Building a Strategic Analytic Culture
A Guide for the Insurance Industry
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Introduction

The insurance marketplace is tough. It’s fiercely competitive with consumers shopping around for the lowest premiums possible and little differentiation among products.

Insurance executives struggle to find the right balance between improving profitability and providing competitive pricing and an unmatched customer experience. Activities that focus on the customer experience – like claims concierge services and enhanced agent support – can run counter to goals like lowering loss-adjustment expenses, reducing labor costs and decreasing combined ratios.

The key to achieving this balance is an enterprisewide commitment to data and analytics. Such a commitment will enable you to:

- See problems coming and take steps to prevent them instead of being reactive and constantly fighting fires.
- Foster a culture of fact-based decision making through all levels of the organization.
- Deliver trusted information into the hands of decision makers in time for them to take action.
- Build a strategic analytic culture where analysis is part of your corporate DNA.

These goals, though lofty, are achievable – and necessary for organizations seeking to survive and thrive in today’s economy. In this paper, we’ll talk about how you can build a strategic analytic culture in your organization.

To thrive in the new economy, you need to build a strategic analytic culture where analysis is part of the corporate DNA.
Anatomy of a Strategic Analytic Culture

What does a strategic analytic culture look like? Figure 1 illustrates the interrelated components of such a culture.

**Executive Commitment**

A strategic analytic culture starts and ends with executive management commitment. When executives are fully bought in to the concept of an analytic culture, they set goals, priorities and expectations based on the use of analytics. They invest in technology, people and processes that will continue to foster this culture. Most importantly, they become highly sought after, both internally and externally, as their companies continue to outpace the competition.
Use Analytics to Set Business Strategies

Companies with a strategic analytic culture set their business strategies based on what the analytics tell them. AIG is a great example of this. Through its Strategic Risk Analysis group, a team responsible for continually optimizing business performance through analytics, the company has implemented 16 underwriting and finance predictive models that have helped prevent millions of dollars in potential losses. One example involved assessing executive liability insurance. Using SAS® Analytics, the Strategic Risk Analysis group found six potentially significant predictors and developed its own quantitative risk model (QRM) to enable risk-based business decisions. Using this model over an 18-month period, AIG was able to target $14 million in new business, representing 100 percent growth. In addition, the modeling tool helped prevent potential losses of $75 million from certain accounts over the same 18-month period.

Commitment to Data Management

Good analytics are pointless without good data. The foundation of a strategic analytic culture requires an organizational commitment to creating, cleansing, storing and accessing information from across the enterprise. And that means more than just being able to get to the data. It also means building common, agreed-upon definitions of key metrics, so that when executives review information they can spend their time making decisions rather than arguing about definitions.

Enterprise Use of Analytics

Not every department has to employ PhD statisticians, optimizing at every turn – but every department needs to actively use analytics as appropriate for the responsibility and maturity of its function. Pockets of analytic competency, isolated from each other and from core operations, will never reach an effective level of strategy. Only through widespread use of analytics can you build this culture into the DNA of your organization.

In January 2012, AIG CEO Peter Hancock announced the newly created position of Chief Science Officer (CSO). This new position would help enhance AIG’s focus on analytics by asking the right questions and making science-driven decisions about the company’s strategies – whether related to underwriting decisions, product innovation, pricing, distribution, marketing, claims or customer service – with the end result of improving the scope of what AIG delivers for its customers.

Whether or not the vision for this new position comes to fruition, the point is that the interdependency created by value transparency in the insurance market is forcing different departments to work together more closely than ever before. For example, think of underwriting and marketing.
Culture of Fact-Based Decision Making

Organizations with a strategic analytic culture are motivated to back up conclusions with data. It isn’t about instinct, but solid proof. Colleagues across the organization ask “why,” and demand data in response. This is not to say there isn’t room for creativity. In fact, it is quite the opposite. Individuals feel more comfortable when thinking out of the box or developing creative solutions if they can point to evidence that suggests this kind of thinking will produce positive results.

Kimberly Holmes, Senior Vice President of Strategic Analytics at XL Insurance Group, provided this insight in an article in Insurance & Technology and a SAS press release. She asserted that the world of insurance is changing exponentially as volumes of available data rapidly expand. According to Holmes, “Data visualization will enable us to clearly communicate complex statistical insights to our colleagues and encourage more widespread use of analytics in business planning and decision making across XL.” However, she also stated, “Data analytics means nothing without the decision makers embracing it.”

The culture of fact-based decision making circles right back to management commitment. Then the cycle starts over again.

Where is your organization in this continuum? Are you getting stuck at the commitment level? Perhaps it’s too difficult to build a commitment to data management? Does analytic competency still reside in pockets across your organization? Let’s consider how to move your organization toward the vision outlined in Figure 1.

Focus Areas for a Strategic Analytic Culture

While strategic technology investments are required to bring an analytic culture vision to fruition, moving your organization in this direction entails more than just technology. Building a strategic analytic culture starts with building on three focus areas within your organization from the perspective of people, processes, organization and technology. The three focus areas are:

• Business analytics skills and resources.
• Information environment and infrastructure.
• Internal analytic processes.

“Data analytics means nothing without the decision makers embracing it.”

Kimberly Holmes
Senior Vice President of Strategic Analytics, XL Insurance Group

Three Building Blocks of a Strategic Analytic Culture

• Business analytics skills and resources.
• Information environment and infrastructure.
• Internal analytic processes.

1 Portions of this section were adapted from the SAS white paper Building an Analytics Culture: A Best Practices Guide. See: sas.com/reg/wp/uk/95186.
Focus Area 1: Business Analytics Skills and Resources

Provide the right balance of resources

Notice the term business analytics in the title. The point here is that we are not applying analytics just for the sake of analytics. Rather, we are applying analytics to the pains and challenges within your business. The distinction seems minor, but it is essential. You need to strike the balance between analytic rigor and business application to fully realize the benefits of technology, people and process investments. That starts with having the right balance of business and technical analytical skills within your resource pool.

Evaluate your labor force to determine key areas of investment. Do you have analytically minded people who understand the business but lack deep technical modeling skills? Do you have access to a crack data scientist, but not the mechanisms to counterbalance with business acumen? You don’t need to build up a team of operations researchers within your organization to succeed (although some leading insurance organizations have decided to make such an investment). You do need to be smart about where you invest and how you develop your team.

Make analytics more approachable

Analytical skills are in short supply. In fact, in the US it is estimated that demand for deep analytical resources will be 50 percent higher than the supply by 2018.² Organizations will need to figure out a way to make analytics more approachable, so that it becomes more accessible to business analysts. This means moving to highly visual, wizard-driven tools.

Graphical tools enable nontechnical users to experience and share “aha moments” with an impact unmatched by static graphs, spreadsheets or reports. The adage “a picture is worth a thousand words” holds true for analytics as well as everyday life. Graphical and interactive information should be as easy for an executive to consume as it is for a business analyst to create.

It is important that the visualization tools you choose are robust and dynamic. You will need fast answers, drill-down and exploration capabilities to meet all the dynamic needs of your organization. With the right exploration and visualization tools in place, more users will be empowered to take advantage of analytics. Analysts can focus on tougher analytic questions while encouraging broader use of analytics throughout the organization.

**Focus Area 2: Information Environment and Infrastructure**

Business analytics is about using data to discover insights that change the way an insurance company operates – elevating it to a strategic analytic culture. Without a strong foundation of reliable and accurate data, results are suspect, and buy-in becomes impossible. A sound information management strategy puts you on the road to analytic success by giving you full confidence in your data.
Upgrade your information architecture

No matter how you feel about the term big data, you can certainly agree that every insurance company has “large” data. Think about all of the different types of data across your organization. It ranges from quotation and new business details to all the information that’s captured during a claims settlement – not to mention digital data like Web behavior, mobile tracking or unstructured text data from social media. To effectively use the insights trapped in these volumes of data, you need a modern data infrastructure that can support enterprise-class analytics, multiple projects and dynamic visualizations.

Cathy Enz, Professor of Strategy at Cornell University, shared her perspective on big data in a recent interview with SAS. “I think using information rather than our hunches, our superstitions, our past history is a very powerful business tool,” she said. “Our biggest challenge is to turn all the information that we get into usable knowledge to help us make decisions. The challenge of dealing with big data is how we translate it into executable information.”

Bridge the gap between IT and the business units

IT needs to rethink the way data is formatted and presented. The data requirements for predictive analytics, business intelligence and reporting are very different from traditional relational databases. Today, data needs to be structured to support different kinds of analytics. This is where the culture of information management comes in. A strong partnership between IT and the business units must be fostered to ensure that the infrastructure supports a new way of looking at the business. Going back to the resource investment required, a key new resource to add to your organization may need to be a “translator” between IT and the business units – someone who understands how to interpret business requirements and put them in an IT context.

Capitalize on advanced analytics, not reporting

For analytics to truly be a game changer, insurance companies need to recognize the difference between reactive and proactive decision making. Using your data to create reports, drill-downs or alerts helps you to keep a finger on the pulse of your business. But these things only show you what happened. They will not tell you why the problem is happening or what effect it will have in the future.

Predictive analytics, like forecasting and optimization, can help you figure out why things are happening, show you what will happen next, or even lead you to the best alternative action considering all of your operating constraints. As Figure 3 shows, organizations that use predictive analytics to move from reactive to proactive decision making can change the game. They are no longer fighting fires. They cease to be surprised. Instead, they can stay one step ahead of trends, set strategy and achieve goals. They gain advantage over the competition, increase value to shareholders, and continue to surprise and delight their policyholders.
Focus Area 3: Internal Processes

Enterprise use of analytics is not as simple as “everyone log in and get started.” Organizations have limited resources – from analysts to IT to technology – so they need processes in place to ensure they can access appropriate analytical or IT resources and also identify, prioritize and address analytical requirements. That could include, for example, deploying a new customer retention model or investing in a new analytical tool.

Manage analytics as an ongoing process, not a one-off project

If the goal is to achieve a strategic analytic culture, internal processes must be designed around sustainable, long-term analytic performance throughout the analytics life cycle. You need to think not just about developing models, but also about deploying them, embedding them into a business process and monitoring them over time. The models themselves need to be managed as carefully as the related business processes you put in place. With a formal model management framework, such as that described in Figure 4, it becomes far easier to document models and facilitate collaboration across the enterprise.
Building a Strategic Analytic Culture

Facilitate collaboration

Collaboration provides a big area of opportunity for insurance companies, and one that is essential to moving toward a strategic analytic culture. Traditionally, insurance – like so many other industries – has operated with siloed departments. To facilitate collaboration, the silos must be broken down. Technology may be the glue that binds departments together, but true collaboration requires realigning incentives, changing organizational structures and breaking down barriers. People across the organization should be empowered and rewarded for acting in the best interest of the enterprise, not just their own department.

This is a significant effort in most organizations, particularly if you haven’t yet achieved executive commitment, which is the first component of a strategic analytic culture anatomy. Collaboration across the enterprise is not possible without at least one active and influential ally at the top of the organization who can rally for change. Frequently, a grass-roots effort from one department stalls out when that department’s executive is unable to gain momentum and attention from peers.

This all sounds great. But how do you get started?

Getting Started

The journey to a strategic analytic culture starts with a small step. The key to success is to have a small, well-defined victory and then sell it loudly across your organization.

First, you need to choose a business area that is ready for success (the proverbial “low-hanging fruit”). Evaluate that opportunity according to the people, technology, processes and culture that are already in place or can be put in place successfully. For example, many insurance companies have already achieved success in their claims departments by applying advanced analytics to the problem of detecting fraudulent activity.

The key to building a successful strategic analytic culture is to have a small, well-defined victory and then sell it loudly across your organization.
Perhaps it is time to address the other side of the coin and start working within the marketing area – focused on building an exceptional customer experience. Or you may see an opportunity – like some insurance companies already have – to bring two siloed departments together, synchronizing marketing and claims decisions through data and analytics.

Once you’ve identified the business area to focus on, you should clearly define your business priorities and objectives. Evaluate potential projects by ensuring that you can answer “yes” to the following questions:

• Is it a business problem that resonates with the organization?
• Is the problem easy to define?
• Is the project relatively small in scope but large in impact?
• Are the objectives easy to measure?
• Does the required data exist?
• Do the necessary skill sets exist?
• Is the process repeatable, or is there at least a path to repeatability?
• Is there an executive who would be willing to support and guide the project (formally or informally)?

As you embark on the project, ensure that you have clearly defined the personas, scope and objectives up front. Make sure that resources are empowered to prioritize this project, and set up open lines of communication. Allow plenty of time for brainstorming, defining metrics and gaining consensus across all key players. Finally, be sure to publicize your success loudly and frequently once you have achieved your goals. Every success story of an organization with a strategic analytic culture starts with this kind of grass-roots project. This type of approach garners so much positive attention that over time, analytics (and the groups that run the project) become essential to every department and every project across the organization.

**It’s a Marathon, Not a Sprint**

Clearly, the journey to a strategic analytic culture takes time, careful planning and a phased approach. As Figure 5 illustrates, organizations need to think about building a strategic analytic culture as a phased and iterative journey.

• First, you must establish the enabling technologies and the cultural and organizational changes required to move forward.
• In the integrate phase, you take on projects like the ones described in this paper. These projects may be highly manual, and should be highly collaborative. The important goal in this phase is to ensure that analysts and executives are comfortable with the new data, processes and results.
• In the optimize phase, data and analytics become an automated part of business processes. Executives can take action on results with a high degree of confidence because they know where the data and results are coming from.
• Once an optimized platform of automated, integrated analytics and business processes are in place, it’s time to **innovate**. Are there new data sources to add? New departments to bring on board? New business processes or service offerings to develop and test?

The most likely result of the innovation phase is the need to return to the **establish** phase once it is determined that new technologies, goals, organizational or cultural changes are needed.

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**Closing Thoughts**

The journey may be difficult, but the results make it all worthwhile. Analytics is becoming increasingly mainstream in insurance, and most leading insurance companies have the desire to grow analytic competency building on previous success. Executives who push successful analytic initiatives within their companies become highly visible and highly promotable.

Once the building blocks of a strategic analytic culture are in place, you have the opportunity to move from reactive to proactive decision making. As a result, you can gain visibility, executive buy-in and competitive advantage.

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**For More Information**

- Learn more about SAS solutions for insurance: [sas.com/insurance](http://sas.com/insurance)
- Visit the Analytic Insurer blog: [blogs.sas.com/content/insurance](http://blogs.sas.com/content/insurance)
About SAS

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