Resources for Defining Functionally Scalable Publishing Workflows

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About the author

Brian O’Leary is founder and principal of Magellan Media Consulting, which works with magazine, book and association publishers to improve how they create, manage and distribute content. O’Leary also writes extensively about issues affecting the publishing industry. With Hugh McGuire, he has edited Book: A Futurist’s Manifesto, a collection of forward-looking essays on publishing (O’Reilly Media, 2012).

O’Leary is also the author of research reports on: the use of metadata in the book industry supply chain; territorial rights in the digital age; and best practices in digital exports. He has studied the impact of free content and digital piracy on paid content sales and was the editor and primary contributor on a study of the use of XML in book publishing, two reports published by O’Reilly Media.

About Idealliance

Idealliance (International Digital Enterprise Alliance) is a not-for-profit membership organization that has been a leader in information technology and publishing since 1966. Idealliance advances core technology to develop standards and best practices to enhance efficiency and speed information across the end-to-end digital media supply chain - creation, production, management, and delivery of knowledge-based multimedia content - digitally and in print.

Idealliance is where media creators and technology communities collaborate to craft best practices, advance standards, and certify people, processes, and systems to achieve the highest performance in creation, production and delivery of graphic communications.”
Executive Summary
When the work for this White Paper began in 2014, the initial task was to design a shared publishing workflow that all could employ. To begin this task, the Idealliance eMedia21 Council developed a number of background resources that publishers could reference. This document includes this resource material.

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Requirements for Agile Workflows
Requirements for an Agile Workflow can be organized as requirements for Publishing Models, Data and Staffing. The requirements were then further detailed to assist publishers in updating their individual workflows.

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<td>Supports serial, parallel and multi-platform publishing</td>
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<td>Include a component that recognizes the need for enrichment, enhancement and metadata development and application</td>
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<td>Process visibility: a dashboard that provides users with an understanding of where things are/should be</td>
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<td>Value of analytics, with different ‘takes’ on web analytics</td>
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### Staffing
- Impact of multi-platform publishing
- Training and cross-training; degree of specialization
- Culture and its impact on a publisher’s ability to adapt
- Scheduling and prioritization
- An infrastructure that enables communication, including decisions about roles and responsibilities, behavior and accountability

### Model Requirements
The data and staffing considerations led to a set of observations about what a workflow model itself should include. The four primary requirements are:

- A general approach must **serve a publisher’s needs**, whether the business model is ad-supported, subscription-driven, blended, product sales or something else.
- Although there is a trend toward multi-platform publishing, the workflow model should **recognize that serial and parallel approaches may already in place** and provide for support and transition over time.
- Content enrichment, product enhancement and metadata development and application may currently handled offline or in separate systems. Functional scalability depends on these processes being **more tightly integrated** with the content.
- Because the outputs are becoming more variable and complex, workflow solutions should be designed with **process visibility** in mind. Most helpful: a dashboard that provides users with an understanding of where things are/should be.

### Data Requirements
The working group identified five opportunities to collect data that would help make workflows both more agile and self-correcting. These included: operational measures; audience measures; audience actions; metadata; and analytics.

**Operational measures** address effectiveness in meeting established requirements. These measure consider things like lead times (in an effort to reduce them), cycle times, cost and quality. The list is not exclusive, and different publishers may expand the list to address other relevant factors. The working group strongly recommended that these measures be part of an overall content workflow, with results updated in a shared form, such as a dashboard (addressed below).

Publishers also need to track **audience measures** relevant to their business objectives. One example is engagement: Was an e-mail opened? A story read? Another dimension is persistence: Did a reader finish a story? Did finishing the story take more than one session? If not finished, when was the content abandoned?
It is also important that workflows track *audience actions*. Again, specific measures may vary by publisher, but examples can include social-media interactions as well as lead-generation activities (requesting a white paper; providing an e-mail, etc.)

As content use and re-use broadens, **using a common metadata vocabulary** is an increasingly important consideration. Three areas of immediate need include: describing content assets in ways that support search and retrieval; describing content assets in ways that determine whether and how the assets can be used; and attaching information that helps users identify similar and dissimilar content.

Web-based content dissemination provides publishers with opportunities to **use analytic data in a variety of ways**. Right now, traditional publishers manage these applications outside of workflow, but that gap must be closed to compete against a new generation of web-first and web-only publishers.

**Staffing Requirements**

New or extended workflows will also affect staff in at least five areas. These include multi-platform requirements; training and specialization; culture; scheduling; and communication.

**Multi-platform publishing requirements** affect both what staff do and how they are likely to do it. As examples, creating content that will be simultaneously published across print and digital media requires consideration of what headlines work, whether and how they might be changed, how to display photographs, and what to do with internal references (e.g., page numbers). While publishers can tackle these requirements in different ways, planning is mandatory.

As workflows evolve, publishers need to make decisions about the **degree of specialization** they can or should support to meet business requirements. Traditional, functionally divided workflows may not work as well in a multi-platform environment. Training and cross-training are likely investments.

The importance of **organizational culture** and its impact on a publisher’s ability to adapt is frequently named as an important consideration. To the extent that how work is done serves as a proxy for the quality, relevance and value of the content produced, culture can block workflow changes.

As publishing requirements become more complex, **scheduling and prioritization** grow in importance. Workflow solutions will need to support adaptive approaches, allowing staff to intervene and reprioritize content creation and dissemination.

In a related way, new approaches to workflow will benefit from **an infrastructure that enables communication**, including decisions about roles and responsibilities, behavior and accountability. The current, generally top-down approach to designing workflow systems emphasizes a single view of workflow priorities, and it has grown inflexible over time.

**Core Components of Agile Workflows**

Core components of an agile publishing workflow include:

- A **content repository** that supports storage and retrieval, whether for internal or customer-driven purposes;
- A **control and workflow layer** that governs access, supports the ability to check in and check out content assets, manages versions, provides appropriate document security, manages rights and permissions and supports metadata capture; allows for the creation and editing of content. As well as the ability to not only version but create variants of content depending on output channel.
- **High-level process steps**, notably planning, content acquisition, content creation and development and a range of publishing activities;
More detailed *functional activities*, not necessarily mapped to existing or traditional publishing functions, that align with each of the high-level process steps.

**Enabling Analytics: The Critical Roles of Metadata and Consumer Data**

As noted earlier, metadata is increasingly used to improve discovery, utility and reuse. Although both traditional and emerging publishers are active in this area, the legacy workflow models used by traditional publishers have been cited as an impediment to more effective use of metadata. Both metadata and post-publishing, consumer data are growing in volume, utility and importance. Because the activities have grown up around legacy workflows, they are not easily linked to content or other analytical components within a workflow.

For print-based and print-first publishers, relying on a “page” metaphor also limits how broadly workflows are designed. A long, successful history working with one format leaves us increasingly “print-disabled”, focusing primarily (if not exclusively) on a print-first set of outputs.

As platforms like Buzzfeed and Vox Media have shown, content is found in multiple ways, even though the ways that it is stored and distributed are increasingly uniform. As the complexity of content forms, formats and channels has increased, the value of standards has never been greater.

These considerations led the working group to propose the development of a new category of data, dubbed “enabling analytics”, to help publishers build and maintain a “learning loop” component. These tools are a competitive response to the ways in which non-legacy competitors have used non-legacy workflows to leapfrog their competition.

**Challenges Publishers Face in Addressing Workflow Issues**

As the competitive importance of publishing workflows has increased, the difficulty in migrating to newer, more agile and effective approaches has become evident. The primary roadblocks to addressing workflow issues are:

- Mapping processes to systems and structures is difficult and time consuming
- Although the need to move more quickly is evident, publishers lack the buy-in required to migrate workflows
- Within traditional publishers, management often views editorial operations and production workflows primarily as opportunities to cut expenses

**Difficulty Mapping Processes**

As noted earlier, cultural norms can create a resistance to change that becomes a significant barrier. However, there are other factors, as well. The tools used to create and distribute print products have limitations, and the new workflows don’t always map well to legacy systems. Adding to the challenge, the act of mapping workflow demands a set of skills that are not always available in publishing settings.

**Inability to Move Quickly**

Although some have argued that developing new skill sets for writers, editors, designers and others is overdue, the significant investments in legacy systems play a role here. A system designed for one purpose doesn’t easily migrate to support broader roles with different rights and permissions. Rethinking the present also means confronting a bias toward comprehensive solutions. Long lead times on installations and upgrades feel increasingly anachronistic in competing against web-based firms.
Ongoing Focus on Cost Management
Traditionally, production functions, including workflow solutions, have been evaluated on their ability to reduce expenses. A number of participants in this study confirmed that agility, though sometimes recognized as an important argument, is not (yet) seen as compelling in justifying workflow investments.

As well, senior decision makers are often not knowledgeable about the impact their investment decisions have on competitive positioning. This is a significant gap that publishers must address to successfully compete on workflow.

Risks Inherent in Legacy Issues
The primary risks associated with slow or limited adoption of a new approach to publishing workflows include:

- Inability to scale;
- Inability to manage analytics, metadata and post-publishing data;
- Weaker performance relative to non-legacy competitors.

Inability to Functionally Scale
As outlined at the start of this paper, legacy workflows can struggle to support a growing number of platforms and uses. As external demands increase, the time and expense required to meet those requirements grows in a manner that is at best linear.

Inability to Manage Data
Analytics, metadata and post-publishing data increasingly inform content development and use. An inability to effectively manage this data limits the knowledge that publishers can gain about both demand for and response to published content.

The challenge goes beyond whether metadata can be collected; management also requires assessment and response to what the market is saying about published content. In many cases, these responses must come using much shorter cycles than publishers have typically supported.

Inability to Compete on Digital Platforms
While demand for the traditionally published products has not disappeared, the basis for competition is broader, solutions-based and increasingly of the web. To the extent that workflow solutions continue to favor print-centric content applications, the opportunities available in digital media will be harder to serve, and demand for digital content will be met by other competitors.