Predictive analytics: Providing new opportunities for insurance companies

Today’s insurance companies have access to more data than ever before, which is good news for industry leaders looking to enhance business results through robust data analysis. Yet, transforming data into value at the pace required to stay competitive is no small feat.

The insurance landscape is constantly evolving toward higher levels of sophistication, and it features products powered by technologies like vehicle telematics and strategies shaped by data sources like social media. In fact, many insurers struggle to extract the true value potential of their data to personalize customer experiences, implement more informed decisions, introduce new products, improve operations, and drive business results. The critical issue, therefore, is not the availability of data, but how to analyze it effectively and apply the results to the business.

That’s where predictive analytics can help. Predictive analytics enable companies to seize new opportunities and improve business results by using the ever-growing mountain of data to provide forward-looking insights that go beyond “what happened” to answer “why it happened,” “what will happen next,” and “what actions we can take.”

While property and casualty and life and health insurers currently use predictive analytics in different areas, most have yet to explore the full range and power of such applications across their business. When applied correctly, predictive analytics enable new opportunities to better understand customer behavior, process claims more efficiently, improve risk management, identify fraud, and pursue new product and service offerings to reduce costs, enhance profitability and improve the customer experience.

KPMG can help overcome data challenges and implement predictive analytic and modeling capabilities in new and progressive ways that drive value and help maximize potential benefits for both insurers and their customers.

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A practical path forward
Moving forward with a practical perspective on how to apply predictive analytic capabilities can help companies overcome challenges and mitigate risks. At KPMG, we encourage clients to:

- **Think big.** Develop a project blueprint that supports the long-term business objectives and achieves short-term goals. This road map will be the compass that steers a company’s predictive analytics initiatives and helps build the longer-term vision. A thorough and objective assessment of capabilities is an important part of the analytical discipline. Tools, techniques and approaches are continuously advancing.

- **Start small.** Take time to define and prioritize initiatives and carve out meaningful phases to deliver the highest value in the shortest amount of time, which will help maintain project momentum. Also, consider “pilot” programs to generate stakeholder buy-in throughout the organization.

- **Deliver quickly.** Develop and execute the road map with milestones, grouped into specific time periods. This approach will help incrementally build toward the vision, while providing interim benefits to the business along the way.

- **Monitor and measure success.** Develop a value scorecard to monitor and measure the return on investment for every phase.

Realize the possibilities
Predictive analytics can be applied to drive strategic business value that benefits both insurers and their customers. Yet, many companies are still discovering the vast opportunities available to deploy predictive analytics and improve business results. Some potential possibilities include:

- Expanding appetite and profitability by segmenting loss costs, rates, and prices.

- Providing a superior customer experience by better understanding policyholder behavior and providing personalized services at every stage of customer interaction: marketing, acquisition, cross-sell, service, and retention.

- Streamlining and improving claims management by focusing detailed scrutiny on claim sectors with higher propensity for fraud, large loss, subrogation, or other special handling needs.

- Improving operational efficiencies by assessing report order practices (e.g., MVR or loss control reports) and workforce optimization models (e.g., phone versus on-site premium audits).

- Assessing agent behavior to design alternative compensation and resource models.

- Developing account level or enterprise level predictive models.

- Improving the underwriting process by assessing authority levels and workflow options (e.g., straight through processing versus underwriter review).

- Developing hedging strategies to reduce investment basis risk.

Predictive modeling process
Implementing analytic and predictive modeling capabilities can seem overwhelming due to the sheer volumes of data available. KPMG can help simplify this process of applying predictive modeling around a key business issue by implementing a four-step approach:

1. **Planning and scoping the project** – This involves clearly defining program objectives and articulating the project mission while determining the cost, benefits, business case, and impact of the project.

2. **Preparing the data** – Incorporates identifying, sourcing, scrubbing, and validating of the data, which include structured, unstructured, internal, and external data sources.

3. **Applying analytics** – Modeling, building, validating, and refining of analytics, which includes software knowledge, modeling and insurance experience, and application of basic and advanced predictive analytic techniques.

4. **Deployment** – Helps ensure ease of doing business and makes operational by integrating factors such as IT, regulatory compliance, training, communication, and monitoring of initiative.
The KPMG Advantage

KPMG’s Predictive Analytic specialists have deep knowledge and experience working with property and casualty and life and health insurers, and have assisted firms along every stage of their data analytic journey from business case development, data preparation and modeling to deployment. We realize that the adoption of predictive analytics varies from business to business, and we provide a full suite of services to complement each stage of the adoption curve. These services include:

- **Performance management** – Measuring, monitoring, and benchmarking operational performance metrics to identify opportunities for improvement through traditional or sophisticated analysis.

- **Analytic enablement** – Facilitating improved understanding of data and data sources, internal and external, then aligning resources that enable businesses to benefit from predictive analytics.

- **Predictive modeling** – Applying robust modeling techniques towards a specific goal (e.g., improving the customer retention, insurance segmentation and pricing, claim handling) to achieve profitable growth and competitive advantage.

### Planning and Scoping
- Envision the initiative
  - Business need
  - What, why, how
  - Envision end state
- What will be modeled
- Quantify potential benefits
- Business case development
- Mobilize the team
- Plan the project

### Data Preparation
- Data architecture
- Data mapping
- Data cleansing
- Data aggregation and integration
- Data entry
- External data
- Unstructured data

### Analytics
- Business analytics
  - Scorecard/KPI development
  - Core analyses
  - Predictive/advanced analytics
    - Data mining
    - Statistical model development

### Deployment
- Operationalize the model
- Operational data sourcing
- Business process redesign/target operating model
- Change management (e.g., training, communication)
- Implementation
- Monitoring
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