



Investment Reporting in the Digital Age: The Case for Dynamic Publishing





Executive Summary

In a highly competitive market, the main challenges that investment research departments typically have grappled with are 1) delivering research opinions and reports faster than their competition to drive the closing of transaction fees, and 2) doing this as efficiently as possible while meeting regulatory requirements.

However, the arrival of digital devices, especially the iPad, along with regular use of social media by young professionals and their clients, has multiplied both the opportunities and challenges of investment reporting.

Today, investment research departments are under pressure to

- Deliver reports that meet their clients' expectations, not just in print and online, but also to the iPad and other digital devices
- Serve the personalized content requirements of their clients
- Integrate social media into research reporting
- Continue to meet strict standards for regulatory requirements
- Monetize digital delivery of opinions and research to drive new revenue

However, the way in which many research groups currently author and publish their reports limits their ability to integrate digital delivery and social media into their research publishing strategy—and generate more transaction fees as a result—because the strategy is burdened by a labor-intensive approach built for a print-only world. It simply cannot keep up.

To move successfully into the digital age, investment research departments must eliminate the inefficiencies and pitfalls of outdated, manual publishing techniques and adopt technology that meets their cross-media research reporting needs cost-effectively.

This white paper describes the impact and opportunity of two key digital media trends: the influence of the iPad and social media on investment research reporting, and the evolution of information publishing standards for investment reporting that are helping firms address the challenges of the digital age. This white paper also describes the pitfalls of traditional print-based publishing, which prevents firms from successfully moving into the digital age, and describes how dynamic publishing can help firms adopt a cross-media publishing strategy to integrate digital devices such as the iPad and social media into their publishing strategy.

IDC raised its worldwide tablet shipment forecast for 2011 to 62.5 million units, up from a previous projection of 53.5 million units. IDC noted that Apple iPad shipments comprised more than 68% of total worldwide tablet shipments for the quarter.

** Media Tablet and eReader Markets Beat Second Quarter Targets, Forecast Increased for 2011, According to IDC, September 14, 2011, <http://www.idc.com/getdoc.jsp?containerId=prUS23034011>

How the iPad Has Turned Investment Reporting Upside Down

Until now, investment reports have typically been published as PDFs that are printed, distributed by email or posted online. Investors receive these research reports when the firm distributes them or when clients seek them from a traditional source.

However, the advent of digital devices—marked especially by the popularity and rapid adoption of the iPad—is dramatically shifting the nature of investment reporting. Offering ubiquitous information access, today's digital devices are driving heightened expectations and demands as to information timeliness, content and relevancy. These demands affect how and when research is published, along with the overall characteristics of the research information itself.

Based on this strong performance in the second quarter 2011, and an improved outlook for the second half of the year, IDC raised its worldwide tablet shipment forecast for 2011 to 62.5 million units, up from a previous projection of 53.5 million units. IDC noted that Apple iPad shipments comprised more than 68% of total worldwide tablet shipments for the quarter.

While reducing the time to publish was a critical focus before the advent of digital devices, the new production schedule for the iPad is **now**. Not only must firms be able to continue delivering regular daily, weekly, and monthly reports, but they also must figure out how to deliver opinions and research on more frequent, practically instantaneous, schedules to satisfy clients' demand for up-to-the-minute information.

The interactive and multimedia capabilities of the iPad—such as the ability to link to videos, podcasts, and audio recordings, as well as direct connections to Facebook, Twitter, and other social media tools—have also heightened expectations for the overall experience of consuming information. While traditional static, one-size-fits-all PDFs provide opinions, facts, and figures, they fail to meet the need for personalized, engaging experiences that keep clients coming back for more information on their current and prospective investments.

In response to these new requirements, research firms are seeking new ways to package and deliver personalized investment reports. This, in turn, has spawned new models for monetizing investment research and the need for publishing systems that support them.

“Research 2.0 is the integration of Web 2.0 culture and technology into sell-side investment research. It can make analyst and client interactions more efficient and ensure that the client experience is truly interactive.”

- Chris Williams,
developer of Research 2.0

In June 2010, Morgan Stanley Smith Barney, the largest retail brokerage in the U.S., was to become the first major wealth manager to allow its brokers partial use of Twitter.

Social Media: A New Way to Communicate with Clients and Prospects

While the iPad has brought about new possibilities for packaging and monetizing digital research, the widespread use of social media also offers new ways for analysts to engage with—and influence—clients. Morgan Stanley Smith Barney U.S. wealth management boss Andy Saperstein said in a memo to analysts, “The emergence of social media has changed the way in which people communicate with each other and companies interact with clients.”¹

Chris Williams, director of Research Acquisition and Distribution at Capital IQ, who coined the term “Research 2.0,” says the rise of social media offers new ways for analysts to build and sustain relationships with both existing and new clients through collaborative exchanges in two key ways:

- First, social media offers the potential for deeper engagement with existing clients through instant messaging, interactive blogs, and other technologies that can lead to more commission dollars.
- And second, these tools also can help analysts give more personal service to tier two, three, and four clients to generate additional revenue from underserved clients.

Regulatory Compliance: Putting the Brakes on Social Media

However, while social media tools offer new and exciting opportunities for client engagement on an individualized level, the use of social media raises questions regarding regulatory compliance.

Although the Financial Industry Regulatory Authority established rules governing social media use in 2009, Wall Street has been proceeding cautiously. Many firms are evaluating how social media can create value for advisors while ensuring prudent supervisory and compliance oversight.

Until firms develop processes to ensure regulatory compliance, social media is likely to be limited to pilot projects and company Facebook pages rather than widespread, personalized client engagement.



Evolving Publishing Standards for Investment Reporting

The iPad and social media have not only given rise to new types of reporting and forced investment firms to address how they will, or will not, integrate digital and social media, they have also boosted advancements in standards for research reporting.

A brief history of publishing standards in investment research

Traditionally, different firms have used different formats to deliver their research reports, and most have relied on email for distribution. Given today's "inbox overload" phenomenon, this information often becomes buried, which slows down clients' decisions and therefore delays investment transactions.

To counter this, a decade ago an industry consortium called RIXML.org was formed. Jack Roehrig, Executive Director of RIXML.org, explains²:

"To bring some order and establish some discipline, a number of firms got together with the goal of applying metadata to research so that when you search you get to the right content faster. The investment community saw that if a firm producing research could define even a small set of metadata to describe content, they could create the foundation for consistent product descriptions. This was the basis for uniformity that began to streamline the way research information is managed."

RIXML.org, whose goal is to make research information more interoperable and easier to search and find, defined an XML schema standard for research reporting (Research Information eXchange Markup Language, or RIXML) and advances the development of publishing standards for the investment reporting community.

Digital Publishing Driving RIXML Standards

Both the thirst of consumers for immediate, personalized, interactive digital content and a constant demand to meet regulatory requirements are driving new conversations about reporting standards.

Richard Brandt, RIXML.org Chairperson of the Emerging Technology Committee, acknowledges that "the most important emerging technology out there today is digital mobile devices."³ Because consumers are demanding information on digital devices and the industry cannot deliver to these platforms in ways that take full advantage of



the devices' capabilities, there's a critical need to discuss how RIXML standards can help," he said. "Currently we're defining use cases and making recommendations on advancing the standards so that all companies can adopt them to drive their publishing processes. If companies take different paths, the result would be detrimental to the research reporting industry."

The Pitfalls of Traditional Publishing

While RIXML.org is championing standards that can help investment research groups publish more easily to the iPad and other digital devices and leverage social media, many firms still depend on traditional publishing processes, which severely inhibit their ability to address digital publishing requirements. These limitations exist because traditional publishing software was originally developed for the lower expectations and slower pace of a print-only world.

These tools have done little to address flaws in the traditional publishing process such as the following:

- **Manual design and layout:** Authors not only create information, but also spend about half of their time applying formatting, laying out pages, and squeezing paragraphs by rewriting them to fit them to the page.
- **Manual integration of data:** Research analysts not only create original information, they also manually integrate data from other sources by copying and pasting, which means they must go back to those original sources again and again when the source data changes.
- **Information reuse:** With traditional publishing tools, authors reuse existing information by copying from one document or data source, pasting it into another, and reformatting the pasted content to fit the new usage. This process creates redundant copies of information that must be handled separately from then on, which adds to the cost and delays of reviewing, translating, and updating, and increases the risk of failing to keep some copies of the information current.
- **Publishing to other media types:** After publications are produced in one form, such as print, they must be converted to other media types, such as web or the iPad. Although it's easy to produce a PDF version of a printed document and post it to a website or to an iPad application, the result is awkward and unfriendly



to users. The alternative is to convert the printed document to the HTML format of the web or convert it for use on the iPad, but this involves a time-consuming and labor-intensive process of dividing the document into multiple pages, adding navigation, changing the formatting, and touching up the content with interactive material to meet consumers' expectations.

- **Updates:** All of the inefficiencies inherent in traditional publishing listed previously loom even larger during update cycles, where small changes to content usually lead to significant additional effort. After tracking down and changing every instance of content that has proliferated through copy-and-paste, authors must also update the formatting of each document to account for layout changes such as awkward page breaks. Then each document that has changed must be sent out for review and retranslation.

Updating the document for other media involves either rerunning the entire process of converting and formatting the document, or separately tracking down and changing every instance of content that needs updating and then running a separate review and approval process.

- **Personalizing publications:** Creating publications that meet individual needs while respecting entitlements is normally cost-prohibitive because of the high degree of manual effort needed, both to produce each variation and to verify that information goes only to those who are entitled.
- **Translation:** In a traditional publishing process, source language materials are usually completed before translation can even begin, which creates intense pressure on translators and reviewers to move too quickly, which can result in the introduction of errors that persist all the way through to publication.
- **Chaotic processes:** During the process of producing a new report, most source materials end up as email attachments, where the latest version can be anywhere at any time. Finding the status of each report and locating its latest version not only takes an extensive amount of time but also creates unacceptable room for error.

The root cause of problems in traditional publishing is the excessive amount of labor-intensive craftsmanship for each output type. The craftsman approach not only introduces excessive costs and time lags, but it also causes significant impacts on the quality of the information produced.



Overcoming Traditional Publishing Problems with Dynamic Publishing

To solve the problems of traditional publishing while enabling publishing to the iPad and other digital devices and supporting social media integration, investment research groups need to shift their publishing paradigm from a labor-intensive, one-size-fits-all approach that no longer meets clients' needs, and develop an approach that solves problems across the entire process. The solution is dynamic publishing.

Dynamic publishing transforms the authoring and publishing process. Instead of handcrafting each formatted page, analysts can create information components that are independent of any specific type of formatting and that can be reused in multiple publications—irrespective of their formatting.

In a separate step, fully automated processes assemble components into various types of documents and tailor them for specific audiences, and then format the information assembly for multiple media types such as print, web, and digital devices.

Dynamic publishing brings two fundamental changes to publishing:

1. First, dynamic publishing separates information from its formatting and then automatically applies formatting in a separate step, without human intervention. This approach allows users to maintain a single source of information for all types of documents, all sizes of documents (such as pocket size and binder size), and all types of media (such as print, web, and digital devices). A single change to the source automatically updates all affected publications immediately. And if corporate design standards change, users can automatically republish all documents in accordance with the new guidelines without touching the information itself.
2. Second, creating small components of information instead of creating information as finished publications allows users to
 - **Personalize content:** By creating information in components and marking each component with entitlement information, users can automatically combine these components in different ways for different purposes while ensuring that entitlements are enforced.
 - **Integrate data from other sources:** For documents that contain data from structured sources such as spreadsheets and databases, dynamic



publishing software provides users with the ability to connect fields and tables in those documents directly to the data sources, instead of requiring copy-and-paste, to facilitate the presentation of real-time data (when the source data changes, the documents are updated automatically).

- **Collaborate:** Dividing documents into components allows multiple authors to work on the same document at the same time, which reduces bottlenecks and project time.
- **Speed up reviews:** Only those components that have changed are sent out to reviewers, greatly reducing the cycle time and effort required.
- **Reduce translation costs:** Only those components that have changed are sent out for translation, which reduces costs because translators charge a lower fee to reuse existing translations.

By automating the publishing process, dynamic publishing also allows users to build in automatic checks for content accuracy and compliance, which provides the procedural steps required to meet regulatory requirements.

Finally, by implementing a dynamic publishing approach that uses structured content, firms can take a significant step to adopting the publishing standards identified by RIXML.org, which supports meeting expanding research reporting requirements more quickly and effectively.

The Benefits of Dynamic Publishing

Adopting a dynamic publishing system can help you integrate digital publishing and the use of social media into an effective cross-media publishing strategy. Dynamic publishing also delivers significant productivity, cost, and information improvements.

Digital Publishing and Social Media Integration

By shifting the focus of authoring away from the publication, analysts can focus on creating information independent of its presentation. This “create once, repurpose to many formats” approach enables firms to publish more frequently and drive more transactions. What’s more, no additional investment is required to support additional media.

Furthermore, by giving analysts a single environment for all of their authoring, publishing, and social media communication needs, dynamic publishing makes it easier to ensure regulatory compliance across all reporting activities. Again, this streamlines the process so that analysts can focus their attention on client engagement.



Productivity and Cost Improvements

The productivity and cost improvements of dynamic publishing can be measured directly, and they provide significant ROI to justify the cost of implementing a new publishing system.

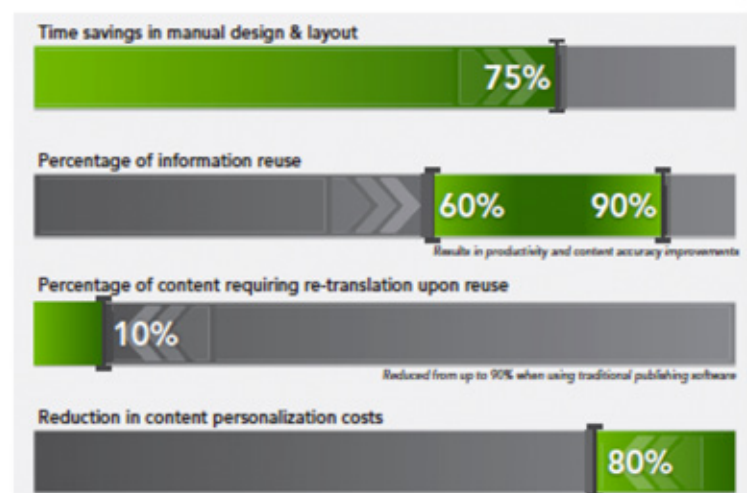
Manual design and layout: Relieving analysts from formatting responsibility typically saves between one-third and one-half of their time, but the difference can be as high as 75%.

Information reuse: Documents of the same type typically feature 20 to 80% common information. Dynamic publishing systems enable analysts to easily reuse information by referring to it instead of copying and pasting it, which allows a single component of information to appear in multiple documents.

Although eliminating 100% of the redundancy is unlikely, reuse rates ranging from 60 to 90% are possible. To calculate the impact of enabling reuse, translate the percentage of reuse likely to be achieved to an annual number of pages of redundant information that has been eliminated. Then take that result and multiply by the per-page cost of reviewing, translating and updating that information.

Publishing to multiple types of media: Implementing a dynamic publishing system can save most or all of the costs of maintaining a separate group for each additional type of media after the first. Companies that adopt dynamic publishing typically consolidate their media groups into one and reduce or redeploy staff that are no longer needed.

Productivity and Cost Improvements





Translation: When you submit content for translation, a translator charges you for each piece of unique content. Typically, translation software performs this evaluation (or looks for uniqueness) at the sentence level. If two sentences are different by only one character, whether it is a space, letter or comma, it's flagged different. And you will be charged for each version. To save money, you can create content in small, reusable modules. You can reuse this content in many publications. Then, when it is evaluated by translation software, it is determined to be an exact match, that is, identical to the previous version. Exact matches are not translated and are therefore free. The more you use reusable modules to create your publications, the lower your translation costs become.

Translators charge a specific amount to translate pure text and charge an additional amount when they have to use desktop publishing for formatting and other similar tasks. With classic desktop publishing, the text is embedded in a page layout file. The expectation is that the translator copies the page layout file and enters the translated text in this copy. The translator might also have to make layout adjustments, if the translated text is shorter or longer than the original text. Therefore, the translator must own the page layout software and be proficient in that software. Hence, the additional charge. However, this additional charge goes away with dynamic publishing because the translator only has to translate the pure text contained in the XML, which is completely separated from page layout information. Take the additional amount that your translator charges for desktop publishing, multiple that by each language and that's your savings.

Personalizing publications: Due to the tremendous effort required to produce standard publications that meet the needs of broad audiences, creating publications that meet individual needs is usually completely out of reach. Verifying that entitlements are respected so that information goes only to the right people raises the costs even higher. But for those organizations that do produce tailored information, as well as for those that currently cannot afford to, implementing a dynamic publishing system can have an enormous impact on reducing costs.

Organizations that produce customized publications can reduce the cost by 80% through dynamic publishing. The savings come from manually assembling or stripping out information, reviewing the finished publication, formatting and laying out the publication, and in some cases translating the publication to other languages.



Information Quality Improvements

Dynamic publishing delivers Information delivery and quality improvements that have consequential effects on customer satisfaction and productivity.

By maintaining a single source of information and automating the process, dynamic publishing helps to speed up the delivery of investment research, improve its accuracy, and make it available to clients in more ways. But how do you gauge the business impact of this?

The answer depends on the type of information and the audience for that information. Because investment research reports are directed at clients' individual requirements, improving these materials and speeding up their delivery can have a positive impact on your organization's bottom line while improving compliance with corporate rules and government regulations.

While this impact is harder to measure than internal process improvements, companies should aim either to catch up with competitors that have already adopted superior processes and are reaping superior results, or to gain an advantage over competitors that are still limited by their traditional publishing systems.

Organizations can justify the cost of a dynamic publishing system by implementing a streamlined and automated publishing process that can reduce expenses and improve productivity. The impact of improving information timeliness and accuracy on your company's revenue is a compelling reason to act now.

The Dynamic Case Communications/Financial Research Reporting Solution from Quark and IBM

Quark's Dynamic Research Reporting solution helps investment research groups deliver personalized, interactive, up-to-the-minute research opinions and advice to iPads and other digital devices, giving them an immediate way to engage a broader client base and increase the potential number of transaction fees.

Dynamic Research Reporting provides

- Advanced authoring capabilities for Microsoft Word that research analysts can use to create, import, evaluate, and personalize content
- Integration of text, tables, charts, real-time financial information, videos, and other multimedia content



- Easy integration with third-party services, social media tools, and customers' existing infrastructures
- Automated checks to help ensure regulatory compliance
- Automated assembly of reports and instant publishing to print, web, and digital media

The solution enables investment research analysts to author opinions and research as reusable information components using Quark XML Author, an add-in to Microsoft Word. These information components can be automatically assembled to quickly produce personalized communications for multichannel output (print, web, iPad and similar tablets, and other digital media).

A vast amount of the content that is generated must be created and published in multiple formats as well as multiple languages. To re-use, repurpose, and republish this information, organizations need IBM Enterprise Management functionality to leverage data and existing content.

Quark® and IBM® Enterprise Content Management have partnered to provide integrated agile information solutions to help organizations author, re-use and repurpose content through a Microsoft Office application. The IBM ECM suite integrates business process management into publishing processes and provides easy-to-use XML content authoring that produces validated XML. IBM has trusted and proven ECM platforms that enable organizations to incorporate the related disciplines of content management, records management, eDiscovery, and dynamic publishing.

The Quark solution integrates with IBM FileNet Content Manager to provide a single repository for all research communications and assets. This integration increases the consistency and accuracy of research information and enables analysts to quickly create reports with personalized information that meet clients' individual needs. Social media tools also are integrated into the Word interface so that analysts can engage clients through social media from a single tool. By facilitating rapid creation and delivery of personalized research reports to multiple channels, customers can retain their competitive edge, drive more transactions, and increase customer satisfaction. Users also have the ability to extend the solution to include case management and integration with the Quark Publishing System.



About Quark

Founded in Denver in 1981, Quark's vision was to create software that would lay the foundation for modern publishing. For 30 years, Quark has delivered on that promise. Quark's dynamic publishing solutions are setting new standards in automated cross-media publishing by combining the power of XML with flexible layout and design to automate the delivery of customized, intelligent communications across print, the Web, and digital media.

For more information, visit www.quark.com

About IBM ECM

The IBM Enterprise Content Management software operation enables the world's top companies to make better decisions, faster. As the market leader in content, process, and compliance software, IBM ECM delivers a broad set of mission-critical solutions that help solve today's most vexing business challenges: managing unstructured content, optimizing business processes, and helping satisfy complex compliance requirements through an integrated information infrastructure. More than 13,000 global companies, organizations, and governments rely on IBM ECM to improve performance and remain competitive through innovation.

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¹ "Morgan Stanley OKs broker use of social media," <http://tinyurl.com/3t93f4g>
Reuters, May 25, 2011.

² "Research 2.0: "Ready to Go Viral," <http://tinyurl.com/4xfmvta>
thedynamicpublisher.com, June 17, 2011.

³ "How Quark Got Connected with the Financial Services Community," <http://tinyurl.com/3pllqfa>
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