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The Marketer's Guide to

ATOMIC DESIGN

a faster way to build and manage your digital brand

ATOMIC DESIGN

Atomic design is a hot topic in the worlds of digital design, branding, and content strategy. In fact, it was even listed as one of the hottest digital trends of 2017 by design magazine and other notable publications. But what is it and why is it so important?

Atomic design is the practice of standardizing designs from their smallest parts up to create consistency. It unifies the appearances of digital platforms by ensuring that everything is built according to the same set of guidelines. An atomic design library gives marketers a structured system that guides every design decision, ensures visual consistency across the platform, and guarantees that an organization's digital identity is fully unified across touchpoints.

Consider all of the work that goes into building a large digital platform. Atomic design is the practice of creating a design system to form the building blocks for that platform. Rather than building everything from singular visual elements, atomic design uses these building blocks to ensure a consistent structure and interface. With atomic design, the littlest details combine in infinitely variable ways, working in concert with larger components to create a cohesive, beautiful experience.

An overview of atomic design

Atomic design, also referred to as component-based design, can refer to two things. First: Atomic design as a philosophy refers to the idea of breaking a platform's visual and technical features down to its smallest functional components (or atoms). From there, everything is standardized and rebuilt in increasingly larger components that can be combined, mixed-and-matched, and endlessly reconfigured.

Additionally, "atomic design" is also used to refer to the entire ecosystem of both the design and its pattern library. A pattern library provides content authors with a series of components that can be used to construct pages and content. In an atomic library, each component has been tested piece by piece, and every item has been checked in the context of larger templates to refine the design. This intentional approach is what preserves visual integrity in a platform, and helps organizations standardize their branding across all of their digital touchpoints.

In fact, the component library is what takes an atomic design from useful visual guidelines to powerful tool. Digitally-savvy businesses are using component libraries already and enjoying four distinct payoffs: technical debt reduction, simplified publishing workflows, better brand integrity, and responsiveness across devices.

The phrase 'atomic design' was coined by Brad Frost, a designer and developer based out of Pittsburgh. In his book, Atomic Design, Frost unified numerous similar design methodologies into the overarching paradigm that he termed atomic design. On his site, he says of the concept:

> **"**
>
> **In searching for inspiration and parallels, I kept coming back to chemistry. The thought is that all matter (whether solid, liquid, gas, simple, complex, etc) is comprised of atoms. Those atomic units bond together to form molecules, which in turn combine into more complex organisms to ultimately create all matter in our universe.**
>
> **Similarly, interfaces are made up of smaller components. This means we can break entire interfaces down into fundamental building blocks and work up from there. That's the basic gist of atomic design.**
>
> **Brad Frost**
> Author of the "Atomic Design" book

Essentially, atomic design provides base-level components and guidelines that are combined and organized in different ways to deliver increasingly complex structures, culminating in web pages. Rather than designing pages one-off, atomic design means that a single set of patterns underpins the entire project, leading to greater visual consistency and evolutionary growth. Atoms and smaller elements allow organizations to create larger systems more effectively and consistently, and helps platforms to experience organic growth based on need, rather than trying to define an entire design system upfront.

How does atomic design work?

At its core, atomic design is the philosophy of combining known and robustly defined small elements in a structured way to make larger elements. Eventually, those elements combine all the way up into pages that are full of useful, functional content.

In his book Atomic Design, Frost lays out the five distinct levels of atomic design:

Atoms   **Molecules**   **Organisms**   **Templates**   **Pages**
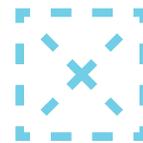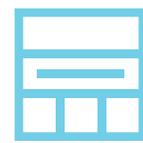
Atoms represent individual design principles or basic HTML elements. An atom might be a button, header text, or other items that, in the words of Frost, "can't be broken down any further without ceasing to be functional."

Molecules are the ways that atoms are combined. A molecule might be a form paired with a button, or another reusable component that may appear multiple times across the site.

When multiple molecules are combined, they form **an organism**, which is a more complex part of the UI interface. An example of an organism might be a content grid, a menu, or a footer.

A template is just what it sounds like: a grouping of organisms that is reused on pages across the site. Templates allow a modular approach to content structuring, and can help define a useful responsive design. Lastly comes **a page**, which is a combination of templates that are populated with real content. On the page, all of the different levels of design come together into a finished product.

Ultimately, atomic design combines smaller elements in thoughtful, intentional ways to provide a structured system that guides every design decision made on a site. It provides consistency across use of color, fonts, spacing, layouts, images, and more, and provides true visual unification to a site. An atomic design is especially valuable when looking to maintain brand integrity and visual consistency across multiple devices, orientations, and screen sizes via a single unified, responsive design.

Why invest in atomic design?

When you build a site around an atomic design, you're getting more than an updated look. Atomic design helps provide organizations with stronger brand integrity, and provides a better web experience to your target audiences.

For example: If you need to change the appearance or behavior of a button on a site without a pattern library, you may need to create a ticket with a developer. And if you're using multiple different kinds of buttons for different actions, that means more work for the developer, and increased infrastructure costs for hosting the code for each of those buttons.
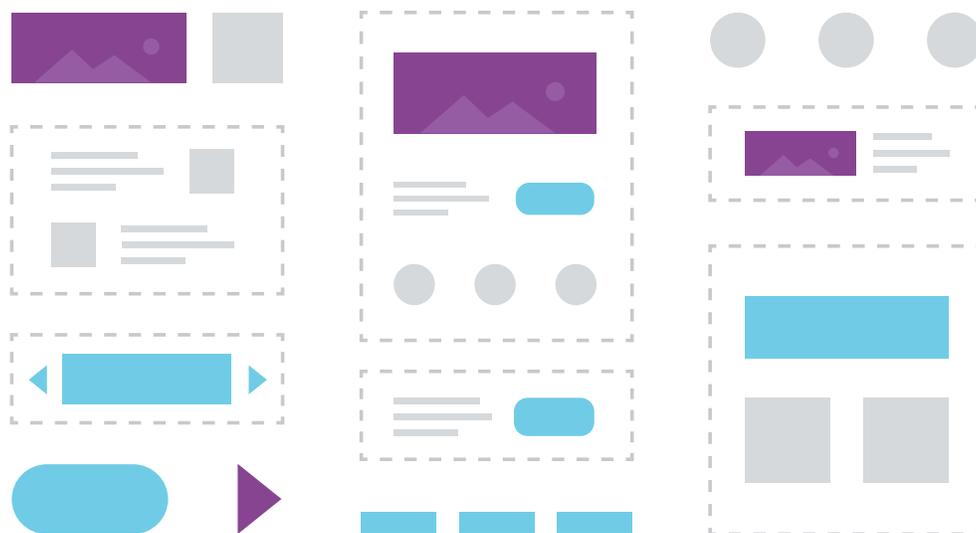
With an atomic design, however, every button on your site is pulled from the same bit of code in the pattern library. Your team will also have the ability to easily change the appearance of the button, either across the board by modifying the button in the pattern library, or on individual pages using the tools that are built in to the back end of your CMS to help you customize your different components.

Keeping all of your visual components in your pattern library doesn't just reduce your development spending, however. It also makes your team more agile and adaptable, because that reduced development overhead directly translates into an increase in development velocity and a shorter time-to-market.

Atomic design will give you better control over your branding

One of the unique value points of pattern libraries is in the way that it can preserve your branding. Your pattern library can be configured so that each of its elements exactly matches up with your organization's existing branding and visual identity guidelines. Then, tools can be built in so that users can modify the appearance of blocks and atoms only within existing parameters—such as changing the color of a button from your brand's primary color to your brand's secondary color.
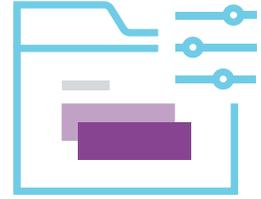
An atomic design isn't a one-off rebrand: it's a new way of doing things that will last. After all, it's more than just a design— it's a full system for displaying content. That means that when it comes to appearances, questions of individual taste are off the table since everything is constructed according to predetermined brand standards.

Atomic design empowers content managers to quickly create new pages without technical help

A good atomic design goes beyond guidelines and provides the templates and workflows that content editors need to do their jobs. A site built atomically provides the ability to easily spin-up new pages that draw on elements, organisms, and templates from a stored component library. Content managers are easily able to build new pages that are 100% compliant with their organization's branding guidelines.
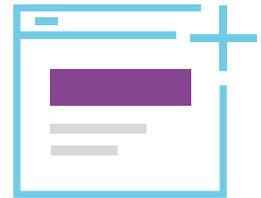
The block-focused interface of an atomic design makes it simple for even non-technical users to modify content in the CMS. Blocks can be moved around on pages, have their content updated or deleted, and their colors and other visuals can be easily adjusted, all while remaining brand compliant. Because the design work is already done, all authors need to do is select the blocks they need from the pattern library. In fact, pages built with an atomic approach not only come together more quickly, but they also offer the kind of informational clarity that leads to more engaging experiences and more conversions. Site visitors also experience a more consistent and unified experience that is reinforced at every touchpoint – reducing lost user efficiency caused by learning and deciphering visual design variations on each new screen that they access.

Atomic design makes responsive design and accessibility easier
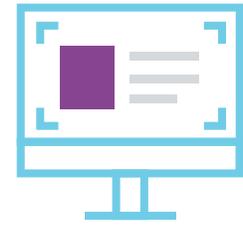
A well-constructed atomic design will be built in a way to maximize usability, with responsive layouts and components that are all designed to be accessibility compliant. With atomic design, you don't have one site for desktop and another for mobile: instead, the information on your site will scale, reorder itself, and remain useful as the size of browser windows change.

Because each visual component is loaded into the pattern library when your development work is being done, you can exhaustively test everything ahead of time to make sure it's fully responsive. Additionally, you can test every combination of colors and components to make sure that everything is fully WCAG 2.0 Accessibility compliant. Testing components ahead of time means that you don't have to worry about making sure each page is responsive or accessible as it's created: everything is already optimized in advance.

Ultimately, implementing a thoughtful atomic design that is tested in advance will allow your team to modify content without having to worry about whether every page is fully responsive and accessibility compliant.

Getting started with atomic design

Atomic design is an excellent choice for any organization interested in offering a beautiful, consistent, easy-to-use digital platform experience. Whether you're a big brand with very strict visual guidelines, or a boutique group interested in dazzling your users, atomic design is an ideal choice for long-term success. It requires a little more upfront planning and design thinking – but the result is a better, faster and more beautiful content experience once the platform launches.

For anyone interested in pursuing an atomic design for their organization, a great place to start is to audit both your existing digital brand guidelines and the architecture of your web properties. Mapping what you have and where your gaps or inconsistencies are is an important first step in building an understanding of your organization's digital strengths and weaknesses. To learn more about this, download our eBook "Is Your Site Performing? 5 Techniques for Auditing Digital Health."

Once you have an inventory of your content and design elements, you can then begin breaking everything down into modular components and develop an atomic strategy that works for you. You'll need to identify the key stakeholders on your redesign project, and should focus on working with a spectrum of content authors, information architects, digital design experts and marketers to make sure that your atomic design suits your organization's specific needs.

For help with stakeholder management, for assistance with a discovery project, for help auditing your existing platform, or to completely gain the expertise of an experienced atomic design team, contact FFW. Our design staff is here to help you understand the process behind building and implementing an atomic design for your organization.

FFW

About Us

FFW is a digital agency focused on creating digital experience platforms that ensure our clients' success, always moving forward at the speed of digital innovation.

Since 2000, the world's largest brands have relied on us to build accessible, creative, and user-friendly digital solutions that deliver results. We are more than 375+ people across 10 countries, with a track record of over 2,000 digital solutions delivered.

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