VIEW POINT

WHY CONTENT CREATION AND PUBLISHING COMPANIES MAY NEED TO ADOPT CONTENT MANAGEMENT ON GOOGLE CLOUD

Abstract

Most content creation and publishing companies today use legacy systems with custom designed processes coupled with ad-hoc and excess external integrations. In today's new digital paradigm, it is critical for these content creation and publishing companies to reinvent themselves, their business processes and internal systems and navigate towards smarter technology to stay relevant and profitable. This point of view explores how content creation and publishing companies can leverage cloud based offerings from Google for all their content management operations.

'Content is king, but technology is the kingmaker'

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Introduction

Leading publishing companies adopted technology in the '80s and '90s and then got locked into monolithic content management platforms and products. Often, costs involved in modernization these platforms and products led to the deployment patchy stop-gap solutions so as to span the distance between capability and aspiration. Owing to this scenario, many content publishing companies are plagued by,

- High CAPEX and OPEX on premise infrastructure
- Costly platforms and products
- Highly custom and non-scalable business processes
- Complex monolithic internal systems and vendor lock-ins
- Ad-hoc external integrations
- Discrete data silos and incoherent analytics
- Inability to adapt Big Data and AI/ML offerings

This PoV is for CXOs and Line of Business Leaders, Technology Directors, and Enterprise Architects of content creation and publishing companies who use legacy business processes, systems, and traditional non-cloud infrastructure but wish to move to an agile, digital, cloud-based content creation and publishing platform. While most of this PoV focuses on the digital publishing business, it is also applicable to those looking to scale their enterprise content management systems and processes.

Quality of content and scale are not mutually exclusive

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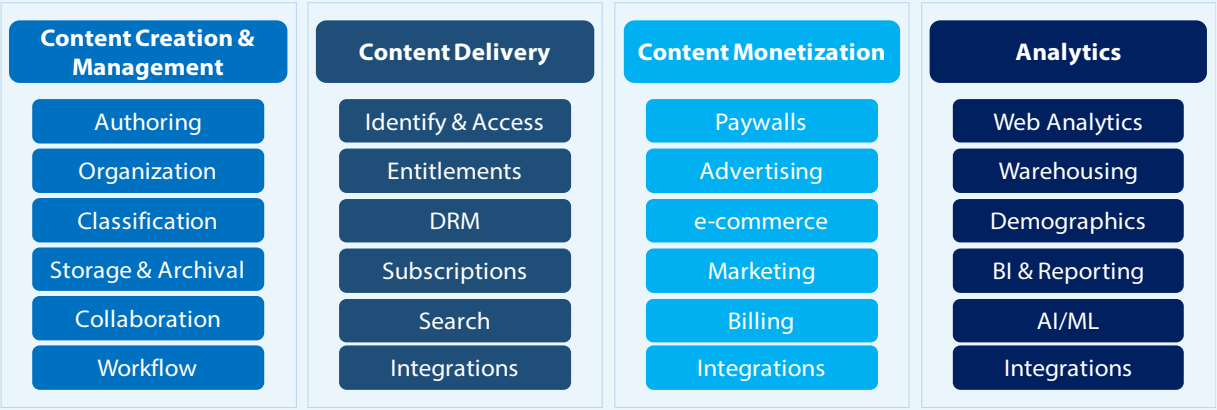

Content management operations in a typical content creation and publishing company

Currently, the line between publishing platforms and publishers is thin. The recent foray by a number of internet giants into news and content publishing indicates that legacy publishers can no longer sustain with their existing platforms. These companies need to decide on whether to put technology first or content first for their future investments. But surprisingly, the decision is not that simple. Publishers who leverage their content superiority to build a technology platform for their operations soon realize that there is significant value for other publishers to use their platform service as well. Secondly, with rapid technological changes, it is easier for content publishers to capitalize on existing solutions rather than build their own platforms. For those wishing to quickly and cost-effectively adopt cutting-edge solutions, Google Cloud Platform (GCP) is an answer.

The kind of technology investments that Google has made and continue to make in managing and delivering their content, besides the scale, indicates the strength of their platform especially for content management compared to their peers in the industry. Google also provides the required custom set-up to run, manage, and grow content management operations of any size and scale.

In the content creation and publishing industry one is either a rapid adopter of technology or a laggard

Content Creation and Management

Figure 1 reviews key Google products and services that address content creation and management. G Suite, along with Google Drive Enterprise, covers all the aspects of content creation and authoring. It works seamlessly with Microsoft Office and other open source formats. Google Drive Enterprise comes with built-in workflows for reviews and approvals, and additional workflows can be customized using Google App engine. Google Vault lets companies retain, hold, search, and export data to support their archiving and eDiscovery needs. The collaborative editing feature is unparalleled compared to other authoring solutions in the market. Data on the cloud makes it ubiquitously accessible, and platform and device agnostic.

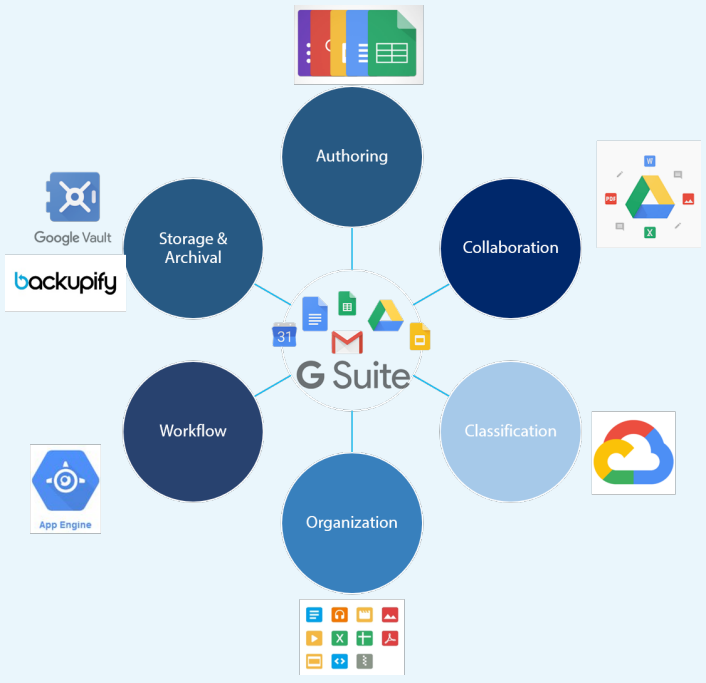

Figure 1: Content Creation and Management Wheel

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Figure 2: Content Delivery Wheel

Content Delivery

Figure 2 shows content delivery products and platforms. Google's content delivery network and its edge caching provider fastly are class-leading. This, coupled with enterprise search (or Google cloud search) and widevine DRM provides the reach, accessibility, and security for content. Cloud-based identity and access management provides single enterprise-wide authorization and authentication for all internal and external stakeholders. While custom subscription and entitlement management system (e.g. wallkit) is built, bought, and configured to work on GCP. Google's own Anvato provides an end-to-end subscription management system for rich audio and video assets if required.

Content Monetization

Figure 3 shows content monetization products and platforms. While there is no debate on the advertising and marketing prowess of Google by virtue of their respective marquee platforms, it may be of interest to small and medium publishers that the ecommerce aspect can be handled at scale with customized Google for retail and Google shopping. There are other nifty services such as wallkit and anvato for billing and subscription management. All other monetization integrations can be effectively handled using Google endpoints and fastly integrations.

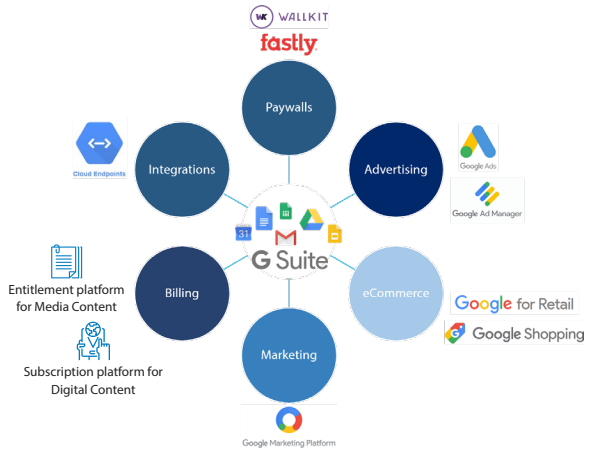

Figure 3: Content Monetization Wheel

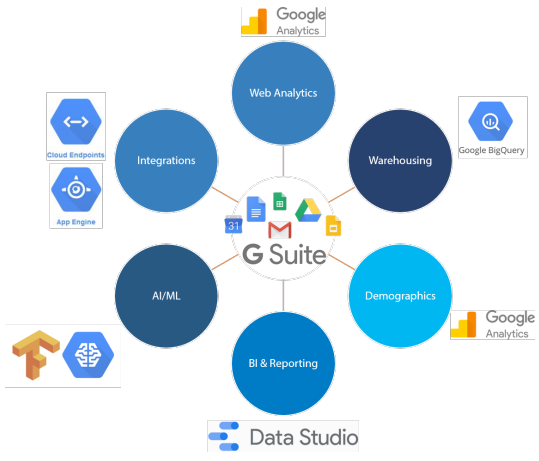

Figure 4 Content Analytics Wheel

Analytics

Figure 4 shows the analytics products and platforms. Analytics is another area where Google is industry leading in terms of solutions and capabilities. As opposed to existing data silos, Google's drive enterprise and all other solutions come together seamlessly to perform extensive cross-department analytics and even take advantage of cloud AI/ML capabilities using standalone Google APIs or custom models on Tensor Flow. Google's web analytics and data studio are cost-effective when it comes to detailed business reporting and data analysis.

[1]*wallkit runs on AWS and can be consumed as a cloud service on a GCP.*

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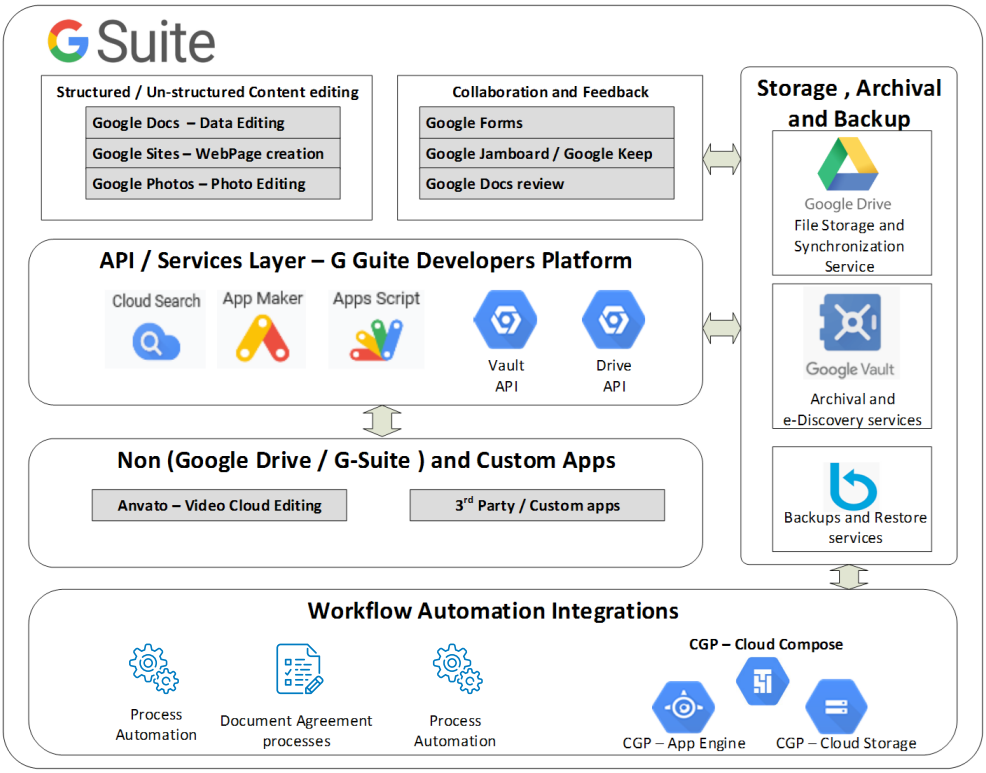
75% of content management companies know that AI/ ML are key drivers to improve subscriptions and ensure customer engagement, but are unable to do so because of their discrete data silos

Conclusion

The information services and publishing industry is highly technology dependent more so now than in the past. Cloud based and cloud native products and platforms are an inevitable part of this industry's sustainability playbook. They provide a seamless way to better build and manage core services and outsource non-core services while being flexible to provide companies an option to choose the areas they want to leverage cloud for or go all-in.

Reference Architecture

Content Creation and Management



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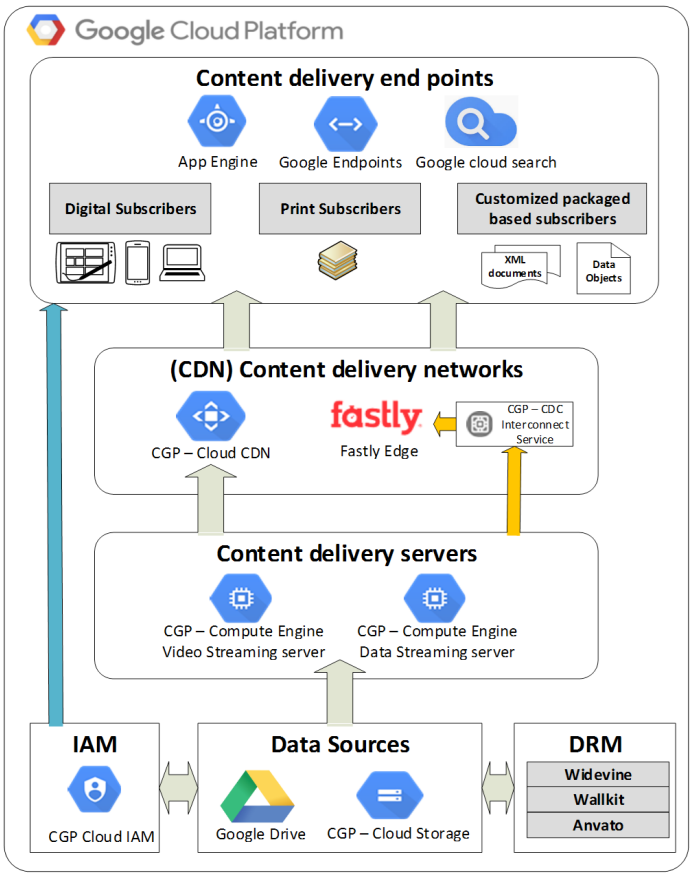
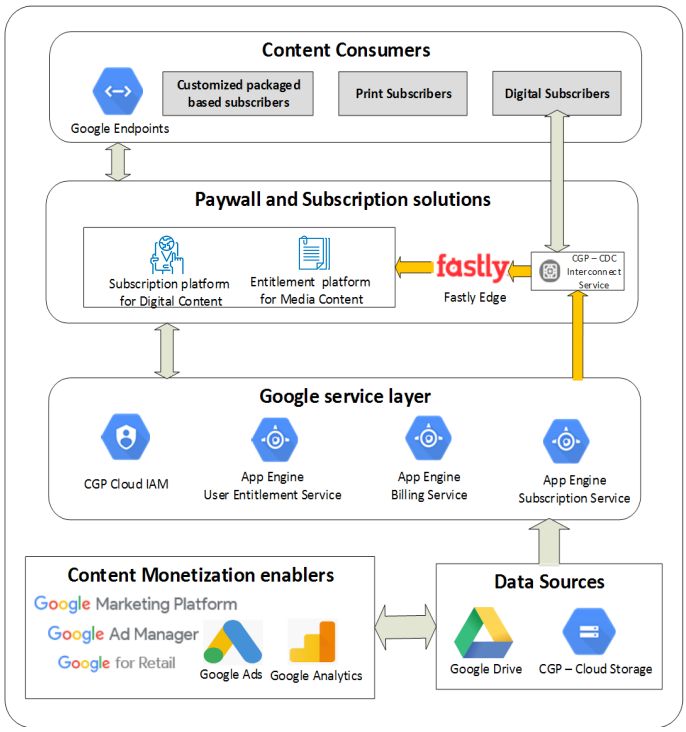
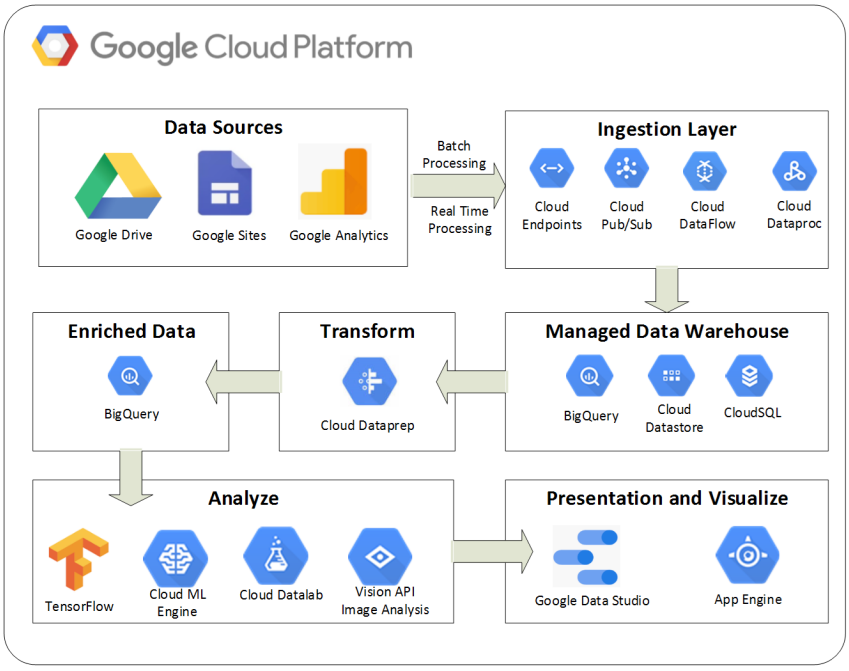
Content Delivery



Content Monetization



Analytics



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Appendix

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Business Area	GCP Product	Notes
Content Creation and Management		
Content Authoring	Drive Enterprise (DE)	DE offers seamless integration with Microsoft Office, Slack, Salesforce
Collaborative Editing	DE	
Workflow Automation	App Engine*	*App Engine does not offer simple 'plug and play' automation. Core business logic of automated tasks need to be coded into App Engine
Content Storage	DE	Content stored on DE can be accessed with 50% less search time using Google's QuickAccess machine-learning tool
Content Archival	Vault	Archives corporate data from G Suite including Gmail and Drive, for audits or eDiscovery/legal procedures
Content Delivery		
Identity & Access Management	Team Drives (DE)*	*Team Drives allows managing of access at the document level. More granular control (e.g. editing/ viewing permissions to specific parts within a document) is not built-in
Entitlements and Digital Rights Management	WideVine (video content only)	
Content Publishing (channel, consumption type and device factor form agnostic)	Fastly	Fastly allows personalization of content served to specific geographies, devices, and roles (e.g. free/subscribed user). Fastly uses Varnish Configuration Language (VCL) for setting configurations
Subscription Management	Anvato (video content only)	Anvato provides end-to-end content monetization and subscription management for video content
Content Search	Fastly	
Context Aware Smart Content		
External Integrations	Cloud IAM, Cloud Endpoints	External applications can connect to the GCP backend through APIs provided by Cloud Endpoints. Cloud IAM allows creating and managing permissions of service accounts of applications
Content Monetization		
Paywall Authentication	Fastly	
Advertisements	Google AdSense	
Analytics		
Data Collection & Warehousing	Google BigQuery	Easy integration with Fastly to feed data from end-users into BigQuery data warehouse
Demographics, Usage Patterns & Insights	Google DataStudio	DataStudio offers BI functionality with drag and drop simplicity, can be used by non-technical users. Fastly also supports A/B testing of content to optimize user engagement

Commentary

From our research, virtually each key business area in content publishing could be mapped to Google Cloud Platform Solutions offering the relevant functionality.

The one exception is full, end-to-end content monetization for non-video content. (Anvato offers this, for video content only). The closest functionality offered by Fastly includes Paywall Authentication and personalizing content served to subscribed and non-subscribed users.

Related to monetization, Google's DRM software, Widevine, is similarly meant for video content. It should be noted that even Google eBooks continues to use Adobe DRM software.

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GCP Product List:

TThe below table provides a list of GCP products referenced in the table above. Each product is linked to its webpage and pricing information is also included, where available.

GCP Product	Description	Pricing
Drive Enterprise	GCP alternative to legacy ECM platforms	Free with G Suite Business/Enterprise
Vault	Archives corporate data from Drive and G Suite	Free with G Suite Business/Enterprise
App Engine	Serverless application deployment platform	Pricing Calculator
Widevine	Digital Rights Management(DRM) for video content	
Fastly	Content Delivery Network(CDN)	Pricing Map
Cloud IAM	Granular control on cloud resources access	Free
Google BigQuery	Cloud Data Warehouse for analytics	Pricing Table
Google Data Studio	Business Intelligence and Data Visualization	Free
Anvato	End-to-End Monetization for video content	

Other References:

Google Cloud Platform: Digital Media Asset Management And Sharing - This paper by Google Cloud Platform provides a technical deep-dive, detailing how to use GCP solutions to build a digital media asset management and sharing system. The information contained is highly relevant for a general content publishing use case.

Fastly Digital Publishing Datasheet - A paper by Fastly, detailing the features of their product for the Digital Publishing industry.

Fastly Digital Publishing Solutions Brief – A paper outlining how Fastly's technology can be leveraged to personalize content for users and drive more business for Digital Publishing companies.

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