Insuring the Insurance Business **with Actionable Analytics**

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Predicting Outcomes and Prescribing Fitting Solutions for the Present and Future

Contents

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Introduction

As insurance executives seek to better manage customers, loss ratios and risk & compliance, while ensuring profitability, actionable analytics is emerging as a critical success factor contributing to industry differentiation.

Despite the emergence of technologies and applications in business intelligence and analytics, many insurers still struggle with how to access, integrate and analyze data from a variety of legacy systems. Organizations that are able to leverage analytics will be positioned to achieve a sustainable competitive advantage. In the near future, analytics will play a vital role in helping insurance executives navigate the technical and operational complexities to accelerate time-to-value from such investments.

The impact of analytics on the insurance business varies according to the level of analytics used, as pointed out by *Everest*, shown in figure 1.

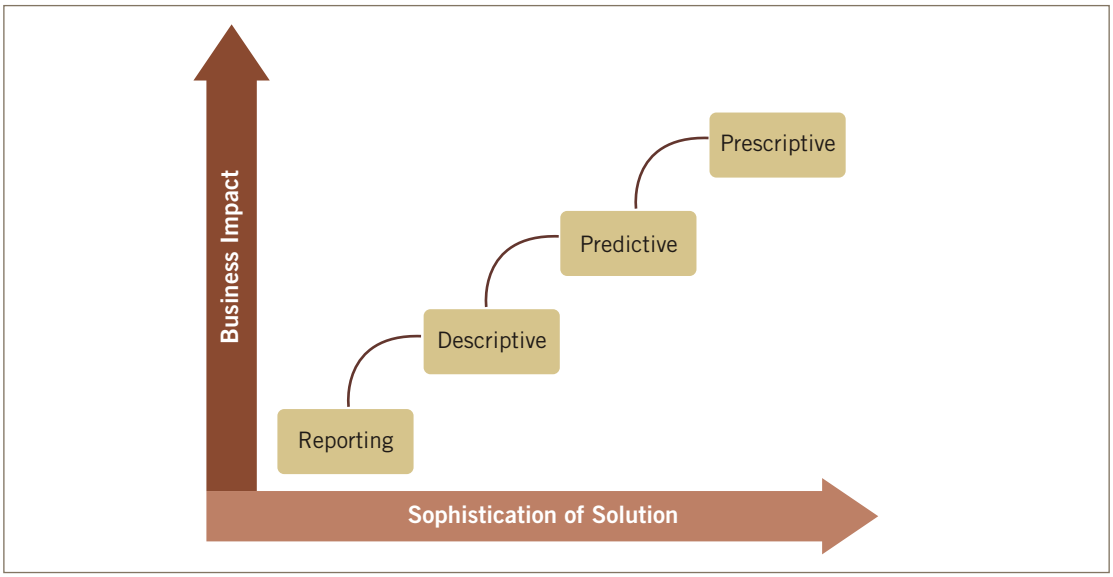

Fig.1: The four forms of analytics as described by Everest Group.

From the very basic ***Reporting***, to the moderately evolved ***Descriptive*** or the advanced ***Predictive*** and ***Prescriptive***, analytics in all forms impacts business. The impact could range from being moderate to transformational.

While Reporting provides reports on the current situation, the Descriptive form of analytics provides actionable insights on the current situation. The more advanced forms, Predictive and Prescriptive, help in predicting likely future outcomes and prescribing action items required to deal with the future events, respectively, as described by *Everest*.

In this paper, we explore the role of the advanced forms of analytics in helping insurers achieve higher ROI on marketing spends, improve customer satisfaction, make better pricing decisions and enhance operational efficiencies across a range of insurance business activities.

The Need for Analytics in Insurance

The need for analytics in insurance has been re-inforced due to a range of new challenges that have forced insurers to think and act differently.

- **Managing Costs Better -** Cost efficiency is a key concern for all insurers. The major concern for any insurance organization would be the cost associated with claims processing, management and settlement. Analytics helps in risk assessment by predicting the expected cost of insurance (loss) associated with the coverage. Analytics also helps reduce losses by detecting and preventing fraudulent behavior.

- **Regulatory Challenges -** A bevy of regulatory challenges has forced insurance companies to re-think their strategies to remain competitive. For instance, in the UK, the retail distribution review (RDR) has forced all financial agents to inform customers about the charges incurred upfront to ensure transparency in the way the customer is charged for financial advice. Industry estimates suggest that this would probably result in close to 30 million customers being orphaned without any advice on financial planning.

  While regulations of this nature create challenges for the industry, they also offer a great opportunity to build a strong point of differentiation and form stronger customer relations. The RDR for instance, forces insurers to build marketing strategy that has a multi-channel distribution strategy at its core. Analytics plays a crucial role in helping insurers identify the right channel and the next best product that can be offered to customers as part of their cross-sell strategy.

- **Increased Customer Awareness, Thanks to Social Media -** Advent of social media and aggregator sites have increased awareness on product / pricing options available to customers. Analytics can help assess customer behavior and social brand equity, and thereby enhance Marketing ROI and customer satisfaction levels.

- **Financial Planner Attrition -** Since a large section of the population still depends on financial planners to help them plan for their retirement and other long-/short-term financial goals, it is extremely important that the right set of agents be retained to ensure continuity in business. Analytics helps in identifying these planners based on their 'Life Time Value' and their performance to ensure that agents get sufficient support from the organization and are well-compensated.

All burgeoning needs for actionable insights in the insurance industry can be effectively met with analytics solutions that have elements of reporting, descriptive, predictive and prescriptive forms in the right proportion.

According to researchers at *Strategy Meets Action 2012,* three quarters of North American insurance companies are expected to spend more on data and analytics projects over the next three years. Almost one fifth of organizations expect to see double digit investments in this category of investment.

“There is no question that analytics projects are viewed as game-changers, but insurers also see the need to focus on improving and enhancing their data to fully capitalize on the power of analytics," SMA Partner Mark Breading wrote in a recent blog. "Two leading trends revealed in the 2012 study continue to be major players this year: increased spending on data and analytics, and broader usage of analytics beyond the traditional risk-centric applications. Most P&C insurers plan to increase spending from 2013 through 2015, with 83 percent planning annual increases (up from 2012). A good percentage of P&C insurers (16 percent) plan annual increases of more than 10 percent of their budgets for data and analytics.”

The Impact of Predictive & Prescriptive Analytics on Insurance

1. Marketing Analytics

Marketing efforts in insurance have often relied on traditional marketing practices. Predictive and prescriptive analytics modeling in insurance marketing represents a quantitative approach that has the ability to enhance customer focus, customer satisfaction and Marketing ROI across various marketing interventions.

a. Customer Acquisition

One of the primary levers of growth for an organization is acquiring new customers. Customer acquisition involves identification of potential customers, understanding their needs, risk assessment and formulation of an acquisition strategy.

Insurance companies need to identify potential customers for different product lines. Predictive analytics can help enhance hit ratio which is a measure of how often the marketing function generates a sale for each contact made with a new prospective customer.

Predictive analytics can be used effectively to analyze the purchasing patterns of existing customers. This insight can in turn help organizations determine behavioral attributes of prospective customers in a particular segment. With these actionable insights, the focus of the sales force and the marketing team can be jointly drawn on the customers who have a higher likelihood to buy. For example, if we are able to identify four customers out of every ten potential prospects who are least likely to purchase a policy, elimination of those potential customers from an agent’s sales agenda will enable him to put across his efforts in converting other targets. This approach can be extended to the digital channels too.

b. **Customer Retention** - Cross-selling & Up-selling Opportunities to Existing Customers

Insurers cannot, and should not, spend unlimited amounts of money to retain all of their customers. Instead, they should use predictive analytics to identify profitable customers and not just retain them, but extend the company's relationship with them by cross-selling other products. With new customer acquisition becoming an expensive proposition, insurers are increasingly focusing on retaining existing customers to develop a long-term and mutually beneficial relationship with them. As a result, a lot of strategic focus is now on cross-selling new products to these existing customers.

Predictive analytics is used to segment the insurer's existing customers using demographic, transactional, contact center and external marketing / risk related data. Once the customer base has been broken down, all advertising, marketing materials, and other customer communications can be re-tooled to speak directly with the most profitable demographic niches. The outreach can be performed with a precise understanding of what messages these audiences are most likely to find compelling based on specific forthcoming events or circumstances (such as the impending arrival of retirement date).

Figure 2 demonstrates the analytics steps, both predictive and prescriptive, that can be followed for developing an effective cross-selling strategy, with a focus on retaining high value customers who have a high propensity to churn.

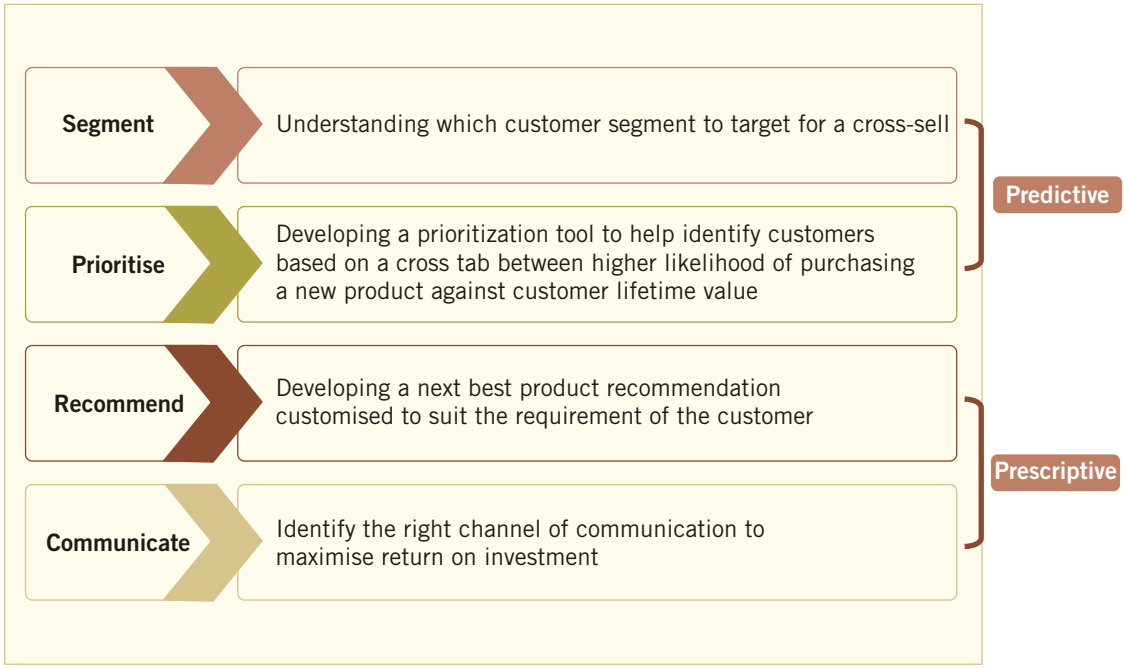

Fig.2: The role of predictive and prescriptive analytics in developing an effective cross-selling strategy with a focus on retaining high value customers.

All customers are not equally profitable. The challenge is to identify different levels of profitability so that differentiated target strategies can be adopted for customers at different points of the matrix shown in figure 3. Analytics solutions use techniques such as profitability analysis, survival analysis and forecasting to predict the lifetime value of the customer. 'Customer Life Time Value' (CLTV) models help forecast the future profitability of the customer and can be used along with churn scores to identify the high value customers as depicted in the figure 3.

Customer Retention Prioritization matrix

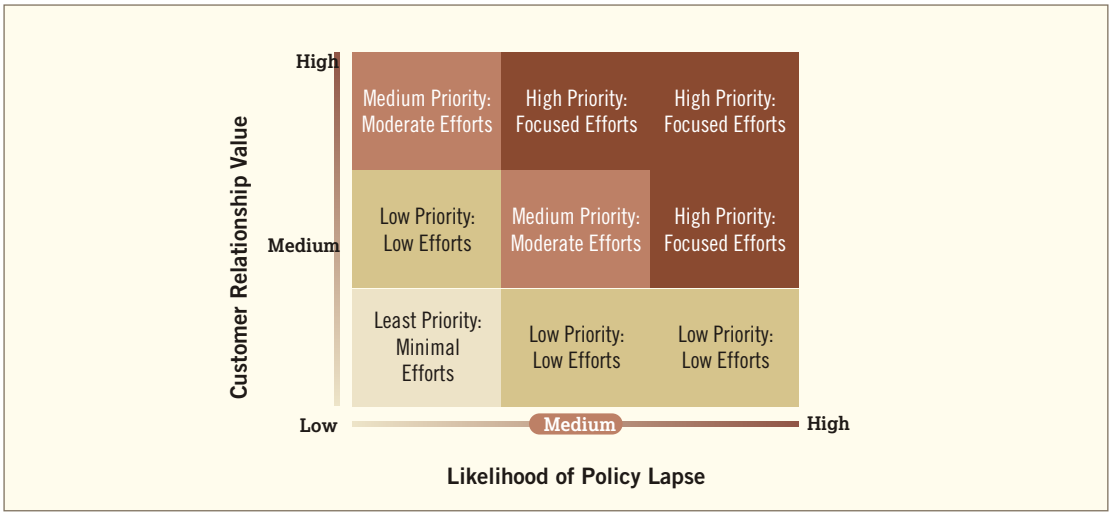

Fig. 3: A sample customer retention prioritization matrix that rates customers on the basis of customer relationship value and likelihood of policy lapse and prescribes the steps to be taken to retain customers.

This approach can help insurers achieve several objectives such as:

- Lowering marketing costs by identifying the right target customer base
- Offering the right pricing depending on the customer profile
- Retaining existing profitable customers and delivering the right message for cross-selling / up-selling
- Customizing product offerings for customers, based on a deeper understanding of their life stage and changing needs
- Targeting customer communications more effectively through their preferred channel be it print, electronic, digital, social or mobile

Contact center conversations are a goldmine when it comes to assessing and understanding customer orientation towards the insurance company / brand. There is usually a large volume of customer feedback data available to insurance companies generated from interactions with customer through the contact center. Text-mining techniques such as opinion mining / sentiment analysis can be employed to assess key pain areas of the customer. Feedback given by unsatisfied customers can be analyzed to identify patterns. This data can then be leveraged to predict the likelihood of existing customers to attrite. Insurers can then provide appropriate offers / services to retain those customers using the framework shown above.

Consider this example:

For one of its leading insurance clients, WNS has developed a **'propensity analysis model'** for segmenting the customer base more accurately and predicting the propensity among the target customer base to transfer out pension policies. This narrower segmentation ensures that marketing efforts to retain such customers are more effective and arguably more cost-efficient.

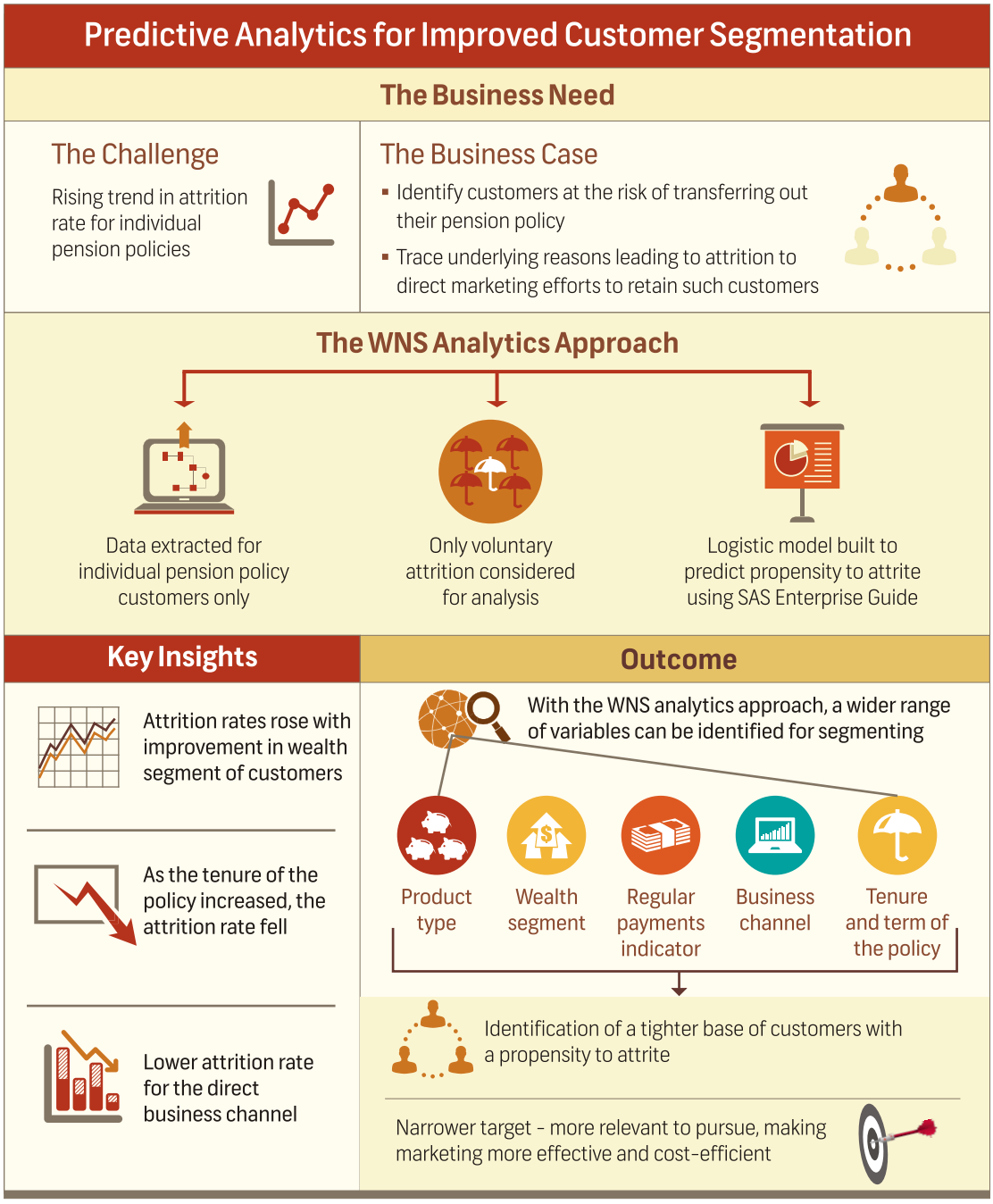

Fig.4: WNS's proprietary 'propensity analysis' model for the insurance industry that helps assess propensity among the target customer base to transfer out pension policies.

C. Assessing Customer Behavior

The advent of social media has led to consumers producing vast amounts of publicly available personal information which insurance organizations can analyze. This has created two outcomes:

- It has opened up a huge window for insurers to get a view of the habits and preferences of consumers around the world – generating an explosion of data that can be analyzed to identify opportunities and connect with profitable customers
- This data is available to everyone, raising the ante for insurance companies who now must strive to compete in a potentially more commoditized market

Brand equity assessment through social media monitoring and analytics: Insurers can effectively leverage text-mining techniques and social media analytics to gauge current customer sentiment about their products and assess brand equity. This analysis can then be fed back to the product / pricing / marketing managers to tweak strategies accordingly.

2. Sales Analytics

Sales analytics can help an organization understand and optimize its sales force, revenue per customer, and pipeline performance over time. Business users can track key sales metrics, analyze these metrics to get a better understanding of the business, and use this analysis to drive an optimal sales process.

Sales analytics can help insurers interpret key sales drivers, trends, and issues including:

- Sales by multiple dimensions (by product, customer, sales representative or channel)
- Under-performing agents, products, channels, customers
- Effects of discounts, special offers / campaigns, sales incentives on revenues

Additionally, sales analytics helps predict outcomes and make recommendations on the future course of action. One of the most powerful impacts of predictive analytics is the fact that it allows insurers to transform their approach to hiring, training and deploying agents. Insurers can use predictive analytics to determine specific agent characteristics that drive revenue growth and then develop recruitment and training programs to propagate those qualities throughout the sales force.

Predictive analytics can help identify the most productive agents and assess the conditions under which they perform optimally. This allows insurers to place the right agent in the right territory enabling him to serve the right customer segment with right products, thereby maximizing revenue.

Finally, predictive and prescriptive analytics can be used to correlate agent lifetime value calculations from LTV models vis-à-vis performance analysis to devise agent retention programs. This way, agents that are most beneficial for the insurance organization can be retained in order to drive revenue growth.

3. Effective Claims Management

Claim lodgment is a defining moment in a customer's relationship with an insurer. When the claims process is strong, insurers can operate efficiently and provide superior customer experience, thereby protecting revenue and profitability.

Claims management is particularly well-suited to benefit from predictive and prescriptive analytics. Their impact on claims management can be profound, especially when it comes to identifying the likelihood of costly fraudulent claims and making step changes.

Claims management has always been a challenge for insurance companies, but the task has become truly daunting in the wake of more sophisticated perpetrators of fraud. Rapid evolution of "professional" fraudsters in today's digital environment has made effective fraud detection an increasingly urgent priority for insurers, according to a recent report from market analyst *Ovum*.

Even so, most insurers have only implemented point solutions aimed specifically at claim notification – and that is seldom enough when professional fraudsters are at play. *Ovum* researchers believe that insurers must re-assess their fraud strategy and introspect on how technology is currently being utilized to combat the growing threat.

"New approaches are addressing the growing threat from professional fraud networks," says Charles Juniper, principal analyst, insurance technology, Ovum. "To date, most insurers have focused their fraud strategies on the claims process. In order to avoid organized criminal fraud, the effectiveness of a fraud strategy can be significantly enhanced by using technology across the entire insurance product life cycle."

All customer-interaction points -- including policy application and underwriting, as well as claim notification -- must be taken into account to improve the effectiveness of fraud systems, particularly since both fraud and technology are in a constant state of flux.

"Insurers should therefore use a range of technologies within an integrated system as part of a comprehensive strategy to tackle fraud," Juniper explains. "The increasing pressure to respond to the fraud threat, together with the need to reduce costs and offer a competitive proposition in difficult market conditions, means insurers will invest significantly in these emerging fraud technologies over the next 36 months."

Fortunately, a robust menu of analytics processes and applications has risen to the challenge. Increasingly, insurance organizations are embracing the value proposition of advanced form of analytics - predictive and prescriptive.

A fraud solution framework should have the capability to factor in all information that is available in silos and bring them together to give a holistic view of the claim for accurate review and decision.

It should also be able to factor in data available over the entire life cycle of the claim and incorporate all the information from previous related claims that have been handled by the analyst, as shown in figure 5. This will help put a holistic framework in place that acts as a proactive early warning system and extends valuable insights to fraud management teams.

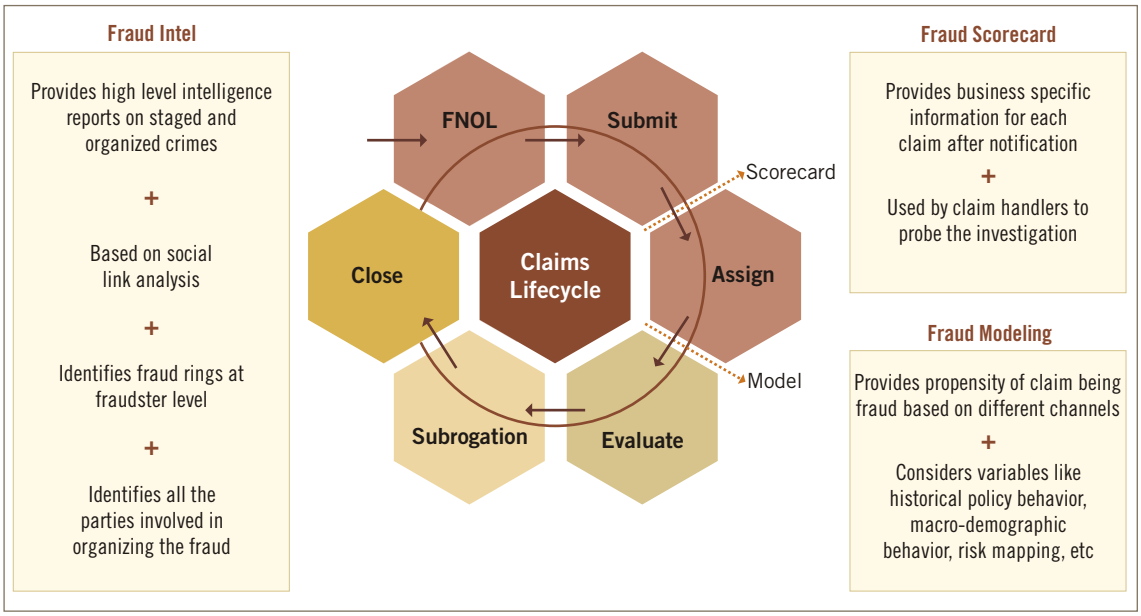

Fig. 5: A typical fraud solution framework with capabilities of analyzing multiple variables across the entire claim life cycle. In-built elements of predictive and prescriptive analytics provide valuable insights to the claims and fraud management teams.

"Currently, claims processing is often manual and complex in nature which results in loopholes to be created and exploited by fraudsters. That in turn leads to an incorrect assessment of the claim and eventually leads to payment leakage," says Nitin Kumar, Senior General Manager, Insurance at WNS Global.

"Fraud often begins during the initial insurance application process," Nitin points out. This "underwriting fraud" or "rate evasion" is the result of mis-representation of facts that directly affects the premium. Individuals may under-report the mileage driven for an auto, fail to report previous claims, give incorrect information about their health history, or mis-represent the characteristics of their property / vehicle.

However, he also points out that insurance companies can reduce claims leakage by taking a holistic view of the information siloed in companies and embedding customised analytical methodology to address the challenge.

Consider this example:

WNS worked closely with a leading auto insurance company that wanted to minimize application-stage fraud by understanding the profiles of fake customers, identifying patterns, and putting in place a proactive early warning system to support their investigation and fraud management teams.

Using analytics, the company was able to improve the rate of genuine claims and significantly reduce costs associated with fraudulent claims investigation. Auto insurance fraud is an expensive proposition for all stakeholders -- genuine consumers, insurance companies and the economy at large. Combating fraud with a well-thought-out analytics plan will help insurance companies conduct their business efficiently, increase customer satisfaction and enhance their overall brand image.

As global insurance markets recover from the recent global financial downturn, insurers are moving from a cost-cutting stance to investment in strategic analytical projects.

WNS's Approach to Analytics in Insurance

WNS approaches analytics from a holistic standpoint to create a broad-based perspective that is based on an accurate and insightful decision making framework. The framework makes use of all the different forms of analytics starting from the very basic reporting, to the more evolved descriptive and the most advanced forms - predictive and prescriptive.

The WNS Analytics Decision Engine (WADE[SM]) uses a tiered approach to create an 'Intelligent Decision Support System' in three steps:

- The first step is to harmonize data from multiple sources. Typically, product data, transactional data, customer data, contact center data, third-party data and claims data are collated
- The next step is to consolidate and analyze data from the varied sources using a number of simple and high-end statistical tools and models
- The analysis is then captured in the form of a single version of truth that is available to the entire enterprise

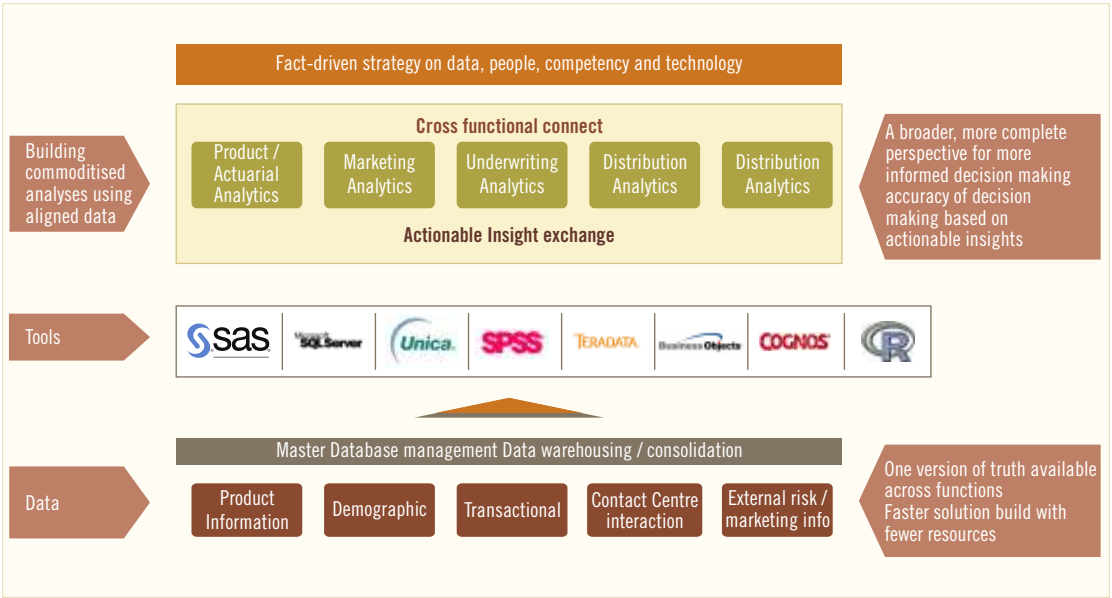

Fig. 6: The WNS proprietary analytics framework WADE[SM] that helps build an intelligent decision support system for insurers

For the insurance industry in particular, WADE[SM] builds a 'segmentation framework' that can be effectively used in Marketing and the Claims Management process. In Marketing, this framework can be used to segment the customer base very efficiently and in Claims Management, fraudulent claims can be sieved from the genuine ones, giving insurers a greater control over their business.

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Conclusion

Analytics can offer a comprehensive view of the business to an insurer, be it in terms of marketing spends or getting a better grip of the claims management process.

The high volume of data – and the stakes associated with leveraging data strategically – has never been higher. In the insurance market, analytics must bring together information from many different sources, including:

- Core systems
- Data marts and warehouses
- External resources (such as cloud services)

These far-flung sources of information must be integrated in some fashion to not just understand the chain of events that explain the current state of the business, but to also provide accurate insight into what is likely to take place in the future.

The expertise and resources associated are expensive to build and maintain. For this reason, insurance industry leaders are increasingly turning to alternate sourcing models for their analytical requirements to serve as a strategic asset and gain actionable insights for improving their marketing effectiveness.

Besides enhancing mission-critical capabilities, business process management companies like WNS can help insurance companies supplement gaps in skill sets, scale predictive analytics capabilities across the enterprise quickly, and address organizational impediments and / or cultural resistance.

About WNS

WNS is a leader in insurance-specific business services with a comprehensive range of solutions in Property & Casualty; Life, Pensions & Annuity to address end-to-end needs of global insurers across the industry value chain. Our bouquet of insurance solutions include new business management, policy set up and changes, premium management, claims management, payments management, agency & distribution management, support services and actuarial services.

Backed by a strong foundation of Technology, Analytics mature Process Services, and the WNS CoE for Actuarial Services, we create enhanced value for our clients from the insurance domain in every corner of the world. Our award-winning proprietary analytics framework, the WNS Analytics Decision Engine (WADE℠) is a first-of-its kind vertical-specific framework that enables organizations to ride the journey towards analytical maturity by taking charge of all decision making data, deploying the width and depth of analytical and research talent for developing innovative analytics models; interfacing with (client) business managers through a domain layer, and thus, helping build scaled solutions. With WADE℠ companies will no longer need to bother about a capex-heavy platform not yielding the desired results or data coordination with the offshore team. WADE℠ liberates companies from the pain points usually associated with data analytics.

To learn more, please write to us at, **marketing@wns.com** or visit **wns.com**