# WEB CONTENT MANAGEMENT

#### **Content Workflow**

•A content workflow is a series of tasks your team performs to take your content from ideation to delivery as efficiently as possible. Although it outlines the processes, a content workflow is also heavily reliant on the people, tools, and resources needed for content creation.

#### Content Workflow

- Strategists, writers, editors, and managers are people you would have on your content team. Their tasks, seen in a workflow, include planning, writing, editing, publishing, and more; however, each function is not necessary for every content type.
- Depending on the content type, your workflow will change. Businesses can publish various content like newsletters, blog posts, and social media posts. The content workflow is different for each asset.
- For example, compare the publication of a newsletter and a social media post. The most evident difference in this process is that the content types go through different channels. Once you break down the workflows, you will discover that each may require separate people, processes, tools, and resources.

# **Content Workflow Management**

- Components of content creation process.
- Process
- People
- Tools

#### Processes

- To manage your content workflow, identify the steps needed to create content. They are:
  - 1. Strategizing
  - 2. Planning
  - 3. Creating
  - 4. Reviewing
  - 5. Publishing
  - 6. Analyzing
- While this is the basic workflow for content, each step has supplementary processes depending on the content type.
- You can build these extra steps as you create your content workflow. At this stage, it's helpful to outline a content strategy.

#### People

- An effective content workflow focuses on the processes needed to publish content, but people are arguably the most vital part.
- One aspect of managing content workflow is identifying and managing key players.
- These people are responsible for fulfilling the steps in the content creation process listed above.
- For example, for strategizing, you'd need a strategist. For reviewing, you'd need an editor.
- In conjunction with managing your people and their processes, content workflow management also covers the tools needed to complete the work.

# Tools

- For your content team to fulfill their roles and work through content creation processes, they need tools.
- Content has to be created, edited, shared or managed somewhere. Managing your team's content workflow means managing the tools it needs.
- Content management systems, like CMS Hub, are essential for publishing blog posts.
- Canva and Adobe Photoshop are great tools for design. These are just three of the many tools your company might add to its content tech stack.
- As the content marketing industry booms, your business needs to expand to accommodate this growth.
- This expansion reflects an increase in the people, processes, and tools associated with your content workflow.
- The more comprehensive your workflow becomes, the more daunting it is to manage; however, integrating content workflow software can solve the problem.

#### Content Workflow Software

- Content workflow software, or a workflow management system, is a program that manages the content creation process through planning, production, and publication.
- Instead of teams using multiple methods and approaches to monitor the content process, workflow management systems help you create a centralized location for your team to visualize its processes.
- It promotes the execution of your content strategy in alignment with company goals.

#### Content Workflow Software

- The added benefits of using content workflow software include:
  - An increase in productivity
  - A reduction in errors
  - An improvement in workplace collaboration

#### Increase in Productivity

- Without using a content workflow software tool, team members are left with extra work and time wasted.
- These issues are removed with content workflow software because it is automated.
- It eliminates sending email updates because the software sends them for you.
- Content teams don't have to guess the timeline of a project because the system manages it for them.
- Everything happens quickly and efficiently.

## Reduction in Errors

- Nothing is perfect, and you can't expect the same from your content workflow.
- Even so, content workflow software helps reduce errors. It helps your team stay ahead of deadlines.
- It allows you to identify what processes in the content workflow need adjustment.
- Content management software gives your company the tools for improving your workflow.

#### Improvement in Workplace Collaboration

- Content management software improves workplace collaboration between team members and the apps and platforms they use.
- Executing your content strategy requires many different people who use various tools.
- Workflow management software allows your team to notify and update another member while the software integrates with several content management systems, email providers, messaging services, and social media platforms.

#### **Content Workflow Template**

• Content workflow software is fundamental in keeping up with your

content strategy; however, you need the appropriate steps to build your

workflow. Only then can you get the most out of the software. Where

do you begin? Here's how you can create your content workflow.

#### How to create a Content Workflow?

- •The people, processes, and tools necessary for executing your content strategy are helpful markers in creating your content workflow.
- •To create a content workflow, you need to:
  - 1. Decide what content to create.
  - 2. Create a breakdown of actionable tasks.
  - 3.Assign roles.
  - 4. Determine the time associated with each task.
  - 5. Document your content workflow.

#### Decide what content to create

- First, decide "what" you are creating.
- Is it a social media post?
- Is it a newsletter?
- Your company has the choice of creating many content types like infographics, blog posts, video content, and more, and you will need to create a workflow for each.

# Create a breakdown of actionable tasks

- Once you are focused on a particular content type, outline the necessary steps needed to get it from strategy to publication.
- Consider this sample workflow for a blog post. Its process might look like this:
- Strategizing > Planning > Creating > Editing > Publishing > Analyzing
- While these are broad tasks for creating a blog, this is where it needs to expand.
- Strategizing typically includes performing content audits, creating buyer personas, and conducting keyword research.
- Editing might involve implementing SEO techniques or adding images and links.
- Every step in the process needs to be accounted for so it can be assigned to the appropriate team member.

# Assign Roles

- After you have the tasks for your content process, it's time to decide who does them.
- This step can help identify if anyone is at capacity in their role and if you need to bring in additional members.
- Using our blog example above, this is how you might assign roles.
  - **Strategizing** > Content Strategist
  - **Planning** > Content Manager
  - Writing > Copywriter
  - Editing > Editor
  - **Publishing** > Content Manager
  - Analyzing > Content Manager
- After assigning responsibility for each task, determine how much time is necessary for completion.

## Determine the time needed for each task

- To determine how much time you need for each task, consult your content team.
- How much time does your writer say it takes them to write a 500-word post?
- What about a 2500-word post?
- Use the length of time they give you and build in additional time.
- It can help your company avoid working with tight timelines or missing deadlines.

## Determine the time needed for each task

- After this step, your content workflow might look like:
  - Strategizing > Content Strategist (1 day)
  - **Planning** > Content Manager (<1 day)
  - Writing > Copywriter (2 days)
  - Editing > Editor (1 day)
  - Publishing > Content Manager (<1 day)
  - Analyzing > Content Manager (Ongoing)
- Once you have outlined a process for the tasks, people, and length of time needed for creating your content, your content workflow is complete.

#### Document your content workflow

- The last step in creating your content workflow is documenting it.
- Companies typically use standard operating procedures (SOPs) to keep their teams aligned with the process.
- •Marketing Hub, Trello, and Evernote are examples of systems that

give teams easy access to documents like SOPs.

#### DOCUMENT MANAGEMENT

#### **Document Management**

- Document management is a system or process used to capture, track and store electronic documents such as PDFs, word processing files and digital images of paper-based content.
- Document management can save you time and money.
- It provides document security, access control, centralized storage, audit trails and streamlined search and retrieval

#### Automate more

- See how automation improves a claims reimbursement process.
- In this example, we'll use an RPA bot with APIs for document capture and

business rules to complete the process faster – and with fewer errors.

- Claims reimbursement automation
- An RPA bot processing emails, documents, cloud APIs and web apps
- •Additional automation by combining the bot with easy to use

document capture and flexible business rules



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#### Essentials

- Less paper, more functionality
  - Document management has grown from digitized paper to include security, auditing and more.
- More storage capacity
  - The storage capacity of a server is greater than a physical filing cabinet or warehouse.
- Common attributes
  - Systems vary in scope but share attributes such as indexing, version control and more.

#### CMS vs. DMS

CMS	DMS		
Content management systems are	DMS is a system that helps		
used to create and manage various	businesses to create, track and		
types of digital content besides	store digitized documents. A DMS		
documents in the traditional	is used to classify, retain and		
sense. For example, in addition to	protect electronic information. It		
being used for PDFs, Word files or	also supports versioning,		
Excel files, a CMS could be used to	collaboration and workflows.		
manage things like images, web			
pages, records and flash files.			

# **How CMS and DMS Are Similar?**

- Document management systems and content management systems both do the following:
  - Help manage documents.
  - Facilitate information creation, retention and distribution.
  - Provide centralized storage for data.
  - Ensure fast and easy information retrieval.
  - Provide high-level information security.
  - Support content-driven collaboration.
  - Offer automated workflows.

# **How CMS and DMS Differ?**

- A DMS manages structured data and is focused on documents in the traditional sense in such formats as Word, PDF, PowerPoint, Excel, etc. A CMS, on the other hand, can handle both structured data and unstructured data, such as web content (HTML and PDF files) and digital assets (images and audio and video files).
- The key purposes of a DMS are regulatory compliance and workflow management, while the key purposes of a CMS are storage, retrieval and publishing of content.
- DMS applications have advanced imaging and scanning capabilities, such as optical character recognition (OCR), handprint character recognition (HCR), optical mark recognition (OMR) and more. CMS tools usually don't support those functions.
- Integration with enterprise systems (such as enterprise resource planning and customer relationship management tools) is essential for a DMS but secondary for a CMS.

# **EDM and ECM: One System or Two?**

- Enterprise document management systems are sets of technologies designed to handle creation, capture, indexing, storage, retrieval, routing and distribution of corporate documentation.
- Enterprise content management, on the other hand, is a term used to refer to a set of strategies, methods and tools used to capture, manage, store, preserve and deliver corporate digital data.
- •As is the case with DMS and CMS, EDM and ECM overlap. Sometimes, it's difficult to say whether they are two different systems or one entity.

# **EDM and ECM: One System or Two?**

- 1. Capturing information: Creating information by digitizing paper documents, or obtaining, organizing and structuring information in electronic formats.
- 2. Managing information: Connecting, modifying and employing information. Specific aspects of managing information include the following:
  - Document management.
  - Collaboration.
  - Web content management.
  - Records management.
  - Workflow/business process management.
- **3. Storing information:** Short-term storage of files in accessible folders to allow editing of files so frequently changing information can be updated.
- **4. Preserving information:** Long-term retention of infrequently changing information as part of regulatory compliance efforts.
- 5. Delivering information: Providing clients, partners or auditors with required information upon request.

# Features of Document Management Software

- Security features such as customizable access restrictions
- Ability to store various file types
- Search functions for quick location and access to important files
- Document history for auditing and tracking
- Version control for documents and backup storage
- Ease of use

#### COLLABORATION

#### What is collaboration?

- Collaboration is a recurrent process where two or more people work together to achieve shared goals by sharing knowledge, learning and building consensus.
- The common goals could also be an intellectual endeavour or a means of creation of new knowledge.
- These include sharing of planning, goal setting, decision making, problem solving, assuming responsibility, open communication, cooperation, coordination and recognition and acceptance of separate and combined areas of activity.
## Tools for Collaboration on the Web

- The Internet enables interactive collaboration on a massive scale which is not easy in other real world communication channels.
- Collaborative content on a massive scale is a distinctive feature of the World Wide Web.
- There is also digital reuse of content.
- Collaborative software was originally designated as groupware. The term 'groupware' was coined by Peter and Trudy Johnson-Lenz in 1978 and defined as "intentional group processes plus software to support them".

# Tools for Collaboration on the Web

- Groupware integrates co-evolving human and tool systems, yet is simply a single system.
- Groupware tools are instruments which can be used to implement groupware functions.
- Groupware is built around three key principles depending on the level of collaboration (Lotus Notes):
  - Communication
  - Conferencing
  - Coordination

# Tools for Collaboration on the Web

#### • i) Communication:

- This can be thought of as an unstructured interchange of information.
- For example, a phone call or an IM Chat discussion.
- ii) Conferencing (or collaboration):
  - This refers to interactive work towards a shared goal.
  - For example, brainstorming or voting.
- iii) Co-ordination:
  - This refers to complex interdependent work towards a shared goal.
  - For example, in a sports team everyone has to contribute the right play at the right time as well as adjust their play to the unfolding situation but everyone is doing something different in order for the team to win. That is complex interdependent work towards a shared goal of collaborative management.

# Features of Collaboration Tools

 Collaborative software and tools promote communication, enable sharing of a text document, a photograph or other similar objects, allow natural interactions and be easy to use and learn.

#### • Strong Communication Capability:

- The most important feature of a collaboration tool is its ability to facilitate communication and interaction between participants.
- This can be through video, audio or simple text.

#### • Easy-to-Understand Interface:

- The interface of the tool should be easy and intuitive to navigate, perhaps emulating an existing tool or an aspect of the physical world.
- A user's ability to simply pick up, adapt to and use a tool considerably diminishes extensive training and supervision needs.

#### • Capability and Expectation of Collaboration:

- To encourage input from participants, a collaboration tool should make it clear that the input is expected and will elicit a response.
- For example, an online presentation can be an ideal tool for collaboration, but it has to be made clear to the audience that they have to respond and interact with others instead of passively watching a webcast.

## Collaborative Content Development

- In collaborative content development, individuals work together in a coordinated fashion towards a common objective.
- The users come together as a team, primarily for the accomplishment of a set goal.
- The collaborative work is facilitated by a collaborative software which provides tools that aid communication, collaboration and the process of problem solving to individuals separated by physical and geographic distances.
- The collaborative tools support individuals involved and also the interactions that take place between them during group decision making process.
- Collaboration and content quality management can be taken care of through the guidelines prepared by the community.
- Web-based applications have made it possible to bring ideas together and develop content collaboratively by providing easy to use, user-friendly applications.

## **Collaborative Content Development**

- A number of applications and initiatives are there which enable different types of collaboration for different types of content.
- The Web offers possibilities of collaboration in various areas.
- These include online encyclopaedias, document management, project management, community or social networks, Learning Management System (LMS) and Content Management System among several others.
- Groupware, content management systems and portals offer a rich set of tools for collaboration.
- They have collaborative authoring tools and provide separate areas with member profiles, areas for online discussions, file and document sharing and for providing comments and feedback.
- In view of technological developments, content is increasingly being created in a collaborative manner with multiple authors and different users commenting, reviewing and providing feedback for a given document.

#### VERSIONING

# Versioning

- Versioning means keeping track of different versions of content when it's changed by editors.
- This brings a few advantages.
  - Roll back of changes
  - See changes in time
  - Used to audit and monitor modifications
  - Control when a new version is available

# Draft, Submitted, Published, Archived

- In our communication preparation process, we had to support the following states of assets:
  - **draft** a *work-in-progress* version, only author or editor can modify it, this version cannot be used in other assets,
  - **submitted** a stable version that was submitted for review via a workflow process, it cannot be used in other assets yet, this will be possible after approving it,
  - **published** basically, it's the same version as *submitted*, but it can be used by users to create a communication,
  - **archived** a previous version of an asset where a new *submitted* version already exists, it cannot be used in other assets, but it is still referenced from already *published* assets and used in communication.

# Versioning

- This is not the final solution as there are plans to support more sophisticated flows and states.
- Implement other relations in Dgraph.
  - previous version a pointer to a previous version if it exists,
  - **next version** a pointer to the next version if it exists.

## Versioning

- So when you create a first version of an asset, which is a draft, and then submit it, you will get a node with neither previous nor next relation on it.
- Yet, when you create another version of an existing asset, then both nodes representing this asset will have *next* or *previous* relation:





# Static and version ID

- Having *previous/next* relations required us to implement a universal identifier of each asset.
- An ID that can be used in references to that asset and in our web designers when opening the asset to view or edit it.

# Static and version ID

- **static ID** an id assigned to the first version of the created asset and it never changes during the whole lifetime of the asset,
- version ID an unique ID that is used to identify each particular version of the asset in the linked list, you can also used it in Dgraph queries when looking for the exact asset version.



#### New Draft Version

- When creating a new version (a new draft), you can start from the latest *submitted* version only, when the draft already exists and you have created it, exactly this version (a draft version) will be used.
- When using one asset in another asset (a text content in another text content), you can only select a *submitted* version of the asset. And once the relations *uses/used by* were set and the outer asset was submitted, the versions were sealed.



#### New Draft Version

•By implementing *Static* and *Version* IDs, with support of *uses & used by* and *previous & next* version relations, we were

able to implement all the requirements that our CMS had to fulfill.



## Different versions of assets

- Another requirement that was discovered during development process was the ability to use different versions of assets used in a template to assemble a test communication.
- each asset is represented by two structures:
  - a node in graph database (a node in Dgraph) and
  - a content definition (either JSON or a binary one stored in Cassandra).

## **Assembling Process**

- the first step was to collect all the versions used in the graph of assets
- This is just a simple map (we called it the *Reference Map*), where keys were *Static* IDs and values *Version* IDs.
- Having the Version IDs, we exactly knew which versions of assets to use.
- So when the assembler was processing a given definition and detected a reference to another asset, through the *Reference Map* it was fetching a proper version of the asset from our CMS.
- You can easily imagine a situation when the *Reference Map* is modified on fly by a user to check if a new version of the asset will fit the old shoes, so their can test the communication before even publishing a new version.

# Advantages of Versioning

- Easy traceability
- Enhanced performance
- Efficient content management

## Version control vs. Versioning

- Version control is shorthand for a system that keeps people from stomping on each other's work in collaborative environments.
- Enforced through content check-in / check-out facilities that prevent two or more people from working simultaneously and unknowingly on the same item
- When you try to edit something that someone else has "checked out," the system ideally alerts you that the item is "locked," tells you who possesses the content item at that point, and potentially gives you the option to override their lock.

## Version control vs. Versioning

- Content contributors in distributed publishing systems usually find version control tremendously helpful, but it sometimes comes at the expense of collaboration.
- When only one person can have a content item checked out at any one time, processes can become very linear, and you can see added stress on workflow routines (such as excessive looping between author and approver).

# Web Content Management Tools

- WordPress
- Textpattern
- MODX
- Joomla
- Silverstripe CMS
- Radiant
- Concrete CMS
- Contano
- Microweber

#### WORDPRESS

#### What is WordPress?

- WordPress is the most popular CMS on the market, powering **65.2%** of websites whose CMS we know.
- That translates to **42.4%** of all websites nearly half of the internet.
- It is a popular option for those who want to build a website or

blog.

#### WordPress

• WordPress is an open-source content management system

(CMS) software used to build, modify, and maintain websites. In

technical terms, WordPress is written in PHP and run on a

MySQL or MariaDB database. In addition, WordPress features

include plugins and themes, among others.

#### How does WordPress Work?

 WordPress runs on a database system that allows you to add, modify, and organize files, themes, plugins, and all types of content.

 Each WordPress user has access to the dashboard to manage their website in one place.

### Benefits of WP

- Free and opensource
- Flexible and customizable
- Scalable platform
- Easy to use

# WordPress.org

- WordPress.org houses the free content management system software used to run a self-hosted version of WordPress.
- To build a self-hosted website, you must first register your domain name and purchase a web hosting plan.
- The type and quality of your chosen web hosting plan will determine the performance of your website.
- Additionally, users can exercise more control over the web server space they're renting from the web hosting provider by self-hosting.

## WordPress.com

- WordPress.com is a hosting company that uses a website builder based on the WordPress content management system for all the websites it hosts.
- Unlike its self-hosted counterpart, WordPress.com is hosted, which means that it manages the web servers that store its users' websites.
- Users who sign up for the service for free are required to use a branded domain name, such as yourwebsitename.wordpress.com.
- To use a custom domain name, one must upgrade to a paid plan.

# WordPress Features

- Admin Dashboard and Settings
- Content Editor
- Theme customizer
- Plugions and Widgets
  - WooCommerce
  - Visual Composer
  - Yoast SEO
  - Wordfence Security

### Admin Dashboard and Settings

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#### **Content Editor**

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## Theme Customizer



#### Learn How to Code



# **Plugins and Widgets**



#### Sites to create with WordPress

- Blogs
- Portfolios
- Business Websites
- Charity Websites
- Online Stores

# Pros of WordPress

- Low cost
- Easy installation and updation
- Simple to manage
- Custom design
- Custom functionality
- Helpful community
- Open source software

## Cons of WordPress

- Security concerns
- Third-party content
- Page load time

### Steps to create a WP site

- 1. Buy a domain name.
- 2. Choose a hosting service provider.
- 3. Buy a web hosting plan.
- 4. Install WordPress.
- 5. Customize the website.
- 6. Start creating content.
- 7. Promote the website.