

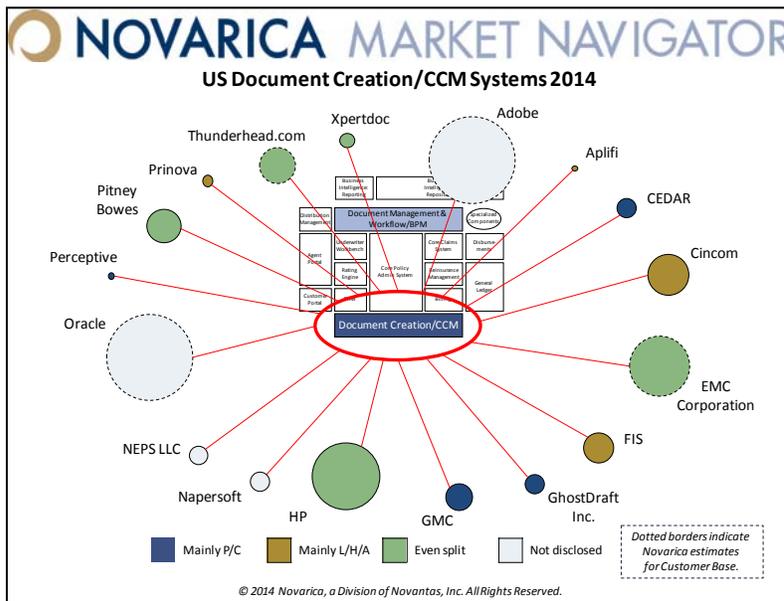
Authorized Excerpt From

NOVARICA

US DOCUMENT CREATION/CCM SYSTEMS

A Novarica Market Navigator Report

January 2014



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AUTHORS

Sarah Bogan
Associate Principal
sbogan@novarica.com

Tom Benton
Principal
tbenton@novarica.com

Lis Maguda
Senior Researcher
emaguda@novarica.com

SUMMARY

This is an excerpt of a recent Novarica report that provides an overview of the available document creation and customer communications management (CCM) systems and services for US insurers. The full report contains profiles of each of 17 vendor solutions shown in the graphic above, summarizing the vendor organization, client base, technology used, differentiators, lines of business supported, deployment options, implementation approaches, upgrades and enhancements, and key functionality.

INTRODUCTION

About the Report

The full report is designed to provide an overview of the current solution provider marketplace for document creation and customer communication management (CCM) systems and services, and to assist insurers in drawing up their shortlists of potential providers based on vendor market position and offering details.

Novarica Market Navigator™ reports do not provide subjective analysis or render judgment on each vendor's solution. They are based on factual responses to a universal RFI distributed by Novarica and subsequent follow-ups with the vendors to validate and confirm responses. The RFI covers details of organization, technology stack, client base, and key functionality. Profiles also include a summary of key differentiators, lines of business supported, deployment options, implementation approaches, and how upgrades/enhancements are handled. Screenshots of the products are available where they were provided by the vendor. Where available, Novarica's ACE Rankings are also embedded in the profiles.

This authorized excerpt includes the introductory material from the original report and the profile of GhostDraft.

RELATED RESEARCH

- [*US Document Creation/CCM Systems \(January 2014\)*](#)
- [*Insurer IT Budgets and Projects for 2014 \(September 2013\)*](#)
- [*Deconstructing ECM for Insurance \(June 2009\)*](#)

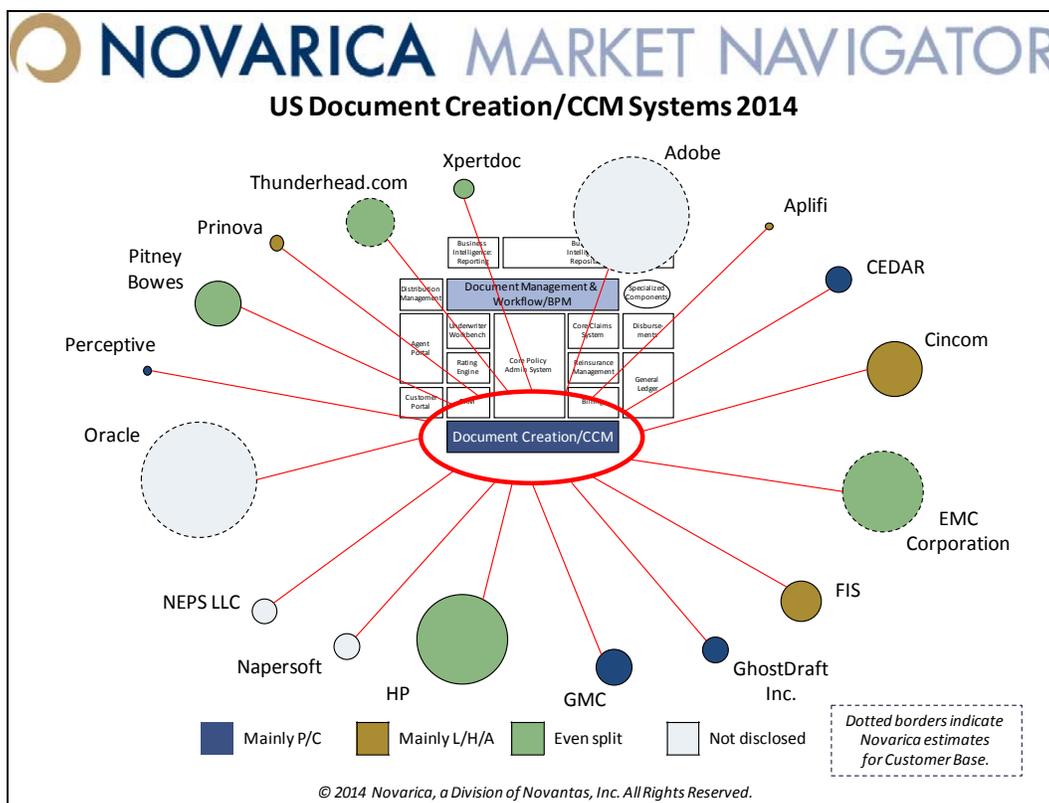
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Novarica Market Navigator Graphic

The Novarica Market Navigator Graphic is designed to provide an overview of the vendors in a particular market space.

In the document creation and CCM solutions graphic, the relative size of client counts (US insurers only) of those vendors' solutions is used to size each vendor's bubble. Further detail is available in the profiles of each solution.



The graphic conveys the size of the client base with the relative size of the solution's bubble: the larger the bubble, the larger the client base. Novarica estimates are indicated by a dotted rather than solid border. The color of the bubble indicates the mix of P/C and L/H/A insurer clients where available. The Novarica Core Systems Map that sits behind the bubbles reflects the core focus of the solutions profiled—document creation—in dark blue, and additional focus areas (that some but not all of the solutions address) in light blue. Note that bubbles are placed around the center in alphabetical order; no subjective judgment is implied or intended.

MARKET OVERVIEW

Many insurers have identified customer experience to be an important factor in meeting their growth and retention goals. This has led insurers to evaluate customer interactions with a focus on providing a universal experience with consistent messaging and branding regardless of the mode of communication or the different policies that an individual possesses.

Document Creation and CCM Systems

Despite the increase in web-based communications, paper and electronic documents are still the predominant communication medium for insurers. Novarica defines **document creation** solutions as those that are primarily concerned with the composition and creation of documents, including policies, forms, customer and claims correspondence, and account statements.

Customer communication management (CCM) is a related area of services and solutions that focuses on providing a universal messaging and branding across the customer's desired method of communication in order to communicate tailored messages using customer-preferred communication channels (e.g. print, email, mobile, text). Customer communication management also focuses on providing cross-sell opportunities by providing advertising or educational material that is targeted to specific customers. Customer communication may require integration of data across disparate core systems in order to provide a customer-focused rather than a policy-focused interaction. While many solutions work to provide both document creation and CCM capabilities, there are a few that provide either niche document creation or view themselves as providing CCM capabilities and services without document creation functionality (e.g. NEPS and Prinova).

It is important to distinguish document creation and generation from document management.

Document management involves the intake, indexing, storage, and rules-based routing of external documents such as correspondence, applications, underwriting requirements, and claims materials. This report focuses on providers of document creation and CCM solutions. Document management solutions will be covered in a separate Novarica Market Navigator™ report scheduled for 2014 publication.

What Are Insurers Looking For?

Generally, insurers' document creation strategies are part of a customer communications improvement strategy (including both correspondence and statementing). Insurers need to make sure their customer documents are timely, accurate, and highly customizable. Improved customer satisfaction and cross-sell rates are generally the goal.

Insurers also typically invest in document creation solutions as part of improvements to their policy issuance capabilities, so that speed-to-market is not impacted by the inability to get new policy documents set up in a legacy administration and issuance system.

While modern claims, policy, and billing systems often have basic levels of document creation built in, carriers looking for multi-channel delivery, better look-and-feel for documents, or better content management capabilities look to more robust document creation solutions. Carriers' needs vary depending on the volume and complexity of the types of documents to be generated. High-volume production such as policies, bills, or statements uses different capabilities than low-volume correspondence, like manuscript forms. Most carriers need both capabilities. In claims, for example, there may be some communication that is highly automated—e.g., we received your claim—and other communication that is specific and unique to a particular claim, e.g., an offer of negotiation.

Insurers generally prioritize the following attributes of document creation and CCM solutions:

- **Industry focus.** Since document creation is more of a horizontal technology and many document creation solution providers serve multiple industries, insurers look for the vendor's level of understanding of the insurance industry and the infrastructures with which the solution will need to be integrated.
- **Content library and templates.** The key attribute here is flexibility in designing and customizing documents. Look for a robust content library with a repository for templates and forms. Some solutions include a pre-existing ISO or ACORD library, preloaded with all ISO/ACORD forms. Insurers should check to see how the library is managed and what the update processes are. They should also look for full version control to track, version, and compare templates, content, and business rules.
- **Core system integration history.** Many core system solutions have rudimentary document creation capabilities that have not kept up with the pace of robust functionality that is provided by document creation solutions. This means many document creation solutions are stand-alone solutions that are integrated with core systems. In some cases, the core system vendor and the document creation vendor may have a partnership in which the document creation solution comes embedded. Insurers should check to see if the document creation vendors that they are considering have a history of integrating with their existing core policy, billing, and claims solutions.
- **Document rendering.** Solutions support retrieving, processing, and updating data from external sources including databases, print streams, file systems, and third-party applications. Some easily extract document data to create reports and produce data files for new applications. Some include the ability to derive data values and include data validation. Insurers should consider the level of indexing ability for the output: especially for high-volume print, the system should be able to capture print stream attributes like page counts, data within each document, addresses, and barcode information for data analysis.
- **Rules capabilities** facilitate assembling documents on the fly. Configurable business rules support personalization, multiple jurisdictions, languages, and output channels.

Look for ease of managing and changing business rules as well as whether mass customization to create individualized messaging is supported.

- **Composition and design tools** vary significantly across vendors. Some are designed to work natively with MS Word, while others have proprietary tools. Those that use Word or are more Word-like make it easier for users to familiarize themselves with the tool, reducing training time and effort. Keep in mind that Word-based tools have a prerequisite of MS Word, so insurers should be sure to check if the solution was designed with the version of Word that they use in mind.
- **Document creation workflow tools** including management of existing assets, collaborative authoring, and approval cycles. For some documents such as correspondence, manuscripted endorsements, or claims documentation, a supervisor may need to review the document and sign off prior to release. Look for real-time monitoring and reporting of workflow processes for additions and changes to template content. Some solutions also include the ability to monitor new underwriting employee work based on a percentage defined by the manager.
- **Multi-channel delivery**, including PDF, email, web, and mobile as well as print.
- **Administrative tools.** A wide variety of tools are included with document creation solutions. Look for testing and quality assurance tools. Many provide toolsets for working with data schemas and metadata for transactional and database data sources. Also, document conversion can be one of the more time-consuming aspects of launching a new document creation solution. Check to see if the system includes document conversion tools to facilitate conversion of an existing library and reduce implementation timeframe. Most have role-based security and access control. Look to see how well the solution supports batch, real time, and interactive print.
- **Proof and approval process.** The process of creating new document templates varies among the solutions. It is imperative to understand the development process and the timeline involved in order to assess which vendors more closely meet an insurer's needs. The proof and approval process can be complex, with multiple steps that take hours, while other vendors' systems support real-time updates.
- **Vendor deployment options** Deployment options such as cloud-based/SaaS or on-premise, which may impact an insurer's vendor selection process. For instance, some vendors support either SaaS or on-premise exclusively, and some offer the choice of cloud vs. on-premise implementation.
- **Vendor services provided.** Solution providers in this space offer a wide array services for their clients. These can be part of the general license or available as additional services. Services provided for each are in the At-A-Glance table in each vendor's profile.

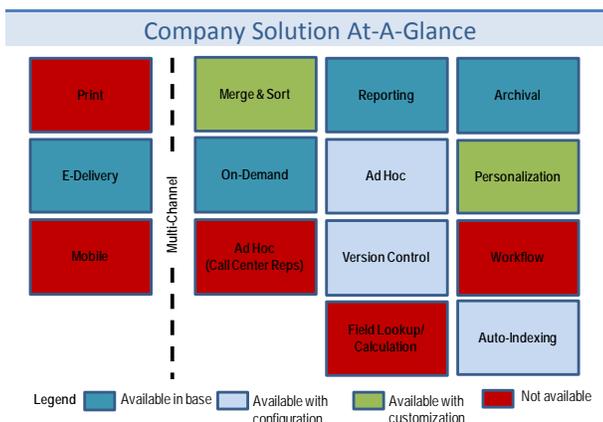
ABOUT THE PROFILES

Each profile contains a Vendor At-A-Glance graphic and quick reference table outlining the key functionalities and lines of business for each vendor’s document creation and CCM system. Vendors that did not submit detailed information for this report do not have At-A-Glance graphics or tables.

A functional capabilities map provides a color-coded view for each application/suite based on whether a functionality is included as part of the system, and if so whether it is available in the base product, available with configuration, or available with customization.

For example, the sample diagram at the upper right of this page indicates that reporting and archival capabilities are available in the base product, and output to e-delivery and on-demand channels is supported. Ad hoc, version control, and auto-indexing are available with configuration. Merge and sort and personalization require customization. Field lookup/calculation and workflow capabilities are not included, and output is not supported to print, mobile, or ad hoc (call center reps) channels.

As part of the Vendor At-A-Glance section, the system launch date, core technology, up to two publicly announced clients (limited for space and consistency purposes), deployment options, document creation/CCM services available, and any pre-packaged, pre-built forms, libraries, and templates (i.e. ACORD, ISO) are provided. Total US insurer clients are also listed—this total only includes carriers, not MGAs or reinsurers, and only counts clients live on the solution. Clients in implementation, live outside the US, or MGAs or reinsurers are mentioned in the Client base paragraph of each profile. Many of the vendors profiled in this report also have a significant customer base outside the insurance sector, which is outside the scope of this report.



Launched/Re-architected	Year
Core Technology	Programming Language
Total US Insurer Clients	Number of Carriers
Publicly Announced Clients	Carrier 1, Carrier 2
Deployment Options	Hosted, On-premise, SaaS
Forms, Libraries, and Templates	ACORD, ISO
Document Creation/CCM Services Provided	
<ul style="list-style-type: none"> Original Document Generation Document Consultation Proofreading Formatting Copyediting Communication Governance Document Assembly 	<ul style="list-style-type: none"> Print Mgmt Postal Optimization Barcoding Forms Design Forms Creation Forms Conversion Data Transformation and Integration

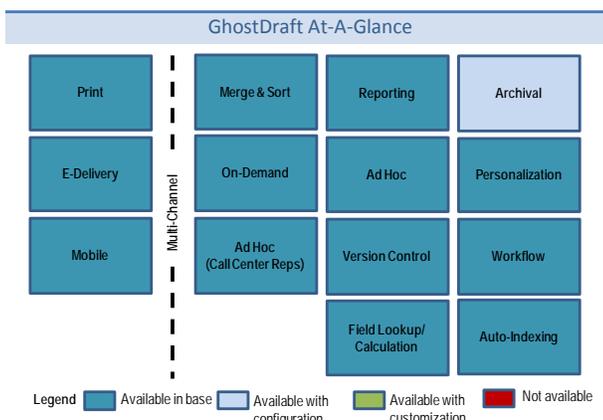
GHOSTDRAFT INC.

Company. GhostDraft Inc. is based in Toronto, ON with approximately 350 employees.

In terms of document creation and CCM services, GhostDraft Inc. provides original document generation, document consultation, proofreading, formatting, copyediting, communication governance, document assembly, print management, barcoding, forms design, forms creation, forms conversion, and data transformation and integration.

Solution. GhostDraft Inc.'s CCM solution, GhostDraft, was launched in 2007. The most recent release has a redesigned product architecture. GhostDraft Inc. provides a platform to satisfy customers' needs for flexibility, scalability, and performance and to allow GhostDraft Inc. to expand and add functionality as needed by the market. The new platform is built on a services-oriented architecture, written using .NET and XML data interchange. Dashboarding/reporting is available. Screen configuration is user-managed via configuration tools. Workflow, rule and interface configuration is vendor- or user-managed via configuration tools.

The solutions included in the GhostDraft suite include GhostDraft Studio, GhostDraft Cloud, and GhostDraft Data Workbench.



Launched/Re-architected	2007
Core Technology	C#
Total US Insurer Clients	10
Publicly Announced Clients	Mutual Aid eXchange, Kentucky National Insurance
Deployment Options	SaaS
Forms, Libraries, and Templates	N/A
Document Creation/CCM Services Provided	<ul style="list-style-type: none"> Original Document Generation Document Consultation Proofreading Formatting Copyediting Communication Governance Document Assembly Print Management Barcoding Forms Design Forms Creation Forms Conversion Data Transformation and Integration
Output Channels Supported	<ul style="list-style-type: none"> Print E-Delivery Mobile Ad Hoc On-Demand

Solution/Component	Description
GhostDraft Studio	GhostDraft Studio is a desktop document-authoring application. It is intended for business users with no programming or database knowledge to create templates for a variety of documents by combining data elements and rules created by the user in plain language. Self-contained testing scenarios and real-time error checking ensure that document composition will execute as designed, with no debugging required. Also included in GhostDraft Studio is the ability to creation data capture forms for interactive documents. It is provided at no additional charge to an unlimited number of users. The target users for maintaining forms are business users. The design environment leverages a custom environment.
GhostDraft Cloud	GhostDraft Cloud automates the entire document creation and delivery process through a cloud-based service offered as a monthly subscription. It is deployed on the Microsoft Windows Azure platform. The web services architecture enables integration with core applications. Multi-channel support, including print, email, web, and SMS provide delivery options for documents produced in a variety of output formats. Live audit and analytics features provide visibility and control during and following document production and delivery.
GhostDraft Data Workbench	GhostDraft Data Workbench is designed to allow IT professionals to convert data from core system databases, or other sources such as print files and flat files, into XML data consumable by GhostDraft. Basic transforms, conditional logic, and mathematical functions support the mapping of data from a variety of sources, including XML, SQL queries, Excel, CSV, JSON, SOAP web service calls, and Salesforce.com. Testing and debugging features are included.

Source: Vendor RFI Response

Functionality. GhostDraft offers batch, real-time, and interactive delivery to print, e-delivery, mobile, ad hoc, and on-demand output channels without the need to create multiple templates or modify composition. It provides configurable business rules for personalization, multiple jurisdictions, multiple languages, and multiple output channels. If the mainline business application specifies the mode of delivery as e-delivery only, GhostDraft will only produce output destined for the e-delivery channel. GhostDraft Inc.’s experience is that carriers want to maintain their customers’ communication preferences within their core system, as this is a key piece of customer data that they want to have available for other purposes. For this reason, GhostDraft Inc. does not maintain customer communication preferences within the GhostDraft system. GhostDraft can produce documents (HTML, PDF, GIF, and others) and metadata to support EBPP services.

Available in base

- Retrieve, process, and update data from external sources, print streams, file systems, and third-party applications
- Extract document data to create reports and product data files for new applications
- Derive data values
- Mass customization to support individualized messaging
- Template-based ad hoc documents to support customer-facing users
- Auto-indexing

- Capture print-stream attributes
- Merge and sort capabilities
- Document creation specific workflow tools
- Full version control
- Content repository and content management tools

Available with Configuration

- Archival capabilities for all documents generated

GhostDraft's user interface was designed with mobile and tablet devices as the first use case and then a computer screen as the second use case.

Key differentiators. GhostDraft's key differentiators, according to the company, are that it is business-centric, has a business document domain model, is cloud and SaaS focused, encompasses the whole document lifecycle and has zero-license, unlimited document authoring. The entire document authoring process is business-driven. The data model and test scenarios are independent from the core system data source, with real-time error checking to eliminate debugging cycles. Document authoring is a self-contained process, requiring no interaction with the database to build document templates. Data elements are assigned plain English names and organized into a "document domain model," a structure created by the business user from the business perspective. All document templates are stored in the cloud, and documents are composed in the cloud, with security provided by Microsoft's Azure platform. The payment structure is based on a monthly fee that can scale up or down as necessary and requires no long-term commitment. GhostDraft Inc. services begin before document automation, to ensure that the document's design, layout, and text produce communications that are clear, relevant, and actionable. GhostDraft's authoring tool, GhostDraft Studio, is provided at no charge to an unlimited number of users, so the authoring process can be distributed among a wide group of domain experts, placing control into the hands of those most familiar with each business process and target audience.

Technology. GhostDraft Cloud is browser-based for general users and administrative functions. GhostDraft Studio and Data Workbench are Windows applications. DB2/UDB, Oracle, Microsoft SQL Server, and any ODBC-compliant database are supported. The solution is written completely in C#. GhostDraft is based on a service-oriented architecture using XML as the data interchange mechanism. Key components of the system include data mapping, document composition, channel preparation, and multi-channel document delivery. GhostDraft Cloud provides e-presentation and e-delivery as part of the platform and supports print, finish and mail, and online mailbox channels. GhostDraft Inc.'s future plans revolve around the addition of content to be distributed with the GhostDraft system. The company plans to include a GhostDraft domain model based on the ACORD framework, which will serve as the data source for ISO forms. They also plan to add the ISO content for all commercial lines of business. ACORD XML is not currently supported by the solution. GhostDraft Inc. does not allow clients to touch core code, but there are several elements of the system that are extensible by the user, in a protected-upgrade fashion, using industry-standard languages.

GhostDraft Inc. utilizes both manual and automated testing tools. GhostDraft has been architected to scale both vertically (i.e. more resources added to a single processor) and horizontally (i.e. more processors added to the cluster). With each release of the software, GhostDraft Inc. conducts testing of scaling in both directions. GhostDraft Inc. conducts unit tests, using test data scenarios developed by the customer. These include tests of the application, data feeds, and application interfaces. Unit testing uncovers any problems early in the development cycle and facilitates regression testing if any downstream changes are made. When the application is complete and has been unit-tested, GhostDraft Inc. provisions the customer’s GhostDraft Cloud and loads the customer’s document templates into their repository. Testing produces output to the all of the customer’s required channels, as outlined in the design specification, including print, email, and archive. In addition, all workflows are executed to validate they meet customer requirements.

Partnerships. GhostDraft Inc. has partnerships with Instec, Maximum Processing, and Simplified Communications Group. GhostDraft reports that the solution has previously been integrated with Instec Quicksolver and Maximum Processing’s Stingray System.

Client base. GhostDraft Inc. reports that there are 4 US P/C insurers live on GhostDraft, all with annual premium under \$1 billion. One is a personal carrier, 2 are commercial carriers and 1 is a combined personal and commercial carrier. There is also one Canadian insurer and 3 carriers outside the US and Canada live on the solution. All 3 international carriers have over \$1 billion in annual premium. 100% of clients are on the latest release. Publicly announced clients include Mutual Aid eXchange, Kentucky National Insurance, and United Educators.



GhostDraft Inc. received an average score of 95 in Novarica’s ACE (Average Customer Experience) Ranking report on the GhostDraft Studio solution. ACE Rankings are based on an online survey of senior technology and operational executives at three insurer clients who have direct experience with the vendor product and organization. Novarica validates the identity and responses of the participants, who are assured of anonymity.

The Novarica ACE Ranking survey asks for the reference to rank his or her experience with the vendor and solution on a 5-point scale from “Very Poor” to “Very Good” against various areas of customer experience, for example “Responsiveness of vendor senior executives.” These statements are grouped into Novarica’s four **SOFT** areas (Staff, Organization, Functionality, and Technology) as well as an additional area for Overall Customer Satisfaction, which is double-weighted in the average.

Lines of business. Clients are live in all 50 US states for professional liability. Clients are live in between 2 and 24 US states for personal auto, homeowners, personal umbrella, dwelling fire,

boat owners, personal package, commercial property, general liability, and commercial auto. Clients are currently in implementation for BOP, commercial crime, E&O/E&O, inland marine, commercial package, specialty, workers' comp, surety, and other commercial lines of business. GhostDraft is designed to support all surveyed L/H/A lines of business but no clients are currently live on or implementing these lines of business.

Support. GhostDraft is supported by a unit of 65 employees, including 20 employees who support the core product and 13 in customer-facing roles. Support staff averages 5 years experience with GhostDraft. Support staff are drawn from a common pool of staff and support is provided from Toronto, ON. A user conference or other event is not available.

Deployment options. All document composition, interactive data input, channel preparation, and e-delivery is executed in GhostDraft Cloud, a cloud-based service deployed on Microsoft's secure Azure platform. The pricing model is exclusively SaaS, with a monthly fee that scales up or down based on need, and with no long-term commitment. GhostDraft Studio and GhostDraft Data Workbench are light-footprint desktop applications for document authoring and data mapping, distributed at no charge to an unlimited number of users.

Implementation. GhostDraft Inc. uses an agile approach to project implementation, working with customers to break their documents into logical groups. These small groups are implemented incrementally, with each iteration using a four-phase process (design, build, test, deploy), which allows for document testing and migration to production as quickly as possible. Learnings uncovered in the initial sprints are applied to subsequent iterations to increase efficiency and reduce implementation time. Resource requirements vary depending on the scale and scope of the implementation. At the outset of a project, GhostDraft Inc. works jointly with the customer to define requirements for document layout and format, workflow, production, mail, e-delivery, and archiving. In addition, GhostDraft Inc. and the customer establish a high-level project plan that includes the project timeline, staffing, and training requirements.

GhostDraft Inc. provides an implementation services pack to all customers as a standard part of the subscription. These start-up services provide document authors with the information and training needed to create documents using GhostDraft Studio and assist IT with the integration of GhostDraft and the business application. The initial implementation services pack includes inventory and analysis of the first group of documents, creation of domain model for the first document group, beginning and advanced training for document authors, training for IT data integration personnel, and integration support to promote documents into production.

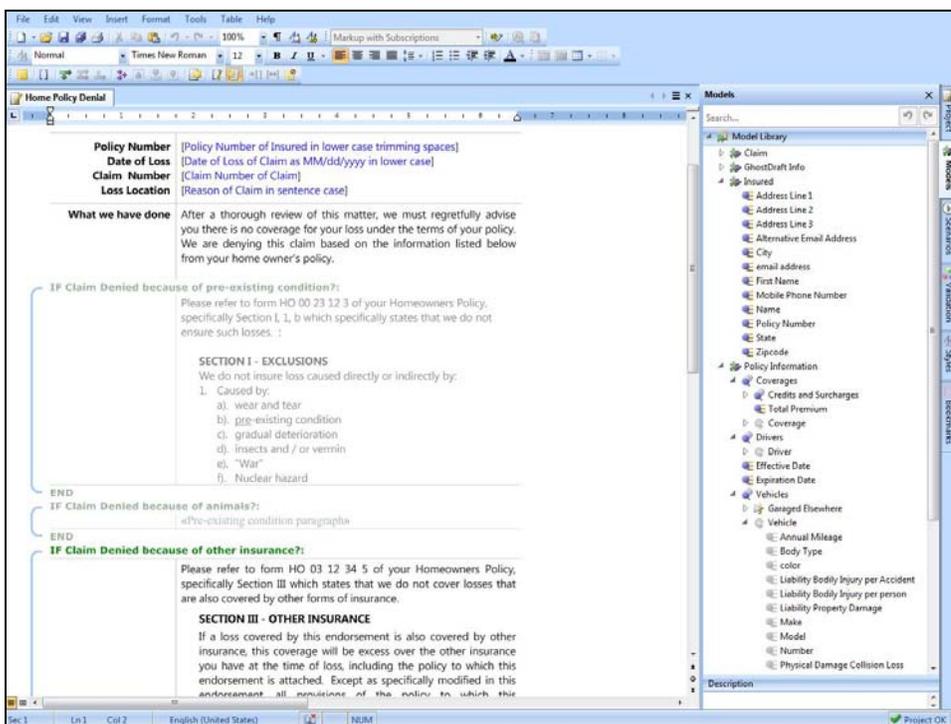
GhostDraft Inc. reports that GhostDraft can be ready for initial go-live in 90 days or less and fully rolled out in an additional 90 days or less.

System upgrades/enhancements. GhostDraft is written in .NET using Visual Studio. GhostDraft Inc. uses scrum and agile development methodologies. They also incorporate automated unit tests supplemented by manual regression testing into the process. GhostDraft Inc. is currently working on enhancements that will allow the business user that authors a document to set up

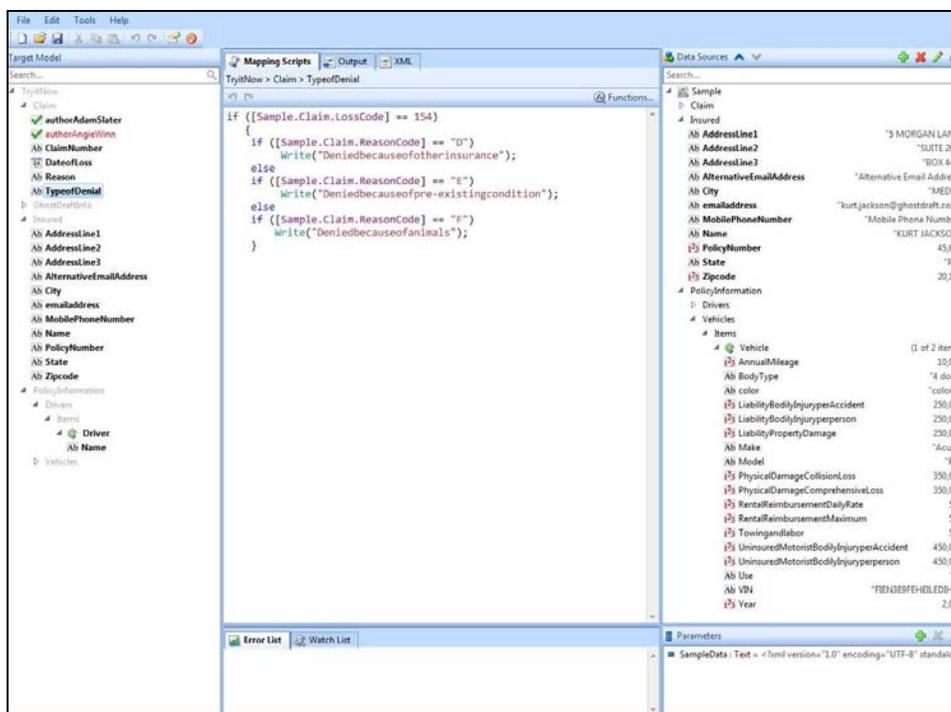
and configure the workflow associated with the creation of that document. These enhancements are scheduled for release later in 2014. Additional collaboration and enhanced reporting and analytics are also on the roadmap. Enhancements are driven by market and customer needs and are internally funded. Partner-specific enhancements are funded on a case-by-case basis in collaboration with the partner.

Pricing. GhostDraft Inc. reports that average implementation cost is under \$100,000. Pricing is based on a monthly fee that scales up or down according to customer needs.

Screenshots of GhostDraft.



Sample screen for document author



Sample screen for IT user

CONCLUSIONS

Document creation has evolved beyond tactical document generation to be part of a more holistic customer communication management strategy among carriers who are looking to provide a universal customer experience and drive deeper relationships among their existing customer base. Carriers are evaluating how their technology organization supports their more customer-centric business strategy. In many cases, insurers identify gaps in their core systems that feed the document creation tools. Carriers can resolve gaps in their technology portfolio as part of a planned system replacement or the addition of data warehouses and more robust customer communications management tools.

We recommend that insurers who are looking at these systems narrow the overall market to a short-list of three or four by focusing on four main areas: **staff**, **organization**, **functionality**, and **technology**, easily remembered by the acronym **SOFT**.

- *Staff*
 - Does the vendor's staff have the right skills and experience?
 - How well are they likely to understand your needs?
 - What resources are available for implementation and support?
 - What assurances will you have that the staff you meet during the sales process will really be the staff that you work with?
- *Organization*
 - How stable is the organization?
 - Is it big enough for your company to do business with?
 - Who are their other clients?
 - How much of a role do clients have in product development?
- *Functionality*
 - Does the solution support the lines of business, states, and high-level functionality that you need?
 - Which functions are actually live at reference clients?
- *Technology*
 - Is the solution's technical architecture compatible with your enterprise standards?
 - Does your IT staff have the skills to support it?

ABOUT NOVARICA

Novarica provides information, insights, and perspective on markets, operations, and technology to financial services and insurance executives. The company delivers its service through published research, retained advisory services, and project-based consulting. Novarica's research includes market and trend analyses, best practices research, case studies, and independent analyses of insurance software vendors. Novarica draws its knowledge from the personal experience of its principals, the ongoing information gathering initiatives of dedicated research staff, and regular communication with insurer executives through informal networks and through the Novarica Insurance Technology Research Council.

Authors



Sarah Bogan is an associate principal in the insurance practice. Her recent projects for insurers have included core systems vendor evaluation projects as well as organizational, IT, process and program management assessments. Sarah's experience includes many years at Allstate in a variety of internal consulting, technology strategy and planning, and business architect roles. Prior to joining Allstate, she was a consultant at PricewaterhouseCoopers. She holds a BS from Indiana University. She can be reached directly sbogan@novarica.com.



Tom Benton is a principal in the insurance practice at Novarica with expertise in IT strategy, business process reengineering, CORE systems implementation and project management, primarily for life and annuities. Prior to joining Novarica, he served as VP, Technology and Systems at Navy Mutual, where he led a multi-year strategy to transform the core systems, which included a rapid-deployment policy administration system implementation. Tom has broad experience as a senior IT executive, serving as CIO/CTO at two medium-sized non-profits in the Washington, DC area, and has held positions in IT project management at PG&E and General Electric. Tom holds a BS degree from Cornell University and a MS degree from MIT. He can be reached at tbenton@novarica.com.



Lis Maguda is a senior researcher at Novarica and Series Editor of the Novarica Market Navigator reports. She focuses on insurance technology vendor research and consulting engagements. Prior to joining the company, Lis worked in multiple capacities at Harvard University. She holds a B.A. *cum laude* in English from Harvard University. She can be reached directly at emaguda@novarica.com.