGATIVELY AFFECT SEO



DEPLOY SITE  
 netlify

## Offload infrastructure management to a purpose-built platform.

Spending time figuring out caching, scaling servers, and creating redundancies to keep the site reliable to a 99.99% is not typically time well spent.

Often, teams use a modern web development platform like Netlify to take care of the deployment, cache invalidation, and auto-scaling to meet any spikes in traffic.

*"In the old days I had to worry about the server, or having memory problems, but with Netify, I know it's just going to work."*



**Rob Kristie**

Global Head of Web Development,

## Automatically identify SEO issues on every deploy.

Getting handed a laundry list of technical improvement recommendations from an SEO specialist is never fun. In addition to automating performance optimizations to keep core web vitals green, advanced teams use SEO-specific plugins such as the Checklinks plugin on Netlify that identifies broken internal and external links so you can catch them before they build up.

## Automate performance optimizations and embedding performance tracking in workflows.

Sites start fast but quickly become bloated and slow as unoptimized images and tags make their way into the site. Using services like the Cloudinary Build Plugin on Netlify ensures that images are constantly optimized. By showing Lighthouse scores on every deploy (enabled via the Netlify Lighthouse Plugin), web developers can visually track the performance of every deploy. If a performance issue is detected, the web developer can easily trace the Lighthouse offender back to the build it happened and fix the offender.

## Update dependencies automatically and prevent deploys with security vulnerabilities.

Although sites built with the Jamstack architecture have fewer vulnerabilities than monoliths, they frequently depend on installed packages and versions of frameworks that eventually need to be updated. By using a git-based workflow, teams automate dependency updates with a one-click service like GitHub's Dependabot. Using the Snyk Plugin on Netlify, enables the Snyk security service to identify if your site includes a security vulnerability and can fail builds until it's fixed. As a result, updating the site becomes a series of small incremental updates instead of large point-in time migrations or entire platform updates.

## Drain logs to a purpose-built platform (if you already have one).

Tech-savvy organizations often have an observability platform such as Datadog or New Relic. These organizations typically ask web teams moving a marketing site from DevOps and SRE-maintained infrastructure to a purpose-built platform to pipe logs to the observability platform. With a single click, Netlify Log Drains automatically funnel logs to observability platforms with no additional configuration.



# Get Started

Many organizations struggle to shift away from building and deploying marketing sites on legacy, monolithic applications because of the perceived cost and risk. Netlify experts have advised countless teams on how best to make the shift to the Jamstack so you and your team can feel confident conducting a proof of concept without risk or any added infrastructure costs.

Contact a Netlify expert to discover how Netlify can help your organization unlock productivity, performance, and scale with the modern web.

[Request a demo](#)



