unthinkable

Success Story

Developing a custom Content Management System (CMS) for the USA's largest media network

Customer	Country	Industry
Leading News Broadcasting Company	USA	Media & Entertainment

About The Client

The client is a leading media conglomerate, widely recognized for its diverse range of publications and broadcasting channels. With a substantial valuation of $6.5 billion, this publicly-traded entity holds a significant presence in the media landscape. Best known for its flagship publication and an array of local newspapers, the client's reach extends to over 150 million people each month. Beyond print, the client has expanded into the realm of local television, operating 68 stations across the country.

Technology Stack

React	WordPress
php	Next.js

Business Situation

The client, overseeing a diverse portfolio of newspapers and television stations, faced a major challenge in managing their online presence. Despite operating numerous properties, they relied on a single system for online content publication. This posed difficulties as each property maintained its own website, and the prevailing system struggled to seamlessly distribute content. Additionally, some systems lacked fundamental features like hyperlink embedding and multimedia integration, complicating the content creation process.

Compounding their issues, the client's CMS was outdated and couldn't handle the growing number of users and website visitors. This led to frequent website crashes, slow performance, and a frustrating experience for users. Furthermore, the application architecture was not scalable, burdened by a monolithic structure that made it difficult for end users to navigate and utilize effectively.

Realizing the necessity for a digital overhaul, the client embarked on a project to develop a new CMS capable of replacing the existing systems and facilitating seamless content management across all their newsrooms. To achieve this objective, they sought a technology partner specializing in custom CMS development. After a meticulous evaluation process, Unthinkable Solutions emerged as the preferred choice due to its track record of success, adaptable approach, and expertise in delivering tailored CMS solutions.

Unthinkable Team was expected to:

- Develop a new content management system (CMS) to facilitate better sharing of stories among publications and broadcast stations.
- Upgrade the outdated system with modern technology to enhance overall system performance.
- Design a robust and scalable application architecture to accommodate increasing viewer traffic without compromising content quality.
- Ensure remote accessibility for field reporters to file and update coverage in real-time from various locations, including areas with limited connectivity.
- Enable a role-based CMS with distinct permissions and data access for administrators, managers, and users.
- Enable dynamic content delivery based on users' device preferences, ensuring tailored experiences across tablets, phones, and desktops.

The Solution

The project kicked off with our business analysts diving deep into understanding the client's needs. Collaborating closely with software architects, they created an optimal structure for the new content management system, refining functional requirements to create a clear roadmap.

Once the strategic blueprint was in place, we seamlessly integrated the requirements into our technological framework. Our UI experts focused on user-centric design principles, ensuring an intuitive interface for the application.

While the previous system was built using Angular, careful consideration was given to technology selection for the new CMS. We opted for Next.js to develop and deploy these modular applications, ensuring seamless integration and compatibility. Leveraging the latest technology, we developed a robust CMS with custom access controls to meet the client's specific needs.

Transitioning from monolithic to microservices

Given the tightly coupled nature of the client's infrastructure, built on monolithic architecture, modifying or updating specific components of the system proved challenging without impacting others. The deployment of the entire application as a single unit necessitated deploying the entire system for any change, leading to increased downtime, unnecessary costs, and a higher likelihood of errors. In response to these challenges, Team Unthinkable proposed transitioning to a microservices architecture.

To initiate this transition, we conducted a thorough analysis of the client's current system. Subsequently, we decomposed their monolithic CMS into individual microservices, prioritizing components based on their business value and complexity. Modules supporting core functionalities such as article/stories management, multimedia embedding, and user authentication were singled out for extraction. By adopting this approach, we aimed to enhance modularity and flexibility, facilitating smoother collaboration and content distribution across the client's diverse properties.

Some highlights of the new Content Management System:

In our efforts to enhance content creation and distribution efficiency, we developed an application called "Content Discovery." This tool facilitates advanced global search functionality, allowing users to easily locate all available content across various properties.

The newly developed CMS comes with a dedicated control panel for managing multiple content assets, including blogs, videos, images, alerts, promos, and more. Unlike before, where all assets were managed on a single webpage, each asset now has its own application. This setup provides enhanced control and configuration options, streamlining the workflow for publishers and editors.

End users now benefit from easy access to existing assets via unique IDs, redirecting them to independent applications for making content adjustments. With various filters available, such as asset type, byline, publish status, and creator, finding the right content has never been easier for our client.

Each asset module including story, gallery, and video playlist, offers comprehensive metadata management capabilities. The application enables users to modify details such as brief descriptions, image sources, captions, credits, tags, and even perform image cropping for different screen sizes. This individualized approach to asset management ensures that metadata can be updated independently without affecting other content elements.

Ultimately, all assets are utilised within the "Story Editor" application, where editors compile and publish final content pieces. Leveraging PHP for backend functionality and ReactJS for frontend development, this application empowers end users to manage headlines, meta descriptions, embeddings, URLs, scheduling, and more with ease.

The Impact

The client seamlessly transitioned to the new systems, encountering zero disruptions throughout the process. Their satisfaction with the newly developed CMS was evident as it significantly streamlined tasks for journalists and publishers. Notably, the time taken to publish stories saw a marked reduction, and the upgraded architecture now ensures seamless performance, even with millions of users accessing the system concurrently. Recognizing our dedication and expertise, the company has chosen Unthinkable as its technology arm, entrusting us with additional projects.