CPCU SOCIETY™

Underwriting Interest Group

Underwriting Trends

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Message From the Chair

by Ann E. Lyon, CPCU, CRM, CIC, ARP, AMIM

Ann E. Lyon, CPCU, CRM, CIC, ARP, AMIM, is senior vice president and chief underwriting officer for Builders Insurance Services, part of Insco Dico Group, located in Lake Oswego, Oregon. She earned the CPCU designation in 1985 and subsequently earned the Certified Risk Manager, Certified Insurance Counselor, Associate in Research and Planning, and Associate in Marine Insurance Management designations. With forty-three years in the insurance industry, Lyon has held various underwriting and marketing positions with several national carriers. She is a member of the CPCU Society's Underwriting Interest Group Committee and is also active in the Oregon Chapter.

The CPCU Society finished up another fabulous Annual Meeting in New Orleans at the end of October. The Underwriting Interest Group was very active this year, with many programs and other activities. On Saturday, October 26, the Underwriting Interest Group Committee met to start planning for next year. We expect to be able to provide seminars, webinars, other educational programs, and chapter outreach, as well as be involved with the student program, at the Annual Meeting in Anaheim, California.

At the 2013 Annual Meeting, the Underwriting Interest Group hosted a luncheon with featured speaker Marvin Kelly, CPCU, former Society president and executive director of the Texas Property and Casualty Insurance Guaranty Association. With twelve college students in attendance, along with insurance professionals, Marvin motivated everyone in the room with his presentation, "What Is Leadership?"

Seminars that were developed solely or in part by the Underwriting Interest Group included "Hydrofracking Risks and Rewards," "Powering a Cleaner World in the 21st Century," and "Predictive Analytics: The Insurance Industry's New Focus for Greater Profitability," all of which were well received.

This will be the last newsletter published by the Underwriting Interest Group. The CPCU Society will be launching a publication in 2014 that will include articles from all interest groups, as well as other journalistic submissions.

We are looking for dedicated new members to help with committee activities. If you are interested or want more information, contact me at ann.lyon@insurancebis.com.

What's in This Issue

Message From the Chair 1

Hydrofracking Risks and Rewards 2

Predictive Analytics—The Insurance Industry's New Focus for Greater Profitability 3

Powering a Cleaner World in the 21st Century 5

Meet Your Underwriting Interest Group Committee 6

Millennials: Looking to Refresh the Client Base? 7

Hydrofracking Risks and Rewards

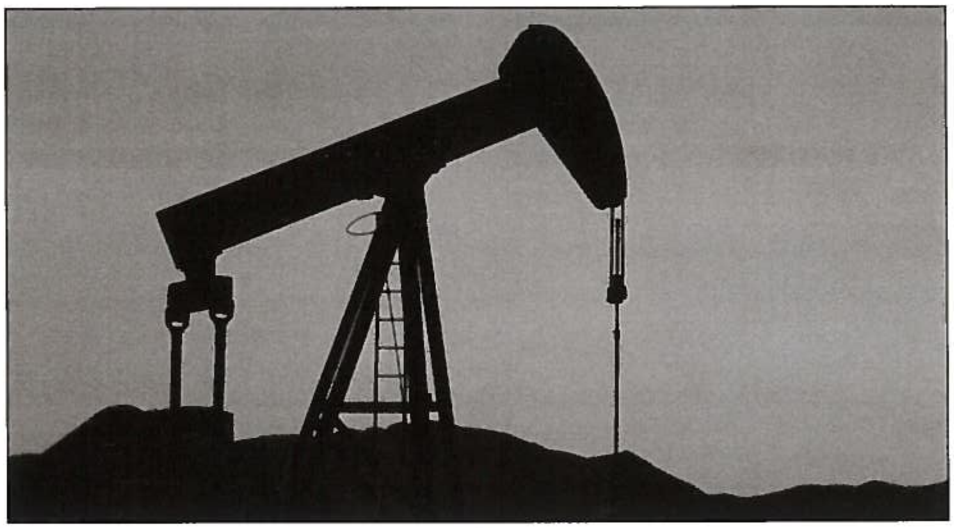
by Ann E. Lyon, CPCU, CRM, CIC, ARP, AMIM

On Sunday, October 27, 2013, with an encore presentation on Monday, October 29, 2013, the seminar "Hydrofracking Risks and Rewards" was held at the CPCU Society Annual Meeting in New Orleans. The program was developed in part by the Underwriting Interest Group and several other interest groups and presented by Charlie Kingdollar, vice president, General Re-Insurance Corporation; Marc S. Voses, Esq., partner at Nelson Levine de Luca & Hamilton Law Firm; and Gregory S. Hoffnagle, Esq., LEED AP®, associate in the New York office of Clyde & Co LLP.

Charlie Kingdollar began the seminar with an overview of hydrofracking and how it has changed over the last sixty years. He explained that it is a process of drilling into a shale deposit and injecting millions of gallons of water mixed with sand, resin, or ceramic beads as well as other ingredients into the well at extremely high pressure to extract natural gas that would not ordinarily be retrievable. Historically, the ingredients in the fracking fluid did not need to be disclosed; although a few states now require some disclosure, many regulations have loopholes that consider this information proprietary or confidential. However, it has been found that as many as 750 very dangerous and toxic chemicals are used.

Producing wells using fracking methods are widely spread over the United States, and as of 2011, total wells numbered 514,637. Many of these wells are on private property leased to the drilling companies by individual landowners, whether these are farmers, ranchers, or others owning land over gas deposits or shale formations. There are many things that can and do go wrong such as explosions, blowouts, fires, contamination of ground and surface water, toxic air emissions, and possibly even earthquakes. Many studies by universities and governmental bodies have shown these problems to be real, and litigation has begun on both individual and class action bases.

The fact that most laws dealing with mining or drilling are at the state level make it difficult to determine who might be liable for damages, because they vary widely by state. There are mineral rights laws through which



the surface owners may not own the mineral rights and have little or no say in drilling operations. Individual state environmental laws also come into to play in various ways, depending upon the state jurisdiction. Forced pooling laws may assign liability, whether it is to the land owner or drilling company.

Kingdollar added that there are insurance coverage issues to consider with these drilling operations: If you are a landowner and have a homeowners policy or farmowners policy, does it have a business or business pursuits exclusion? Various court cases have interpreted these exclusions in different ways with some going up to the appellate courts for rulings. Pollution exclusions can also vary by policy and coverage. Personal lines insurance carriers have generally not contemplated the exposure.

Voses and Hoffnagle continued the discussion with more in-depth information regarding insurance coverages and litigation. They noted that some of the major commercial insurance carriers are now prohibiting these kinds of operations because the exposures are too great to ignore. These exposures spread over many lines of business, they said, including commercial auto and motor truck cargo, commercial general liability, and workers compensation. The liability for the drilling operations, and the property coverage for the drilling equipment, are usually addressed by specialty oil and gas carriers. Some of the risks are casing integrity, fracking methods used, number of fracking stages, separate fracturing operations at a well pad, experience level, and subcontractors involved.

If a claim is presented, there are a number of issues to consider, such as the duty to defend or indemnify, high-dollar defense exposures, coverage interpretations, and choice of law.

Voses and Hoffnagle shared that some types of claims that have arisen involve groundwater contamination—cleanup and remediation, migration to surface, mishandled waste and disposal of fluids; seismic activity, including property damage and loss of life; diversion of water being used; soil contamination and effects on farming and fishing; air quality from burn off and fumes from flowback and increased truck and site equipment; and radioactivity. The plaintiffs' lawyers are gearing up with targets such as property owners, leaseholders, trucking operations, and pad operators, among others. The issues they are pursuing are bodily injury claims from exposure to chemicals; medical monitoring; environmental contamination; loss of property value; damage to property, including soil, crops, and livestock; and remediation of water contamination.

Drilling operators should be using best practices to address containment of hazardous or toxic liquids, flammables, naturally occurring radioactive materials, heavy metals, toxic minerals, air emissions, and noise. They also need to make sure their casings are inspected and do not break. Cleaning up the site of flowback, fracking water, and temporary roadways is also critical. Finally, the speakers asserted, drilling operators need to practice corporate citizenship.

Predictive Analytics—The Insurance Industry's New Focus for Greater Profitability

by Lamont D. Boyd, CPCU, AIM

Lamont D. Boyd, CPCU, AIM, director, insurance market, with FICO® (Fair Isaac Corporation), is responsible for client and partnership opportunities that make use of FICO's predictive analytics technology, scoring products, and consulting services. Speaking regularly to industry, regulatory, and consumer groups on behalf of FICO for the past eighteen years, he is recognized as a leading expert in predictive scoring technology. In addition to managing the CPCU Society Student Program, he is a member of the Underwriting Interest Group Committee and the Annual Meeting Task Force.

Before a standing-room-only audience of more than 150 attendees at the CPCU Society Annual Meeting in New Orleans recently, the Underwriting Interest Group sponsored an educational seminar focused on the industry's use of predictive analytics for greater profitability. The value of predictive analytics in many functional areas—marketing, underwriting, pricing, product development and management, claims management, and claims fraud—was presented and discussed.

We were fortunate to hear from these three industry leaders, who shared their views on the subject and responded to a number of interesting questions from those gathered:

Karlyn Carnahan, CPCU—Principal, Novarica

Scott Horwitz—Senior Director, Insurance, Fair Isaac Corporation (FICO)

Ed Pulkstenis, CPCU—Executive Vice President, Commercial Lines, Tower Group Companies

Our objectives for this educational seminar were to highlight the continuing growth in predictive analytics within the insurance industry, to provide key insights for enhancing insurer profitability through predictive analytics, to present and understand the value of generating immediate return on investment by focusing on key decision components, and to discuss the steps necessary for successful implementation of predictive analytics in decision making on many different fronts.

Based on Novarica research and years of insurance industry client relationships, Carnahan guided seminar participants in understanding the importance of analytics in our growing world of big data, defined by volume, velocity, and variety. Although insurers have swifter and greater accessibility to internal and external data—including from new data sources such as customer contact data, social media data, telematics data, and others—their ability to effectively analyze these data for deeper understanding is critical to successful and profitable operations.

Nearly 60 percent of all property-casualty insurers responding to a recent Novarica survey made it clear that the use of analytics and business information is one of their top three business capability priorities. While larger insurers are somewhat more advanced in their use of predictive analytics than smaller insurers, 95 percent of all respondents use analytics in actuarial modeling and risk analysis, 83 percent in pricing, and just over 70 percent in product management and product development. This increasing use of analytics has also led to greater reliance on predictive models, such as credit-based insurance scores and other underwriting risk scores, as well as profitability models.

The opportunities available to the industry regarding big data analytics include better customer engagement; enriched context around risks for marketing, underwriting, and pricing; early risk assessment from public information; early interest indications from online behavior; ability to better understand geospatial information such as distance to coast; enriched context around claims and claimants, such as event data from telematics devices; insights from analysis of trends; anomalies and dependencies that can be used for product development; brand protection; marketing opportunities; and sentiment analysis.

There are certainly challenges associated with big data analytics: significant up-front costs of specialized hardware and data; limited access and high cost of resources, as data scientists with the right skills and domain knowledge are needed; and an understanding of the full benefits for prioritization and senior management sponsorship. However, all the challenges are being addressed by what Carnahan refers to as "analytical innovators," focused on the bottom line, and can be overcome by others as they fully understand the value of predictive analytics for greater profitability.

Having been with FICO for more than two decades, Horwitz shared some of the predictive analytics/predictive modeling approaches that have made FICO a leading provider of analytics and decision-management tools to the banking and insurance industries since its origin in 1956.

FICO has a long history with big data analytics. As the leading provider of credit risk scores and credit-based insurance scores for more than twenty years, FICO has worked with huge amounts of consumer credit data to provide lenders and insurers with tools to enhance their marketing, underwriting, and customer management/relationship decisions. Predictive analytics are also the foundation for FICO® Falcon® Fraud Manager, used by the vast majority of lenders and credit card issuers for the past twenty years, with more than one petabyte of data processed annually.

Horwitz shared the need for a 360-degree customer view to achieve the best possible results from a predictive analytics project, considering each of the internal and external databases that provide information about

continued on page 4

Predictive Analytics—The Insurance Industry's New Focus for Greater Profitability

continued from page 3

customers. The goal of predictive analytics is to determine which of those sets of data offers the best—most accurate and most predictive—view for the decision(s) under consideration, whether for marketing response, underwriting risk, or managing customer contacts and relationships.

Effective customer relationship and communication strategies include the application of analytics to all collected customer transaction and available demographic (for example, consumer credit) data. Those data are optimized and deployed via a business rules management system to ensure that personalized communication and treatments are being presented to the right customers at the right time.

Because much of the available data is dynamic, changing at different points in the customer relationship, it's important that the predictive analytics not be viewed in a vacuum, but as an ongoing solution. The modeler's dilemma is to also weigh the greatest predictive value, which may rely on significant complexity, with the insurer's ability to operationalize the model. It may be necessary to give up some predictive value to offer a simpler, more explainable, deployable model. The ability to develop, use, and maintain multiple models for various decisions can assist with simplicity and deployment as well.

The right data scientists, working with all business interests that have the necessary domain knowledge, are able to develop and offer the best model(s) for the decision(s) being made. A glass-box versus a black-box analytic approach offers the greater understanding, ease of engineering, and operational consistency an insurer needs to succeed.

Pulkstenis offered his valuable insights into the practical application of predictive analytics in a variety of industries. He focused primarily on the real-world implications and impact of deploying analytics-based decision making. He provided both insurance and noninsurance examples of how to interpret analytics data, as well as how to optimize the business results. The use of predictive analytics in many industries is not new. In the mid-80s, one of the most obvious manifestations of early analytics was the introduction of bar-code scanning. Companies went through an evolutionary process in the early days of bar-code use, initially focusing on pricing sensitivity and later maturing to a more comprehensive integration of the information collected into their broader brand and business strategies. Over time, companies continued to advance both the sophistication of their information collection as well as the use of it in the markets. Various examples were shared demonstrating both the power and the pitfalls of applying analytics.

Within the insurance space, Pulkstenis described several techniques that can help in understanding the impact of analytics, ensuring their accuracy, and implementing them successfully. One technique he described involves ranking policies using predictive analytics scores and then examining the highest hazard policies individually to validate the results. He discussed the importance of high-quality input data and some of the challenges associated with ensuring data accuracy. He shared examples of cases in which correlations can cause invalid conclusions. And he explained the importance of cross-functional collaboration including analytics experts, underwriters, field staff, operations staff, and others involved in the underwriting process.

Pulkstenis closed our Annual Meeting educational seminar with these four simple, yet critical, rules to successful predictive analytics efforts:

- Don't let analytics intelligence replace common sense; you need both.
- Don't trust just your own observations.
- Analytic conclusions are only as good as the inputs, internal and external.
- Respect insurance as a people business: company personnel, agents, customers. It's possible to win the battle but lose the war.

Powering a Cleaner World in the 21st Century

by Gregory J. Massey, MBA, MS, CIC, CRM, CPCU, ARM, CLCS, PMP

Gregory J. Massey, MBA, MS, CIC, CRM, CPCU, ARM, CLCS, PMP, is senior vice president and head of technical underwriting for Zurich North America. He is based in New York, N.Y. Massey is involved in the industry: CISR Board of Governors with The National Alliance, National Committee member for the CPCU Society, editor of the Underwriting Interest Group newsletter for the CPCU Society, past panel member for ISO GL and Emerging Issues, past president of three CPCU chapters, CPCU textbook reviewer, and academic advisory council.

At the 2013 CPCU Society Annual Meeting in New Orleans, the seminar "Powering a Cleaner World in the 21st Century" was presented to a full audience. Moderating the session was Greg Massey, CPCU, senior vice president and head of technical underwriting for Zurich North America. The speakers were Dallas Kinley, operations vice president at Mutual Boiler Re, and Stephen C. Clarke, CPCU, assistant vice president—commercial property at ISO, Inc.

The session focused on alternative energy. Alternative to what? Alternative to petroleum-based energy, such as ethanol, bio diesel, methane, hydrogen, nuclear, and compressed natural gas, and alternative to foreign oil, such as coal, tar sands, hydraulic fracturing, off-shore drilling, shale oil, and natural gas. The focus was on renewable energy, such as solar, wind, tidal, hydro, and geothermal.

While the speakers pointed out that there are a lot of advantages to moving to alternative energy, there is also a whole new set of exposures to deal with. When we think of exposures with a traditional source of energy, say, petroleum, the BP oil spill, for example, comes to mind. With alternative energy, what types of exposures are we faced with? Below are benefits and exposures with varying types of alternative energy.

Solar Power

- Benefits
  - Indefinitely renewable
  - Clean
  - Cost effective
    - Tax incentives
    - Net metering
  - "Bragging" rights
- Hazards
  - Power quality
    - Fluctuations can cause damage to equipment
    - Power "islanding"
      - Safety concerns for repair crews
    - Liability often assumed by contract
      - Utility may require insurance
      - Wind exposure and roof penetrations
      - Fire safety
      - Wiring/electrical safety—concern for first responders
      - Increased cost in roof repair

What's the future hold for solar energy? Roof shingles and falling prices, as shown in these exhibits.

Wind Power

- Benefits
  - o Cost competitive
  - o Creates jobs
  - o Clean
  - o Indefinitely renewable
  - o Income potential
- Hazards
  - o Attractive nuisance
  - o Zoning issues and "not in my backyard" issues
  - o Bird strikes (damage to turbines)
  - o Fire and mechanical breakdown

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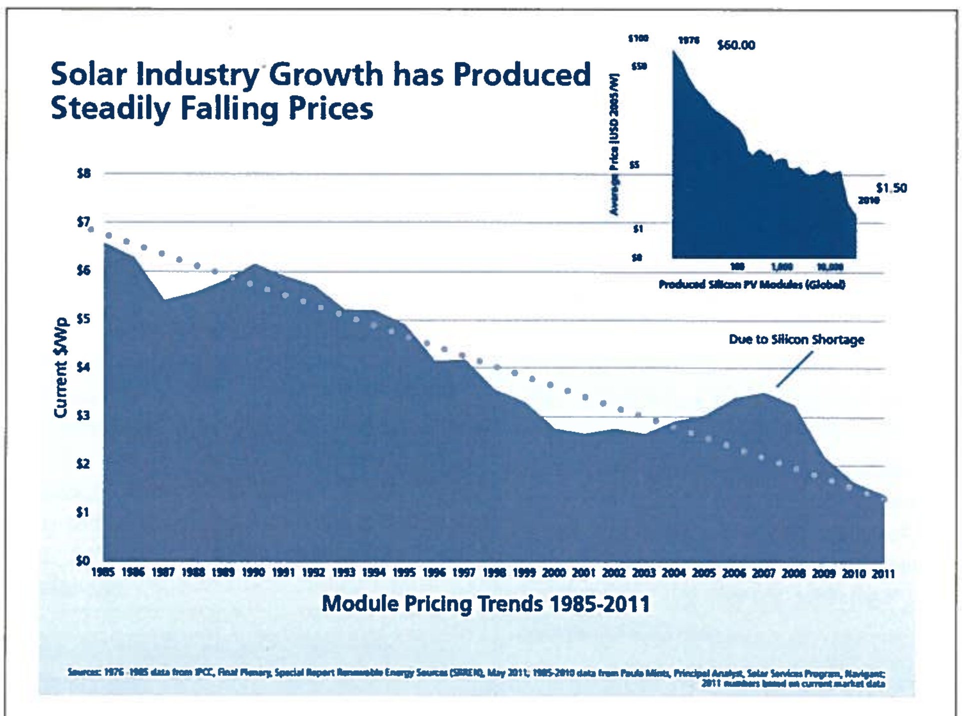

Powering a Cleaner World in the 21st Century

continued from page 5

- o Catastrophic brake failure (self destruction)
- o Transportation (to get to place of installation)
- o Site repair (difficult topography)
- o Worker safety
- o Noise pollution (The sound from standing next to a wind turbine is equivalent to the sound of a lawn mower; from 400 meters away, the sound is equivalent to the sound of a refrigerator.)

Hydro Electric Power

- Benefits
  - o Cheap power
  - o Clean
  - o Creates jobs
- Hazards
  - o Disturbs habitat
  - o Agricultural effects
  - o Flooding/dam bursts

As an underwriter, while one may see positive attributes about insureds wanting to go green, such exposures need to be evaluated appropriately by measuring the overall cost of risk. And, with lack of a sufficient amount of claims data for some of these emerging exposures, it becomes even more difficult to quantify risk and predict loss cost. Underwriters' reliance upon qualified risk engineers and their insight becomes imperative in the overall risk assessment process.

Meet Your Underwriting Interest Group Committee

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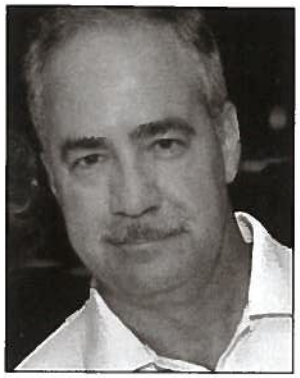
Millennials: Looking to Refresh the Client Base?

by John C Anderson



John C Anderson is a senior managing consultant in the IBM Global Business Services Insurance Strategy and Transformation Practice. He has more than thirty years of experience in the property-casualty industry, having worked for the Chubb Group, Zurich North America, and Horizon Blue Cross prior to working for IBM the past three years. Most recently, Anderson and two colleagues authored a paper on leveraging big data in the underwriting process and followed this by developing a visual prototype of the integrated concepts.

For more information, please contact John C. Anderson at jcanderson@us.ibm.com.

Facing an aging client base, personal insurers are turning their focus to the younger generation. How to appeal and attract the younger segment is a matter of smart planning, and ultimately becomes the "win or lose" factor in long-term survival. There are no shortages of proposed solutions, and most have acted to leverage social media and technology by building slick, powerful, end-to-end Internet shopping portals. Unfortunately, this endeavor appears to be incomplete.

Don't get me wrong—chasing down a market segment by participating in emerging technological capabilities will have positive results, but ultimately it does not optimize the market "refresh" being sought. In my experience, the opportunity for market penetration has always been found in developing a better understanding of the customer, so the reach-out is a seamless fit to that customer's life cadence. For the millennials, the life cadence may be more sophisticated than the approach some insurance professionals are taking.

We are going through an incredible period where advances in personal technology have never been so rapid or expansive. In some instances, individual digital capabilities have developed so fast that they have pushed past normal comprehension of social implication. Understanding the implications is one thing, but understanding customer behavior as a result is the greater challenge with potentially bigger reward.

Interestingly, the current youthful (and targeted) customer segment is unique in a very specific way—they have basically grown up never knowing life without computers or the Internet. We know them as the millennial generation,[1] and they are at the prime age for beginning a financial relationship. So, what are important things to know about them?

Growing up with the Internet has exposed millennials to an entire global community and has increased their awareness of news and world events far beyond that of prior generations. They are confident, sometimes impatient, seek self-fulfillment, expect that they will be successful, and have expanded their networking sophistication in this digital age.

Distinctive characteristics of the millennials include these:

- *Instant gratification:* They are used to having information readily accessible (via the Internet). Anything less is unacceptable and should be "passed." Clunky access is a sure way to lose them.
- *Self-fulfillment values:* Think "interesting" Their time spent doing anything needs to accommodate their personal lives and be worth spending time on. Whether something is fun or enjoyable is a key indicator of their activities (even as they operate in their adult "responsible" lives).
- *Confident:* Millennials were raised to believe in themselves. They will research using digital tools (confident in their self sufficiency) and they are quick to connect via their smart phone when they are ready to make a decision. This is part of their networking sophistication.
- *Motivated to achieve:* They have high expectations for themselves. They expect to understand what they want to know and, with confidence, are just as quick to access expert advice to fill in the blanks.
- *Key–Social Networking:* Millennials view the Internet and technology as a convenient portal to network. It is not their only network and it is not a requirement that something be digital, but you may not catch their attention otherwise.

continued on page 8

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Underwriting Trends

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Millennials: Looking to Refresh the Client Base?

continued from page 7

Sure, this is a limited list, but I think the ideas in the few descriptors will enhance your strategic approach. And, while there are as many theories on this as there are marketing departments, it will be up to each company to apply their unique tribal wisdom.

One last thought—demographically speaking, in the United States, millennials are racially and ethnically a highly diverse group. This demographic represents a transcultural evolution of expectations—it is high speed and "newly socialized," with a uniquely evolved consumerist behavior. Inexorably influenced by the Internet, millennials have become a digital mixing bowl of socioeconomic drivers.

There is no doubt that millennials are an important and vital customer segment. This is a great opportunity to refresh your customer base. Understanding them is knowing that they see the world from a more global perspective and have been experiencing their lives through a uniquely (as compared to prior generations) digitized cadence. Their experiences have influenced their consumerist behavior, their social orientation, self sufficiency, and networking instincts.

I believe the best opportunity to attract this group will be found in understanding how they use technology. It will mean understanding an intolerance for inelegant delivery, and, at the end of the day, it means knowing they have not abandoned the human connection in favor of electronic self-help. Instead, the use of electronically assisted connections speeds them along and eventually leads them to a chat, a phone call, or other personal interaction with the human being on the other end.

Endnote

1 Although the exact definition may vary, millennials are generally considered to be anyone born between 1985 and 2002, representing approximately 62 million people in the United States.

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