Hosted Managed Services: Changing the Paradigm in Customer Communications Management

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INTRODUCTION

Customer Communications Management (CCM) is rapidly evolving as enterprises continue to expand their communications infrastructure to address a variety of needs, both internal and customer, while leveraging new technology capabilities. The challenge, however, is that these communications infrastructures are continuing to grow instead of evolve, creating overly complex environments which include unsupported solutions, homegrown systems, and software that is far behind the current version. This in turn, removes focus from an overall customer engagement strategy, as enterprises are concerned with getting customer communications delivered. While CCM solution vendors have grown their portfolios to include software that addressed the expanding needs of enterprises, the existing infrastructures and lack of resources make it challenging to fully implement these new solutions. The increase in adoption of cloud and software-as-a-service capabilities also provides a solution for many enterprise communication challenges; however, lack of resources and fear of compliance issues has slowed down adoption of these delivery models by enterprises when it comes to systems and workflows tied to customer data. A handful of providers, however, have introduced a new model to address enterprise communication requirements and relieve the burden on IT. This model is CCM Hosted Managed Services.

KEY FINDINGS

While conducting this research, Madison Advisors found that organizations continue to struggle with the requirement for communications to be compliant as well as more personalized and relevant while striving to support complex products with clarity and appropriate calls to action. Combined with growing delivery expectations in the digital world, these requirements have caused many companies to fall behind as they attempt to achieve their strategic communication goals.

These rapid changes in customer communication requirements have driven manufacturers to build additional capabilities into their software. Unfortunately, these ever-increasing capabilities can often create a technology proficiency gap that leaves companies struggling to make effective use of and generate a return from their investment. Additionally, document composition tools only represent a component of customer communications lifecycle management, and as a result, internal IT departments are faced with the burden of integrating numerous tools into an already disjointed CCM infrastructure.

These challenges have led to a number of key findings within this Madison Advisors study:

- The issue within enterprise communication infrastructures today lies with the technology delivery and support models offered by the manufacturers. Selling software and providing installation assistance

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does not constitute a successful transfer of technological capabilities. Even when combined with incremental initial project deployment assistance (professional services), customers are not provided with enough adequate support to guarantee the desired outcomes.

- The result of this lack of software utilization has been the unintended consequence of an ever-widening gap between the technological capabilities of the software and the resulting ROI realized by the purchaser.

- A new service delivery model is required in order to overcome the complexity inherent in the software and corresponding integration tasks, a model that can guarantee results and then leads to the ROI and overall value organizations desire.

- A few organizations have demonstrated a clear understanding of the gap between software technology capabilities and utilization by enterprises, creating a new category of technology delivery services called CCM Hosted Managed Services (HMS).

CCM Hosted Managed Services is not the same as Software-as-a-Service (SaaS).

- CCM Hosted Managed Services is not the same as Software-as-a-Service (SaaS). It is a set of managed services in which software, specifically CCM software, is just one part of the offering and overall value being delivered.

- Madison Advisors estimates the market opportunity for CCM Hosted Managed Services is significant. With a CAGR of 45%, it is forecasted to exceed $3 Billion in the United States alone.

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CCM Hosted Managed Services is not the only solution to the gap found between CCM software capabilities and enterprise installations, however, we have found it to be an ideal solution for many organizations looking to lighten the load on IT resources and focus initiatives on the overall customer engagement strategy rather than the day-to-day logistics of creating and distributing communications.

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As Madison Advisors continues to guide our enterprise clients through the selection and alignment of CCM technology within their organizations, we have identified an evolution of thinking within a segment of solution providers that we believe will continue to drive the market. Simply put, this small group of providers have chosen to focus on delivering delivering successful customer outcomes or results to their clients rather than building more complex and ultimately, underutilized technology. This philosophy is represented in how these companies engage and deliver CCM technology to their clients. Madison Advisors refers to this client engagement and technology delivery model as CCM Hosted Managed Services, and it is this model that is the subject of our 2015 study: ***Hosted Managed Services: Changing the Paradigm in Customer Communications Management.***

Madison Advisors has identified three providers as Hosted Managed Services providers today:

- Cedar Document Technologies
- DataOceans
- NEPS

As with the previous study, Madison Advisors does not intend to rank each company against a set of criteria but rather to provide insight to the key challenges that enterprise organizations are struggling with that have given rise to the establishment of the CCM Hosted Managed Services delivery model. The study will discuss the history of CCM Hosted Managed Services and how it has evolved in response to market factors as well as identify the specific components that represent current best practices. In addition, emerging trends in this space will be highlighted, including an analysis of the benefits associated with adoption, and guidance to end users contemplating a move in this direction.

The results of this research are presented as a follow-up to a previous Madison Advisors study, ***"Cloud Impact on CCM Offerings" (June 2013),*** which provided an initial review of the market, technologies, opportunities, and challenges associated with cloud-based delivery models for CCM. In the 2013 research study, Madison Advisors addressed the following topics:

- Defined cloud delivery in general as well as identified and defined distinct cloud delivery models including IaaS (Infrastructure-as-a-Service), PaaS (Platform-as-a-Service), and SaaS (Software-as-a-Service)
- Identified and defined cloud deployment models including Public Cloud, Private Cloud, Hybrid Cloud, and Community Cloud

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- Discussed the advantages and disadvantages of cloud delivery models
- Reviewed the incentives and barriers to cloud adoption
- Provided a discussion of key cloud market trends including the status of cloud adoption and cloud service brokering
- Analyzed the impact of cloud delivery on CCM

The participants in the 2013 study overwhelmingly identified themselves as SaaS providers with a hybrid cloud deployment model. Some of the identified advantages of a cloud-based CCM offering included a relatively lower cost of entry, rapid scalability and elasticity, on-demand self-service, available resource pooling, and breadth of access. However, cloud-based delivery came with some trade-offs including the differences in access, workflow, security, and control.

Enterprises continue to struggle to achieve strategic customer communications goals, in part, due to the complexity of the technology available from software providers and the requirement to integrate this technology with other internal systems.

Since the conclusion of the 2013 Cloud Study, Madison Advisors has continued to monitor the CCM marketplace to understand the challenges faced by our enterprise clients as we assist them with CCM optimization strategies designed to enhance revenue, reduce costs, and improve customer experience and retention. Companies need to create additional value for the customer through a digital relationship. Providing this value to the recipient will encourage digital engagement and, thereby, enhance revenue, reduce delivery costs, and improve the customer experience. It is these challenges and the resulting requirements that are driving further changes in the delivery models for CCM technology. The move to cloud based CCM offerings via SaaS, while a good first step, has not fully delivered on its promise to revolutionize the industry. Enterprises continue to struggle to achieve strategic customer communications goals, in part, due to the complexity of the technology available from software providers and the requirement to integrate this technology with other internal systems. A SaaS delivery model alone will not solve the problems of technical complexity and systems integration as it simply moves these issues to the cloud.

In the previous study, CCM service providers were categorized into two groups:

- Print Centric
- Software and Solution Centric

Print-centric providers own their own print and mail assets, and have a successful history of providing print and mail services to their clients. These organizations have a set of CCM capabilities including multi-channel delivery and archival, as well as other services, and may leverage their web-based offering via the cloud. Software- and solution-centric providers generally have a broader set of CCM capabilities. They do not own print assets;

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their focus is on technology and their solutions are integrated with external providers or partners to provide the print/mail offering to their clients.

CCM MARKET OVERVIEW

Historically, enterprises have looked to software providers to meet their communications technology requirements and providers have responded with feature-rich document composition software. Over the years, however, customer communication requirements have evolved, and new offerings have emerged while others have fallen by the wayside. As a result, companies have invested in a proliferation of point solutions to fill gaps, address changing needs, and connect disparate and unsupported systems; increasing the complexity of integration requirements. These integration issues alone create points of fragility that require support and maintenance with increased risk of failures. Rapid advancements in communications technology and corresponding customer expectations have accelerated the pace of change beyond the reach of most, if not all, organizations.

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It is no secret that relationships are built on communication, and it is critical that companies demonstrate that they understand who their customers are, how they prefer to be communicated with, and the products or services in which they might be interested. Understanding the complexities of CCM infrastructure and how it affects customer service interactions is critical to remaining competitive in the marketplace and maintaining customer experience. The challenge of making communications more personalized and relevant while, at the same time, addressing the growing list of compliance and regulatory requirements has left many organizational leaders shaking their heads in search of an answer. In addition, meeting and keeping up with delivery expectations in the digital world has caused many companies to fall behind. Changes in technology and customer behavior are forcing enterprises to rethink their overall customer communications strategy.

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While electronic delivery has been a high priority for companies looking to eliminate or reduce the costs associated with print and mail, the unanticipated downside has been the lost opportunity to communicate with customers. Since the open rate for electronically delivered documents is significantly lower than documents that are printed and mailed, fewer customers are viewing critical communications. Because of advancements in technology, consumer expectations have progressed beyond receiving an email containing a link to a web

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portal where they can retrieve documents. Instead, consumers expect to have up-to-date, relevant, meaningful, and personalized information readily available via the device at hand, whether that is a mobile application designed for a smart phone, a tablet, or the next latest and greatest device to come on the market. The widespread use of smart phones and tablets with mobile applications and SMS has provided a platform that has changed how customers expect to be communicated with more rapidly than expected in the last few years.

Meanwhile, software providers have continued to invest in technology with the intent of staying abreast of client demands. As the providers continue to add more and more features and functions to the composition tools, the result has been the unintended consequence of an ever-widening gap between the technological capabilities of the software and the resulting ROI realized by the purchaser. While the increased functionality built into the software has increased the potential value of the technology, the ability of enterprises to unlock that potential and convert it to ROI has significantly lagged. Organizations lack the time or the skilled labor pool to fully implement and utilize technology in a way that allows full realization of its potential. As a result of this technology proficiency gap, companies have struggled to successfully deploy and integrate the necessary technology required to deliver meaningful communications to their customers and stay current with the rapid changes in the industry. Madison Advisors has identified several specific issues faced by organizations that further compound the impact of the technology proficiency gap. The issues listed below cause internal IT to feel as though they are running up the down escalator.

- **Budget cycles** – Unlike for-profit technology vendors, internal IT organizations operate as a cost center and, as such, are subject to internal budget cycles. CCM technology initiatives are weighed against competing projects from other areas within the organization. Decisions are not made based upon pushing the envelope in CCM technology, or even meeting customer requirements, but made based on other organizational priorities. This process does not allow for a CCM technology refresh cycle consistent with the rapidly changing market and, as a result, organizations are typically multiple versions behind on the technology investments they have made.
- **Project phases** – Even when budgets are approved for CCM technology projects, they are often planned as multi-phased initiatives. Unfortunately, too often, priorities and budgets change in a relatively short period of time and many times future phases never happen. This leaves organizations with partially built technology platforms unable to support all of their requirements.
- **IT resources** – Due to the cyclical nature of development cycles described above, technical resources typically do not get enough experience with the software to develop the necessary skills. Initial training provided by the vendor, while well intended, does not impart the necessary expertise. Resources become stale when there are months or sometimes years between projects. Retention of scarce, well-qualified resources is challenging due to other available opportunities, internal or external, to the organization. In addition, cost-cutting measures often target resources that seem

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expendable between heavier development cycles.

- **Composition software** – These tools alone are not enough, as other technical capabilities are required to support the end-to-end customer communication lifecycle. This issue will be expanded upon in a future section.

How have organizations responded to these challenges? Unfortunately, all too often, the response has been to buy another tool. Organizations purchase additional tools in an attempt to find one that can fill a perceived gap from previous software investments. As a result, internal IT departments are faced with the burden of integrating numerous tools into an already disjointed CCM infrastructure. Over time, multiple document composition tools are acquired leading to excess costs associated with vendor support to maintain those tools, as well as redundancies in infrastructure, software, and staffing. This forces resources to be familiar with the different tools; however, as discussed above, when tools are not used, skills diminish. In Madison Advisors' experience, it is common for an enterprise to support from 5-8 unique composition tools. In one example between internally developed and commercially available software, an organization was supporting in excess of a dozen composition platforms, none of which were on the current version. The result of this tool collection mismanagement has been that organizations end up with disparate, redundant, and disconnected CCM technology not capable of supporting strategic customer communications goals. Multiple tools and content repositories also tend to make it harder to communicate with customers with a consistent voice and brand. Lack of a well-integrated solution leads to a host of other challenges as outlined below.

- **Enterprise core systems produce non-standard data output** – Core application systems create output files in various data formats, including partially composed files that are also non-standard. These files are intended to be the inputs to the document composition process. As a result, multiple data preparation and pre-composition processes are necessary to create a standard input file structure.
- **Digital assets are hard coded into the document applications or stored in multiple repositories** – Logos, signatures, and other variable content, such as regulatory text, are sometimes hard coded within the document, thus, increasing the time to market and the associated costs to make requested changes. Many organizations also maintain multiple content repositories across the organization, which leads to redundant maintenance for common assets, issues with version control, and disparate workflows in the composition process.
- **Over-reliance on post-composition tools** – Post composition software is an important component of the CCM technology toolkit and can be useful when there is a requirement to make a rapid or interim change to standardize output. The challenge comes into play when post composition tools are used as a cure-all because of the inability to make the required changes within the composition tool(s). This results in additional complexity that is difficult to understand and track and often creates gaps within

the archive. Some organizations have upped the ante by adding multiple post-composition tools into the mix, further complicating the environment.

- **Multiple archive solutions used to store documents** – Customer communications are typically stored in PDF format for future retrieval, to support paper suppression, or stored as print data converted to PDF on request. Often times, multiple archive solutions are used, which results in operational inefficiencies, redundancies in infrastructure to support the archive solutions, and higher resource costs. In addition, the entire content of the envelope is not archived if marketing inserts, privacy notices, and other documentation is included in the package and finished on the print shop floor. Compliance regulations and corresponding audit requirements continue to change and become stricter, thus requiring companies to re-examine their existing archival solution. It will no longer be sufficient to store a PDF version of a document in an archive; companies should also retain all metadata associated with document creation and delivery, including the associated audit trail for all changes and approvals. Frequently, on-demand servicing documents are not included in enterprise archives, which prevents customer service representatives from viewing correspondence as received by the customer.

> **The issue lies with the technology delivery and support models offered by the manufacturers.**

- **Increased Regulatory and Compliance Burden** – Compliance regulations and associated agencies such as SSAE16 (formerly SAS70), Sarbanes Oxley, HIPAA, Dodd-Frank, CFPB, Gramm-Leach-Bliley, and others have been given expanded reach and impact. Data security breaches continue to make headlines. Penalties for non-compliance and the price an organization pays from a financial and reputational perspective after a data breach or a compliance violation have caused senior management to evaluate CCM technology decisions.

It should be further reinforced that the challenges identified above, although faced by many organizations, are not necessarily an issue with composition tool capabilities. Software manufacturers are diligent in carefully monitoring the market to understand industry requirements and address those requirements in their product roadmaps. The issue lies with the technology delivery and support models offered by the manufacturers. Selling software and providing installation assistance does not constitute a successful transfer of technological capabilities. Even when combined with incremental initial project deployment assistance (professional services), customers are not provided with enough adequate support to guarantee the desired outcomes. Systems integrators, who specialize in bringing together component subsystems into an integrated whole and ensure that those subsystems function together, may be able to assist; however, they lack the vision of a long-term strategic roadmap supporting a corresponding pre-integrated platform. A new service delivery model

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is required that combines the features of these tools with a fully integrated suite of technology services engineered to support the end-to-end customer communication lifecycle. This model, identified as CCM Hosted Managed Services, is the model employed by the three companies featured in this study.
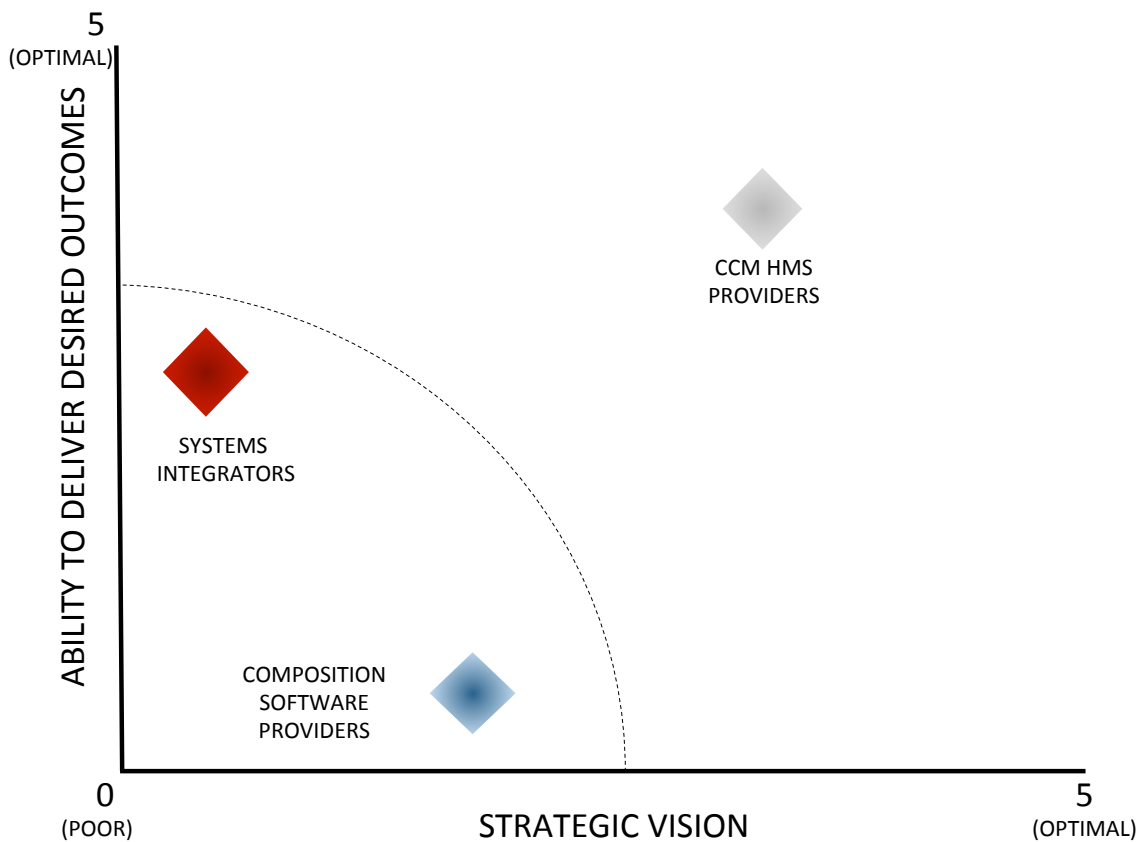

Figure 1: Evaluation of CCM Hosted Managed Services offerings

THE SOLUTION: CCM HOSTED MANAGED SERVICES

As we have seen, enterprises are faced with a number of challenges as they seek to develop a comprehensive customer communications strategy and align the necessary technology to support that strategy. As typically happens within our free market economy, recognized challenges provide an opportunity for someone to step in to provide innovative solutions. Historically, innovation has come from either individuals or small nimble companies as opposed to large well-established companies that often struggle to pivot to changing market demands. While large well-established companies may have a history of success, this success is based upon a service paradigm guided by their corporate DNA. Established at inception, this corporate DNA will guide and direct evolution and growth but may inhibit a rapid response to a new market opportunity. Conversely, entrepreneurs can more quickly identify needs in the marketplace and develop creative solutions to meet

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those needs; apparently, it is easier to innovate in a garage than it is to turn the Titanic. In fact, history is full of examples of innovative companies that started in garages (see Appendix C for some recent examples). This case is no exception as all of our study participants are small companies founded on the premise of developing and integrating the technology and services required to address the issues in the marketplace.

Over the last 10-15 years, the companies identified within this study have steadily evolved their offerings to the point where they are now effectively bridging the technology proficiency gap through the CCM Hosted Managed Services delivery model. By providing a set of integrated technology capabilities that enable the end-to-end management of the full customer communications lifecycle, these companies have succeeded in offering complex technological capabilities that are simplified and exposed to business users in the form of an easy-to-use dashboard or portal. However, a simplified user interface for complex technology is only part of the model. In addition, the offering includes a set of services that, when bundled with the appropriate technology, is capable of delivering the measurable results and ROI that enterprises are seeking. These services include, but may not be limited to, the following:

- Solution design services to determine the appropriate points of integration with existing client technology and capabilities
- Configuration and customization of technology components to address client-specific requirements and use cases
- Consulting services to assist with designing documents and communications that are effective based on business requirements and strategic objectives
- Business process reengineering to enable optimized solution results
- Implementation of solution components including full integration with client technology
- Training and education services to ensure clients are effectively utilizing the new technology
- Several hosting options which include operation and maintenance of the deployed technology
- Service models that range from completely client self-service to fully vendor serviced based upon client requests
- Assistance with client adoption to ensure the embedding of the solution within the client organization
- Assistance with configuring new and specific industry applications that drive customer engagement deeper into the core business models
- Strategic planning to establish and enhance the digital engagement of the client's end customers

CCM Hosted Managed Services firms have the expertise to help organizations overcome the challenges they have been unable to resolve in their attempts to enhance customer communications and meet consumers' digital expectations. These service providers have made it their business to stay on the leading edge of CCM technology as they seek to meet the needs of their expanding list of clients.

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Although the two services are somewhat similar, CCM Hosted Managed Services is not the same as Software-as-a-Service (SaaS). The two terms are sometimes used interchangeably; however, there are a number of important distinctions that require clarification. Both are similar in that the databases, software, and servers may be hosted remotely (though it is not a requirement). In addition, both are often accessed via a thin client or browser-based layer. The important distinctions between the two services are based upon how the applications are designed and delivered.

In a SaaS model, there is a single instance of the application or software that is available to all clients. To a certain extent, the ability to personalize the software through configuration parameters, profiles, and system settings is available but ultimately there is only one instance of the software that is shared by all clients. Additionally, in a SaaS model there is a single database instance. Although the data for all clients may be stored in the same database, each client only has access to its own data. As updates to the software are scheduled and implemented, all clients will receive the updates at the same time. Since all clients are affected by the modifications, the actual software cannot be customized for one particular client; however, each client would have the ability to configure and personalize the look and feel of the application in that they could upload their own company color scheme or logos. It is ultimately the responsibility of the client to integrate SaaS capabilities with other internal solution components and manage the results.

...with a hosted managed services approach, deployment, integration, and support of all related technology and services become the responsibility of the provider and as such, they become accountable for the results.

With a CCM Hosted Managed Services model, the provider maintains a separate instance of the software and database for each client. Infrastructure may be shared, or each client may have its own dedicated set of servers, which could be hosted externally or internally (behind the enterprise's own firewall) by the service provider. Each client has its own instance of the software and can choose to take updates according to its own schedule versus the SaaS model where all clients receive the same update at the same time. In a CCM Hosted Managed Services model, the software is configured and customized based on an individual client's requirements without affecting any other client. In addition, with a hosted managed services approach, deployment, integration, and support of all related technology and services become the responsibility of the provider and as such, they become accountable for the results.

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As previously discussed, the current commercially available document composition software includes a number of very advanced capabilities and features. However, these tools alone are not sufficient to manage the complete end-to-end customer communications lifecycle; they represent only a single component within the required CCM workflow. To varying degrees, our study participants have created or leveraged the best-in-class composition tools on the market and integrated those tools with proprietary and/or other commercially available software to create a complete CCM technology service offering. Madison Advisors considers the seven capabilities depicted and defined below as the essential components of a CCM Hosted Managed Services platform. The offerings of the service providers that participated in our study include these elements although each provider has its own, slightly different approach as to how to address these items.
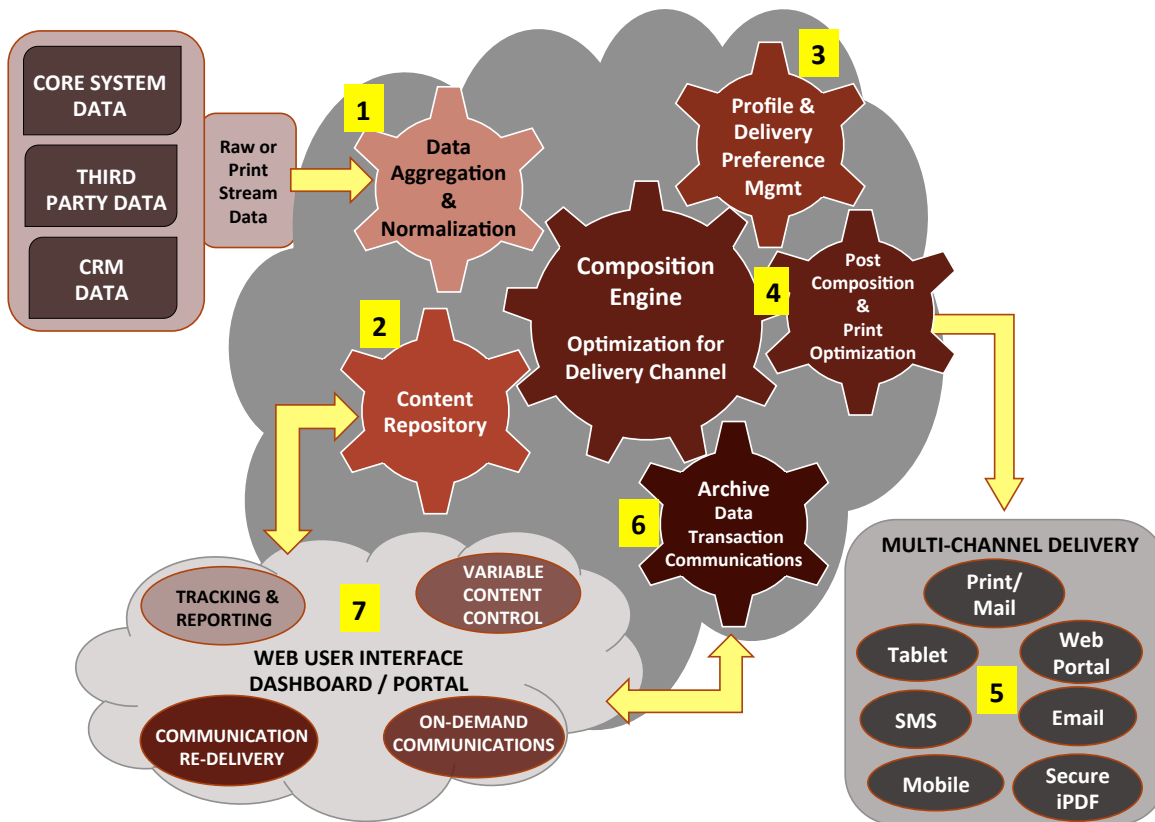

Figure 2: Hosted Managed Services Platform Components

1. **Data Aggregation** – The first and critical step in the process is to position the data to be effectively used in the customer communications lifecycle. Data typically comes from multiple sources including line of business core processing systems, CRM applications, and other third party industry benchmark sources. Data files are ingested in multiple formats such as ASCII, EBCDIC, TXT, XML, PDF, and TIFF as well as composed print stream data. Data is aggregated, normalized, and stored in a standard data model. This process is critical for effective composition, execution of business rules that drive the use of variable content, data analytics, and personalization of communications with targeted marketing messages that are relevant to the recipient. Data is also used for print output management features such as postal optimization (digital pre-sort, real time NCOA, and CASS processing), house-holding, and the placement of barcodes required for the print vendors' production workflow such as piece-level tracking, and insert management. In addition, data is required to support the delivery of documents, analytics, personalized messages, and alerts via electronic channels.

2. **Content Management** – Another necessary component of the customer communications lifecycle is a centralized repository for the retention and management of templates, business rules, digital assets (logos, signatures, etc.), and other variable content resources (text such as state-specific regulatory messages or customer service phone numbers, etc.). Once stored in a content library, these artifacts become available for use during the creation process for documents and other communications across any delivery channel. A thin client user interface that allows business users to control and manage content is an important feature as it eliminates the IT expense and lengthy lead-time normally associated with routine changes. An automated multi-tiered approval workflow, along with version control for all content artifacts, is essential given today's compliance requirements. Additional data for each content artifact, such as the date loaded, version, effective and expiration dates, and audit trail information regarding the update and approval cycle, should also be stored.

3. **Account Profile and Delivery Preference Management** – This process allows the customer to provide consent to do business electronically and captures necessary contact information such as postal address, email address, and phone numbers as well as delivery preferences for all customer communications. Consent should be captured at the customer level so that it is not necessary for a customer to provide consent each time an additional document is made available for electronic delivery. However, delivery preferences must be managed at a more granular level, allowing customers to choose the channel or channels, through which they receive individual documents and other communications including alerts. Self-management features built into the interface allow customers to update this information as required. This data is used in the composition process to

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optimize the content and the output based on the selected delivery channel(s).

4. **Document Composition and Post-Composition** – The document composition process is understandably, what one typically thinks of when considering CCM. Organizations typically invest a significant portion of their budget in customer communications technology. During the composition step, data and variable content are combined with templates according to pre-determined business rule to create customer communications. Communications are optimized for the delivery channel(s) based upon the recipients pre-selected delivery preferences. In addition, an archive copy of all communications is generated and sent to the archive of record. Following the composition of the document there is a post-composition or post-processing step where additional optimization is done for print output. This step includes the application of necessary bar codes as well as batch optimization and postal processing. By keeping this part of the process separate from the primary document composition step, CCM Hosed Managed Services providers create more flexibility in the print model in that separate processes can be built for each print partner to facilitate an easier transition between them.

5. **Multi-channel Delivery** – Once customer communications have been formatted during the composition process, they must be delivered to the final recipient. Delivery of communications must be seamlessly managed and fulfilled according to the delivery preferences selected by the customer. Multi-channel delivery refers to making documents available to customers via more than one delivery channel including print, email, WEB, mobile, tablet, SMS, etc. Responsive design during the composition process ensures that the customer experience is optimized with a seamless and consistent message but formatted and configured to the device that is being used. Previously, the concept of multi-channel delivery was based on the requirement to offer a choice to recipients as to how they would receive a particular communication; one could send either a printed document or an email with a link to view the document via a secure portal. Current thinking has expanded the concept to allow for the additional channels now available. Multiple versions of the same communication can be delivered via more than one channel concurrently if specified in the delivery preferences. For example, a customer may choose to receive a printed copy of a notice but also receive an SMS with a similar but device-specific message.

6. **Archival** – Storage of all customer communications for future retrieval and delivery in a single repository to support all customer-service requirements. Due to strict audit and regulatory requirements, the archive has become an even more critical component in the customer communications lifecycle. Tracking a document that has been created is no longer enough evidence of what was sent to the customer. Additionally, the associated metadata for each

communication, including creation date, approvals, channel of delivery, delivery status, and date of submission to the USPS, needs to be stored. If a communication has been electronically delivered, bounce back and remediation data along with click-through metrics should also be included in the archive.

7. **Dashboard and Reporting** – A dashboard is a browser-based user interface that provides visibility into the entire production workflow and offers a business user the opportunity to view the status of all jobs from the point of file receipt through delivery. In addition to job-level tracking, piece- level monitoring is also offered with the ability to pull documents to be re-routed, destroyed, or redelivered. Standard and customizable reports are also offered through a reporting module. The ability to manage the warehoused inventory of consumables used in document manufacturing including the ordering process is another important feature. More advanced offerings may allow for the integration of business intelligence tools to facilitate client access to underlying data.

CCM HOSTED MANAGED SERVICES PROVIDERS

For this 2015 Hosted Managed Services study, Madison Advisors has elected to profile three companies that we believe to be the market leaders in this approach of delivering hosted CCM technology services. Listed alphabetically:

CEDAR DOCUMENT TECHNOLOGIES

The CEDAR approach is simple: From a single platform, deliver all the critical communication and servicing capabilities necessary to ensure end-to-end process automation, management and governance of the functional servicing "use cases" required to support both a digital and personal customer communication and servicing experience.

"Our founders were the first to take mainframe data to a printable image back in the '70s. In 1993, with the rollout of the PDF standard, they were encouraged by Adobe to build transform software to convert mainframe legacy Print Output (AFP, DJDE, Metacode, etc.) to PDF. The result: CEDAR was born as the first technology company to bring mainframe documents into the world of the Internet through the PDF standard. Since our DNA was always Data to Output Presentment, the move to Data to Omni-channel Output and Digital Servicing was a natural evolution."

~ Pete Kenning, CEO, CEDAR DOCUMENT TECHNOLOGIES

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- Document and Communication Technologies – Doc Tech
- Digital Servicing – Consumer and Business-Facing Web/Mobile (EIPP/EBPP)
- Administrative and Agent Services – Digital Web/Mobile

Doc Tech – CEDAR offers a comprehensive suite of communication and servicing technologies focused on the digitization of the Customer Communication Management (CCM) process to support highly variable Output requirements for Omni-channel presentment and delivery. Digital CCM (DCCM) is built on a flexible template structure (the wireframe for the Output channel) with reusable data, rules and content, which are merged in the Omni-channel composition process. This approach allows the enterprise to leverage information into any servicing channel for clear, compliant and customer-relevant communications. It also enables complete digital document packages for e-delivery and archiving – no more finishing the document with physical inserts and attachments in the mailroom or on the print shop floor.

Digital Servicing – With the document/communication events as the foundation and trigger of most service interactions, CEDAR provides a suite of Web/Mobile services that leverage the communications data and content for: mobile presentment of key documents; emails and SMS; secure iPDF; profile, preference and consent management; mobile payment wallets; digital forms; and more. All archived and accessible to customers and agents to support a complete digital and personal servicing experience.

Administrative and Agent Services – These are an integrated suite of browser-based tools for: role-based user administration and access management; content change management across all documents, communications, and servicing channels; access to all documents and communications as sent to customers; all associated servicing transactions; and agent "Service On Behalf Of" (SOBO) to support personal service and closed-loop communications when required.
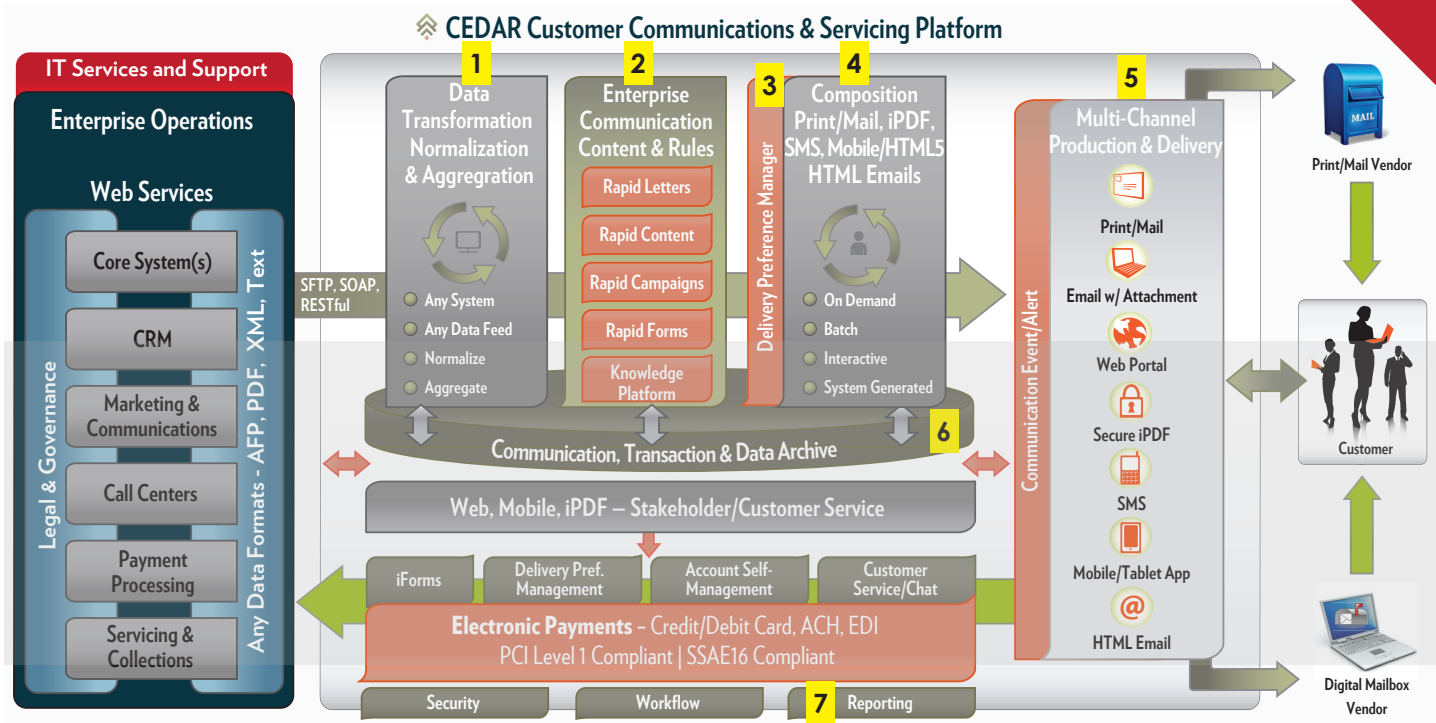
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Figure 3: CEDAR Document Technologies Platform

DATAOCEANS

DataOceans is headquartered in Norcross, GA. Their proprietary software, which can be hosted either at their hosting center or within a client's firewall, offers CCM solutions and services for the banking, utility, insurance, government, and healthcare verticals. The DataOceans platform is data driven and will accept or parse data from multiple sources, including both internal legacy systems and external 3rd parties. Data is then parsed down to the atomic level, put into an information model and used to personalize high volume printed or electronic documents with targeted messaging and advertisements. Inherent in DataOceans platform are customer interfaces that enable or empower their customer's business analysts to manage and configure the data, rules, content, preference management, and analytics that drive personalized messaging on the customer communications.

"…as investors in other venture technology endeavors, we were impressed with the emerging customer communications market. We felt that a hosted managed service offering that provided empowerment and control to the client and relevant, personalized, digital, data driven communications to the consumer was a big idea that made a lot of sense for organizations that produce high volume transactional documents."
~Larry Buckley, CEO, DataOceans

DataOceans developed and owns all of their technology; their platform is a Microsoft-based application built on a Services Oriented Architecture (SOA). They are on the cutting edge with their marketing capability through personalization of documents using micro-targeted messages and advertising offers to drive adoption. DataOceans understands that it is not good enough to have an enterprise CCM platform if their customers do not reengineer their workflows, business processes, and marketing campaigns to leverage their platform. They offer expert knowledge, ideas, partnerships, and programs to help their clients drive adoption and improve their ROI. In addition to offering personalized documents through print and electronic channels, DataOceans can also offer documents on demand, e-signature, targeted on-hold IVR messaging as well as CSR pop-up messaging prompts for call center personnel. Control over data, content and personalized messages (including broadcast or personalized video messaging) is provided to their clients through their Targeted Content Manager (TCM) user interface.

DataOceans believes that 3rd party advertising is a future revenue stream and, as such, offers tracking of click through activity on marketing onserts and advertisements to facilitate targeted affiliate partner campaigns for their clients. Critical to a seamless revenue generating offerings will be payment. DataOceans is a PCI Level 1 certified organization. Their interactive PDF (iPDF) documents offer comprehensive payment functions, retrieval of past statements, partial payment, and other advanced payment capabilities in their platform. Control, management and visibility of the entire platform is provided through the DataOceans command and control modules.

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RAPID & UNIQUE APPROACH TO TRANSFORMATION
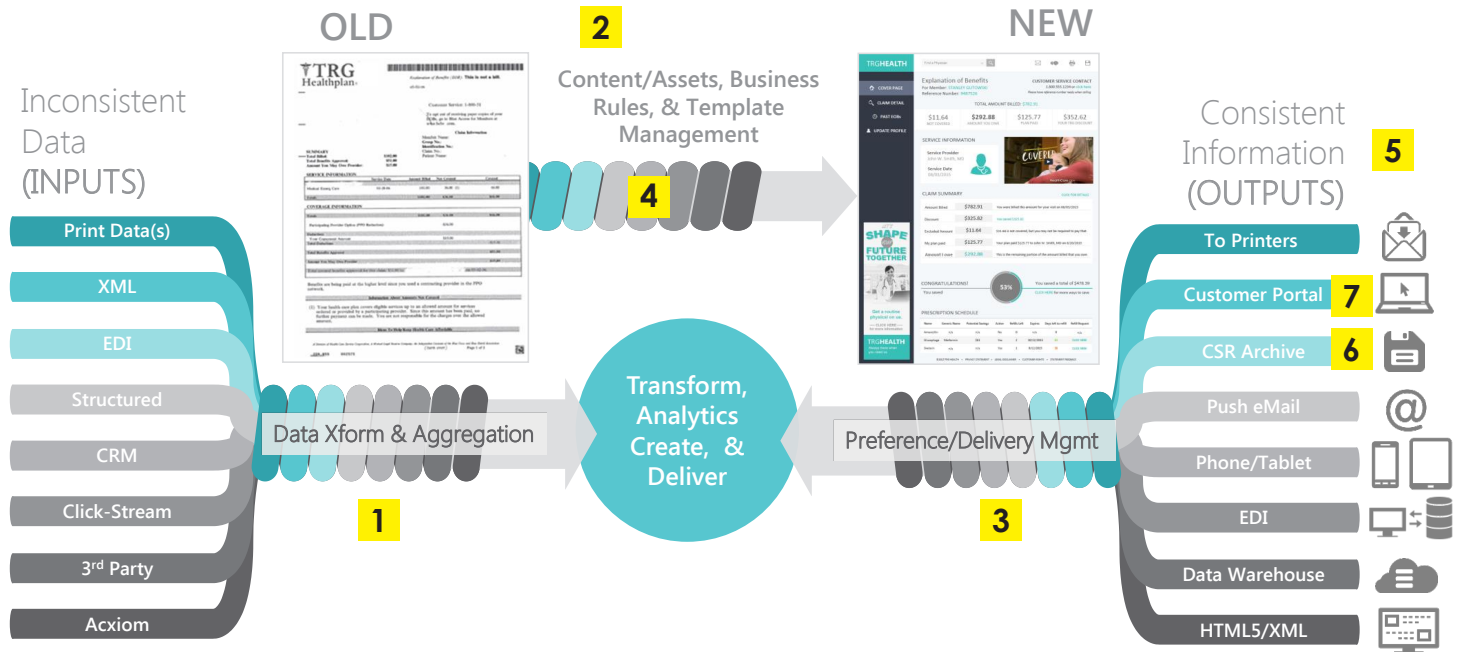
Figure 4: DataOceans Platform

NEPS

NEPS is recognized as an innovated leader in the Enterprise Communications Management (ECM) industry and has expertise in developing, integrating, and managing all aspects of secure hosted Customer Communications Management technologies and services. Their solution combines in-house subject matter expertise and industry leading third party technologies with their proprietary offerings to deliver a private cloudbased solution. NEPS' primary deployment model is a Software-as-a-Service offering which allows their clients to quickly deploy and take advantage of the stability and security of a private cloud. NEPS also offers a solution where the software is licensed and integrated behind a client's firewall and jointly supported by NEPS and the client.

> *"...we met with two former senior executives from a large insurance company at a diner in New Hampshire; they wanted to venture off and create a new insurance company and asked us if we would help them on the IT side. From there, our business took off and the rest is history."*
>
> *~Denise Miano, CEO, NEPS*

The flexibility that NEPS offers with their composition platform allows them to assess their client's needs and deliver a solution that is flexible and robust. NEPS has a deep understanding and expertise in all of the commercially available tools including HP Exstream, Thunderhead, EMC xPression, XMPie and GMC Inspire. They also maintain expertise in widely used legacy systems and processes such as DocuMerge, CompuSet, CSF and Doc1, which allows them to assess the document needs of their clients and deliver a solution that fits their environment. In addition, NEPS will leverage their client's investment in the composition tools they currently use as a part of their overall solution.

NEPS was founded in 1988 and focuses on the financial services, insurance, and healthcare verticals. As part of their Customer Communications Management Consulting Services, they offer expert document design services to help their clients achieve measurable results with communications that contain relevant and personalized content.
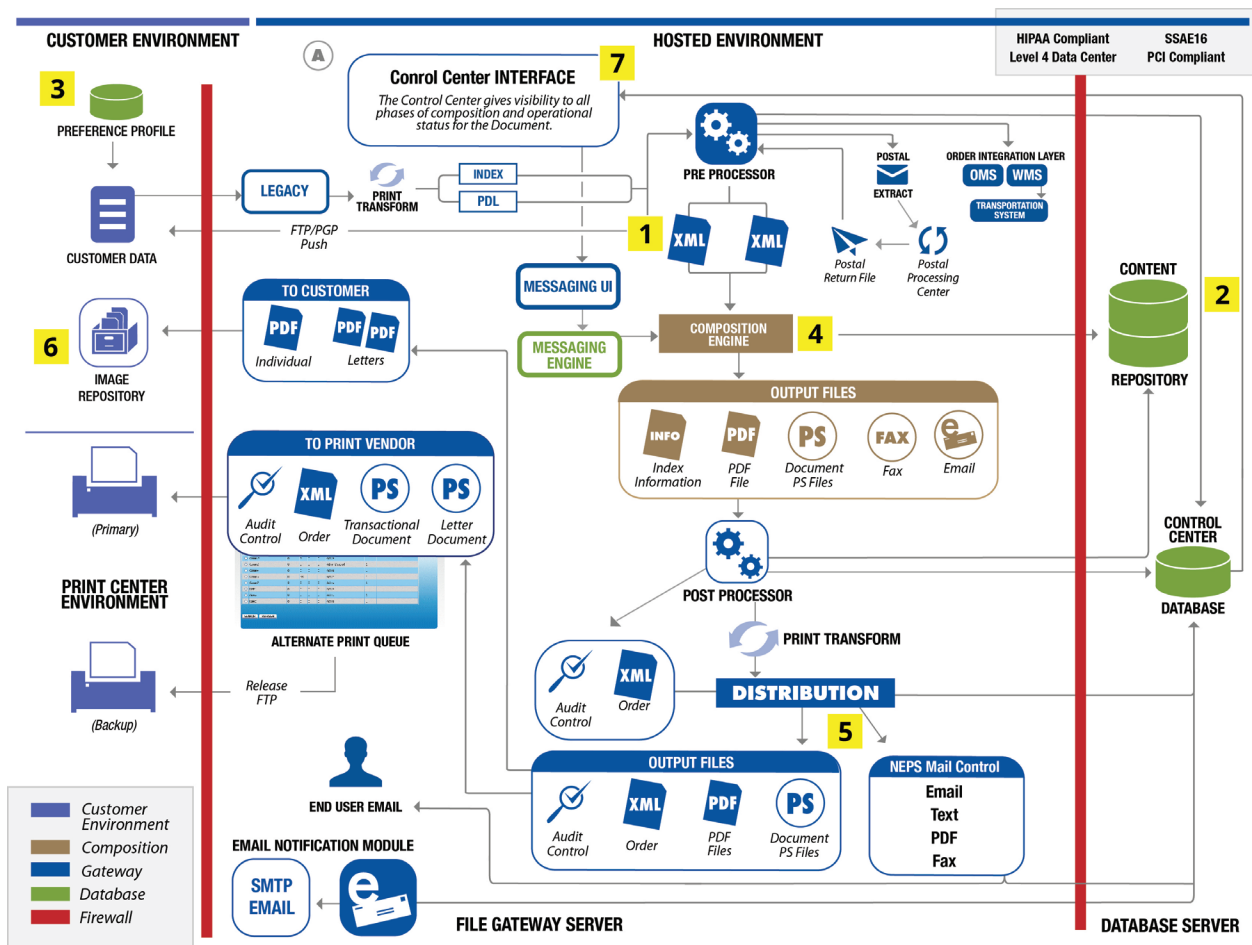
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Figure 5: NEPS Platform

EMERGING MARKET TRENDS THAT INFLUENCE CCM HOSTED MANAGED SERVICES

Within the last two years, Madison Advisors has witnessed the barriers to the adoption of CCM Hosted Managed Services slowly begin to break down. Although we have previously discussed many of the reasons behind this shift, additional industry trends have been contributing factors.

Not surprisingly, enterprise CCM technology has traditionally been the domain of the internal IT organization. Since IT has been responsible for much of the technology selection and integration, it is natural that this would extend to the CCM area as well. Until recently, this has consisted of helping the business to select a document composition tool, working with the vendor to install the software, receiving limited training on the use of the tool, and building a few applications.

This cycle began to change 10-15 years ago with the advent of electronic delivery. Software providers responded to this new paradigm by introducing more features into their technology and the pace of the required refresh cycle began to increase. The arms race had begun. Over the past several years, the pace of change has accelerated dramatically. Software companies have continued to produce more sophisticated and technologically complex offerings, while compliance and regulatory requirements have also increased requiring the integration of additional services.

Many internal IT departments no longer desire to build and maintain control over a CCM technology empire...

When combined with the rapidly evolving customer expectations relative to communications, IT has not been able to keep up. Due to issues with budget and project cycles discussed previously, many CCM technology projects remain unfinished. Many internal IT departments no longer desire to build and maintain control over a CCM technology empire that continues to change at a rapid pace and recognize that any further capital expenditures would only be an investment to remain behind the curve. Some have even chosen to throw in the towel.

When working with a recent client to assist with the selection of CCM technology, Madison Advisors had the following interesting experience. This particular client, by policy, could not outsource a function without having the internal IT group supply a bid on the project. When asked for their bid, the response from IT was "our bid will be equal to double the highest external bid received." Although an extreme example, this is consistent with what Madison Advisors has experienced over the past two years. Now, internal IT has begun to loosen its grip on this technology segment and become more open to partnering with external vendors that specialize in this space. Composition tool manufacturers, for the most part, have not provided the complete support model required to ensure client success. As a result, a CCM Hosted Managed Services offering is an attractive option for many companies.

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An approved business case is a standard requirement prior to any internal project being funded and a good business case must always include a cost benefit analysis. In today's enterprises, cost savings alone should not justify a significant investment, particularly when it comes to systems and workflows that interact with customers. Customer engagement, which includes other factors such as revenue enhancement as well as customer experience and retention, should be key factors for enterprises to consider when improving communications infrastructure. Until recently, however, organization's business cases have almost exclusively focused on cost reduction with only a nominal gesture towards select pieces of customer engagement such as revenue and customer experience.

For some time many organizations have made a commitment to Lean manufacturing and Six Sigma concepts to improve the efficiency and effectiveness of their operations. Two specific results have occurred:

- Due to the numerous Lean and Six Sigma initiatives conducted, organizations have removed a significant portion of the excess cost. Although inefficiencies still exist, it has become more difficult to reduce head count further without jeopardizing results and employee morale.
- Senior leadership has begun to recognize that cost cutting, while important, is not necessarily an effective long-term growth strategy.

Focus on customer experience has become more evident as organizations have begun to create new roles such as Customer Experience Officer or even Chief Experience Officer. Recently, books have been written and conferences developed with the primary focus of improving the customer experience. Forward thinking companies have come to view a commitment to customer experience as a strategic advantage to gain additional wallet share of their existing customer base, increase market share at the expense of their competition, and grow the bottom line as a result. As a fully integrated set of technology and services designed to support the end-to-end customer communications lifecycle, a CCM Hosted Managed Services offering is well positioned to positively affect the customer experience across all channels.

THE EVOLUTION OF CCM HOSTED MANAGED SERVICES

In recent years, CCM Hosted Managed Services has evolved from a point solution designed to assist organizations with the optimization of print output or the enhancement of electronic delivery capabilities to an integrated, robust enterprise customer communications management platform with ancillary features and services that have become increasingly important to improving the overall customer experience.

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Initial CCM Hosted Managed Services offerings, for all intents and purposes, allowed for a single delivery model, (i.e. all of the services and technology required to provide the solution to the client were offered via a secure private cloud hosted within the service provider's data center). This option allowed clients the opportunity to deploy quickly and take advantage of the private cloud's scalability, security, and stability. Client data files would be securely delivered to the provider, and the processing required to generate the customer communication output was performed by the provider inside its firewall. However, the numerous high profile data security breaches that have made recent headlines have caused some companies to be hesitant to send sensitive data outside of the organization. CCM Hosted Managed Services providers have responded by developing alternate delivery models for their solutions in order to meet a variety of client requirements. If needed, providers can establish a complete instance of the solution behind the client's firewall and host and monitor it remotely through a VPN. If requested by the client, the provider can transition a client side installation to a fully licensed version of the solution totally managed by the client within its data center. Having evolved their solutions to meet changing client demands, hosted managed services providers do take data security very seriously. The participants in this study are HIPAA, PCI, and SSAE16 Type II SOC 2 (formerly known as SAS70) certified operating in Tier IV data centers.

ADDITIONAL COMMUNICATION TYPES SUPPORTED

CCM Hosted Managed Services initially entered the scene as a solution to optimize high volume transactional print output and enhance electronic delivery capabilities for enterprise companies. These customer communications, regardless of channel, were processed and delivered in a batch mode. As providers worked closely with their clients, the need for support of other communication types became evident, and solutions have now expanded to support on-demand and ad-hoc communications. For example, call center representatives can generate interactive communications, such as personalized and customized letters, as a confirmation or follow-up to a service call and deliver that letter based on the delivery preference of the customer. A copy of the letter is stored in the servicing archive and is available to customer service or other company representatives as necessary. With some provider solutions, business users can now take advantage of campaign management functionality to create targeted ad-hoc marketing communications for a specific list of customers. Lists can be uploaded from an external source or created using data stored in the relational database housed within the platform. Campaign functionality can be used to support other types of ad-hoc communications, such as an updated privacy notice, and, as with the on-demand letter functionality, deliver the communication according to the recipient's preference. Features, such as personalized audio or video files, embedded within an interactive document or electronic communication are used for educational or marketing purposes. Services have also expanded to include aspects of payment functionality. The providers

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featured in this study will deliver printed or electronic bills and some have streamlined the payment process by allowing customers to pay a bill with the simple click of an icon. One provider has recently developed an entire payments portal solution and has begun to make inroads in the EBPP and EIPP space.

Communication Type	Relationship	Description
Batch Communications	One-to-many	High volume transactional documents that are typically processed and delivered in batch mode, in either print or electronic format, on a recurring basis (e.g. monthly statements)
On-Demand or Ad-hoc Communications	One-to-many	Communications that are not delivered on a recurring schedule such as a privacy notice mailing or a marketing campaign targeted to a specific list of customers
Interactive Communications	One-to-one	Communications that are generated and delivered in real time in response to a particular transaction or event such as a call center letter confirmation

Table 1: Definition of Communication Types

PRICING STRUCTURE FOR HOSTED MANAGED SERVICES

When evaluating CCM Hosted Managed Services offerings, it is also important to understand the pricing structure, as there are some significant advantages as opposed to purchasing and internally integrating software. In a software purchase, a large upfront investment (CAPEX) is made; however, what has been purchased is not actual results or outcomes, but only the potential to achieve results. There is no guarantee that the software purchased will ever be effectively used. In order to provide benefit to the enterprise, it must first be installed and integrated with a number of additional technology components. Even then, before tangible benefits are derived, internal resources must master the software's complexity, at least to the point of proficiency. This has repeatedly proven to be a failed model. Madison Advisors has witnessed numerous cases of companies seeking the "magic bullet" by replacing one document composition software with the next promising tool, only to be disappointed with the lack of desired outcomes. Too often, organizations are focused on cost as opposed to value. When value is considered, it should not only be measured in potential but in quantifiable results.

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Pricing Structure for CCM Hosted Managed Services around three distinct elements:

- A one-time implementation fee to deploy the required services on behalf of the client
- A recurring monthly fee for the production support services provided
- Labor based services for client requested changes to the services once deployed (change requests)

The pricing distinction between our study participants is primarily through the approach used to determine the monthly recurring services fee. In a sense, CCM Hosted Managed Services was born out of the print services and software industries, and this is reflected in the standard pricing models. This has resulted in two prevalent pricing models that have traditionally been used. As a carry-over from the print and mail industry, providers may utilize a "click charge" pricing approach where items such as data preparation, including the creation of down-stream operational efficiencies, postal and delivery optimization, document composition, delivery, archival, and other services are priced at a per document or per image level. The advantage of this approach is in its transparency. Clients can see exactly what services they are paying for and how much they are paying. The downside is that it can be complicated and therefore difficult to understand the many different charges.

Too often, organizations are focused on price and not cost vs. value.

The other popular approach has its roots in the software industry and is based upon a bundled monthly software-licensing fee. Clients pay a certain monthly fee to license the platform services. With this approach, there may also be an annual maintenance fee charged during the contract period. The strength of this model is in its simplicity; however, clients may not totally comprehend exactly what services they are receiving for the monthly fee and, therefore, not completely understand the value of the solution to the organization. With both of these models, tiered pricing structures exist to reflect the volume of transaction services provided.

Just as the services continue to evolve, so have the pricing models, and providers may continue to employ a combination of these models as they strive to determine an approach that is less complicated but still conveys the value of the services delivered. Madison Advisors' position is that pricing models will continue to evolve as the offerings mature; however, the goals should be as follows:

- **Continued transition from a CAPEX to an OPEX model**: In this shift, the delivery risk (consisting of the cost of infrastructure and management) is transferred to the service provider. Enterprises should not pay a large fee to establish services that have not yet been utilized. This has essentially been the

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software model; paying for potential and not actual results. Providers clearly need to cover the costs to deploy services for clients.

- **Simplify pricing**: Pricing models should be easy to understand, reflect the value of the services provided, and tie directly to outcomes and results so that success is easily defined and understood.

While Madison Advisors believes that an ideal managed services pricing structure follows an OPEX model, hosted managed service providers should not bear all of the initial cost to on-board a new client. By developing a standard set of configurable services with little to no customization requirements, hosted managed services providers can reduce the complexity of deployments, reducing the overall cost to onboard a new customer. Hosted managed services providers can also shift a portion of the cost of the implementation into the monthly servicing fee. This will reduce the barrier to adoption for some companies, further incent the provider to meet its target dates, and more closely tie the monetary exchange to the success metrics of the client. We are not advocating a no cost deployment, nor are we suggesting that the clients should have no skin in the game. Providers can mitigate risk by establishing a monthly servicing minimum to begin when the agreed upon services are established. In that way, clients will have an additional incentive to immediately onboard customers to the platform.

> **Pricing models should be easy to understand, reflect the value of the services provided, and tie directly to outcomes and results so that success is easily defined and understood.**

In one such promising approach that has recently emerged, pricing is based on the number of customers that have been on-boarded to the platform. In this model, a small fee is charged per customer per month based on the services being used. While this pricing model is relatively new and has not been universally accepted, it may prove to be attractive to certain verticals such as financial services where costs are typically quantified on a per customer account basis. Banks for example, tend to use profit and expense models that are calculated on a per customer basis and typically track acquisition and servicing costs as well as profitability per customer. With this approach, CCM Hosted Managed Services pricing is offered in tiers based upon customer volume and may vary depending on the size of the organization and the breadth of services deployed. The advantage to enterprises of this pricing method is that it is easy to understand and ties the services that have been enabled directly to the end customer. It remains to be seen how much traction this model will develop.
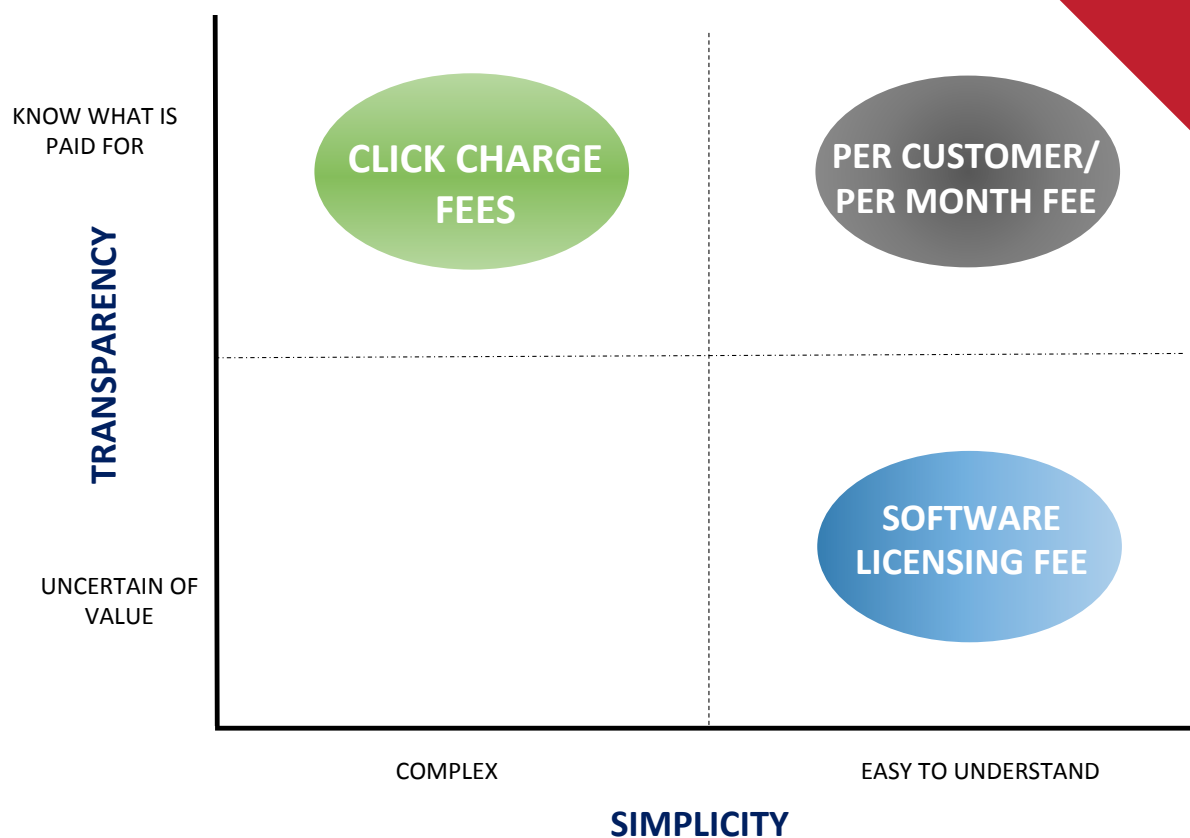
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KNOW WHAT IS PAID FOR

TRANSPARENCY

CLICK CHARGE FEES

PER CUSTOMER/ PER MONTH FEE

SOFTWARE LICENSING FEE

UNCERTAIN OF VALUE

COMPLEX

EASY TO UNDERSTAND

SIMPLICITY

Figure 6: Pricing Structure for CCM Hosted Managed Services

ANALYTICS AND BUSINESS INTELLIGENCE

An emerging feature of CCM Hosted Managed Services where the potential has not been fully realized is the use of analytics. Up to this point, providers have leveraged the data stored during the aggregation process to provide at best, an "analytics light" capability. However, there is an opportunity to expand this component by either further building out the existing capabilities or partnering with companies that provide additional data and analysis capabilities. Madison Advisors anticipate that this will become one of the focal points of service provider's offerings in the near future.

INLET ENABLES NEW DISTRIBUTION CHANNELS

Although the momentum of digital mailbox solutions appears to have stalled, there is still an opportunity to affect the way in which customers receive and interact with documents by building bridges to the online distribution channels they prefer. Inlet, a recently announced (June 2014) joint venture between Broadridge Financial Solutions and Pitney Bowes, is determined to build these connections and appears to be off to a good start. Unlike the failed "if we build it they will come" strategy of the digital mailbox, Inlet has chosen a different approach; this approach is to create and maintain a set of pre-built API to the most frequented online channels, including online banking sites. Rather than try to build a destination and force consumer

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behavior, Inlet is constructing the highways and infrastructure that will connect consumers to the most popular destinations. Although, to a certain extent, the long-term success of this model remains to be seen, Madison Advisors views this as a more promising, gradual transitional. As opposed to attempting to bend the will of millions, Inlet will enable customer choice. CCM Hosted Managed Services providers are certainly adept at building API and could choose to address this independently. However, there may be an advantage to plugging into a pre-built service in that this would allow providers to continue to develop the product feature set of their own offerings. NEPS clearly believes this to be true, as they have just entered into a strategic relationship with Inlet; others may follow suit. As Inlet promises to increase paperless adoption, customer engagement, and speed of payment while lowering costs, this will be an interesting trend to watch going forward.
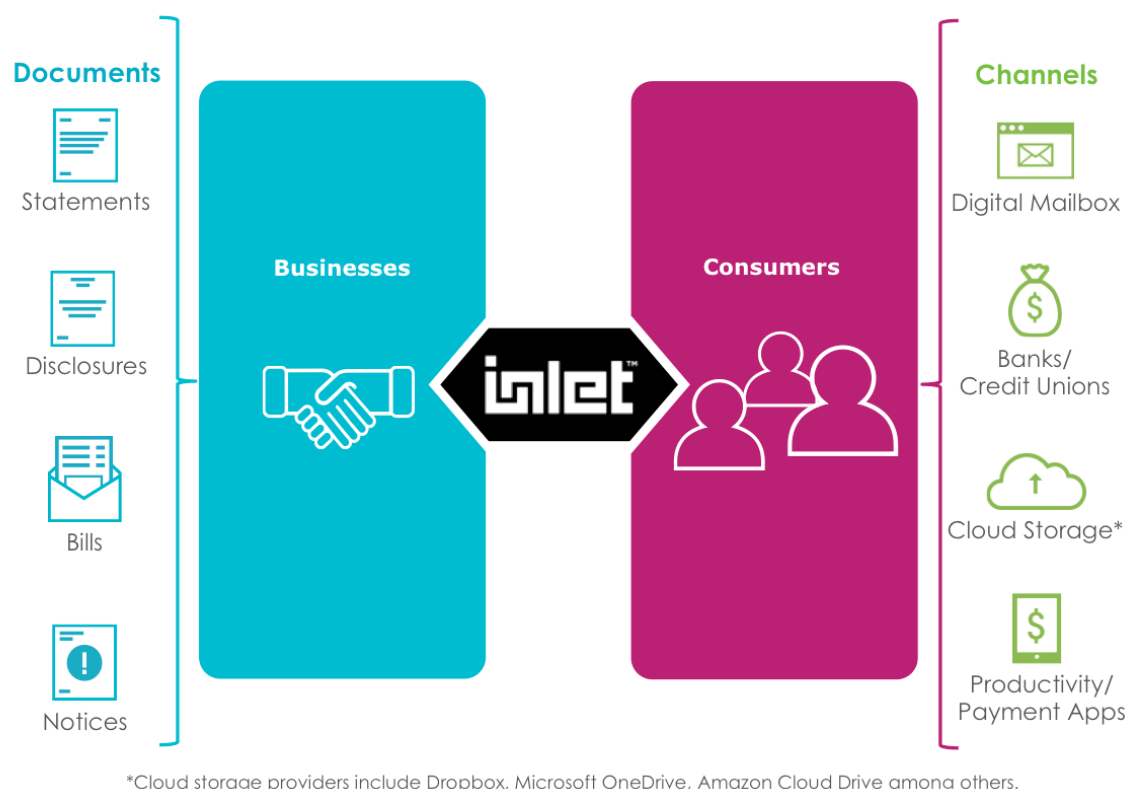

*Cloud storage providers include Dropbox, Microsoft OneDrive, Amazon Cloud Drive among others.

Figure 7: Inlet Distribution Model

CCM HOSTED MANAGED SERVICES MARKET LANDSCAPE

Over the past 10-15 years, the companies profiled in our study have established themselves as the market leaders in CCM Hosted Managed Services. Although these companies are relatively small, they are growing and well established with all three having relationships with large enterprise clients. Considering the hundreds of insurance companies, banks and credit unions, wealth management firms, health insurance providers, and

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utility companies that exist – in addition to the hundreds of millions misspent on software licenses and maintenance, which will be reallocated – Madison Advisors forecasts the market opportunity for CCM Hosted Managed Services to exceed $3 Billion in the United States alone with a CAGR of 45%. If the Canadian and European markets are considered, the magnitude of this opportunity is enormous. This delivery model is showing signs of hitting critical mass in the next 2-3 years; and, as a result, there is a tremendous opportunity for our study participants to experience rapid growth as well as for other players to enter the game. As this offering has continued to evolve and mature, subtle shifts in the market are beginning to take place. Others are taking notice of the challenges and opportunities discussed in this study and are exploring alternative approaches to throwing their hat into the ring. These companies can be best be categorized into three distinct segments:

1. **Entrepreneurs**

   As noted above, this market is currently underserved, and as the CCM technology paradigm continues to shift in favor of managed services and barriers to adoption break down, this truth will become more self-evident. Factors such as these will pave the way for new entrepreneurs to join the game, perhaps with a fresh and different perspective. At the time of this writing, Madison Advisors is aware of one smaller company that is beginning to gain traction, as well as two additional firms currently in the process of defining their offerings. We will monitor their progress as well as that of others that may choose to enter the market.

2. **Software Manufacturers**

   For the most part, software manufacturers continue to add features and functions to their composition tools with the effect of further expanding the technology proficiency gap. Some are also investing in their technology to include or refine a cloud-based offering in addition to expanding professional services offerings and partnerships. While these may eventually prove to be worthy endeavors, these alone will not significantly move the needle with regard to allowing enterprises to succeed in achieving strategic CCM goals. Interestingly, within the last six months, one software manufacturer has indicated its desire to shift its business model toward a hosted managed services approach and, with the help of Madison Advisors, is actively developing its strategy. Other than this one example, and despite our best efforts, we do not at this point see software manufacturers rushing to adopt the hosted managed services model, especially those with large, entrenched, software licensed customer bases.

3. **Print Service Providers**

   This segment, identified as print-centric providers in our previous study, is also known as Print Service Providers. In Madison Advisors' opinion, print service providers have the best opportunity to get into

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the game and affect this market. Having been trusted partners of enterprise clients for years, in some cases providing composition, archival, and electronic delivery services, they are uniquely positioned to leverage and expand existing relationships. In addition, as market factors place additional pressures on many in-plants to consider outsourcing print and mail, opportunities for print service providers will continue to expand. As physical print and mail manufacturing has become more of a commodity, recent best practice has been for companies to take a printer agnostic approach to outsourcing.

As contracts expire, companies want to be free to take advantage of more competitive pricing through movement to another service provider. If the print service provider also does the composition work, the transition process becomes more complicated, and timetables extended, as these services are unraveled and ported to a new provider. In some cases, the complexity of the move causes companies to forgo the savings and remain with the current vendor. For this reason, many companies have elected to keep composition and other upstream tasks in house. As we have seen, this is also fraught with challenges, and increasingly, companies have turned to CCM Hosted Managed Services providers to achieve the desired outcomes.

As contracts expire, companies want to be free to take advantage of more competitive pricing through movement to another service provider.

Madison Advisors has recently assisted a Fortune 100 insurance client with the selection of a hosted managed services provider and, subsequently, ran the RFP to move from one large print service provider to another to take advantage of downward movement in price. We believe this will be the trend going forward. Print service providers may continue to fight this trend but are better served to execute a strategic pivot and reposition themselves in the market. Rather than being providers of traditional print services, they should establish themselves as CCM technology service providers with print being a separate and distinct offering. To a degree, this is already true as many print service providers have offered additional services including electronic delivery, archival, and to a limited extent, business user control of messaging and variable content. However, these offerings have been viewed as bolted-on services, inextricably linked to traditional print and mail services.

Madison Advisors believes that print service providers should further embrace this market shift to create a new model of printer agnosticism by separating upstream and digital services from physical print offerings. For some companies, this may be a difficult transformation as it may be seen as taking their eye off the ball or cannibalizing existing print-based revenue streams. However, until they are willing to let go of print as the primary business, these service providers will be watching this market

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continue to evolve and expand from the sidelines. Some forward-thinking companies are beginning to take the plunge. Two very large traditional print service providers are in the early stages of rolling out CCM Hosted Managed Services offerings. Several others are exploring ways to partner with existing providers. Perhaps, most notably, within the last few months, Taylor Corporation has acquired NEPS, demonstrating its commitment to the customer communications market and further solidifying CCM Hosted Managed Services as a service delivery model.

So what does this shifting landscape mean for the three innovators featured in our study? As additional companies develop offerings based upon the managed services delivery model, remaining barriers to adoption will continue to collapse, and the market will begin to realize its potential. Madison Advisors predicts that these businesses will continue to grow, and in some cases, as with NEPS, be acquired.
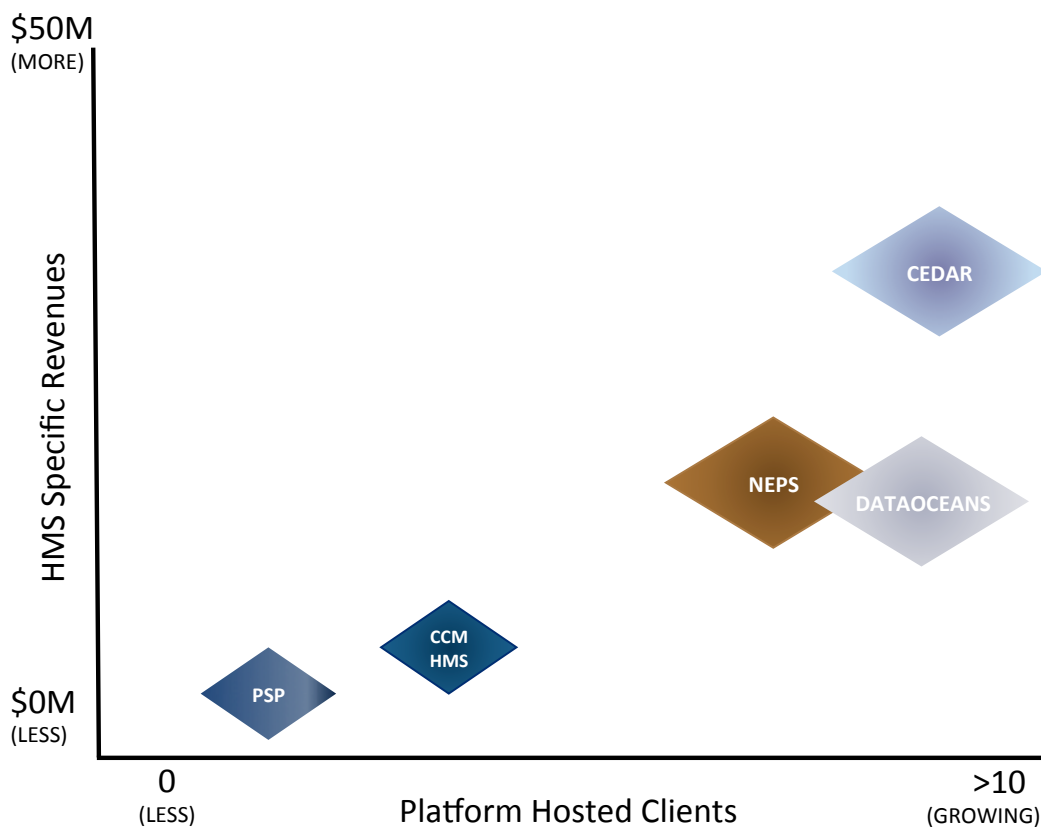
Figure 8: 2015 CCM Hosted Managed Services Market Comparison

Enterprises currently face numerous challenges as they seek to keep up with rapidly evolving CCM requirements and supporting technology. According to a recent book, "...any customer service interaction is four times more likely to drive disloyalty than to drive loyalty."[1] In addition, the Harvard Business Review published that "most customers encounter loyalty-eroding problems when they engage with customer service," and "service failures not only drive existing customers to defect – they also can repel prospective ones."[2] The Harvard Business Review article quotes data points from its research that says, "57% report having to switch from the web to the phone." This demonstrates that current web-based capabilities do not meet the self-service needs of a signification portion of customers. The web is just one part of an organization's CCM infrastructure, engagement strategy, and communication channel that appears to be under-delivering to customer expectations.

Understanding the complexities of the latest CCM technology and its potential impact on the customer is critical to remaining competitive in the marketplace. The result is a widening gap between organizations that can successfully meet customer demand and those that cannot. Composition software manufacturers are engineering additional capabilities into their tools, many having multiple major releases within the past three years; however, this has come with a corresponding increase in complexity. Even more challenging is the task of integrating all of the technology components required to enable full lifecycle customer communications management. CCM Hosted Managed Services firms have recognized these struggles and have been able to provide much needed assistance to many organizations. Providers have the expertise and solutions to address the challenges many organizations experience because of disparate technology infrastructures and inefficient business processes and workflows; all of which have been complicated by multiple composition tools acquired over the course of time in anticipation of solving those challenges.

The most important benefits and advantages of the CCM Hosted Managed Services model are:

- CCM Hosted Managed Services offers a single-sourced, integrated technology platform that incorporates all of the essential elements of CCM, as defined by Madison Advisors, which are necessary for end-to-end communications workflow automation, management, and governance.
- The technological complexity that is necessary to support today's requirements for CCM has been enabled in an easy-to-use web-user interface putting control of variable content in the hands of business users, eliminating the cost and lead time associated with heavy IT involvement.

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[1] Matthew Dixon, Nicholas Toman and Rick Delisi, *The Effortless Experience: Conquering the New Battleground for Customer Loyalty (Penguin, September 2013)*
[2] Matthew Dixon, Karen Freeman and Nicholas Toman, "Stop Trying to Delight Your Customers," *Harvard Business Review,* July/August 2010

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- The upfront capital expenditure and the corresponding time-to-market required to deploy the services is relatively low as compared to the investment required to acquire and integrate all of the necessary software and resources to provide similar capabilities.
- CCM Hosted Managed Services providers offer an extensive set of companion services including solution and communication design that ensures client success.
- CCM Hosted Managed Services providers have extensive knowledge and expertise that can be leveraged by clients in order to achieve strategic communication goals.
- An OPEX pricing structure that effectively transfers delivery risk from the client to the provider in that providers are primarily compensated for delivering success in the form of measurable results.
- Flexible, highly secure hosting models have been engineered to meet various client requirements.
- CCM Hosted Managed Services providers have continuously maintained a profit-motivated commitment to advancements in CCM technology.
- Print output is standardized and optimized to allow for the migration to a white paper factory in a printer agnostic model.

Enterprises should not remain frozen in their tracks waiting to see what happens, as doing so, they risk watching their competitors pass them by.

Madison Advisors anticipates continued growth for this delivery model in the coming years as new providers are poised to enter the market. With established relationships based upon the delivery of complimentary services, print service providers are well positioned to capitalize on this growing trend.

This is an exciting time for CCM technology as providers seek to evolve capabilities, strategies, and delivery models. Enterprises should not remain frozen in their tracks waiting to see what happens, as in doing so, they risk watching their competitors pass them by. CCM Hosted Managed Services will allow those companies who choose to participate the opportunity to turn what typically is a strategic threat into a competitive advantage.

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Kemal Carr
President
Madison Advisors

Since founding Madison Advisors in 2001, Carr has built the company into a highly respected, independent analyst firm that provides project-based, vendor-neutral research and advisory services designed to assist clients with technology selection and business process decisions.

Carr is regularly engaged by leading technology publications to write about key industry issues. His articles have been published in The Wall Street Journal, Document, Digital Publishing Solutions, and Mailing Systems Technology. He is also a frequent speaker at trade events, including Graph Expo, Xplor's Global conference, NPES/PRIMIR Industry Summit, and DOCUMENT's Strategy Forum.

Randy Beals
Principal Analyst
Madison Advisors

Mr. Beals has over 30 years of experience in the banking, insurance, and financial services industries. As Chief Operating Officer at Madison Advisors, Randy advised some of the nations' top companies regarding customer communications management strategies, including print and multi-channel delivery. He has authored and participated in white paper studies, participated on a number of expert panels, frequently speaks at industry events, and remains on the leading edge of current strategies to increase adoption of electronic communications.
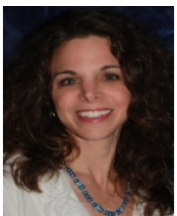
Gina L. Ferrara
Principal Analyst
Madison Advisors

Gina joined Madison Advisors in January 2014 after spending more than 19 years in the banking and financial services industry, where she served in a variety of capacities. She has spent a combined total of 15 years working as a project manager / business analyst in the eCommerce industry, focusing on the online banking and electronic bill payment space. Her experience in customer communications specifically relates to project management consulting for print and mail operations, postal optimization and address quality, as well as multi-channel delivery.

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Stephanie Pieruccini
Principal Analyst
Madison Advisors

Stephanie is the VP of Research and Enterprise & Technology Consulting Services at Madison Advisors. In this role, Stephanie is responsible for directing the Madison Advisors research agenda as well as providing guidance to enterprises and software technology providers in the communication and engagement space. Her experience comes from a strong knowledge of communication and production workflows and relevant solutions acquired from covering the print, marketing, and CCM markets as an analyst and consultant with InfoTrends as well as serving as the channel development manager for CCM and data quality solutions at Neopost USA. Stephanie has also acquired XML multi-channel publishing and document management experience at General Code and has gained professional experience with organizations including the Rochester Institute of Technology and Newspaper Association of America.

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Madison Advisors exists to advance the print and electronic communications objectives of Fortune 1000 companies. Madison Advisors specializes in offering context-specific guidance for a range of content delivery strategies, particularly those addressing enterprise output technologies and customer communications. The company has specific and unique knowledge of the document composition market, technology vendors, best practices, and emerging scenarios.

Madison Advisors offers services and expertise primarily through high-impact consulting services along with associated solution deployment, professional services. With no-nonsense, highly specialized engagements, Madison Advisors directly helps our clients achieve very hard and specific return on investment (ROI) related to their CCM, Print, and Electronic Communications initiatives.

Madison Advisors' analysts and consulting professionals are dedicated to technology and market research that is delivered through short-term project engagements as well as articles, publications, and presentations. We specialize in customer communication technologies including enterprise output management, content management, customer relationship management, e-billing, and infrastructure technology. In addition, our hands on experience, developed through assisting our clients with deploying selected solutions, adds a practical dimension to our approach not typically found with consulting generalists or other analyst firms.

For more information on Madison Advisors, please visit our website at www.madison-advisors.com or call (817) 684-7545.

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While large well-established companies may have a history of success, this success is based upon a service paradigm guided by their corporate DNA. Established at inception, this corporate DNA will guide and direct evolution and growth but may inhibit a rapid response to a new market opportunity. Conversely, entrepreneurs can more quickly identify needs in the marketplace and develop creative solutions to meet those needs; apparently it is easier to innovate in a garage than it is to turn the Titanic. In fact, history is full of examples of innovative companies that started in garages. Here are some well-documented examples:

Company Name	Founders	History
	William Harley Arthur Davidson *Founded 1901*	After William Harley designed an engine for a bicycle frame in 1901, he and friend Arthur Davidson spent the next 2 years working on their first motor-bicycle using a friend's garage. Their first motor bike did not perform as well as hoped; however, the two friends kept working at it and ultimately created a successful motorcycle company. With its dedicated fan base, highly modifiable and sought-after motorcycles, and popular merchandise sales, Harley-Davidson remains the top motorcycle company in the world.
	Bill Hewlett Dave Packard *Founded 1939*	Two friends, Bill Hewlett and Dave Packard, founded HP in Packard's garage in 1939 with an initial investment of only $538. Since its inception, HP has developed into a powerful and active company, developing various computers, laptops, and other computer-related accessories. The Packard's garage in Palo Alto is famous as the birthplace of HP and Silicon Valley.
	Larry Page Sergey Brin *Founded 1998*	Graduates of Stanford University, Larry Page and Sergey Brin worked day and night from a rented garage for a number of months and developed what has become the most commonly used search engine in the world. Google has also launched other useful websites and applications like Gmail, Google+, and Google Drive.
	Steve Jobs Steve Wozniak Ronald Wayne *Founded 1976*	The first Apple computer was developed in 1976 in the garage of Steve Jobs' parents' house in California. It started with the Apple I, and shortly thereafter, the team created the Apple II computer. The founders' products and company became famous when they got a break from their Macintosh line of products, from which they earned millions of dollars. Now, Apple is leading a technological revolution with its various devices, including Mac computers, iPhones, iPods, and iPads.

Table 2: Examples of Companies that Started in Garages

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