ACQUIA

EXPERIENCE DIGITAL FREEDOM

THE DEVELOPER'S GUIDE TO WEBSITE REDESIGN

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INTRODUCTION

In mid-2020, we launched a far-reaching project to redesign and rebuild Acquia.com. Several goals motivated our efforts.

From the marketing perspective (covered extensively in our **companion e-book**), we wanted to optimize the flow of the site to support users, especially those researching our products and their capabilities. Since the range of these products has continuously expanded since our last redesign, we wanted to make sure the new site highlighted their power. We also wanted to make sure we were taking full advantage of this power ourselves.

Achieving both these goals involved adding to the content we had on the site as well as totally restructuring it. On the developer side, we worked hand-in-hand with marketing to bring this vision to life. To that end, we focused on re-architecting our content model.

Specifically, we wanted to develop a strategic, component-based architecture to support our accelerated rate of content creation and evolving content creation workflows. The aim here was to rebuild strategically to support the needs of marketers and other business users, refocusing development efforts on building new experiences, rather than simply keeping the lights on.

Key to achieving all this was an upgrade to Drupal 9. Moving to the latest version allowed us to get the most out of Drupal, modernize the site's look and feel and improve its overall performance. In other words, we took upgrading to D9 as an opportunity to rebuild the site in a way that would make development more efficient, empower marketers to create content and ensure that both groups were able to work together on the site, seamlessly.

In this e-book, we will share a high-level overview of the approach we took for this rebuild. Since we were especially focused on creating a composable architecture, we will go into some detail regarding the content architecture we implemented. Finally, we will share the lessons we learned, both in terms of challenges to look out for and recommendations to ensure the success of your own redesign.

For large-scale website redesigns, it's crucial to give every project milestone full consideration.

Below we lay out the specific milestones for the development of our new site. As you will see, once things got rolling, we pursued a number of these milestones in parallel. It's also worth emphasizing that hitting these milestones involved close collaboration between developers and the marketing team all along the way.

While we generally follow an Agile development methodology as an organization, the approach we took in this case was not strictly Agile. (One developer involved jokingly referred to it as, "Express Waterfall.")

Our decisions were guided by pragmatism, given the enormous quantity of content we had to migrate (and develop), as well as our tight timeline. The development team was very familiar with the existing site and what we were aiming for in the new one. And all our senior back-end and front-end architects knew what

needed to be done without explicit acceptance criteria. As a result, we could deploy large, completed tasks to the "live," non-production environment without any QA beforehand.
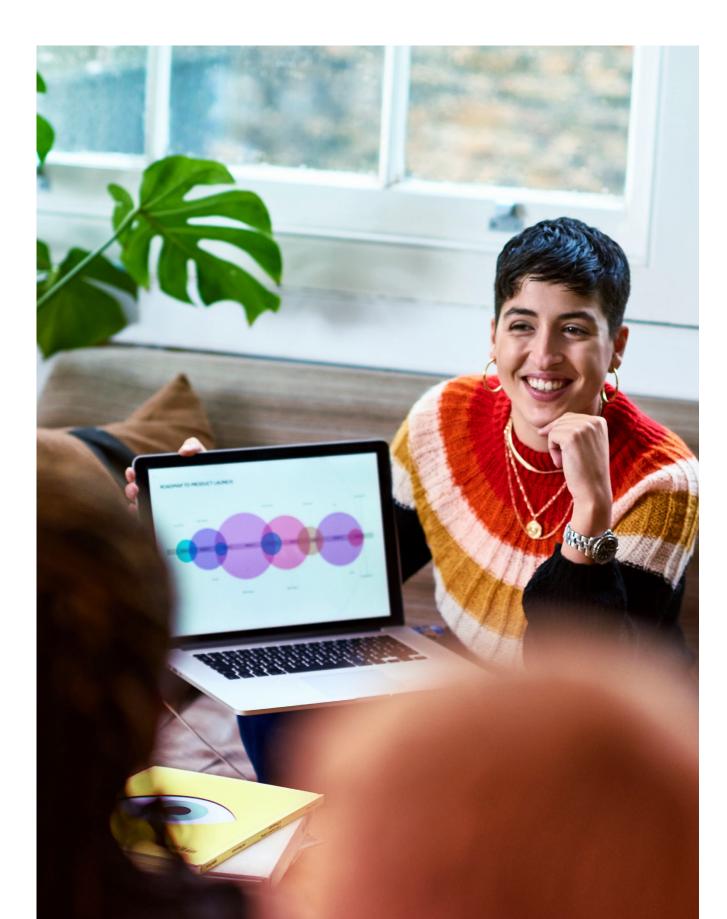
This had several benefits. First, it let devs move on to their next task without pause, maintaining their rhythm. Second, it let QA immediately start using and testing the new functionality at the same time. Finally, it made it possible for the devs to handle bug fixes in bulk. Overall, this approach proved extremely efficient, supporting our need for speed.

That being said, developers still went through the typical agile workflow: Submit pull request (notifying others you have completed a feature); move on to code review/QA; then merge with existing code. We also instituted fairly rigorous acceptance criteria for the non-architects on the

project. This significantly removed overhead and allowed us to tackle numerous changes all at once. It also allowed us to immediately test the way components, features or other changes behaved alongside each other, rather than testing each in a vacuum.

Effectively, the entire site-building process became a kind of continual testing environment.

Now, to the milestones:

KICKOFF

To kick things off, we defined stakeholders, project owners and approvers. No project like this can succeed unless it is clear who owns the overall goal, who oversees the different project tracks and who decides when a particular milestone has been reached.

Kickoff also involved mapping out the resource plan for completing this project. On the development side, we relied heavily on our internal capabilities, particularly from the WebOps team. On the design side, we chose an award-winning agency – **Third and Grove** – to create the site's design system. Our CMO was the project's executive owner.

Key Takeaway: For a project of this scope, it's critical to clearly define who is accountable for what, from the completion of individual tasks all the way up to the project's final outcome.

RESEARCH

A big mistake that many companies make when undertaking a site redesign is spending too much time talking to themselves. We wanted to make sure that the pages and conversions we thought were important were also important from a visitor behavior and site traffic perspective. So, we did our research.

While the numbers can tell a story, they don't tell the whole story. We always tried to temper our analysis with insights from the business. Likewise, we used our analysis to inform the business decisions we were making. Balancing opinions and assumptions with data is the best way to avoid internal tunnel vision while giving customers and other users a voice.

Key Takeaway: Redesigning and rebuilding a website can't happen in a vacuum. Research keeps you focused on the needs of your customers and the needs of the business.

STRATEGIC PLANNING

We began our strategic planning in tandem with our research. Here we defined the vision and direction for the site's look and feel, as well as our overarching usability goals. We also developed strategies to optimize the navigation experience and conversion paths.
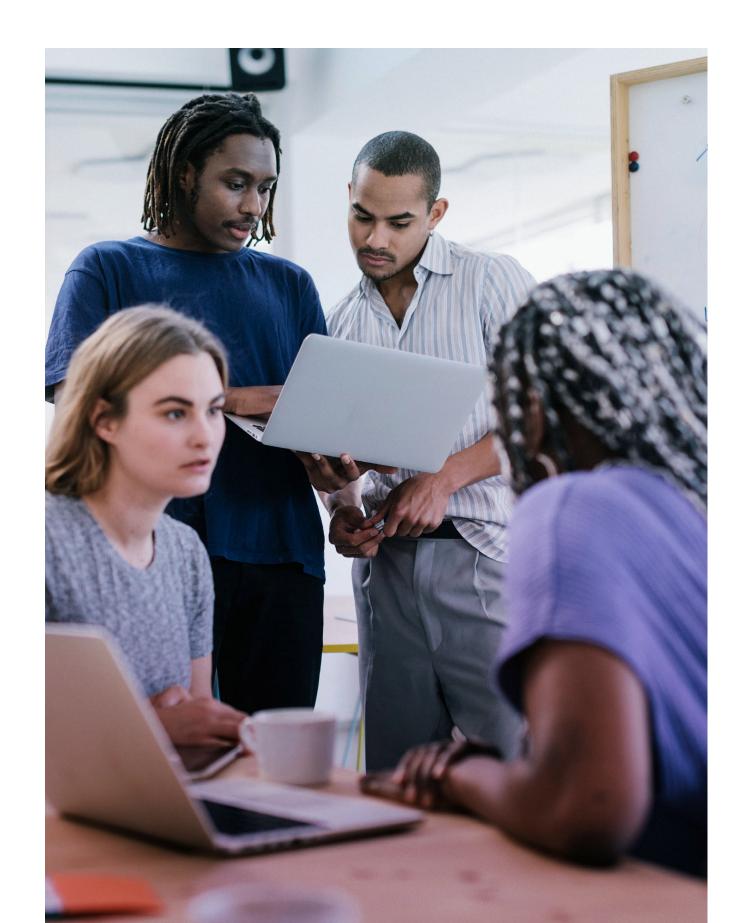
Defining your site's primary audience, as well as the broader audience it addresses, is a crucial first step. After all, you're not building the site for you. You're building it for them. Defining these audiences is an important way to keep everyone grounded with regard to the overall focus of the project.

While our site speaks to the C-level (CEO, CMO, CIO), it also speaks to marketers, developers, digital leaders and innovators. Our content strategy aimed to streamline the information architecture for these different personas, especially when they visit the site in research mode,

as they often do. "Researcher," in fact, became our overarching persona type.

As important as it is to be strategic with regard to your audience and your site's business goals, you also have to be strategic in your operational choices.

Our site is content-rich, so we needed to thoughtfully document our content migration strategy. Because we didn't want the rebuild to affect our current rank or domain authority, we also needed an SEO migration strategy. And because the site ultimately has to work for the business, we also defined our target KPIs and began to collect relevant benchmark data.

Key Takeaway: It's easy to get lost in the details. Strategic planning – from defining your audience to setting concrete performance goals for the site – keeps everyone focused.

CREATIVE DESIGN

Our research and strategic planning informed the creative direction taken by Third and Grove. They developed the wireframes and the detailed designs for the pages and other site elements.

We used these designs to develop a library of reusable components for the site. We also developed a component library to guide page creators as the site grows.

Key Takeaway: To avoid complications down the road, make sure your design partners are aligned on the development strategy.

INFRASTRUCTURE

We laid the foundation for the infrastructure we were building while the strategic plans were being developed.

We stood up parallel environments in Acquia Cloud, setting up and configuring GitHub connectivity along the way. We also set up and configured Acquia Pipelines.

We created local environments for developers to use, set up and configured the Drupal core modules, established Front-end Development Workflow and connected everything to Acquia Cloud. We were ready to go.

Key Takeaway: Planning how you are going to build is almost as important as the building itself. Making sure your infrastructure and workflows are in place will set you up for success.

CONTENT STRATEGY & PLANNING

Since rearchitecting our content model was key to this redesign, we'll dive a bit deeper below. To give you a quick idea of the scope of revisions we made to the model, we consolidated 22 content types down to 13, among other things.

That being said, at a high level, the content strategy and planning phase required us to do several things. We had to define our content taxonomy. Because we were implementing Acquia Site Studio, to facilitate future page creation, we had to define Site Studio components based on this taxonomy. This also called for definition of Content Aggregate Pages (Views) prior to development.

And because we wanted to enable a wider range of stakeholders to create and deploy new content quickly, we had to clearly define content roles and permissions for the new site.

Finally, given the ways the content structure on the existing site differed from the structure of the new one, we had to pay special attention in this phase to developing our content migration strategy.

Key Takeaway: Content strategy needs to focus on enabling content creation, especially for non-technical business users.

DEVELOPMENT

With all the right pieces in place, we began the actual development work. First, we developed the structured content types, including those on the front end. Then we developed the Site Studio components. We also implemented the content taxonomy across the site.

We upgraded existing custom modules for Drupal 9 and developed custom migrations from the old site to the new site, where needed. While we prioritized using contrib modules wherever possible, we also ended up creating custom modules for special functionality such as careers pages, events handling and gated assets.

Finally, we focused on front-end development, creating 31 Site Studio components for our full range of content and media types.

Key Takeaway: When starting development, it's always good to start with the back-end work first and then move to front-end development, especially with Drupal.

TESTING & MIGRATION

Of course, we had to QA our work and migrate it to our production environment. Testing occurred in tandem with development. We defined our testing strategy for various browsers and mobile devices and got to work.

We tested the Site Studio components and structured content. We also tested all custom functionality we had developed. From an internal user perspective, we tested the content editor experience, making sure that roles and permissions had been properly defined and implemented. We also ran tests once various migrations had been performed.

Key Takeaway: QA often and frequently, making sure that each change is tested and routine testing is done across the site. It's best to QA what you can as you go. Don't wait until the very end to begin QA. If possible, dedicating resources to just bug fixes will let other developers maintain the momentum.

SECTION 02

DEEP DIVE: CONTENT STRATEGY

Your content model is the foundation of your site. Websites can do a lot of things, but central to all that is presenting content to visitors. We used our site redesign as a golden opportunity to analyze, evaluate and re-engineer our content model in a way that aligns with both how business users use the site to generate content and how other tools that power content curation and customization work.

One goal of this redesign, as mentioned, was to provide researchers with more content, particularly content focused on our new products. We wanted to make sure that our site addressed all questions researchers have, from problem identification to building an investment case. So, we knew we needed new content. Of course, we already offered a lot of content on Acquia.com. This led to some obvious questions:

/ **What pages and content did we want to move to the new site?**

/ **How are visitors engaging with our content currently?**

/ **How are internal users working with our content?**

/ **How could we make it easier for everyone?**

STRUCTURED VS. UNSTRUCTURED CONTENT

At the most basic level, we looked at our pages and content types in terms of whether or not they were structured or unstructured. Structured content types – blog posts, press releases, webinar pages and so on – have a consistent format that doesn't change. These have to be set up so users can create content without worrying about how it will ultimately appear on the site.

Unstructured content types, such as the home page and product pages, are dynamic. These have to be set up so users can create or change them using predefined components.

The amount of structured vs. unstructured content you have significantly influences your migration strategy. It's critical that your stakeholders, either in marketing or in the business at large, understand the implications of this. Structured content is set in stone and is relatively straightforward to migrate over. With unstructured content, you need to plan time for building, reviewing and approving pages. Because the home page and product pages can take on different forms and functions than structured content, they may require multiple revisions and updates.

REVISITING AND REFINING YOUR CONTENT STRUCTURE

When creating our new content model, we continuously looked for ways to consolidate and simplify the structure. Our old site, for example, relied on making countless image styles available in the WYSIWYG and had over 22 content types – some of which hadn't been used in years.

We consolidated them all into five basic image styles and 13 content types, greatly simplifying the user experience. For example, users could convert an e-book landing page to a whitepaper landing page with a simple dropdown menu, rather than having to create an entirely new page.
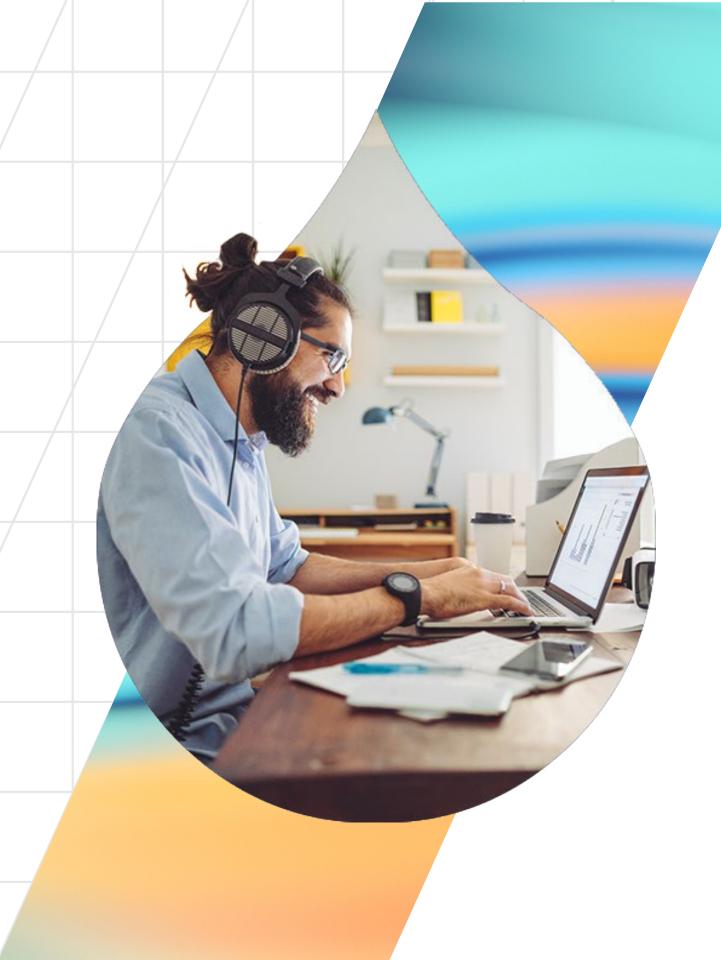
For unstructured content, we leveraged Site Studio to create a set of components that users could lay out as they see fit. This component approach not only makes it easier to create pages, but also allows you to maintain brand standards built into the structure of the components themselves.

Using the rebuild/redesign process to revisit and refine the inherent content structure of your site is essential. It is all too common for companies to define a content structure once and never revisit it.

But business needs change, and your content structure needs to support those changes. By consolidating, simplifying and streamlining your content model, your site can adapt more easily to changing business needs.

SECTION 03

WATCH OUT! CHALLENGES YOU MIGHT FACE

Trying to complete a massive project such as an entire site rebuild on a strict timeline (in our case, less than six months) is bound to pose some challenges. Of course, we ran into our share (although the move from Drupal 8 to Drupal 9 was one of the smoothest migrations many on our team had ever gone through). Here are the challenges we think you should watch out for.

LEGACY CODE

Acquia.com has been around in one form or another since 2007, with many different developers working on it. While we could make some assumptions going in about how things were structured, you really can't know what you'll find until you look under the hood. Unfortunately, sometimes things are a bit rustier than you thought!

For example, we found a lot of content structured in a way that was not standard for its content type. Mapping this content to the new content types was time-consuming. We had to be especially careful that we didn't lose any meaningful data in the migration process when, for instance, we migrated unstructured Paragraph components over to structured fields.

Sometimes, we had to resort to manual intervention. Because Events pages on our former site were all fairly unique, to the point where they resembled unstructured content, we had to migrate upcoming and recent events by hand.

CONTENT MIGRATION

The sheer quantity of content that we needed to migrate – over 2,600 structured pages worth – posed a challenge in itself.

First, we had to account for the fact that the structure of the content in the old site differed from the content structure in the new site, as indicated. Then we had to undertake a complete audit of all of our content to be certain we were only migrating over content we still wanted/needed. (In our case, the only content that didn't get migrated was unstructured content. Otherwise, we migrated everything that was migrate-able.)

The time required for an audit should not be underestimated. You will uncover things that need a migration plan of their own that goes beyond what you initially mapped out.

Finally, we had to create 60+ entirely new pages. And of course, we had to be careful not to foul up our SEO along the way.

WORKING WITH NEW TOOLS AND METHODS

One of the stated goals of the site rebuild was modernization. We wanted to make sure that the site was built on the latest version of Drupal (Drupal 9). Thanks to the innovations in Drupal 8, this upgrade was relatively simple.

We also wanted to make sure we were configuring the new site to get the most out of our tools, especially the newer ones. For example, our team had to get more familiar with Site Studio. The beauty of Site Studio is the component-based approach that it enables. By defining and creating a library of reusable components, anyone can use Site Studio to create pages/experiences without any technical know-how. Naturally, this means designing and architecting the site to take advantage of these powerful capabilities.

COORDINATING DESIGN AND DEVELOPMENT

Unfortunately, the site wasn't designed with an eye to the underlying component structure that Site Studio depends on. This meant that we had to create the components based on the design system our creative partners created, rather than the other way around.

While the ideal would be for designers to design with development in mind, that's not always how designers work. For this reason, it's important to set up cross-functional teams to collaborate to ensure you are optimizing where you're spending the most development hours.

The goal here should be to point out where certain designs will be challenging to implement and make suggestions for alternatives that respect both the design direction and development time, and spend the most time on features that will have the greatest impact.

SECTION 04

RECOMMENDATIONS FOR A SMOOTHER RIDE

GET FULL BUY-IN FROM THE OUTSET

When redesigning an enterprise-grade site like Acquia.com, it's critical to get full buy-in from stakeholders at the outset. A lot of people across the organization, from leadership on down, are going to have opinions. As we mentioned above, it's important that those opinions be heard but also that they be guided by analysis. Getting buy-in on the overarching strategic goals and documenting tactical decisions provides a steady reference point as things get more complicated.

Getting buy-in also helps you stay focused on the ultimate goals you want to accomplish. For example, in our case, we had to work fast, so the emphasis fell more on building the site right with a component-based framework vs. designing every single page perfectly. If we did that, we knew we could go back and optimize specific pages and add to our component base.

DO THE SIMPLE STUFF FIRST

It's also very important to complete first the things that won't change. Content migration was a huge part of this project. As it turned out, a lot of the structured content – e.g. blog posts and press releases – didn't have to be rebuilt; these content types only had to be themed and moved. Focusing on structured content first meant that we could complete steps, get sign-off and keep moving.

This kind of approach helps you maintain momentum. When you're in the middle of a massive project like this, seeing things come together is a great morale booster.

EMPHASIZE BREADTH OVER DEPTH IN TESTING

In our normal QA process, we naturally want to make sure that everything is thoroughly tested before it goes live. When managing the QA process for this project, we realized we didn't have time for that level of rigor. There was simply too much to test.

So, we made a choice. We realized that it was better to get everything 90% of the way there than a limited number of things 100% of the way there. In other words, be pragmatic. If you can ensure that everything basically works, you can get the site launched and address issues with ongoing iterations.
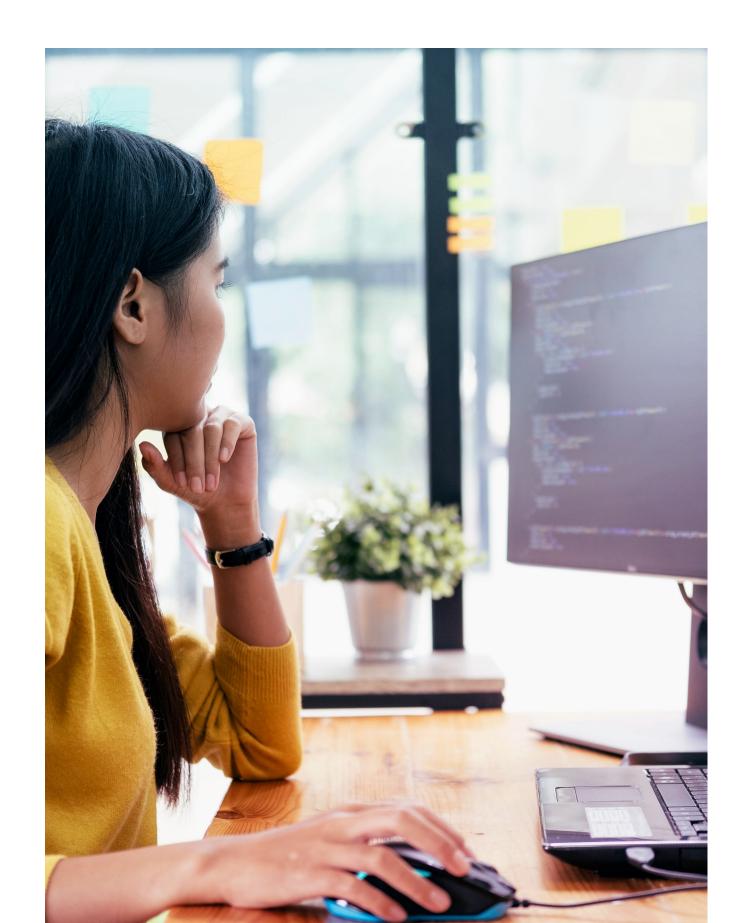
BAKE IN AN ADDITIONAL MONTH INTO THE SCOPE

Scoping a project like this isn't easy. When you are using new tools or a new approach, the time it will take to complete certain steps can't be accurately gauged. It is inevitable that you will scope for more than you can actually accomplish.

It's also the case that, while the project is progressing, the business is evolving. This can mean that tasks and requests get added to the scope. That might not be ideal, but it's going to happen because the business is operating in the moment while you're focused on the future.

Related to that, for a company like ours, the business also has day-to-day needs and they depend on your developer resources. When conflicts arise, it can slow you down.

You need to account for all these contingencies by building a buffer into your scope; everyone and everything you need won't always be available on demand. Thanks to your buffer, you can absorb the changes and keep moving.

PAY ATTENTION TO WHAT'S COMING NEXT

When you aren't sure how long certain steps are going to take, you need to continually account for what's coming next. In circumstances like this, project plans and sprints can actually become a trap where focusing on the current deliverable comes at the expense of thinking about the next one.

The uncertainty that comes with using new tools or implementing a novel architecture aside, you will also inevitably uncover things along the way that need a better solution than the one you can provide, things that could be improved, things that could be more consistent, things you want to test (because there maybe wasn't agreement between options) and so on. If these things don't stand in the way of project completion, it's a good idea to keep track of them as they come up and then build a prioritized action plan for addressing them once the launch is behind you.

Managing the present needs to go hand in hand with planning for the future. That means constantly asking yourself, what do we need to think about now to ensure that we can do what's next in the most efficient way possible?

REBUILD ON THE RIGHT FOUNDATION

Whether you are overhauling your website or rethinking your entire approach to customer experience, Acquia DXP offers the full suite of tools you will need to build a new digital experience that serves both your brand and your customers.

EXPLORE ACQUIA DXP ▶

ACQUIA

ABOUT ACQUIA

Acquia is the open digital experience platform that enables organizations to build, host, analyze and communicate with their customers at scale through websites and digital applications. As the trusted open source leader, we use adaptive intelligence to produce better business outcomes for CX leaders.

THE DEV GUIDE TO WEBSITE REDESIGN