

February, 2021

Building a product to make design scalable

Implementing a design system into WordPress

White paper

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Introduction

The first logo ever trademarked under the UK's Trade Mark Registration Act of 1875 was in 1876 for Bass Brewery. The logo, a simple red triangle with the company name 'Bass' scrawled in a handwriting font underneath, was pioneering in the realm of corporate identity at that time. Over the years, the logo's distinct colour and recognisable shape have stood the test of time. Colour psychology then started to emerge in the 1800s with the publication of Johann Wolfgang von Goethe's Theory of Colors.



Fast forward to 2021, and it's clear that branding, and the application of a brand, has evolved into a hugely important part of corporate culture, with brand identity recognised as one of the most powerful marketing tools that a business can have at its disposal, reflecting brand values and evoking consumer loyalty, similar to the effects human interaction can have.

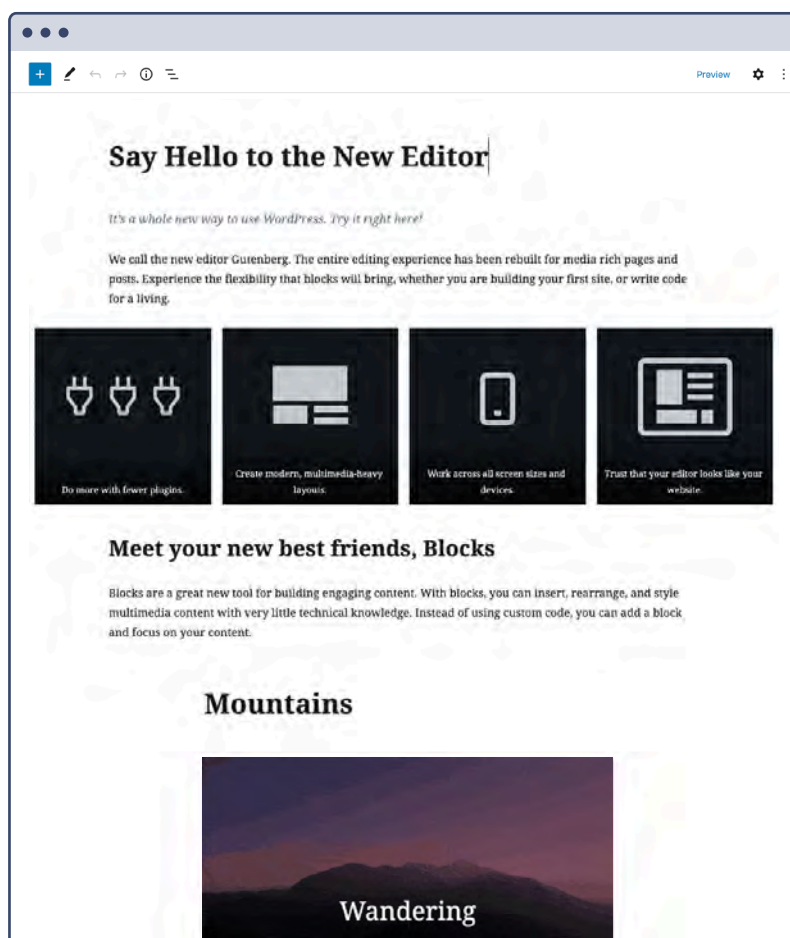
With an ever-growing library of products at the disposal of every company, including responsive websites, microsites, apps and intranets, stripped back brand guidelines just don't cut it in the digital-first world we live in. As the web continues to evolve, companies look to streamline efficiencies in order to keep up with technology and consumer needs, which means that unless you have unlimited resources at your disposal, designers and developers need to work in sync with a system that enables them to create consistency in their work - something that makes the process of design and development scalable.

Marketing tools are constantly changing based on consumer habits. Every change, no matter how small, triggers a chain reaction which can take up a lot of valuable time. So, to create consistency in their designs, most companies will use a design system. A design system is a well-documented, overarching set of rules and agreements on how to create products and communications by using components - a single source of truth for companies. The system provides the internal teams with building blocks to create a user interface, as well as containing the guidelines for those building blocks which explain how and when they should be used.

But how can this workflow be further adapted to utilise a component-based CMS?

The new WordPress editor, Gutenberg, represents a huge shift towards adapting the way that developers and less technical teams create websites, and how these sites are broken down into components which represent various actions across the sites. It has also changed the way in which content is produced, with content editors now able to create and launch content in a matter of minutes rather than hours, using the drag and drop system.

This white paper is aimed at design teams, marketing teams, senior level managers, directors, product owners and product leads at enterprise level companies. In the following pages, we'll explore the process, and the benefits, of implementing a design system into the new component-based editor, Gutenberg, using a recent project as our case study.



bigbite

The essence of our work at Big Bite is to transform our clients' digital landscapes, from workflows and plugins, to apps and multisite migrations. We believe passionately in building outstanding digital solutions using WordPress, to change the way in which organisations operate effectively.

We work directly with enterprise clients from around the globe to build robust solutions on the platform that powers over 36% of the web. As a team, we've been focused on working with the Gutenberg editor, and testing its limitations, for almost three years now - long before the official release of WordPress 5.0 in 2018. Since then, the popularity of the drag and drop CMS has increased considerably with some of the world's largest sites using Gutenberg components, including The Times newspaper, Amnesty International and Octopus Group, as demonstrated in this white paper.

THE  TIMES

THE WALL STREET JOURNAL.

News Corp

**AMNESTY
INTERNATIONAL** 

 **Gumtree**

PMIC

ebay

METRO

Octopus

Founded in 2000, Octopus Group operates in two key sectors – financial services and energy supply. With an array of businesses under the brand including Octopus Investments, Octopus Energy and Octopus Ventures, the company has over 11 websites, aimed at various audiences and each with very different purposes and goals.

Entrepreneurial values are at the core of the Octopus brand, and for two decades the business has been challenging convention and investing in people, ideas and industries to launch impactful businesses through acquisitions, mergers and investment opportunities.

Since 2000, we've been **challenging** convention and turning bright ideas into **game-changing businesses**. And as we get bigger we just keep evolving. Because we're invested in making the world a **better place to live**.

OCTOPUS



Octopus shares many of our **company values** and this has reflected in the project throughout - the whole team has taken the time to listen to, and understand, **alternative ways of working** and really harnessed the power of the new block editor, Gutenberg.

We've **genuinely enjoyed** working with the whole team at Octopus, and we're looking forward to launching many more sites on the new **Octopus theme**.

JONNY WATERS, HEAD OF DESIGN AND UX
BIG BITE

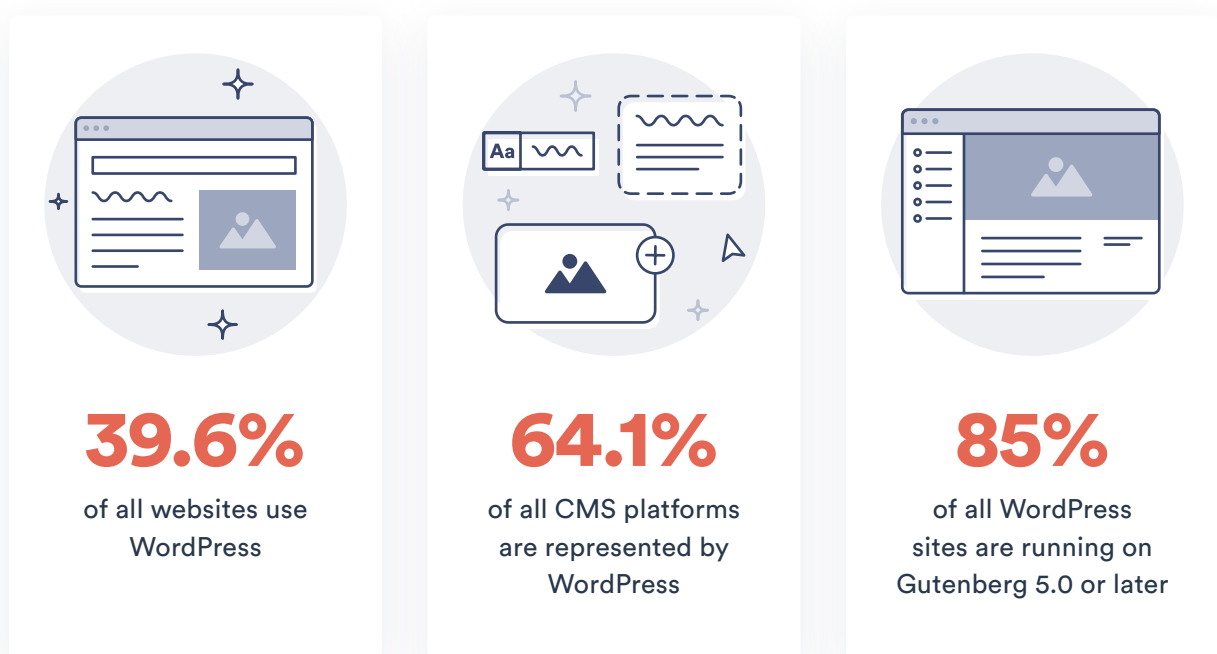
Overview of Gutenberg

Since its beta launch in 2018, the Gutenberg editor has taken the publishing world by storm with its revolutionary content publishing experience.

The Gutenberg project was designed to give users the ability to create modern, media-rich pages and posts by providing an inherently more visual experience than the classic editor of the past, which relied on a more traditional experience of using a WYSIWYG editor, custom fields, shortcodes and widgets.

By embracing modern JavaScript, and in particular React, within the editor, Gutenberg bridges the gap between the editing interface and the front end, providing a visual representation of how the page or post will appear. This gives a range of teams, including non-technical team members, the ability to build and publish websites, pages and content pieces efficiently, without the need for multiple resources.

Big Bite was an early adopter of the editor since its inception back in 2018. In just two years, among other projects, we have used the Gutenberg editor to dramatically increase global site production with Amnesty International, share news and streamline employee communication across the globe through a React Native app with a global bank, and revolutionise how a world-leading news organisation produces content across publications including The Times, The Sun and The Wall Street Journal.



*Source: W3Techs

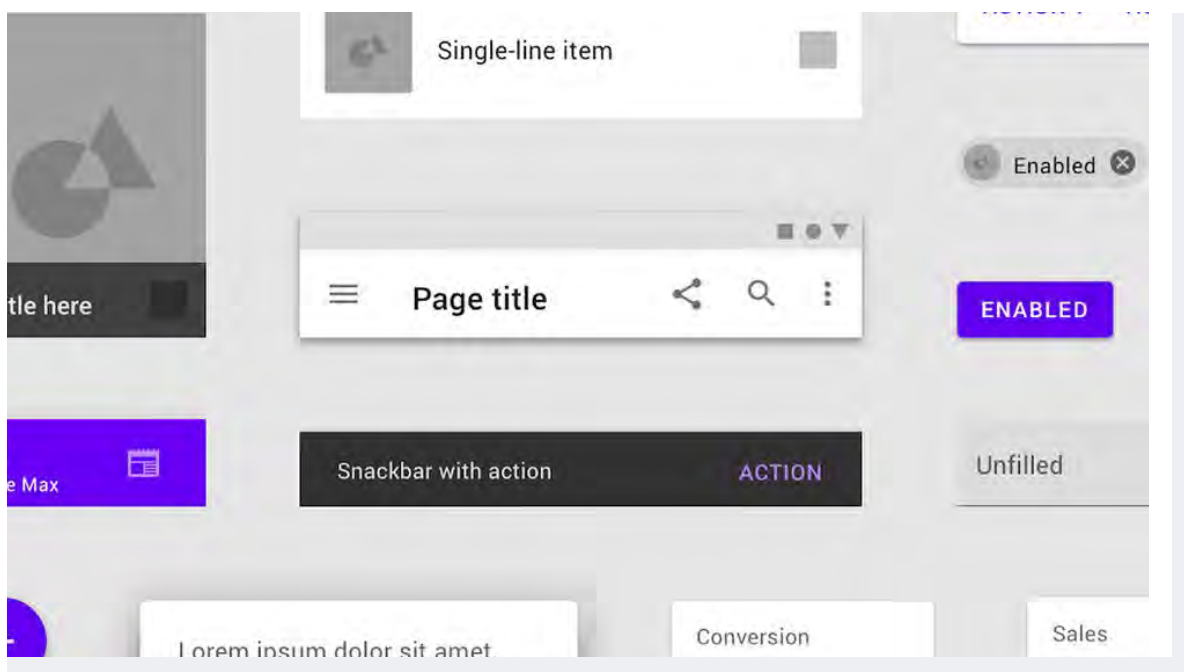
What is a design system?

Traditional graphic designers have long understood the value of shared guidelines when crafting complex designs that need to be easy to understand.

Fast forward to the modern day, and digital product designers have followed suit, with the realisation that collaboration and a single source of truth is also good practice for the same reasons. Only now, it's a way to make sure your digital components, for example, buttons or header images, always look and act the same way.

Design systems emerged as a practical way to efficiently build consistent UI and UX at scale. For Octopus, this was key to building on-brand, high quality and consistent web properties for the entire business.

One of the key examples of a modern design system is Material Design, created by Google. Material Design is an open-source system of guidelines, components and tools that provides designers and developers an adaptable foundation to build cross-platform digital experiences. Using Material Design ensures that teams can quickly build usable and accessible products, that follow the best practices of user interface design.



Example Material Design components

What is a design system?

A design system provides the building blocks to create a user interface. It also contains the guidelines for those building blocks which explain how and when they should be used.



The New York transit authority took this a step further in the 1970s creating a Graphics Standards Manual.

Benefits of using a design system



Resourceful

Design systems define the basics for design teams, allowing them more time to focus on refining and testing.



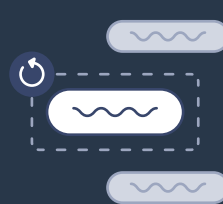
Consistent

Everyone is designing and building from the same system, resulting in a consistent digital landscape across all devices.



Cost effective

Developers only need to build something once, rather than building the same components multiple times.



Iterative

If you need to make changes to multiple designs, it's much easier if there's only one single source of truth.

Building a design system

The process of developing a design system is not something for the faint-hearted. It takes time, and a strong commitment to creating genuinely useful work that truly meets the needs of clients and internal teams, as well as being able to stand the test of time.

1. Identify clear project aims and objectives

Before getting started on your design system, you should take a step back to consider the overall project goals and reasons for creating a design system. Get the team involved in the process right from the start - from marketing and content teams to development and design. Focus on the what and why, and set out smaller goals which will allow you to achieve the bigger picture.

2. Evaluate your current design inventory

Once discovery was complete, the design and UX team at Octopus went on to gather together all of the existing brand websites and style guides, identifying and defining key brand characteristics including typography, icons, colours and space. What are the strengths and weaknesses of each? What styles best matched the brand? Which elements would work best systematically and which wouldn't?

This is a crucial part of building a design system - get these right and you'll have a solid foundation for the rest of the project.

3. Identify and document your assets

Now it's time to start identifying the common components across your brand and compile a master list of reusable 'blocks'. Using one of the most important (and largest) sites in the brand's suite of designs, Octopus Investments, the team went on to identify common parallels across the pages of the site, and breaking these down again into smaller components.

In the case of Octopus, the team utilised an effective design approach detailed in Brad Frost's Atomic Design (2013). Atomic design is a methodology for creating component-based design systems with five distinct levels:

Atoms - the basic building blocks of the web, including paragraphs, headings, an input or a button.

Molecules - groups of atoms bonded together; for example, a simple search bar consisting of search input, label and a button.

Organisms - a group of molecules bonded together to form a more complex action or design component; for example, a card.

Templates - groups of organisms brought together to form a basic page layout in action, similar to a wireframe.

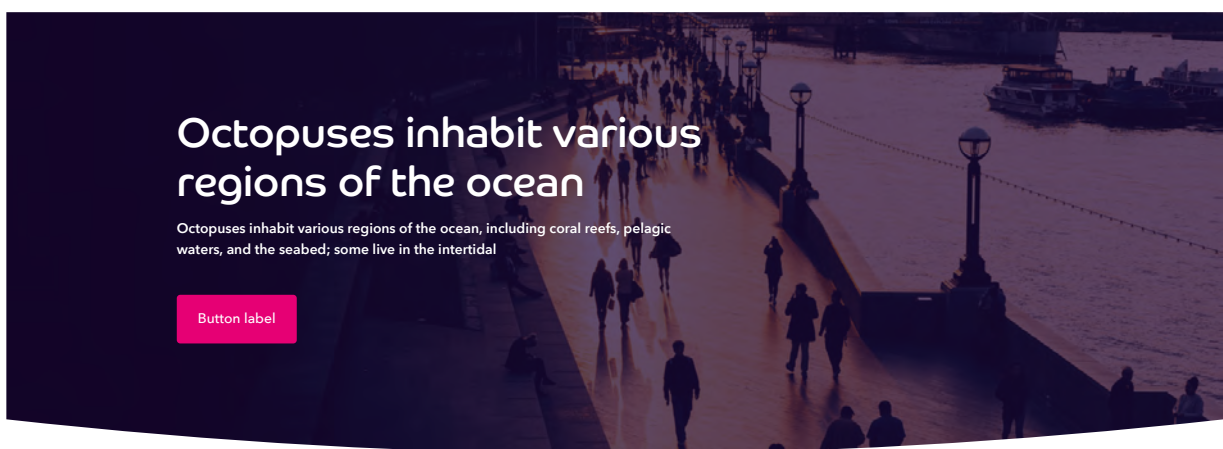
Pages - templates using placeholder content.

This way of working allows teams to better appreciate the concept of a design system by clearly visualising the steps. It also allows scalability while simultaneously showing things in their final context.

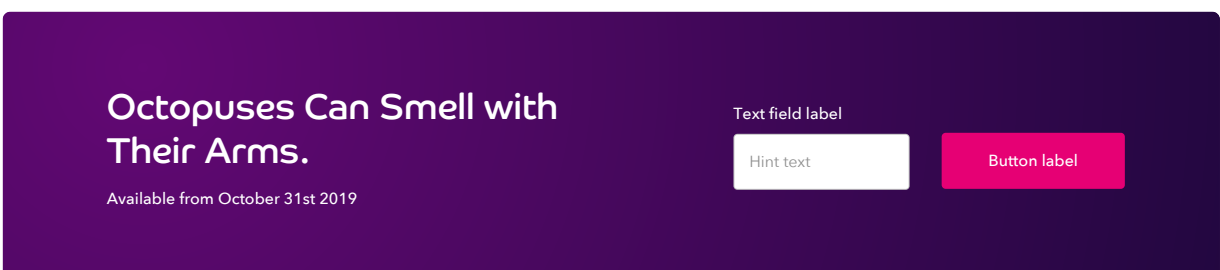
4. Design your streamlined components

The work was split between a number of product designers in the Octopus team. A small team began working on the build of the initial websites (while also bringing some much needed upgrades to the Octopus Group website) by reusing some components already created or alternatively, designing new ones if required. Meanwhile, another team focused on building the design system itself - Deep Sea.

Collecting feedback as they progressed, the team would iterate on components and integrate new ones where needed. With this parallel workstream, the system evolved quickly, alongside the team's work processes.



Deep Sea - Hero Component



Deep Sea - Banner Component

5. Test, Test, Test







As the sites took shape, the team gained valuable insight from users via a UX research team. As well as collecting internal feedback from marketing, content and development teams, through remote user testing the team also learned about any sticking points in the components and the website's experience.

Through multiple usability tests on product navigation, the team found a more optimum and lean layout for the primary navigation component.

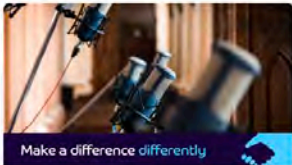


Building a block

Below is an example of the atomic design system in practice, taking our atoms and combining them to create the dynamic card feed found across the Octopus theme.

| H1 | 48px / 56px Leading | Light | Regular | Bold | Heading Styles Atom |
|----|---------------------|-------|---------|-------------|------------------------|
| H2 | 36px / 44px Leading | Light | Regular | Bold | |
| H3 | 24px / 32px Leading | Light | Regular | Bold | |

| Button Styles Atom | | |
|---|---|--|
|  |  |  |
|  |  |  |
| Enabled → | Hovered → | |

| Tag Styles Atom | | |
|---|---|---|
|  |  |  |

| | | |
|---|--|--|
|  |  |  |
| <p>Octopus Group</p> <p>28 Jan 2021</p> <p>Make a difference differently: How singing can help vulnerable people</p> <p>Read more</p> | <p>Octopus Group</p> <p>20 Jan 2021</p> <p>An entrepreneur's journey: from working at Octopus to launching a business</p> <p>Read more</p> | <p>Octopus Group</p> <p>15 Jan 2021</p> <p>An entrepreneur's journey: from working at Octopus to running Parent Cloud</p> <p>Read more</p> |

Dynamic Card Feed
Component

WordPress as a **block editor**

Gutenberg introduces a modular approach to pages and posts. Each piece of content in the editor, from a simple paragraph to an image gallery, is its own component, known as a 'block'. Blocks can be added, arranged and rearranged, allowing WordPress users to create media-rich pages in a visually intuitive way, without workarounds like shortcodes or custom HTML.



Modern websites and blogs rely on a much wider range of media than in the past. The classic WordPress editor was primarily used for editing text, whereas now editors may want to add a variety of components to increase user interaction, including images, GIFs, social media embeds or videos into a post. With the classic editor, this was a challenge that may require a third party plugin, shortcode or widget to achieve - all of which may not come easy to users who were less technically minded.

Now with Gutenberg blocks, the user has access to a library of components that instantly embeds rich media into a page or post. Beyond this, we can use blocks to provide our clients with layout tools within the editor, making it perfect for users to quickly create pages and posts with no assistance from developers.

Using this modular approach to content creation, Gutenberg also provides powerful templating tools which gives editors the ability to save a single block, or a group of blocks together and reuse those across their website.

For enterprise clients, the ability to have reusable blocks in Gutenberg opens the potential for designers, front end developers and content creators across the organisation to create a custom suite of reusable components that can be kept in sync with a design system.

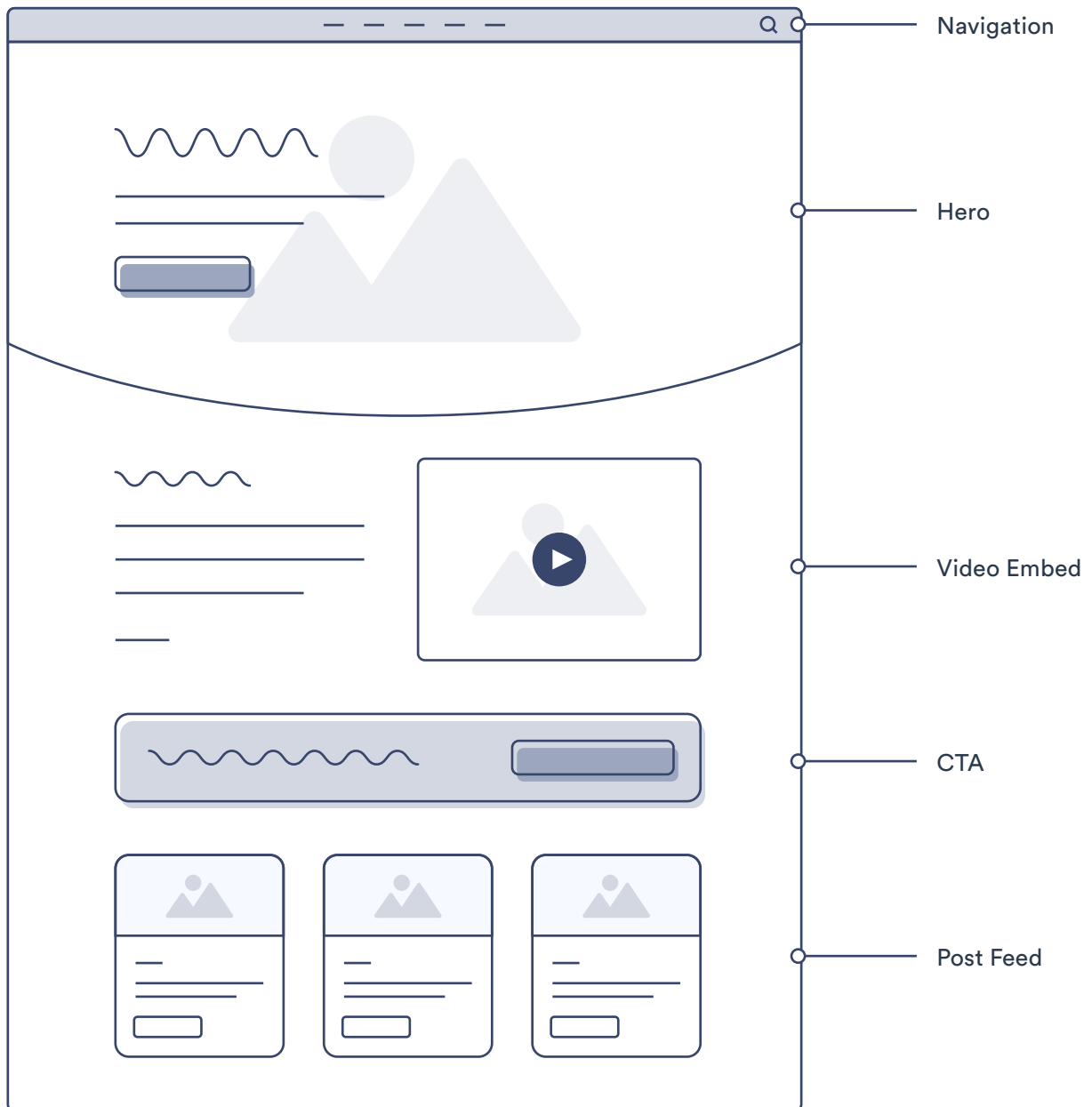
A digital transformation to further the Octopus mission

Rewind to the beginning of 2019, and the six main brand websites at Octopus lacked visual and information architectural consistency. Octopus Investments, Real Estate, Ventures, Renewables, Renewables Infrastructure and Octopus Group were all built using WordPress but each site had a lot of historical pages that were no longer in use, and much of the site had become outdated. Despite the brand's entrepreneurial and innovative values, website production at Octopus had become rigid, and producing new content pages and websites proactively for the brands was proving a drawn-out task.

Despite already being on the WordPress CMS, they used an old version of the platform, and none of the sites were managed in-house. Without a design system, small changes would take weeks to implement, and making fundamental changes to update the overall user experience of a site was almost impossible.

In 2019, the team at Octopus set out to find a new technology partner to share its entrepreneurial vision and replatform the company's suite of websites to a new scalable solution which could grow with the brand and provide a more streamlined launch process. With a vast portfolio of companies, each with its own website, and content published daily by the in-house marketing departments, the team at Octopus were in need of a solution which would allow them to adapt easily to new requirements, be this a piece of content, campaign page or a new website.

Following an in depth discovery phase which included stakeholder meetings, on-site workshops and desk research, Big Bite proposed a strategy which would allow each line of business within the Octopus Group brand to have full control over the production and management of each website.



We built a core Octopus theme on the WordPress platform as a multisite network. The theme consists of a suite of styled components, known as blocks, which act as a tool kit to create websites, pages and content pages quickly and efficiently.

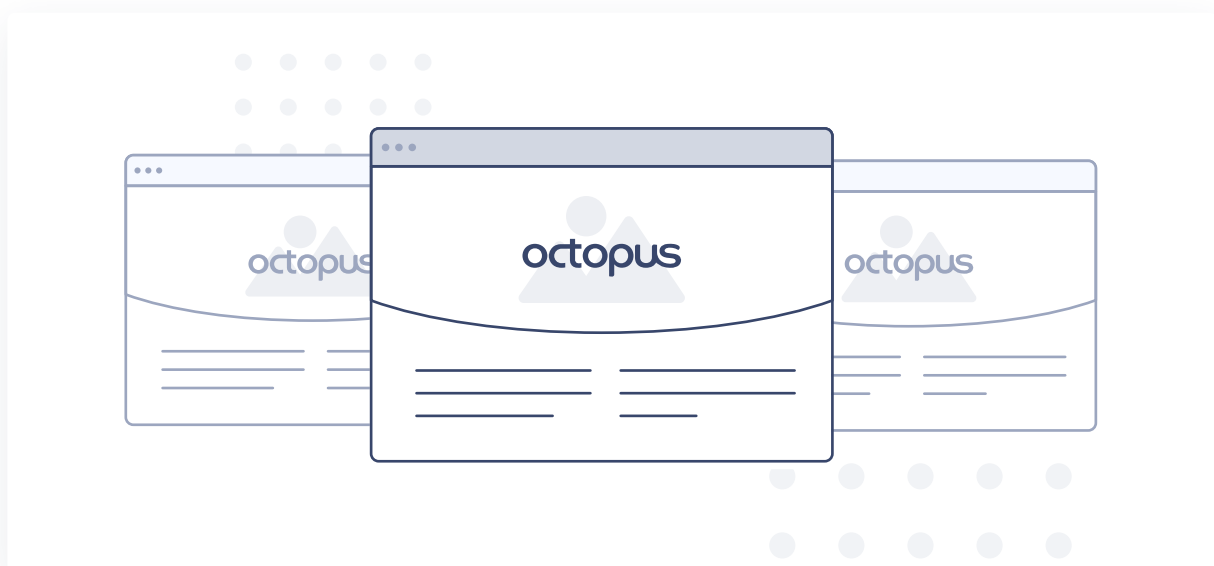
Deep Sea design system

To achieve brand consistency throughout each of the sites, the Gutenberg blocks were built in collaboration with the internal design team at Octopus using the extensive Octopus design system, Deep Sea.

Over a six month period, the Octopus and Big Bite UX teams worked in collaboration to scope out, design and implement the Deep Sea design system into WordPress. This was achieved by first capturing requirements from the existing designs to create a list of reusable components that could be used to build out multiple websites. Responsive versions of each component were then designed to enable a smooth transition across desktop, tablet and mobile, showing every state that a given component could display to a user. These designs were then incorporated into the development sprints to build out.

The first website on the new multisite network, octopusgroup.com, was successfully launched in January 2020, shortly followed by three additional websites including octopusinvestments.com.

The new Octopus theme has changed the way that content, pages and websites are produced, mirroring the ambitious values that run throughout the company. The non-technical teams across the company have the flexibility to react to news



and support campaigns quickly and efficiently, and are able to produce new pages in just a few short days, compared to the drawn-out process which would have previously taken a lot longer.

As an example, the Octopus Investments website was launched shortly before the recent lockdown commenced due to the COVID-19 pandemic. Yet despite these external blockers, it has allowed the team to remotely keep their clients up to date in a very efficient way as the website was flexible and scalable like never before.

Changing the pace of creation and innovation

As we have seen, a design system is an essential aspect of enterprise level design and content creation. By establishing a clear and consistent set of standards and components, organisations can fundamentally change the pace of creation and innovation when building products or websites at scale.

In the world of design, there are three core principles of a design system which can be broken down into the following:



Efficiency - Rather than building similar components from scratch, Gutenberg enables you to reuse components and templates, increasing the efficiency of building a product or website.



Consistency - We're able to integrate the principles and rules set out in a design system into Gutenberg, allowing companies to create consistent experiences across different platforms.



Scalability - Taking into consideration both efficiency and consistency, this allows teams within an organisation to be able to build products much faster than previous methods and at scale.

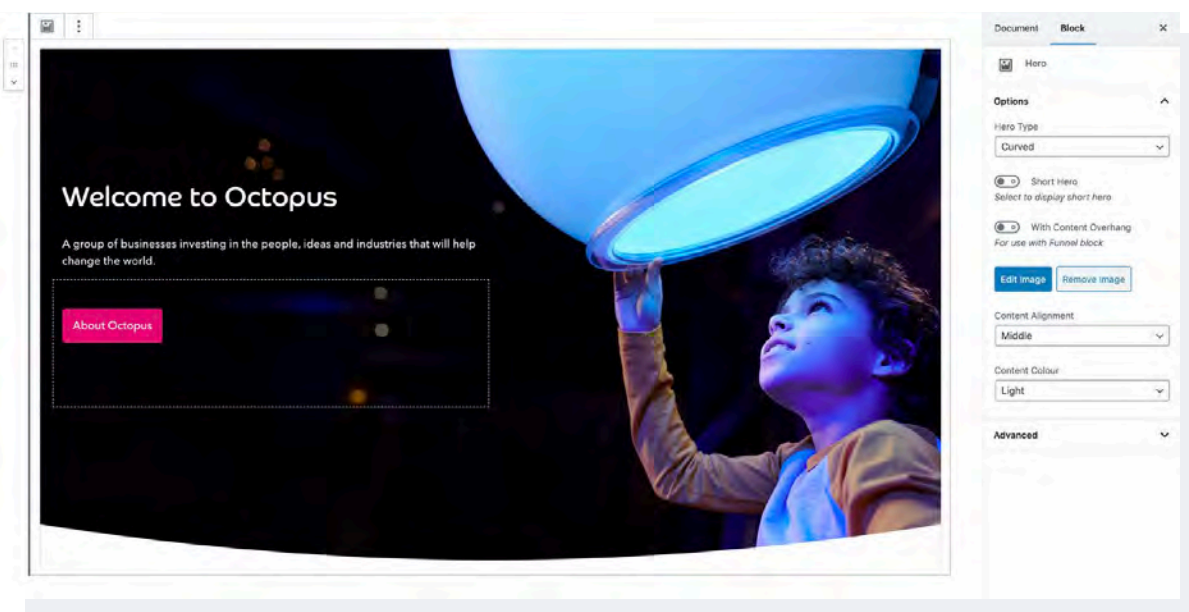
While this is true for design systems, the same principles can be directly applied to the benefits of using a modular, component-based platform such as Gutenberg, and the two combined can allow for a number of benefits to be seen for teams and companies, as discussed further in this document.

With Octopus Group, we were able to work directly with their design team throughout the process of planning, designing and implementing their design system, Deep Sea.

Together we were able to fundamentally understand the core driving principles and components of Deep Sea and work together with our engineering and UX teams to implement those component parts into Gutenberg as blocks.

Implementing Deep Sea into the Gutenberg editor

Design systems have been proving their worth for many years in product development teams within enterprise level brands, thanks to the collaborative process involved and the consistent results they deliver. They've carried many different names and terms over the years, and only recently have they become popular with a wider range of brands, including SMEs, thanks to their versatility and the increasing importance of good design and strong UX.



Building a Hero block in the WordPress editor

Brand consistency

One of the main and most obvious benefits of implementing the Deep Sea design system with any technology is the brand consistency it can offer. Consistency is key in maintaining a successful brand, particularly one with high growth across various digital avenues, including the first point of call for many consumers - the website.

In a high growth environment like Octopus, as the company grows, products expand and acquisitions occur, inconsistency is a huge risk. A design system is the single source of truth for all design and UX, filtered down from the in-house design team and simplifying the publishing process and taking away any confusion that may occur across multiple teams. For growing brands like Octopus, who have various brands, sub brands and marketing campaigns, each with its own website or content piece, this has been one of the biggest benefits.

Information architecture/focus on content

Investing time into building a comprehensive design system and implementing it into Gutenberg has long-term ROI benefits, not just saving time and resources, but also allowing brands to focus on producing quality content for each of the defined target audiences.

Utilising Deep Sea allows the content producer to focus on the content, rather than the technical or design aspects of a page. It means that the design components have already been defined thoroughly within the design system, with previous research supporting each and every design component. The flexibility Gutenberg offers in building out pages is much simpler than ever before and allows the user to focus on building pages to suit the end user, offering greater usability.



Less time, less resources

Despite a higher cost and involvement in the initial build and implementation process, investing time early in the process of building out and implementing a design system can result in huge rewards further down the line thanks to the ability to reuse the block library.

The simplified Gutenberg editor allows for a wide range of teams with varying technical abilities to utilise the drag and drop editor. It also offers a visual representation of components, content or pages in the admin interface, allowing the content manager to view the visual aspect of the build while remaining in the admin.

The velocity of building and publishing new content has also been revolutionised thanks to Deep Sea and Gutenberg. It has changed the way in which content, pages and websites are produced in-house. The non-technical teams across a company now have the flexibility to react to news and support campaigns quickly and efficiently, and are able to produce large pieces of new content in just a few short days, compared to the drawn-out process which would have previously taken months.

Implementing Deep Sea into the Gutenberg editor has **revolutionised** the way our business functions on a daily basis, particularly our **marketing and content teams**. The Gutenberg editor allows us to react to new business needs very quickly, and **productivity** among our teams has increased massively.

MONA STEININGER, HEAD OF DIGITAL MARKETING
OCTOPUS

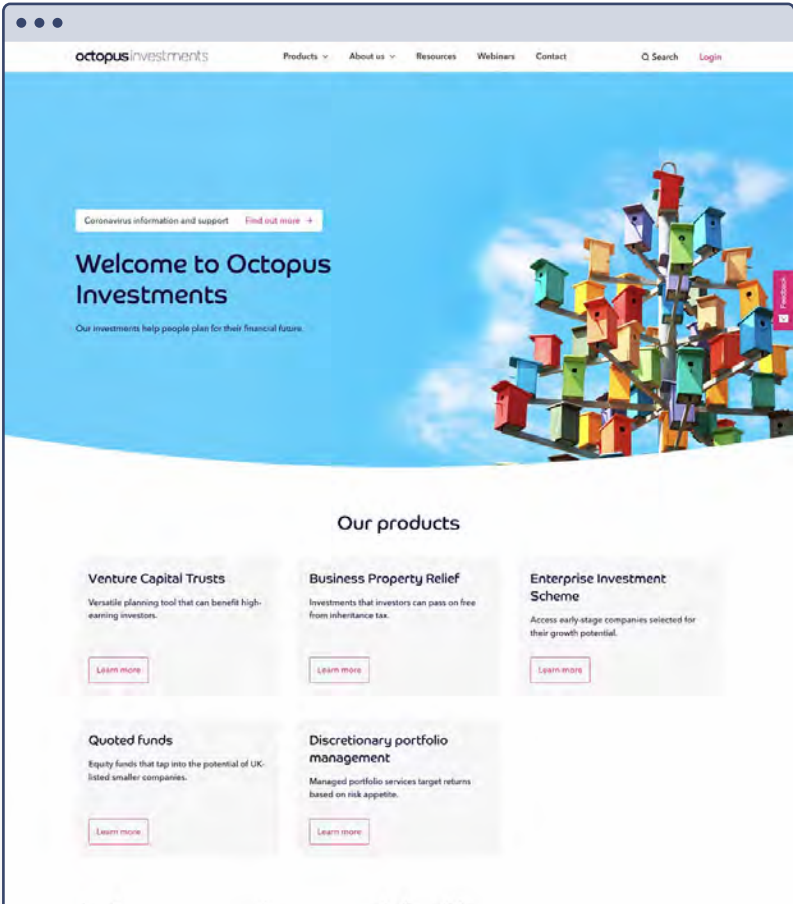
Looking to the future

The introduction of the Gutenberg editor has fundamentally changed the way we approach designing and building enterprise websites. The return on investment which can be offered when implementing a component-based design system, like Deep Sea, into the new editor, is second to none.

The ongoing improvement of design tools such as Figma, Sketch and Framer X is empowering more product teams, designers and engineers to adopt these new methodologies and collaborate to build more efficient, scalable systems across enterprise organisations.

With every new project, we continue to develop our process and close the gap between component-based design systems and the suite of blocks we can offer with a Gutenberg theme.

Gutenberg is already leading the way in terms of scalability, productivity and efficiency, and is proving to be a revolutionary resource for content at scale. We will continue to work on nurturing the symbiotic relationship between Gutenberg and design systems.



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Our experience, combined with our involvement in the WordPress development community, positions us perfectly to demonstrate what can be achieved with Gutenberg for forward-thinking enterprise clients from around the globe.

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