



STRATEGY MEETS ACTION

## **Realizing the True Power of Insurance Data: An Integrated Approach to Legacy Replacement and Business Intelligence**

*Featuring as an example:  
Guidewire DataHub™ and  
Guidewire InfoCenter™*

### **An SMA Perspective**

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*This perspective is based on SMA's ongoing research on data management, business intelligence, and core systems in insurance. Guidewire has purchased distribution rights.*



### About This Perspective

This SMA Perspective is a summary of SMA's ongoing research on data management, business intelligence, and core systems.

Guidewire has purchased distribution rights for summary results of selected research and opinion. This is not paid-for research.

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## Data – The Enabler of Major P&C Initiatives

Everyone agrees that the property and casualty insurance industry is deeply dependent upon data. Every part of the business captures data, formats it, enhances it, and analyzes it. Marketing acquires and analyzes customer data to identify segments, product needs, and prospects. Underwriting relies on both internal and external risk data to determine whether to accept a risk. Claims gathers it from many sources to investigate incidents and determine the best approach for restoration or reimbursement. A review of the key trends in P&C, along with the challenges and opportunities related to data, sets the stage for a deeper understanding of the business and technology capabilities for data and the insights that propel the business forward.

### Major P&C Trends and the Data Connection

It is a very competitive time in the North American P&C industry. Insurers have a wide variety of initiatives underway that fundamentally reflect three big trends: customer-centricity, innovation and transformation, and operational flexibility. All three rely on the ability to manage and leverage data to the fullest.

Customer-centricity has been discussed in insurance for a long time. Now many insurers are actively transforming from being product-centric to customer-centric organizations. A thorough understanding of the needs of policyholders and agent/brokers is driving changes in product, distribution, underwriting, and policy service. Insurers quickly discover that in order to become customer-centric, they must first be data-centric.

Innovation and transformation initiatives in insurance can be found around every corner. In the past, the words innovation and insurance rarely occurred in the same sentence. By nature, the industry is conservative, cautious, and slow to change. But now the dynamics of the business are changing. External factors like an uncertain economic environment, increased regulation, and more frequent and unusual catastrophes are resulting in the need to rethink everything. Major innovation and transformation initiatives would not be possible without ready access to information for decision making and tools that help to find new insights about customers, risks, channels, and other parts of the business.

Leading insurers know that being competitive requires a high level of operational flexibility. Responding to changing customer demands and the business environment allows them to seize new opportunities and mitigate negative circumstances. More than ever, insurers need the ability to rapidly add products, move to new geographies, or integrate an acquired firm. Insurers with flexible core systems and modern enterprise data management approaches will be positioned to capitalize on new opportunities.

### Challenges Inherent in the Current Environment

The IT infrastructures of many insurers today prevent them from being customer centric, creating a culture of innovation, and achieving operational flexibility. There are a variety of reasons for this, many of which have data issues at their core.

- **Multiple legacy systems:** Running the business on old policy, billing, and claims systems inhibits flexibility. These systems have typically been extended and patched to the point that even relatively simple changes take a long time and place additional

Three big trends in P&C all rely on the ability to manage and leverage data to the fullest. These trends are:

- Customer-centricity
- Innovation and transformation
- Operational flexibility



Good data supports decisions that directly drive key metrics. Insurers that have their data well organized, along with modern BI and analytics capabilities, are able to differentiate with data.

strain on IT resources. What makes the situation even worse is that many insurers have multiple legacy systems.

- **Disparate data:** Insurance organizations are notorious for having siloed systems, with each department or line of business managing their own systems and data. In this environment, aggregating and accessing data related to multiple areas (customers, products, claims, etc.) is vital to gaining a better understanding of daily operations and new insights to enable strategic decisions. This is especially challenging when an enterprise data model is not widely used by the company.
- **Poor data quality:** It is not enough to have huge volumes of proprietary data. Data cannot be considered a valuable corporate asset unless its quality is good. There are many reasons why data quality may be poor, including inconsistent definitions, incomplete data, inaccurate data, or data that is out-of-date.
- **Lack of an enterprise data strategy:** To leverage the true power of data in the enterprise, it needs to be managed at the enterprise level. Turf wars over data ownership or data stranded in departmental islands diminish an organization's ability to turn that data into information for decision making.
- **Poor/ineffective data warehouses:** Insurers must have their data well organized in order to benefit from modern BI and analytics capabilities. Unfortunately, the haphazard growth of warehouses and marts over the years has often resulted in data that is still difficult to access and provision for BI uses.

These challenges create stumbling blocks for many insurers looking to unleash the power of BI and analytics. However, modern solutions address these issues. In fact, the best times to tackle these issues might be when the core systems are being upgraded.

## Opportunities to Differentiate with Data

An insurer's success depends on many factors, including its brand position, distribution channel, product mix, operational efficiency, and the expertise of employees. It is often said that companies must consider people, processes, and technology in planning for or enhancing any aspect of the business. But another important dimension must be added to this list – data. It is foundational for all strategy, planning, and operational activities.

Good data supports decisions that directly drive key metrics. Insurers that have their data well organized, along with modern BI and analytics capabilities, are able to differentiate with data. While there are hundreds of different types of opportunities, a few examples provide insights into the potential for insurers:

- **Agent location:** Determining the optimum location for new agents should be based on analysis of the existing book of business, demographic/census information, and the location and performance of the current distribution partners.
- **Risk of defection alerts:** Identifying policyholders at risk of switching allows insurers to take proactive steps to retain good customers. Analyzing data from policy, billing, and claims transactions can help to determine triggers that predict defection. Analysis can also help identify best customers and provide them with the appropriate tier of service.
- **Product performance:** Gaining real-time understanding of how products are performing, by market or by agent, enables insurers to fine-tune marketing, pricing,



and product features. The ability to assess information on sales and loss trends helps detect problems early on and determine the best course of action.

- **Fraud prevention and detection:** Analyzing claims, starting with the first notice of loss, can help to spot claims needing further investigation. Insurers should continually seek insights from past claims and leverage data from national fraud databases.

## Business Capabilities

In order to capitalize on the power of data, insurers must establish three foundational business capabilities: optimum business flexibility, high quality data, and timely access to data.

### Optimum Business Flexibility

The traditional insurance business model is one that tends to lack flexibility. Products are introduced only after sufficient historical information is available about the covered risks. Once launched, they are designed to have a long lifetime. Most insurers are product-centric, and the notion that everything must revolve around the product is slow to change. This culture is usually reflected in the company's technology infrastructure, which is built for efficiency and control. In earlier days, IT systems were built based on these principles. Flexibility was not necessarily top of mind in the design, and even when it was, few designers realized that their systems would still be in use decades later. Data was designed for use by the application which it served, rather than use for enterprise-wide analysis and insights.

Today insurers must be able respond more quickly to market opportunities and challenges. IT systems and data must be designed and implemented so that they are adaptable and extensible. Once strategic business decisions are made to expand into new geographic areas, introduce a new product, or partner with a new distribution channel organization, the speed to implement becomes a critical success factor. Modern core systems and enterprise data management approaches are required to enable optimum business flexibility, allowing the insurer to react much more quickly than in the past.

### High Quality Data

Although there are technology tools and expertise required to manage data, the requirement for high quality data is fundamentally a business requirement. Business leaders should have responsibility for determining what data is acquired, how that data should be defined, and how the data is used. Because data is often aggregated from different sources for BI purposes, it is extremely important that the data be correct, consistent, complete, and current. These four C's of data quality form the foundation of high data quality.

**Correct data** is one of the most important quality factors of all. If the information about a customer, risk, or product is incorrect, insights from analysis will probably be incorrect too. Although the need to have correct data seems obvious and achievable, there are many reasons that incorrect data finds its way into databases.

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A data environment that makes it easy for business users to directly access the data they need in formats that are suitable for analysis has gone from being a desire to a necessity. Today, timely access means now, and now is only possible with a modern enterprise data environment.

**Consistent data** is achieved when insurers manage data across the enterprise in a common manner, leveraging a common data model. One set of definitions should be used so that combining data from different source databases is straightforward.

**Complete data** allows BI and analytics results to more closely reflect reality. As an example, suppose that a system has a field that agents rarely or never fill out that represents the reason prospects reject offers. The data would be incomplete, and it would be difficult to use a BI tool to gain any insight as to whether prospects were rejecting the offers due to price, coverage, or some other reason.

**Current data** is critical in order for business users to get the maximum value from the data. Reports on sales results are less valuable if they are only available from prior periods. Current data is also especially important when acquired from external parties. Information about prospects for campaigns is less valuable if the data is old, or if the prospects have made property changes in the meantime.

## Timely Access to Data

The speed of business is increasing. Insurers cannot afford to wait weeks or months for IT to provision the data needed for business intelligence or analytics projects. Today many business users see their requests added to a long queue of IT projects. Because of the current data organization in many companies, IT must often go through many steps to make the data, reports, and tools available to the business users.

The business requirement for timely access can be met when data is organized for easy access, and when data warehouses and marts are pre-built and flexible. A data environment that makes it easy for business users to directly access the data they need in formats that are suitable for analysis has gone from being a desire to a necessity. Today, timely access means now, and now is only possible with a modern enterprise data environment.

## Technology Capabilities

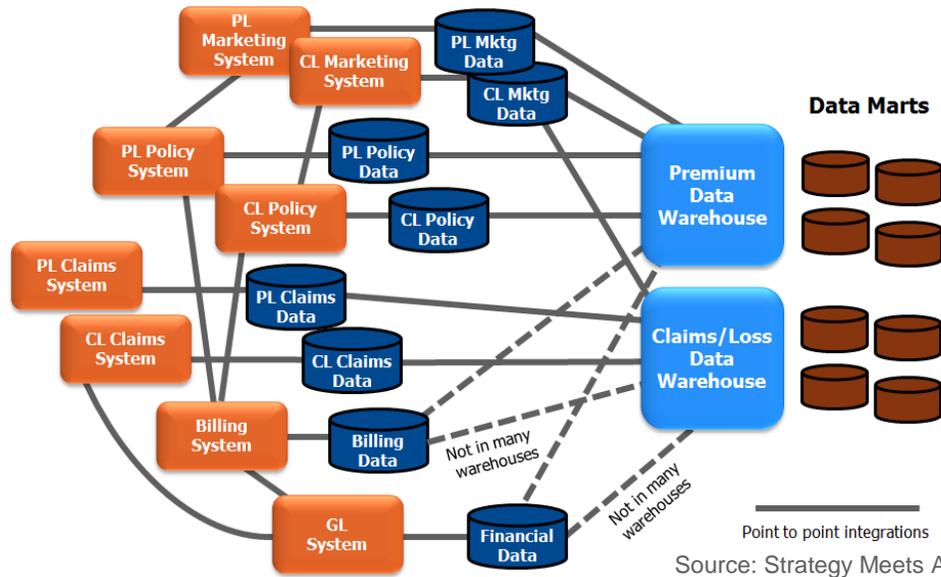
Insurers must develop technology capabilities in three key areas to take maximum advantage of their data: the creation of a robust enterprise data architecture, core systems replacement or modernization, and world class tools.

### Robust Enterprise Data Architecture

Data should be viewed and managed as a corporate asset. This begins with the development and implementation of an enterprise data architecture that is supported by top level management. A successful architecture will address the challenges in the current environment and support the key required business capabilities. The architecture should include the way that data is defined, organized, and accessed. Figure 1 below shows the typical data environment found at many insurers today. Since the data is often in silos and not managed via an enterprise approach, the picture is complicated and results in many point-to-point integrations to gain access to the data required.

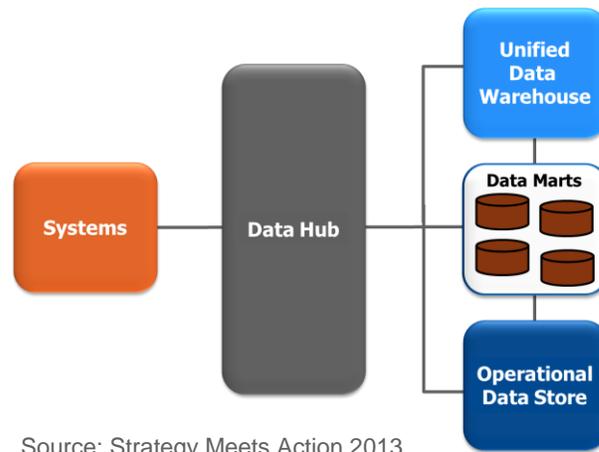


Figure 1. P&C Insurance Architecture Today: Many Point-to-Point Integrations



In today's IT environment, it is not uncommon for personal lines and commercial lines systems (and related data) to be separate. Some insurers also have more than one warehouse, such as the premium and claims warehouses shown in Figure 1. In addition, the billing and financial data are not always included in current warehouses and marts. A more ideal setup that solves these problems is depicted in Figure 2.

Figure 2. Conceptual Model of an Ideal P&C Data Environment



Organizing the data as shown in Figure 2, with a central data switch, is the best way to dramatically reduce the point-to-point integrations and simplify the environment. This approach promotes data independence, decoupling the data from the applications. The switch uses multiple mechanisms for routing data, including an enterprise service bus for individual data records or ETL (extract, transform, load) tools for batch transfer of large volumes of data. In addition, a unified data warehouse that includes all dimensions of the business is the right approach to ensure that data is not siloed and inaccessible for BI



Because core systems touch many parts of the business, when they are modernized or replaced, it naturally leads to rethinking other parts of the IT environment. It is vital that insurers include the retirement of old core systems as part of their replacement project(s).

purposes. With this two-pronged approach, systems can access any operational data stores, data warehouses, or data marts within the enterprise in a standard manner.

## Core Systems Replacement/Modernization

It is virtually impossible to gain significant, differentiating insights from data when legacy core systems (policy, billing, claims) are in place. Some insurers attempt to leverage modern BI and analytics capabilities in conjunction with legacy system projects, but the brute force effort required to move, rationalize, organize, and enhance data is resource intensive. Fortunately, many insurers have recently upgraded to modern core systems, or are in the process of planning or migrating to new systems. Because these core systems touch many parts of the business, when they are modernized or replaced, it naturally leads to rethinking other parts of the IT environment. It is vital that these insurers include the retirement of old core systems as part of their replacement project(s).

Many insurers are realizing that uniting core replacement and enterprise data management initiatives offers great potential value. Modern core systems have often been architected based on a common data model, with data stores designed for use beyond transactional systems. The implementation of new core systems gets the insurer half-way to the ideal enterprise data environment. Coupling the core replacement project with plans for an enterprise data hub and a unified data warehouse can yield large benefits. It does make the overall project more complicated. However, most insurers will need to implement a data hub and unified warehouse to support business needs for BI and analytics. Tackling the hub and warehouse later will ultimately cause more work, cost more money, and probably result in significant rework. In fact, many insurers find that a large percentage of the implementation costs relate to integration with other systems. The best approach for most insurers going forward will be to plan for the implementation of modern core systems and data management solutions together.

## World Class Tools

Tools to support implementations can reduce the overall implementation time and resources required. This is especially true in the data management space, where automated tools for data cleansing and ETL (extract, transform, load) processes are vital. These tools are as important for ongoing operations as for the initial core system(s) implementations. Equally important is making data accessible so that users can create reports and perform analyses using business friendly tools.

## Guidewire DataHub and InfoCenter

### Company Overview

Guidewire Software, Inc. provides software solutions exclusively to the property and casualty insurance industry. Based in California and founded in 2001, Guidewire has enjoyed tremendous success and growth. With over 150 insurance company customers around the world, Guidewire has become a premier provider of core systems solutions to the P&C industry. The acquisition of Millbrook, Inc. in May, 2013 extends Guidewire's solutions offerings into the data management and business intelligence domains.

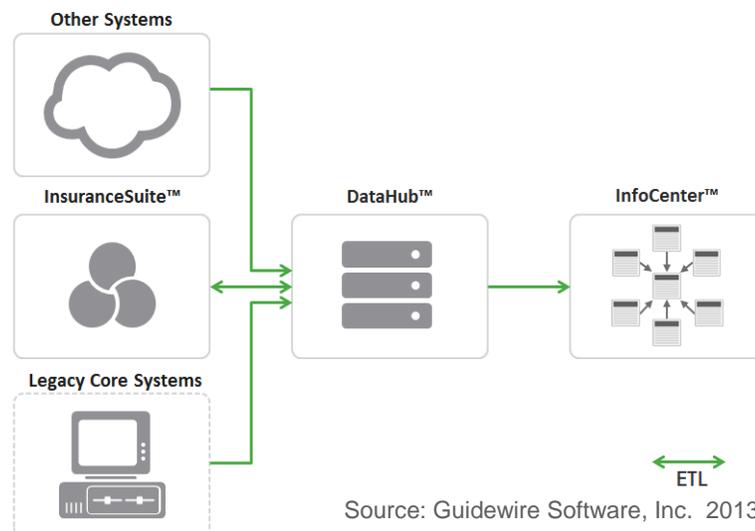


Guidewire's primary offerings are its InsuranceSuite (comprised of Guidewire PolicyCenter<sup>®</sup>, Guidewire BillingCenter<sup>®</sup>, and Guidewire ClaimCenter<sup>®</sup>), Guidewire Live<sup>SM</sup>, Guidewire DataHub<sup>TM</sup>, and Guidewire InfoCenter<sup>TM</sup>. InsuranceSuite addresses the three main core systems required by P&C insurers, which may be installed as individual components (Policy, Billing, or Claims), or as an integrated suite. Guidewire Live is an innovative new offering that connects insurers, core systems data, external sources of information, and expert tools in a collaborative network. DataHub and InfoCenter will be profiled in more detail in the breadth of functionality section that follows.

## Breadth of Functionality

Guidewire DataHub and InfoCenter are designed to address the key business and technology capabilities required by insurers to realize the true power of their data. Using the Millbrook data model and technology as the foundation, these offerings enable insurers to achieve the goals associated with enterprise data management. Figure 3 illustrates the relationships between InsuranceSuite, DataHub, and InfoCenter.

Figure 3. Guidewire DataHub and InfoCenter



Source: Guidewire Software, Inc. 2013

DataHub is a modern operational data store that provides access to data in Guidewire's InsuranceSuite solutions, legacy core systems, and other internal and external systems. DataHub allows the decoupling of data consumption from data production, enabling insurers to leverage a single version of the truth. This provides insurers with timely access to high quality data for both transactional and business intelligence purposes. Pre-integration with InsuranceSuite reduces implementation risk and provides insurers with the opportunity to upgrade core systems and the enterprise data environment together.

InfoCenter is a modern business intelligence warehouse, purpose built for P&C, and pre-integrated with Guidewire DataHub. InfoCenter enables an enterprise-wide view of the insurer's data, and includes pre-built capabilities for ETL and maintenance. Many P&C specific, pre-built data marts and sample reports are available.

DataHub and InfoCenter may be implemented independently of each other and of InsuranceSuite. Other core systems and business intelligence tools in place will benefit from the implementation of either (or both) DataHub or InfoCenter.



## Strategy Meets Action Commentary

Insurers saddled with legacy core systems that are planning to upgrade to modern core systems should consider implementing Guidewire InsuranceSuite solutions, DataHub, and InfoCenter as part of a master plan to position their companies to realize the true power of their data and to use it to differentiate their businesses.

Insurers have long suffered from the dual problems of legacy systems and the inability to harness the power of the vast amounts of data in the enterprise. Advanced data management concepts such as a robust industry data model, data hub, unified enterprise data warehouse, and processes for creating high quality data are not new. The theory and the methodologies have been around for many years. However, many insurers have found it difficult to truly retire their legacy core system(s) as they move to modern systems. In addition, they realize that they also need to modernize their data environment. The experience, methodologies, and software solutions to support the insurer initiatives for addressing legacy systems and data problems are now available in the marketplace. Far from being just an IT infrastructure issue, addressing these dual problems allows insurers to have increased operational flexibility, move to a customer-centric culture, and transform their businesses.

Guidewire has been very successful in helping insurers address the legacy systems issue, with many successful implementations of their policy, billing, and claim systems, individually or in combination (via InsuranceSuite). With the acquisition of Millbrook and the introduction of DataHub and InfoCenter, Guidewire now also enables insurers to tackle their data challenges, resulting in an advanced, integrated data environment and the ability to retire their legacy system(s). Insurers seeking to rapidly advance their BI and analytics capabilities should consider the DataHub and InfoCenter offerings. Insurers saddled with legacy core systems that they are planning to upgrade to modern core systems should consider implementing the InsuranceSuite solutions, DataHub, and InfoCenter as part of a master plan to position their companies to realize the true power of their data and to use it to differentiate their businesses.



## About Strategy Meets Action

Exclusively serving the insurance industry, Strategy Meets Action (SMA) blends unbiased research findings with expertise and experience to deliver business and technology insights, research, and advice to insurers and IT solution providers. By leveraging best practices from both the management consulting and research advisory disciplines, SMA's services are actionable, business-driven, and research-based – where strategy meets action – enabling companies to achieve business success.

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