Changing the Game:
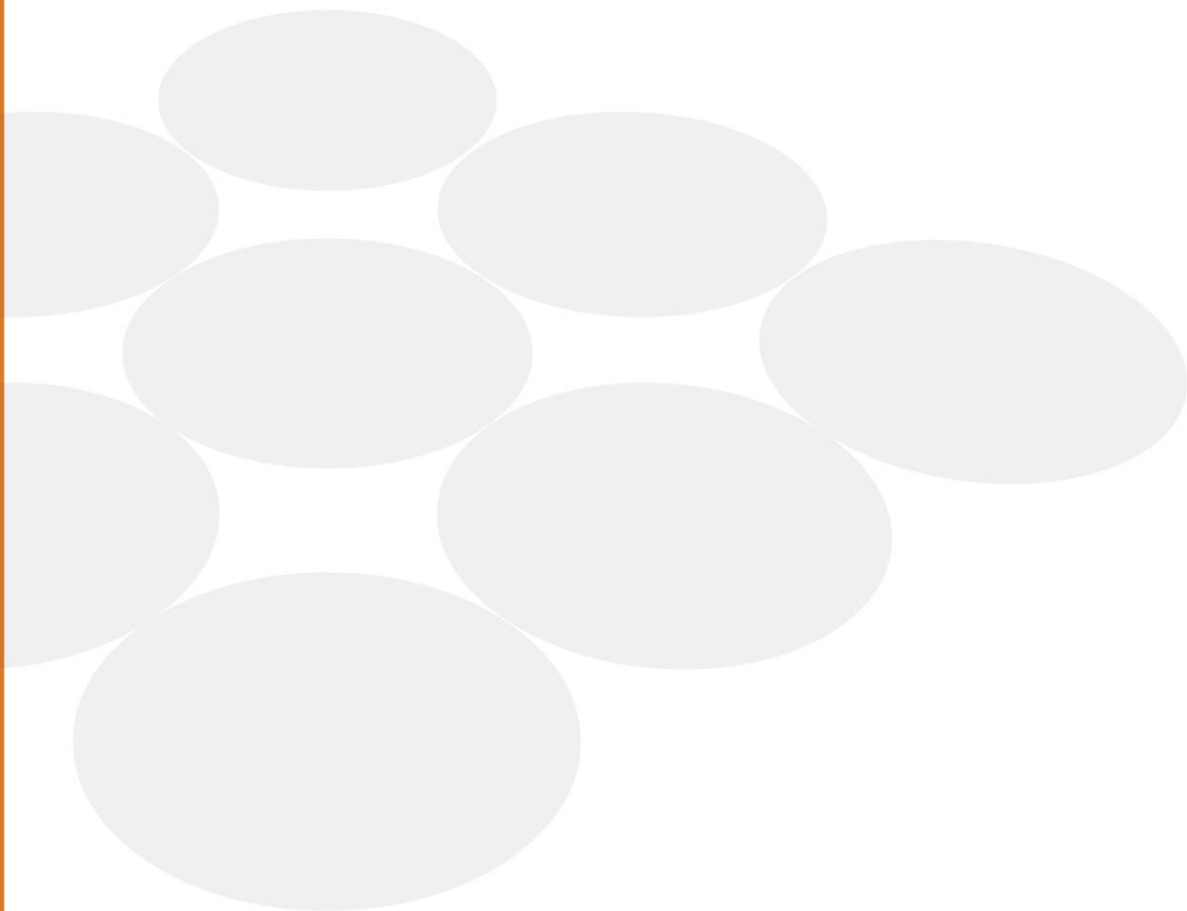
Customer Analytics in Insurance

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Executive Summary

Throughout its history, the insurance industry has been guided and managed with a focus on data and customers. For insurers, an informed understanding of customers and risks means success. Growth and profitability are highly dependent on the right products and services being delivered at the right time and at the right price – so that customers' needs are anticipated and services exceed expectations. A recent study found that 90% of Insurance CEOs rank getting closer to customers at the top of their agenda[1]. The management challenge is having, at your fingertips, the data-driven insights needed to make intelligent decisions and take appropriate actions.

As computing technologies evolved over the past several decades, insurers have experimented with and deployed a number of different avenues to maximize the value of information. These approaches, systems, and technologies include decision support systems (DSS), knowledge-based systems (KBS), online analytical processing (OLAP), expert systems, executive information systems (EIS), business performance management, data mining, business intelligence, and predictive analytics. Although some early efforts did not live up to the hype, systems for intelligence and analytics have increasingly become important components of insurance company business management and operations, and for leading insurers, they are rapidly changing the competitive levers for the insurance industry.

There are enormous amounts of data and a wide range of IT tools available that help insurers better understand customers' needs and develop new insights – insights that are integrated into everyday decisions. The tools for business intelligence and predictive analytics have matured significantly and many have remarkably robust capabilities. These tools are no longer just the province of IT – ease of use features allow end users to directly use sophisticated tools. Leadership in the coming years will require a comprehensive approach to acquiring, analyzing, and acting upon data to fully leverage every customer interaction, bring value to every touchpoint, and capitalize on every opportunity to enhance the relationship and delight the customer.

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[1] Capitalizing on Complexity: Insights from the Global Chief Executive Officer Study (Insurance Industry Executive Summary), May 2010

Changing the Game in Insurance

In many areas of life, new approaches, events or individuals periodically come along to "change the game." The advent of air travel, computers, and the Internet each resulted in the playing field being changed for many companies. The September 2001 terrorist attack on the United States was a game changer for insurance because many different types of risks – previously thought to be uncorrelated – were affected by a single incident. It is the maturation and the increasing sophistication of tools and techniques for analyzing data that are the driving forces behind a game changing competitive environment for insurers.

The competitive levers for the industry are transitioning from efficient operations to data-driven insights – insights that enable informed customer care, intelligent product design, and precision pricing. In the "game" of insurance, keeping track of the score is still important, but paying attention to the plays being made and the creation of new plays is equally, if not more, important. Playing catch-up with more innovative competitors may not be possible.

The main hurdle for insurers is that a new model is required for solving business problems. It is not about just arranging pieces of data together like a puzzle to determine the answer. It is more complicated today as insurers try to take new views, develop fresh perspectives, and uncover new insights. While the industry does not lack for data, many insurers lack a state-of-the-art ability to analyze that data, identify novel insights, and use that insight to drive strategy and better business decisions.

Catalysts for Change

While there are many *opportunities* to change the game, some may ask if there is a compelling *reason* for insurers to change. The answer is a resounding yes. The playing field is changing so fast that insurers refusing to adapt will be playing the wrong game in the future. The inexorable, gradual change brought on by evolving customer expectations and new business practices, has just been kicked into overdrive due to the events of the past few years.

The near collapse of the global financial system and related economic recession heightened competition and introduced new challenges and opportunities for insurers. The insurance industry, with some notable exceptions, has survived the downturn much better than banking and investments, primarily due to long-standing conservative approaches to managing investments and a limited number of major catastrophes in the years from 2008 to 2010. Non-life (property and casualty) insurers have experienced sustained declines in net premium written (NPW) largely due to soft market conditions, especially on the commercial lines side of the business. Life and pension companies have seen declines in premiums across most major lines, reductions in assets under management, and the challenge of low interest rates.

Even before the crisis, insurers were grappling with saturation in mature markets, the challenges of rapid growth in emerging markets, operational inefficiencies, and increasing expectations and demands from customers. The financial and economic upheaval have now introduced volatile investment returns, acutely price-sensitive customers, and

increasing government intervention in the insurance industry. The combined result has permanently reshaped the landscape and moved competition to a new level.

Insurers must aggressively build on existing competitive advantages and seek new areas of differentiation. SMA believes the key to enhancing market position lies in customer information – specifically the ability to analyze this information along many dimensions for new insights – insights that will drive both tactical and strategic actions that have impact across the entire insurance value chain. In short, customer analytics is the game changer. It opens the door for identifying new market opportunities, creating new and enhanced products, applying insights to business decisions, and bringing more value to the customer relationship.

The Case for Change

The financial case for change is based on a desire for growth – and not growth at all cost, but profitable growth. Key components of profitable growth include finding new ways to increase revenue from existing customers, while also acquiring new customers and writing business at the right price for the particular risk. A global study of insurers identified intense customer focus as one of the two key differentiators for top insurers. The study concluded that, "High-performance insurers cultivate organic growth by identifying their most valuable customers and investing to increase sales to them; by recruiting new clients through referrals; and by lifting retention rates.[2]" These factors are illustrated in Figure 1.

Figure 1. Driving Profitable Growth in Insurance
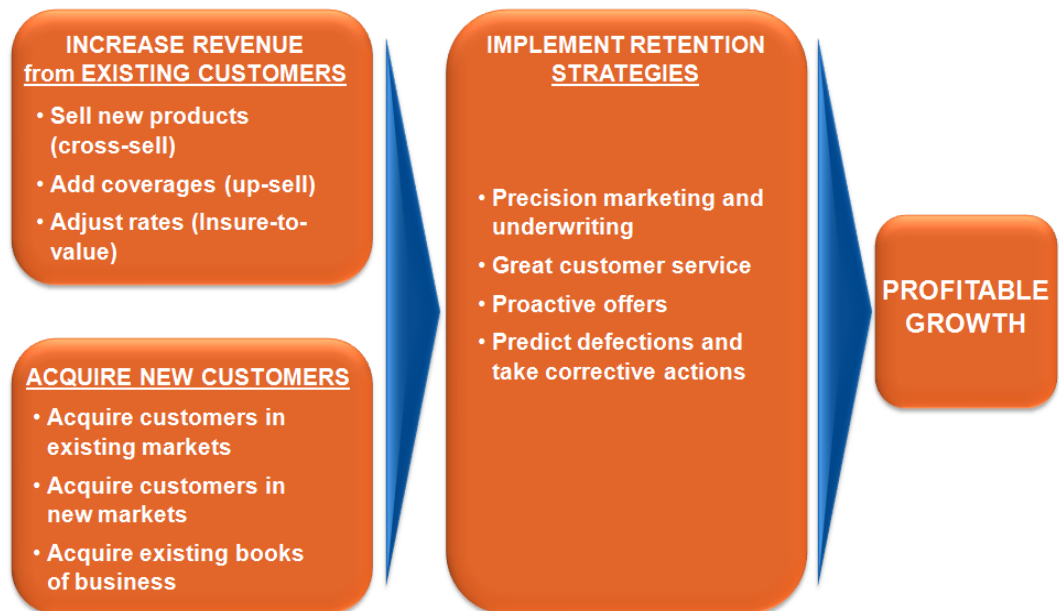
Source: SMA Research 2010

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[2] Palmer, N, Tanner, S., Detrick, C., & Wagner, I. (2007). For top insurance companies, customer focus and merger mastery produce superior results. *Strategy & Leadership*, Bain & Co. Vol. 35 NO. 2 2007.

A winning path to profitable growth involves:

- **Segmenting:** via market intelligence, portfolio analysis, business modeling, and profit engineering to better segment customers

- **Pricing**: via   precision pricing, personalized product configuration, and real-time quotes

- **Selling**: via a customized and personalized sales approach, real time negotiation through agent portals, straight through processing and presenting up-sell and cross-sell offers

- **Managing**: via predictive risk intelligence, claim severity and frequency management, fraud detection, and personal service
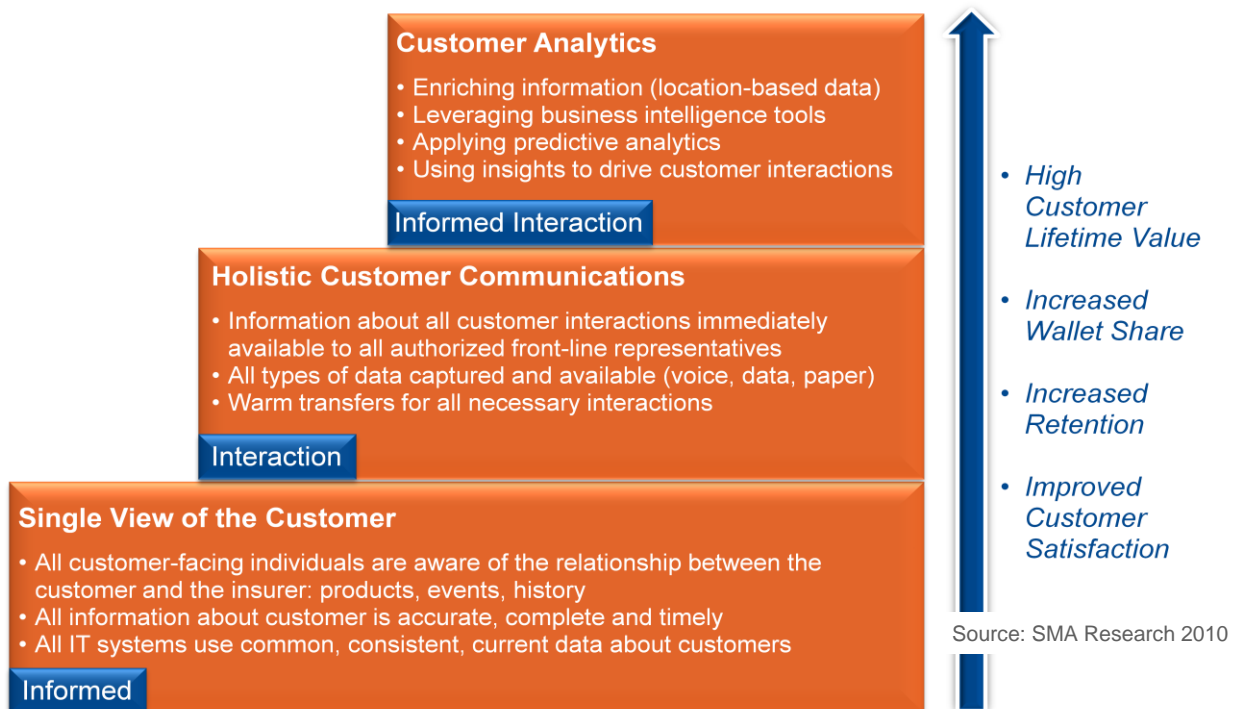
The ability to fully capitalize on profit and growth potential requires employing data, analytics, and process automation across capability areas – ensuring that the best market opportunities are chosen, the best risks are selected, the best pricing is determined, and the best management and service is delivered – at the right time and place.

Customer Care through Analytics

Analytics in Customer Relationships

As insurers seek to grow their businesses profitably, they must progress through three stages as they build exemplary relationships and capitalize on the opportunities those relationships generate (Figure 2).

Figure 2. Customer Relationship Capability Levels

Customer Analytics
- Enriching information (location-based data)
- Leveraging business intelligence tools
- Applying predictive analytics
- Using insights to drive customer interactions

Informed Interaction

Holistic Customer Communications
- Information about all customer interactions immediately available to all authorized front-line representatives
- All types of data captured and available (voice, data, paper)
- Warm transfers for all necessary interactions

Interaction

Single View of the Customer
- All customer-facing individuals are aware of the relationship between the customer and the insurer: products, events, history
- All information about customer is accurate, complete and timely
- All IT systems use common, consistent, current data about customers

Informed

- *High Customer Lifetime Value*

- *Increased Wallet Share*

- *Increased Retention*

- *Improved Customer Satisfaction*

Source: SMA Research 2010

At a minimum, as a base level capability, a single view of the customer is required to ensure that all decisions, actions, and communications with customers are based on an accurate and complete view of the relationship between the customer and the insurer. According to a recent study, 65% of insurers are using technology to integrate customer data across different functional areas. Another 23% plan to implement this capability over the next three years.[3]

The next level of capability, holistic customer communications, should be built upon the foundation of a single customer view, enabling consistency and high quality customer care in every interaction. An enterprise wide strategy for customer communications management (CCM) ensures that information from customer interactions is captured, cleansed, organized, routed and made available in a timely manner.

A robust customer analytics capability raises the bar in customer insight and has the potential to be a true game changer for insurers. By enriching information and leveraging powerful tools like business intelligence and advanced analytics, insurers can gain new insights that transform their customer interactions from merely efficient to informed conversations – the kind of conversations that result in cross-selling and up-selling and increasingly high customer lifetime value.

Dimensions of Customer Analytics

Growth and profit start with deep insights into business units, products, channels, geographic regions, and market segments, all oriented around a customer-centric approach (Figure 3). Successful insurers will create strong alignment between these areas based on their understanding of customer needs. Many insurers still take an inside-out approach to the market, starting first with a business unit view and extending out to the market (moving from left to right in figure 3). Insurers that are highly successful in the new playing field will use intelligence and analytics to take an outside-in, customer-centric view of the world, beginning with a deep understanding of customers and the implications for every aspect of the business.

Figure 3. Analytics for a Customer-centric Approach

| Business Units | Products | Channels | Geographic Regions | Market Segments |

Customer-centric Approach Across the Enterprise

Business Intelligence and Advanced Analytics

Source: SMA Research 2010

[3] Pueltz, R. (2010). Technology's effect on property and casualty insurance operations. *Risk Management and Insurance Review*. 2010, Vol. 13, No. 1, 85-109

A superior understanding of customers that yields unique insight into their specific needs and wants requires that insurers seek intelligence about:

- **Individual customers and market segments**: the defined set of characteristics related to a group of individuals or businesses, based on demographics, behavior patterns, location, and/or other attributes.

- **Geographic regions**: the specific regional area that may be managed and measured by the insurers as a group, ranging from small units such as a single town to large units such as a continent.

- **Channels**: the sales and services avenues used to reach customers, including third party intermediaries (agents/brokers), the Internet, and call centers.

- **Products**: the individual products or set of components that make up the insurance offering to the individual or business customer.

Business units, seeking to better understand profitability, must investigate and analyze across all of these dimensions as well as by looking at different combinations of markets, geographies, channels, and products.

Competing via Customer Analytics
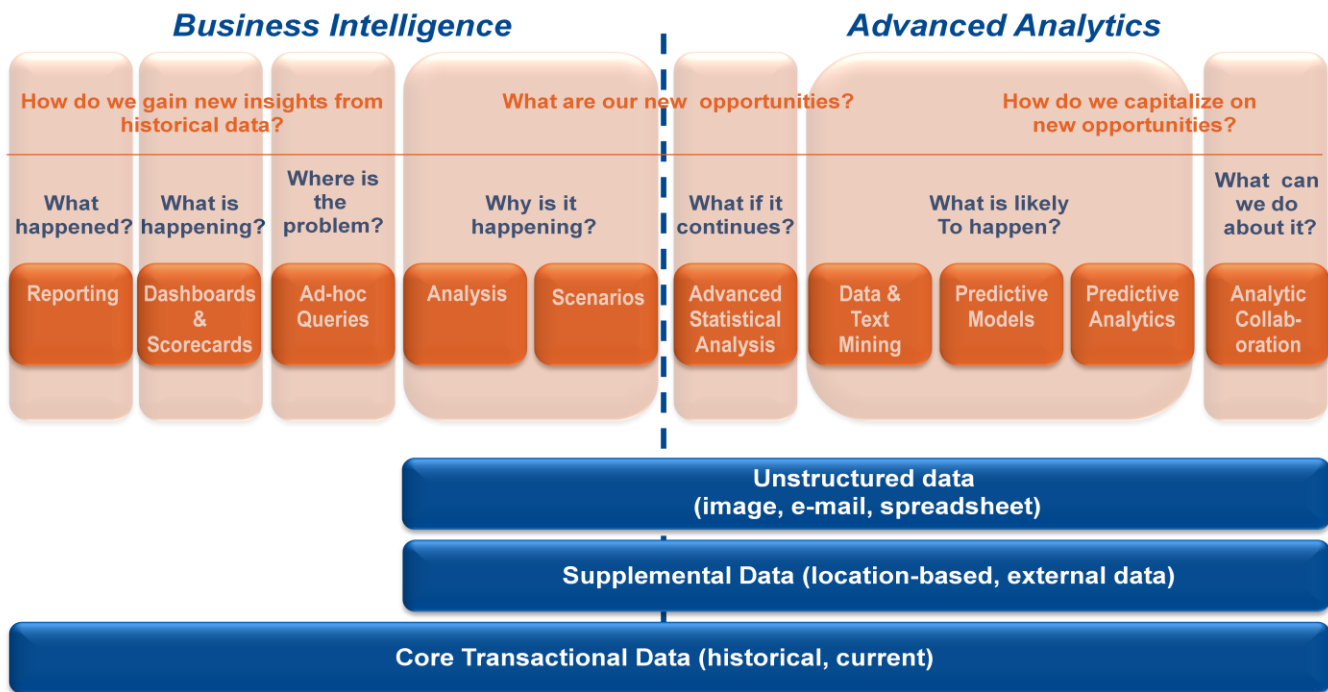
Acquire, Analyze, Act on Data

Critical to effective competition in insurance is the ability to put data to work and to fully leverage all the data – structured and unstructured. Customer data is the most valuable! Insurers must leverage customer data as a corporate asset – not just inside IT department boundaries, but as a major strategy across the entire enterprise. Successful insurers are able to turn customer data into information that drives better decision making. There are three stages to realizing the full value of customer data:

- **Acquire** data: capture data from many types of customer interactions (call center, claims, web), through many devices, in many formats; improve data quality and enhance the data via supplemental sources

- **Analyze** data: apply tools and intelligence and analytics, both real-time and offline, to better understand customers and garner new actionable insights

- **Act** on insights: drive proactive communications and campaigns; arm front-line employees to improve service and develop targeted offers or marketing programs

All of the three stages involved in leveraging enterprise data are important. A closer look at the analysis phase shows that the value of business intelligence and advanced analytics can be broken down into a spectrum of business issues and analytical approaches (Figure 4). Two streams of questions can be addressed by applying analytics to customer data: questions related to understanding and improving the existing customer relationship and profile and questions about new acquisition, retention, or cross/up sell opportunities to expand the business. Core transactional data provides the baseline for analysis across the spectrum. Sophisticated analyses add supplemental data from both external and internal sources. Unstructured data from call center transcripts, e-mails, claims, geographical or weather, and a variety of other sources help provide unique insights and segmentation strategies for competitive advantage.

Figure 4. Intelligence and Analytics in Insurance

Business Intelligence | Advanced Analytics

Business Intelligence				Advanced Analytics				
How do we gain new insights from historical data?			**What are our new opportunities?**		**How do we capitalize on new opportunities?**			
What happened?	What is happening?	Where is the problem?	Why is it happening?	What if it continues?	What is likely To happen?			What can we do about it?
Reporting	Dashboards & Scorecards	Ad-hoc Queries	Analysis / Scenarios	Advanced Statistical Analysis	Data & Text Mining	Predictive Models	Predictive Analytics	Analytic Collab-oration

Unstructured data (image, e-mail, spreadsheet)

Supplemental Data (location-based, external data)

Core Transactional Data (historical, current)

Source: SMA Research

Business Intelligence

Tools and approaches for business intelligence enable insurers to report and visualize trends in both historical and current data. This capability helps insurers better understand business performance along many dimensions and provides management and front line employees the information needed to provide better serve customers. Leading business intelligence solutions allow a view of not only the *what*, but also the *why*. Modern BI systems extend beyond traditional reporting capabilities, broadening their application to a range of business areas for reporting as well as providing ad-hoc and real-time reporting and analysis capabilities to better understand customers.

Categories of BI tools and the business issues they address include:

- **Reporting**: Efficiently create standard reports for business results and activities for both internal and external consumption – including operational, management, financial, and regulatory reporting. Answer the question "What happened?"

- **Dashboards and scorecards**: Extract information from multiple sources to create real-time views of performance measurements (scorecards) and identify issues and areas requiring additional focus (dashboards). Answer the question "What is happening?"

- **Ad-hoc queries**: Enable business users to further investigate problem or opportunity areas by drilling down to the next level of data or different views of data. Answer the question "Where is the problem?"

- **Analysis**: Explore data from multiple sources at detail levels to identify and better understand symptoms, root causes, and trends. Answer the question "Why is it happening?"

- **Scenarios**: Organize information to compare and model the results from different problems and actions. Answer the question "Why is it happening?"

State-of-the-art business intelligence tools extend acumen beyond just reporting on business results and investigating the "why" behind the results. Good BI tools assist in developing novel insights based on deeper exploration of different dimensions of the business results using drill down capabilities to uncover new insights about customers, relationships, and products. BI tools can help management recognize important performance trends or identify issues concerning producers, products, or territories. BI tools enable rapid, information-powered strategies and actions to adjust and even reconfigure the business direction.

Advanced Analytics

Tools and advanced approaches using sophisticated statistical and predictive analytics give insurers the knowledge to think differently and make discoveries that inform and empower customer interactions and relationships. Analyzing data has been at the heart of the insurance business since its inception. The applicable disciplines and primary focus areas remain the same today as in the past, covering areas such as market segmentation, precision pricing, actuarial analysis, and loss reserving. Leading insurers are able to analyze massive amounts of data, discover fresh innovative patterns in customer behavior, glean new business/market knowledge, and then turn those insights into profitable action in a timely and effective manner.

The burgeoning competitive landscape demands that insurers leverage and exploit the rewards of advanced analytics for enhancing customer relationships. This means not just understanding what has happened in the past, but predicting what is likely to happen in the future.

Categories of Advanced Analytics tools and the business issues they address include:

- **Advanced statistical analysis**: Use proven statistical techniques based on arithmetic and probability theory to interpret and present data, forecast trends, and pinpoint issues and opportunities. Answer the question "What if it continues?"

- **Data and text mining**: Leverage advanced algorithms and statistics to determine patterns and extract meaning from unstructured data and text. Answer the question "What is likely to happen?"

- **Predictive models**: Build representations of the real world to be used by predictive analytics software. Answer the question "What is likely to happen?"

- **Predictive analytics**: Use enhanced data mining techniques with predictive models to determine future results based on current or historical results or actions. Answer the question "What is likely to happen?"

- **Analytic collaboration**: Create an infrastructure to enable reuse and sharing of analytic assets, supporting planning and decision making between multiple parties. Answer the question "What can we do about it?"

Insurance Examples

Business intelligence and advanced analytics help insurers turn customer insights into action in many ways, including:

- Issues or opportunities related to an individual customer, resulting in alerts sent to call center representatives or claim adjusters

- Marketing campaign trends spotted and highlighted so that marketing managers are able to adjust campaigns mid-stream

- Declining performance trend for an individual producer or product, requiring proactive action by a sales executive

- Identification of new customer needs and wants, resulting in new or enhanced insurance products and services

- Determining when a specific customer is at risk of defection and taking corrective action to retain the customer (or letting the customer defect if they are unprofitable)

In addition to addressing questions related to improving the existing business – identifying problems, issues, and corrective actions – advanced analytics play a large role in identifying new opportunities and determining how to best capitalize on them.

Strategy Meets Action

SMA Observations

The game of insurance is changing. A strong brand and efficient execution are no longer enough. The new winners are smarter than competitors, capitalizing on data to discover new insights about customers, channels, and products. Technology provides the game changing technologies in the form of tools and approaches for business intelligence and advanced analytics.

Insurers do not lack for information – there is abundance of information available from both internal and external sources. What is lacking is the ability to put the information to work – to drive great insights. Insurers must have enterprise capabilities to cleanse and enhance data to provide robust input to analytic tools. Companies that utilize customer analytics create informed interactions resulting in increased retention, wallet share and high customer lifetime value.

Call to Action for Insurers

Insurers should take several steps to compete and win on the new playing field:

- Improve data quality: insurers need to acquire, analyze, and act on data – structured and unstructured, internal and external -- and put systems and procedures in place to ensure that data is accurate, complete, consistent, timely, and relevant

- Focus on business performance management: flexible, ad-hoc, timely reporting of key performance indicators and business results is a mandatory capability – across products, channels, geographies, and market segments

- Gain new insights on customers: for individuals and business customers, combine proprietary data with supplemental data and unleash tools to understand customer needs, behaviors, and affinities

- Predict the future: use advanced analytic tools to discover triggers, patterns, and predictors of customer activity – and design programs to proactively leverage this knowledge to retain customers, sell new products, and increase customer satisfaction

- Act on insights: Build fact driven business models & marketing strategies using customer insights, and grow revenue through retaining/growing existing customers and acquiring new ones

About SMA: Strategy Meets Action

Exclusively servicing the insurance industry, SMA is a strategic advisory firm offering a unique blend of research, advisory, and consulting services to insurance companies and solution providers. By leveraging best practices from both management consulting and research advisory disciplines, SMA's advisory service offerings are actionable, business driven, and research based where strategy meets action.

SMA is an independent, privately owned advisory firm providing unbiased research and actionable advice on business and technology to the insurance industry via publications, a variety of media, and custom engagements. We developed the content of this whitepaper, sponsored and distributed by IBM, using SMA's research-based views and experience.

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