

# A Structured Content Model and Multi-Channel Publishing for Rapid Content Distribution



## The Challenge

EK partnered with the office of a large government agency whose primary mission required them to rapidly distribute real-time updates about current events to government executives and their staff. At the same time, they needed the ability to manage the knowledge inherent in these real-time updates for later analysis. The requirements of rapid and near-instantaneous distribution of content pulled in opposition to the requirement for more structured content which would enable analysis. Their old system, which involved drafting content in OneNote and pasting directly into Outlook to send email updates, provided no efficient way to view or leverage previously published content, nor did it allow them to save and reuse content or content templates. The office needed a content management and distribution system that allowed them to rapidly author, distribute content to multiple publication channels, and retrieve and analyze previously published content to inform policy decisions.



## The Solution

EK architects, developers, and strategists worked with the office over a period of three years to iteratively develop and release a structured content management system that would revolutionize the way the office managed content. In the first year of the engagement, EK's expert content engineers performed a detailed content analysis to identify the multi-channel publishing opportunity of content. The output of the content analysis was a content model which defined how content would be broken down into its component parts in the new system, documenting the relationships between content types, supporting metadata, and the overall structure of the content (and templates) which developers would later implement in the content management system.

A typical approach for achieving structured content in a CMS employs the use of predefined fields which are filled out at the time of content creation - similar to the experience of filling out a web form. Due to the need for near-instantaneous content publishing, that experience was undesirable. Content authors needed an authoring experience which felt unstructured, while it actually structured content behind the scenes. The solution for this was a custom built document editor that allowed users to add content in a seemingly unstructured fashion. Upon save, a translation microservice would save the editor's content into JSON structured content when saved to the database.

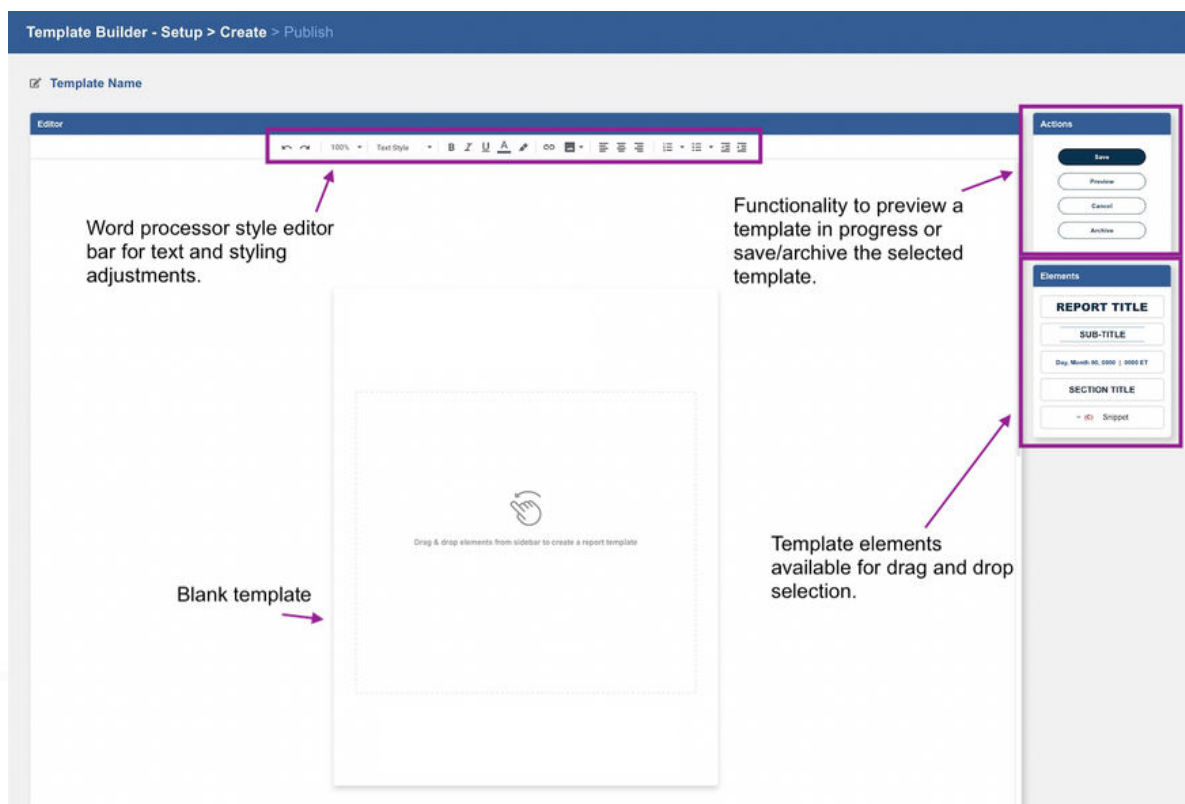
Government executives who were the ultimate audiences for this content had very strong preferences for how they wanted to consume the content. Some wanted to continue to receive email, some wanted the email to go to an

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assistant who would print a PDF for them to read while in transit, and some had a strong preference for a mobile app or SMS. By structuring content, we enable the flexibility to design multiple end-user experiences to consume the content.

While the need for immediate distribution to government executives was met through these distribution channels, analysts had a need to search for previously published content in order to analyze trends and make policy recommendations. This type of deeper analysis is better supported by a web interface and so a web application with search functionality became yet another publication endpoint.

One thing is a constant of content models: as an organization evolves, so must the model. Indeed, over the course of our three year engagement, the name and structure of the reports being authored by the government office changed several times. It became imperative that the custom CMS EK developed would support the administrative management of additional content structures and templates. In response to this need, EK created a template manager which allowed non-technical content designers to define their own templates. They could instead choose which structured content components from the content model would be in the default content creation experience as a content author rapidly created a new piece of content directly through the administrative interface.



*The Template Manager enabled administrators to define new content types using predefined elements of the structured content model*

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## The EK Difference

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EK employed our Advanced Content expertise to design and develop a custom CMS which met the complex requirements of the government agency. Our expert consultants identified the need for rapid, multi-channel publishing and immediately translated that to the technical requirement of a structured content model and a CMS which would support not only structured content, but also the creation of content in a way which felt unstructured to content authors.

EK conducted a targeted content analysis, facilitating focus groups with the stakeholders to identify themes and duplicate content across publications. This enabled us to help the office define the major and minor content types within publications, highlighting the structured content components that were critical to a publication and had potential for reuse in multiple publications. Additionally, we were able to define the structured content model, including the content types, the structural components which were reusable across content types and end-user experiences, and the metadata which supported reuse of structured content components.

EK not only provided content strategists and content engineers for the engagement, but also provided a solution architect and software engineering team with dedicated CMS development experience. This team was able to customize a Drupal CMS and enrich it with a set of Python microservices in order to maximize the value of the open source tool, but also meet the complex, custom requirements of the government agency.



## The Results

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EK architected the content model to accomplish a few different business goals:

- **Efficient Content Authoring:** Through collaborative content creation, the application of templates, and tools for the automated application of metadata, staff writers spend 20% less time composing content.
- **Optimized End-User Interfaces for Consuming Content:** The structured content model and CMS enabled authors to rapidly compose one report and publish relevant structured content components to multiple distribution channels including email, PDF, and web. Email and PDF met the preferences and demands of government executives and web met the needs of analysts. Additionally, recipients of the office's publications benefit from consistently structured, authoritative information that, through a structured content model.

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- **Improved Knowledge Management:** Analysts gained ability to search for and analyze previously published content where previously that knowledge was lost to the email black hole.
- **Decreased Time to Inbox:** One of the highest priority distribution channels for the CMS is publishing to email. The optimizations to the content management system and processes reduced the average time of distribution to email inboxes from 76 minutes down to one minute.

Enterprise Knowledge (EK) is a services firm that integrates Knowledge Management, Information Management, Information Technology, and Agile Approaches to deliver comprehensive solutions. Our mission is to form true partnerships with our clients, listening and collaborating to create tailored, practical, and results-oriented solutions that enable them to thrive and adapt to changing needs.

Our core services include strategy, design, and development of Knowledge and Information Management systems, with proven approaches for Data and Information Management, Knowledge Graph Implementation in support of NLP, ML, and AI initiatives, Taxonomy Design, Project Strategy and Road Mapping, Brand and Content Strategy, Change Management and Communication, and Agile Transformation and Facilitation. At the heart of these services, we always focus on working alongside our clients to understand their needs, ensuring we can provide practical and achievable solutions on an iterative, ongoing basis.