INGENIUX

CMS Platform Overview

Contents

Your Content is Mission Critical

Great content is rocket fuel for your brand. It will take you to far and wondrous places; it's a catalyst for growth and transformation, with the power to attract, inform, persuade and entertain.

We created Ingeniux CMS because great content needs a platform. Teams need to work together to create compelling content. Organizations need to manage, govern and deliver digital content, anywhere, on any device, in any format.

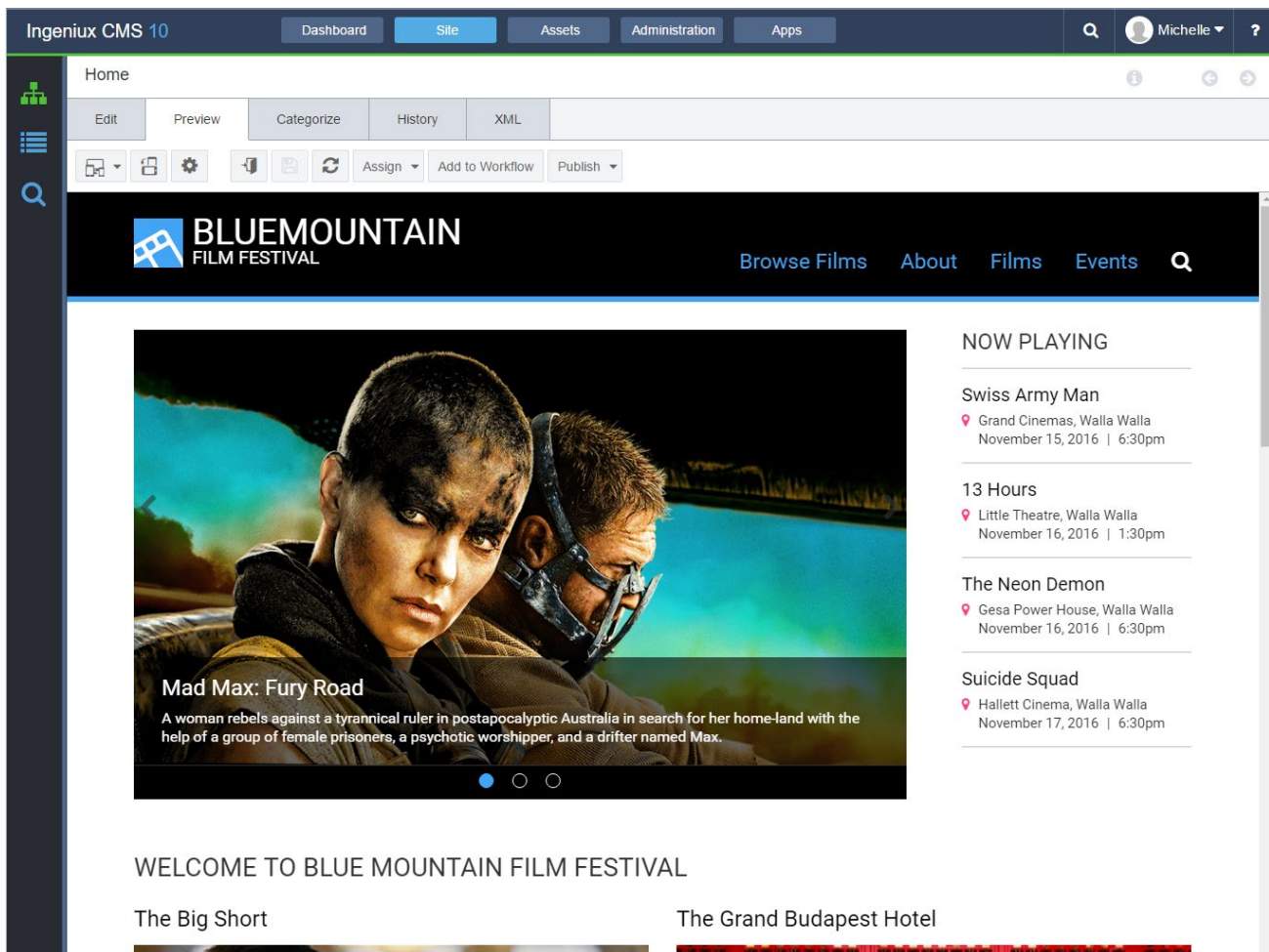We're ready to help you launch your next digital experience.

Let's get started!

What is Ingeniux CMS

Ingeniux CMS is a web content management system designed for the modern Web. Ingeniux software empowers teams in all departments – marketers, developers, technical writers, IT pros, and the rest - to work together to elevate the creation and management of digital content.

Whether you're creating a brand website, a portal, or a complex web application, Ingeniux CMS is an essential part of your solution.

Core Principals of Ingeniux CMS

Modern

The Ingeniux technology difference is a truly decoupled architecture, open content API, visual responsive page building, and technology agnostic approach that supports development and integration across a wide range of technology platforms and applications. It's a new architecture designed for a new world of connected websites, devices and applications powered by digital content.

Cloud-Ready

Ingeniux is the leading provider of cloud-based content management solutions. With ten plus years of Software-as-a-Service success, a global network, and 24 x 7 support and service, we provide digital content management built for the cloud.

Intelligent

Our intelligent content model helps companies shift from a static, one-size fits all experience, to a more personalized contextual experience based on things such as the visitor profile, account-data, history, channel or device.
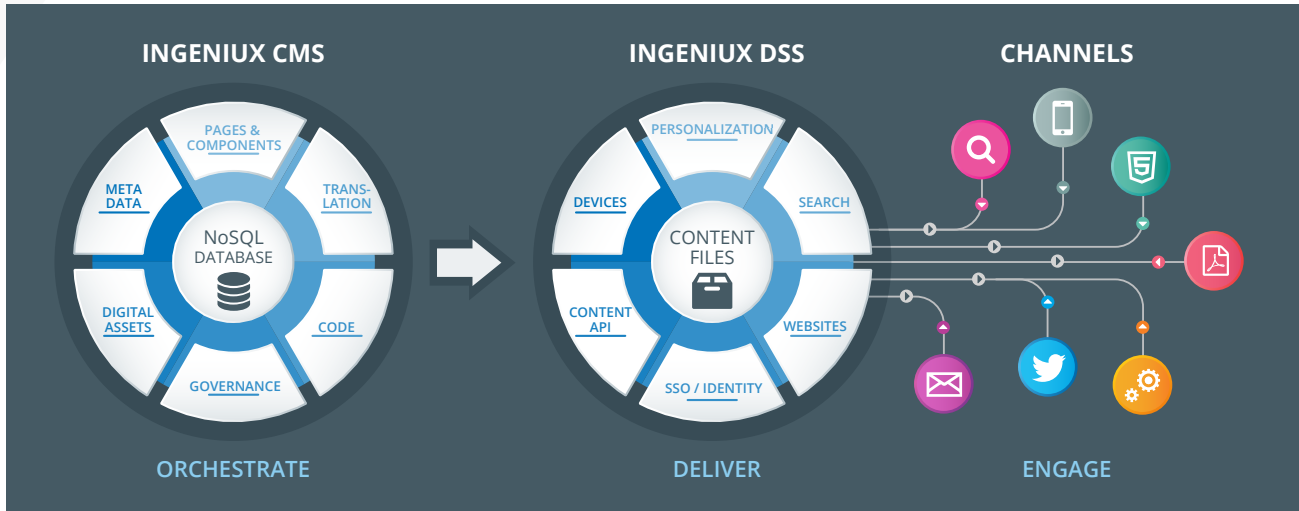
Agile

Our content management and collaboration platform provides a centerpiece for enabling digital transformation. Ingeniux software aligns business units, and customer touch points with a common set of content, applications, business rules, and secure membership services. It extends beyond the website to work deeply with marketing automation, CRM, ERP, and enterprise applications.

Ingeniux is the content engine that powers the modern digital experience.

Ingeniux Platform Overview

Let's take a minute and review the high-level architecture of Ingeniux CMS. Here's how it works:

The key components of Ingeniux include:

CMS Application

The Content Management Server provides content creation, editing, workflow approvals, and publishing capabilities.

This is the core content management backend, featuring a robust security and permissions system, advanced authoring with structured content, complete lifecycle management and more.

Benefits of Ingeniux CMS

1. Designed for multi-site publishing
2. Technology agnostic
3. Content-as-a-service delivery
4. High performance content delivery
5. Strong security model for content development
6. Low total cost of ownership
7. Simple upgrades

Dynamic Site Server

The Dynamic Site Server is an ASP.NET application for delivering content and applying business rules for personalization, device and channel optimization, and search indexing. Using the DSS, you can deploy content to different publishing targets, including websites or development environments. You can also deploy different versions of a content asset to different publishing targets.

Ingeniux CMS has excellent support for outputting content to multiple formats and replicating content to multiple locations. The CMS supports "early binding" static HTML and other file types, as well as "late binding" dynamic deployment using the Ingeniux ASP.NET Dynamic Site Server.

Ingeniux can also deploy content using third-party server technologies, including Java Server Pages, PHP, or Adobe Cold Fusion. In these cases, the web server handles content delivery, and the targeted server programming technology performs any dynamic content processing.

CMS Web Client

Ingeniux CMS can easily be accessed and administered over the web. Ingeniux CMS offers a cross browser, zero-install web client that works with most web browsers.

Content contributors access the system through the browser, using a cross-browser web application connecting to the server software via HTTP/S. Users work remotely as long as they have an Internet connection and permission to access the CMS development software.

NoSQL Content Database

Ingeniux CMS is the first enterprise web content management system based on NoSQL technology. It provides a highly scalable, cost effective platform for managing and delivering content in any cloud or secure network.

Designed for content, the Ingeniux NoSQL repository does not require a fixed schema; any content type can be introduced without development or database changes.

Content is instantly indexed. When it comes to scaling, Ingeniux is unmatched. The repository supports millions of topics and documents. Automatic clustering and sharding allow repository clustering without DB administration or development costs.

Content is stored as JSON objects. Files are versioned and managed through a file-locking system that checks pages out for editing. All of the content in the repository is indexed and cached in memory, enabling information to be quickly processed and delivered without any performance impact, database IO, or SQL injection risk.

Enterprise Search Platform

Ingeniux InSite Search is an enterprise and web search application that works with the Ingeniux CMS. InSite is based on the Lucene.net project and provides a high-performance solution for "federated" indexing and searching of content and files across multiple locations.

The Ingeniux search application supports faceted and guided search, integrates taxonomy, security and content filtering based on access rights, stemming, search analytics, and keyword and search results weighting.

Ingeniux CMS application uses InSite Search for finding content in the Ingeniux repository; as well as on public web deployments using the Dynamic Site Server. InSite can also be used to generate search-based navigation creating recommended content indexes, related links, and other search-based content indexes.

Ingeniux CMS For Content Managers

How Content is Managed in the CMS

Ingeniux empowers organizations to create personalized engaging content experiences. It provides content managers with the tools to collaborate on the right content for the right channel, while ensuring proper governance of that content.

Creating and Editing Digital Content

Ingeniux uses cross-platform browser-based web clients for content authoring. The authoring experience is available using In-Context Editing, which allows authors to edit content using a set of editing controls available in the preview of the web page. It offers forms-based editing which supports a Microsoft Office-like editing experience that exposes all the content and metadata for a given page. Content authoring is designed for non-technical users and does not require any technology knowledge outside of basic PC skills.

Ingeniux also offers a complete preview system for viewing content on desktop, mobile, and tablet devices. Preview can also be set up to run as a service on external servers where you may view external applications and services for pages that consume content outside of the CMS application environment (such as an external web application).

Content Reuse

Ingeniux CMS is designed to optimize content reuse. Content is modeled in XML schemas using the Ingeniux Schema Designer and natively available as XML or JSON. The content model is very rich and designed to maximize content reuse by structuring content, separating content from presentation, supporting metadata, and component-based content chunking. Ingeniux provides a powerful tagging and classification system for applying topical categories to content. Taxonomy supports browse-by-topic navigation, faceted navigation, guided search, related content, tag clouds, audience segmentation, and other capabilities.

Templates and Pages

There are a couple of ways to create templates and web pages within Ingeniux. Ingeniux offers a templating framework to create content type templates using the coding language of choice. Templates can be created directly within Ingeniux using ASP.Net or using a code-editor such as Visual Studio.

Ingeniux also offers Page Builder, a design tool for creating visual layouts leveraging existing themes/designs or creating new ones without coding. You can create templates or reusable visual designs for a content type in Page Builder. Also, you can customize an existing design to create bespoke areas of the website.

The Page Builder system employs mobile friendly open standard responsive design approaches and does not require development to create new layouts

Workflow

Ingeniux provides a fully integrated content workflow system. Design workflows using a Visio-like visual workflow designer that enables trusted users to easily model workflows using work states (boxes) and transitions (arrows). Users can map workflows to their business process and terminology and leverage best practice templates for common processes.

Workflow actions are triggered at each transition. Actions are used to automate CMS tasks, such as check-in, archive, schedule start and end dates, publish, send email notification, and post to social media. You can also use workflow as a business process tool for executing custom actions and integration with custom end-points. For end users workflow is as simple as advancing a page to the next state and sending a transition message if desired. Content can be advanced or rescinded or can bridge to other workflows.

Multi-Lingual

Ingeniux CMS supports bidirectional (bidi) text, UTF-8, Unicode, and other character formats, empowering teams to publish web pages in any language regardless of the text flow or encoding. Ingeniux CMS comes standard with English, French, Spanish, German, Italian, Japanese, Chinese, Korean, and other language packs.

Develop your taxonomy once and use it for every country site and language variation, maintaining search capabilities, facets, audience targeting, and browse-by-category capabilities. Ingeniux CMS offers pre-built workflows designed to make translation easy and manageable. Starting a translation only requires one click.

The Site Definition Manager provides a tool to track localization of site templates and assets, including individual page elements, components, workflows, and page creation rules.

The Ingeniux Translation Dashboard enables content creators to import and export content for localization. With connectors for many leading localization solutions and a flexible interface, Ingeniux can integrate seamlessly into your existing translation process.
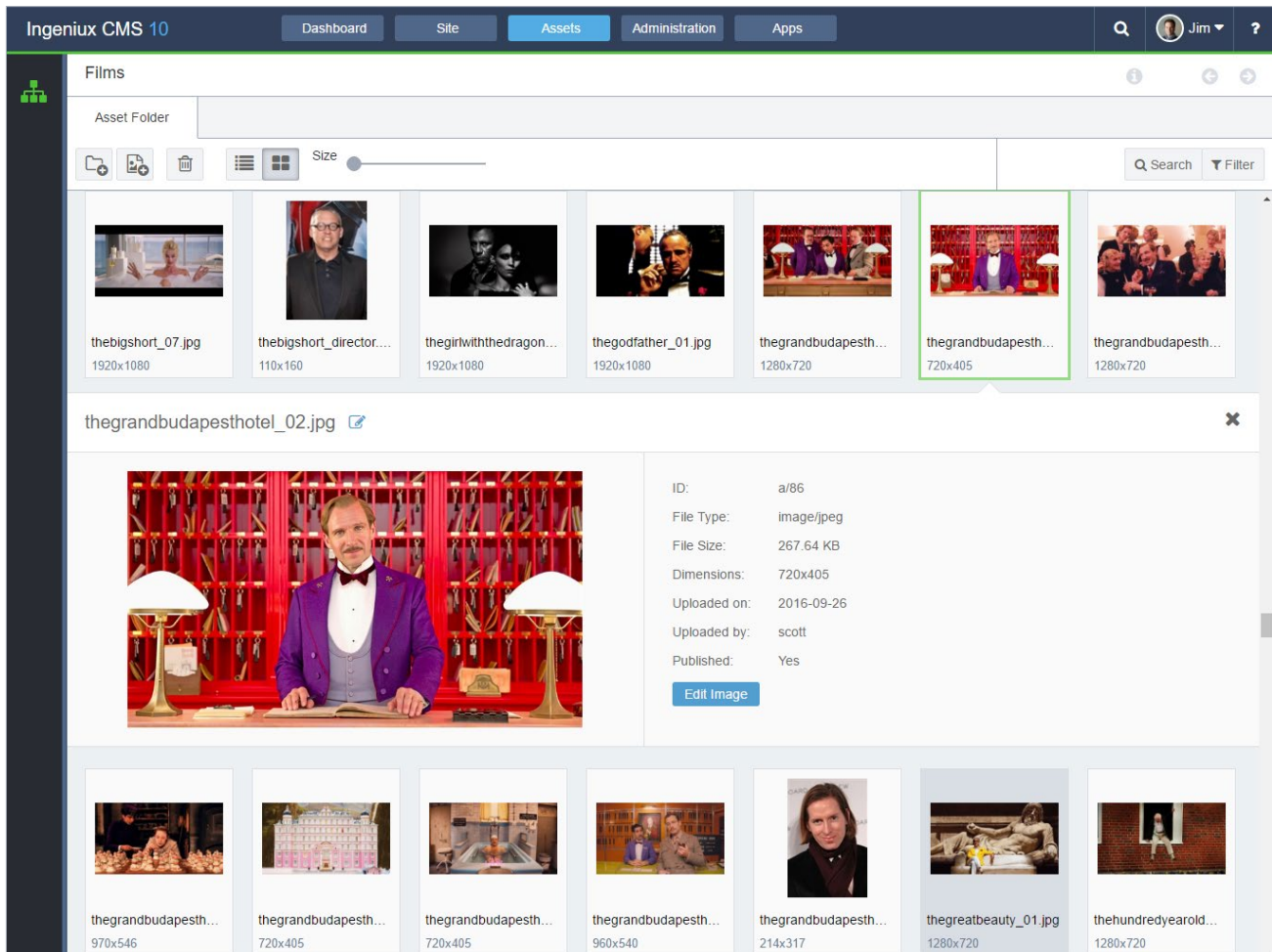
Managing Digital Assets

Many organizations still manage their digital assets in a silo. However, digital assets are often the main element of an experience as seen with videos, infographics, and social media content.

Ingeniux treats digital assets as first class citizens. Assets are mapped to the CMS taxonomy and the appropriate metadata is applied, improving how assets are found and displayed in search, as well as on web pages (including personalized web experiences).

You can upload multiple images, documents, media files, templates, and other assets using the Ingeniux Digital Asset Manager. Assets are editable including full metadata and usage rights, supporting group-level security and collaboration.
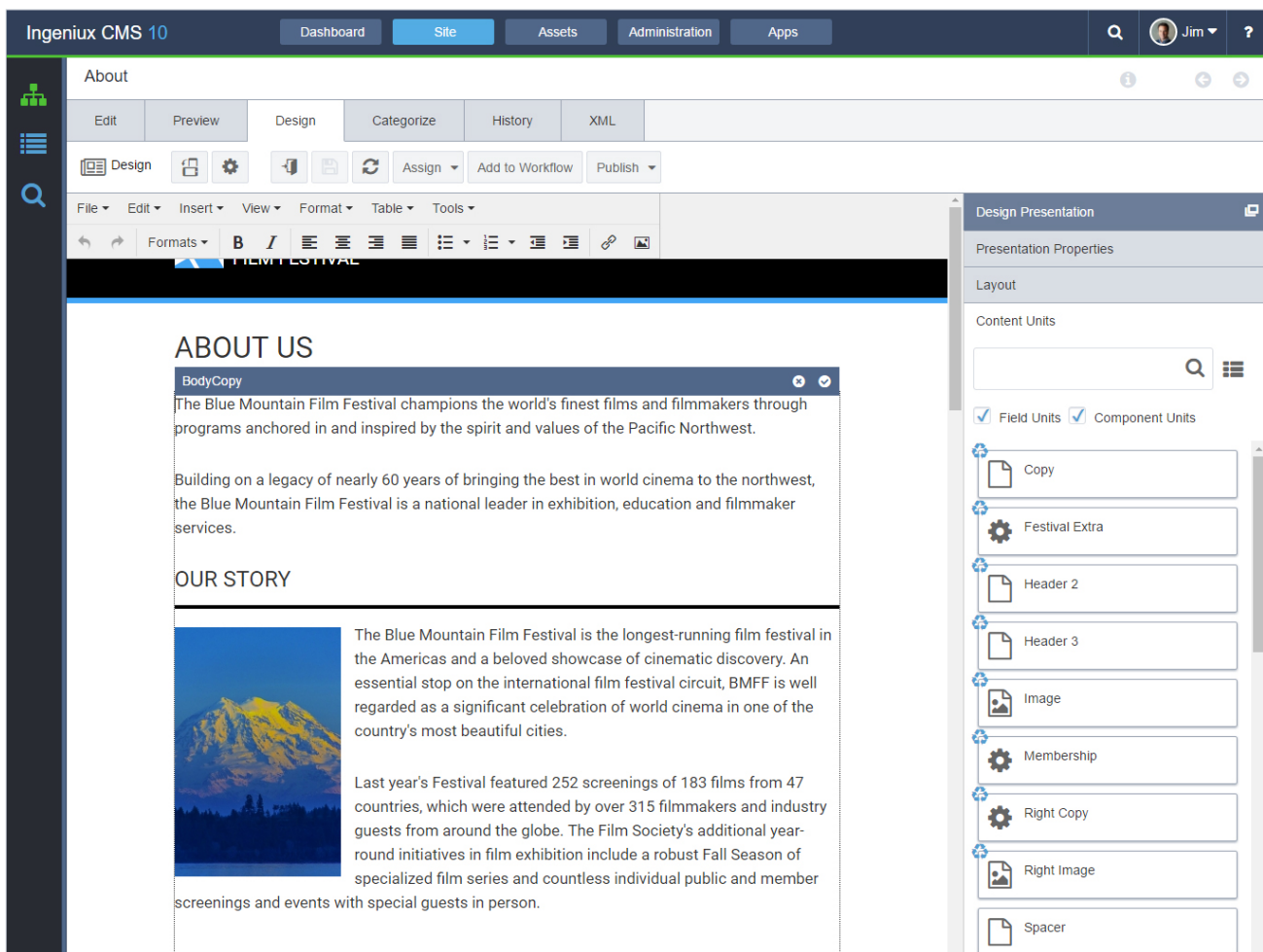
Giving a wider range of users' access to manage digital assets where they create web pages and text-based content improves the agility and speed of the user to create and update content.

For Digital Marketers

Building Today and Tomorrow's Digital Experiences

Ingeniux CMS is an ideal solution for digital marketing teams. It makes it easy to create and deliver web pages without any developer or IT support, provides powerful built-in marketing tools, and supports leading marketing automation and campaign solutions.

Personalization

Ingeniux supports a robust personalization system that allows you to target elements of content within a web page to different visitors based on clickstream behavior, visitor profile, website membership, geo-location, or marketing segment. Marketers or content managers can preview content for each segment to simulate what content would be displayed/hidden based on user type.

The system tracks page views - even for anonymous visitors - and has a scoring system to assign scores/values to different pages and actions to allow users to implicitly self-identify their preferences. The targeting system can also combine/layer multiple data points to create an extremely targeted experience with minimal extra work for CMS content managers.

Mobile Experiences

Ingeniux CMS supports mobile experiences out of the box. The Ingeniux Dynamic Site Server is a device aware-application that detects the user agent and device for each content request. Ingeniux CMS can target and render content based on device types and capabilities.

Ingeniux CMS preview supports desktop, tablet, and smartphone content emulation and preview. The software is pre-loaded with standard device previews. You can load additional previews from the Device Library, a device profile library of over 20,000 mobile devices that is automatically updated weekly with new specifications.

In addition, because Ingeniux delivers content-as-a-service, marketers developing and delivering native mobile applications can easily connect to Ingeniux and retrieve the content they require.

Web Forms

Ingeniux Forms Builder is a web forms application available within the CMS software. Forms can easily be built using visual design through the CMS content preview and editing experience. Forms Builder provides a default processor written in ASP.NET that can post form data as an XML form post, to a database, or via email. Forms Builder is extensible via the CMS content model and supports plugging in different processors.

Ingeniux also supports a wide range of forms integration options within the CMS application to support third party forms integration, including using external form URLs, double-post, and other options.

Marketing Automation & CRM Integration

Ingeniux integrates with leading marketing automation platforms such as Marketo and Pardot. It also integrates with Salesforce CRM and Dynamics CRM. These integrations enable Ingeniux to import customer profile information to personalize content experiences as well as export customer data back to these systems to update profiles.

Landing Pages

Marketers use Ingeniux to create landing pages for campaigns run from their marketing automation platform. Ingeniux integrates with the leading marketing automation platforms to pull profile information. It supports progressive profiling and can send registration form data to the campaign in the MA platform.

Content Marketing

Content Marketing is a primary tactic for digital marketers and Ingeniux is the perfect CMS to support it. One of Ingeniux's key differentiators is its support for both structured (blog posts, articles, web pages) and unstructured content (whitepapers, ebooks, documents). You can add landing pages to Ingeniux or create them in your marketing automation platform and connect them.

Email Newsletters

Ingeniux offers a newsletter module which enables organizations to create and send newsletters with ease. Marketers can create email-optimized templates, add responsive views for mobile devices and automate content reuse to populate email newsletters.

SEO

Ingeniux provides a complete set of SEO features and metadata support. URLs are automatically canonical, providing greater authority. The CMS issues permanent redirects whenever you move content, or URLs are changed, ensuring all inbound links continue to work. Integrated Sitesmaps.org compliant XML site maps are published and integrated with Google Web Master Tools.

SEO metadata is available in the CMS edit form. It is completely flexible but comes with pre-set elements for Title, Description, Google-bot instructions, and optional Open Graph tags for social sharing. Metadata is automatically populated based on the web page content, but you can overwrite it within the edit control.

Analytics

Ingeniux provides web analytics dashboards on a page-by-page and site-wide basis. Analytics data is integrated via a provider model with pre-built connectors for Google Analytics, WebTrends, and Omniture SiteCatalyst. Each Publishing Target in Ingeniux CMS can have a unique analytics provider.

For IT

Ingeniux is one of the most secure and easy to manage content management systems, making it an ideal solution for IT Managers. Ingeniux CMS provides a backend administration server that is separate from the live environment and an embedded NoSQL database. Robust user management, easy upgrades and a public API enable a wide variety use cases. With Ingeniux, you can ensure the secure creation, replication and deployment of content to multiple environments, including the Cloud.

Publishing and Synchronization

Ingeniux CMS supports delivery of content to multiple formats and replication of content to multiple locations. In deploying, Ingeniux CMS supports "early binding" static HTML and other file types, as well as "late binding" dynamic deployment using the Ingeniux ASP.NET Dynamic Site Server.

Ingeniux can also deploy content using third-party server technologies, including Java Server Pages, PHP, or Adobe Cold Fusion. In these cases, content delivery is handled by the web server and any dynamic content processing is managed by the targeted server programming technology.

Ingeniux CMS replicates content to multiple locations for website and content deployment using built-in syncing and replication. Automatically deploy web content, code, assets and templates from development through production. Ingeniux supports multiple replication options, including secure FTP, WAN-LAN, and File Share. Replication is bi-directional and updates byte level changes, quickly syncing the differences across targets. Replication is based on the Microsoft Sync Framework.

Ingeniux CMS is designed to support multiple development, staging, and production environments.

Multi-site Publishing

Ingeniux is designed to manage an unlimited number of websites and to control the content reuse, staging,

security, and delivery between them. With Ingeniux CMS, you can define separate environments for each website, staging and test environment. Content is checked in and out of each environment, maintaining separation for approved and work-in-progress content items. Publishing targets define where content is physically replicated when it is published and the format it is delivered in, providing the ability to manage sites using different technology standards and templates.

Mobile Capabilities

Ingeniux supports both responsive and adaptive delivery of content.

Adaptive Mobile Delivery: Ingeniux supports adaptive HTML5 web technologies like jQuery Mobile, Sencha, and others. It delivers content to task-based web apps that leverage single-sourced content and information architecture for adaptive mobile web experiences and services. Ingeniux also offers a library of best practice mobile templates.

Responsive Design: Ingeniux natively supports the Bootstrap 3.x and Foundation 5.x responsive frameworks. A plug-in system supports additional responsive frameworks. The Ingeniux Page Builder uses responsive frameworks to generate the grids in which content items are added, and rows and columns set to visually layout a new page or modify an existing template.

The Ingeniux Dynamic Site Server is a device aware-application that detects the user agent and device for each content request. Ingeniux CMS can target and render content based on device types and capabilities.

Ingeniux packages a device profile library of over 20,000 mobile devices that is automatically updated weekly with new specifications. Use the library for loading emulations and real-time device and capabilities detection for intelligent content display.

Digital Asset Management

The Digital Asset Manager supports true federation; including integration of Microsoft SharePoint lists for document management, media servers and CDN's for rich media storage, and file level storage in NAS and SAN systems.

Ingeniux integrates with all leading CDNs including Akamai, Azure, and Limelight.

Governance

Ingeniux has a robust governance model, including security and permissions for users, groups, and content assets, along with page creation rules.

Users, Groups, and Roles: Cascading Authentication authenticates a user into the CMS software. Supporting single sign-on integration with Active Directory, LDAP, the CMS users system, and a host of custom providers, Cascading Authentication enables organizations to utilize multiple identity providers to manage access and group-level security in the CMS.

Content Level Permissions: Apply access rights to any content item in the CMS application. Within the CMS client content may be full access, read only, or hidden. Component and element level permissions may also be applied to secure portions of a web page. External access rights can be applied to content that requires log-in or authentication on the live website to view gated information.

Using the global group settings users are restricted to what features are visible within the CMS client, whether they can publish content or just advance content in a workflow, what elements of a page they can edit, whether they can roll-back content to previous versions and many other options. The Group user manager provides security templates for simplifying permission management.

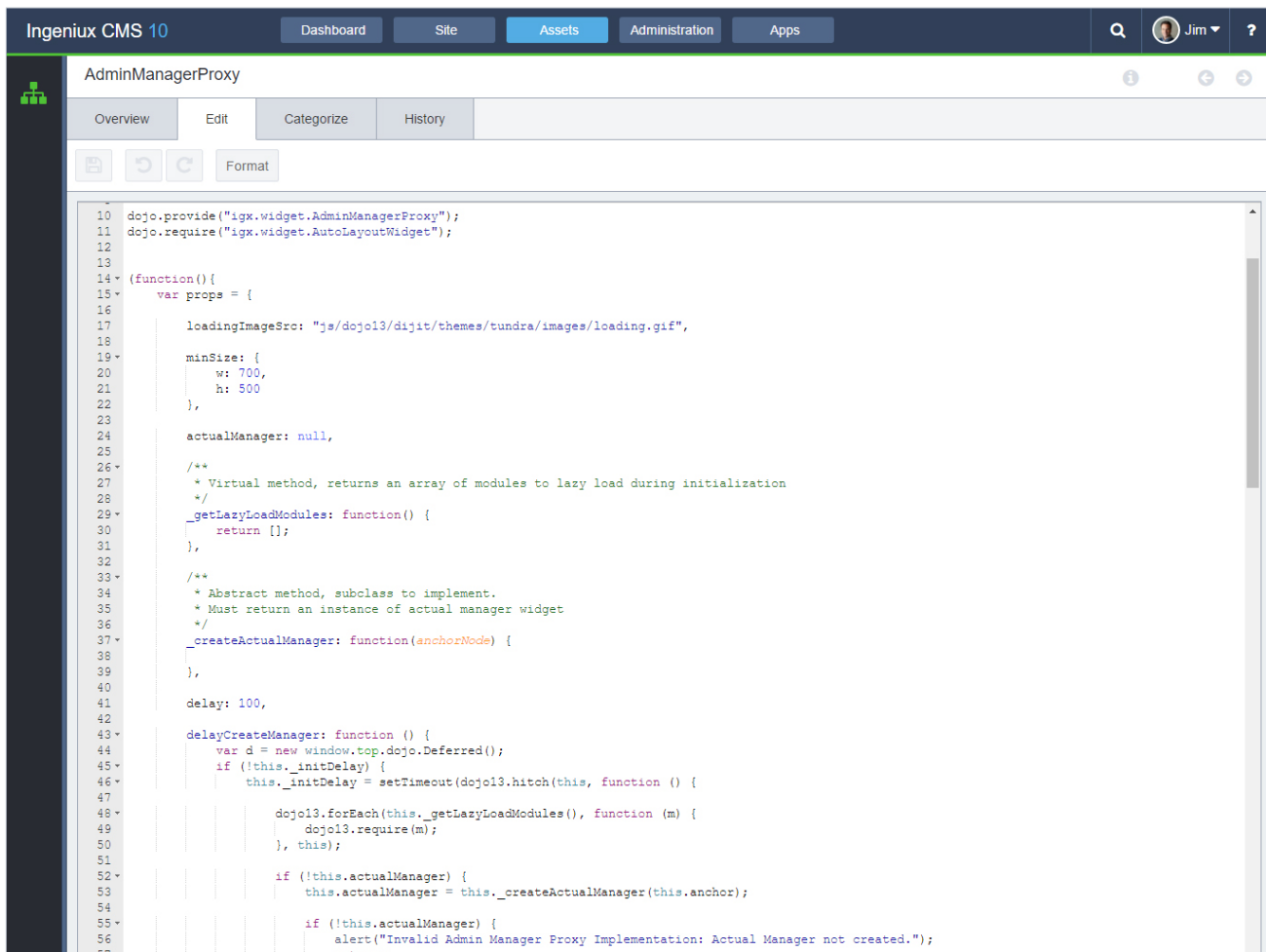In addition, the following administrative capabilities exist within Ingeniux CMS:

- Comments on Ingeniux CMS posts and pages are moderated using a dashboard. Content can be flagged as inappropriate for each comment block. Comments can be reviewed and approved ad hoc or en masse.

- The CMS client software can be configured with the features and views for each user group. Drag-and-drop customization tools allow you to define menus, available features, editing views and other options.

Reporting: The Ingeniux CMS provides a full reporting interface, with a complete set of content management reports. You can create custom reports. Reports may be scheduled to run automatically, or you can export data as CSV or Microsoft Excel files.

For Developers

Implementation Approach

Ingeniux software is built on the latest Microsoft technology; including ASP.NET 4.5 and MVC 5.0. Ingeniux is the ideal solution for professional ASP.NET developers and agencies, providing an innovative content development model based solely on open web standards, deep integration with IDE's such as Visual Studio, and an accessible REST-based API that delivers the power of intelligent content without the overhead of traditional tightly coupled CMS applications.

APIs

Ingeniux provides a faster, more agile platform for developing ASP.NET-based websites and applications. It features a true three-tier architecture, support for the latest ASP.NET technologies including MVC and the Razor view engine, full Visual Studio integration, and open RESTful API elements.

Ingeniux CMS provides a Developer API written in ASP.NET. The API is available in REST and SOAP. The CS API provides access to the content store and CMS application services. It is built around a NoSQL document database. The DSS API provides access to the content delivery tier and is used to integrate content in applications and web templates.

The Ingeniux API is session-based and transaction-oriented, provides full support for LINQ syntaxes, and uses a modern object structure and naming conventions for ease of use and development. It is also concurrent and supports multi-threading for high-performance applications and deployment via ASP.NET, and MVC.

Schema Builder

Content is modeled in XML schemas using the Ingeniux Schema Designer. The content model is very rich and designed to maximize content reuse by structuring content, separating content from presentation, support for meta data, and component-based content chunking.

There are over 25 standard element types, such as Text (string), XHTML (WYSIWYG editing), image, media file, database query, navigation, etc., that can be used to define the data model for a document. The elements are parsed by the CMS to provide the authoring forms and user interface. The Ingeniux Schema Designer provides versioning and control as well as syncing and replication to propagate changes across existing content items. The Schema Designer allows content models to change and web administrators to selectively update existing content with those changes.

Content stored in the NoSQL document database is schema-free. Any changes to the content model are automatically available within the CMS repository.

Working with Code as an Asset

Developers who need to make small, quick updates to the code can do so without having to open desktop tools such as Visual Studio. Essentially you can develop end-to-end on the browser with no heavy requirements for client-based code editors.

Visual Studio Integration

Ingeniux CMS supports template development in Visual Studio. An Ingeniux site is a standard ASP.NET project in Visual Studio. Ingeniux content and information is available as a Web Service directly within Visual Studio.

Remote Preview

Remote Preview can be set up to run as a service on external servers where you may view external applications and services for pages that consume content outside of the CMS application environment.

Working with Raven DB

Ingeniux CMS uses the RavenDB NoSQL database. It is a native.NET NoSQL database that doesn't add an extra footprint to the technical and hardware architecture. RavenDB also works with Lucene, which is the backbone to the Ingeniux search architecture.

Deployment Options

Ingeniux is architected from the ground up for cloud delivery.

Ingeniux Managed Cloud / SaaS

Ingeniux CMS software-as-a-service and cloud services provide customers with a fully deployed and managed web presence and application environment. The CMS application and website are hosted in the Ingeniux cloud using virtual servers over an extensive grid of computers. The back-end CMS application uses a NoSQL framework designed for cloud hosting, and the deployment tier supports CDN and auto-scaling with fast file-based delivery and edge caching.

Ingeniux goes beyond traditional multitenant SaaS solutions by providing each customer with a dedicated environment for its Ingeniux CMS application. Using this approach, each customer can define the network configuration needed to meet business, security, and compliance requirements.

The Ingeniux approach also provides greater flexibility: upgrade when you want, manage file-level access, write customizations and integrations, install additional applications or databases, and, perhaps most importantly, move the application to your servers if you want in the future.

The cloud provides greater scalability, less management overhead for IT teams, and the peace of mind of having one number to call to address your web software, performance, and uptime services.

Public Cloud / PaaS

Ingeniux provides managed hosting solutions that enable businesses of all sizes to accelerate growth and scale operations while controlling costs and reducing IT infrastructure support risks. Our industry-leading software-as-a-service goes beyond traditional hosting by providing application management, change management, performance management, and application optimization. Ingeniux CMS is the first content management solution to bring together the flexibility of the public cloud with the security, performance, and control that enterprises demand.

OnPremise

Not every organization is ready to move to the cloud, or they have business needs that require them to run software on their internal networks. For those customers, Ingeniux provides on premise edition of Ingeniux CMS.

OnPremise provides the ability to install Ingeniux CMS software on dedicated servers or VMs and configure publishing targets to deploy content to multiple web servers or other endpoints within the network or other locations. OnPremise is available with a perpetual license to the software and an unlimited support and maintenance program.

Closing Remarks

Modern websites require a new set of tools to craft engaging experiences and connect online applications and services. The Ingeniux approach is to provide an agile content management platform with the capabilities to easily deliver engaging digital experiences across all channels and devices.

Ingeniux has reoriented the CMS application to support more open, rapid and lighter weight development and helps organizations create smarter content.

With the ability to easily manage distributed content contribution, digital marketing, translation and global deployment, and multi-channel mobile delivery, Ingeniux empowers digital innovation for the modern web.

About Ingeniux

Ingeniux is the leading provider of web content management and digital experience software. We enable organizations to orchestrate the entire customer experience from acquisition through to sales to support and service, across any device, application, or website.

We build content management software with an unparalleled focus on the content itself. The Ingeniux CMS is designed to manage and deliver modern websites, customer support portals, online communities, and other customer touchpoints.

We believe in intelligent "structured" content. We design our software to enable content reuse, enable true mobile and multi-channel content delivery, and insightful content discovery. Our unique content-as-a-service capabilities deliver content into web and mobile applications, and other key channels.

Ingeniux software is available as a fully managed software service or an on premise application. Ingeniux delivers unparalleled service and support to customers worldwide.

To learn more, visit us at http://www.ingeniux.com.

INGENIUX