

Is insurance keeping pace with disruptive innovations?

By Jeffrey T. Bowman

Numerous sources remind us that businesses, especially insurance, are operating in the age of Big Data. But if you look closely, it's apparent that a growing number of innovations – many of them relatively diminutive and designed for individual users – are already beginning to transform what we know about insurance and claims processes.

The meteoric rise in the number of Internet-connected devices is staggering. Cisco estimates that, by 2020, the [Internet of Things](#) will comprise 50 billion devices. To put that into perspective, that is approximately 7.1 connected devices for every man, woman and child on the planet. Each of those devices is capturing data, which may well be useful to identifying and analyzing patterns of behavior and loss activity that currently generate hundreds of billions of dollars in property/casualty premiums.

We are already seeing so-called smart homes, where connected systems with embedded sensors alert property owners to mechanical failures, leaks and the need for repair and periodic maintenance. Smart homes may well redefine wear and tear for purposes of warranties and other forms of indemnity.

Wearable devices are yet another innovation that is altering the personal fitness landscape already. Devices such as the FitBit track activity ranging from eating to exercise to sleeping. Analysts at [Morgan Stanley](#) predict that wearable technology could become a \$1.6 trillion industry and usher in disruptions in multiple realms, from watches to clothing, to mobile payments, to retail shopping, to healthcare. One way to think of wearable technology is a form of telematics for the human body. Imagine the potential impact such devices could have on predictive analytics for workers compensation, disability and medical insurance.

Drones are already being used by some companies in assessing risks. These remotely operated unmanned aerial vehicles, to use their formal name, literally offer a bird's eye view of insured property. Their use in adjusting claims can permit observation where human access is difficult or restricted. This might help accelerate the insurance industry's response to catastrophic loss such as natural disasters, which often make roads impassable for claim adjusters.

Three-dimensional printing, also known as additive manufacturing, enables everyone with such technology to become a manufacturer. Using computer-aided design software or a 3-D scanner, a person can create new objects or sophisticated copies of existing ones. Will 3-D printing ultimately redefine the risk of product liability or patent infringement liability?

It's still very early days, but autonomous vehicles such as driverless cars may become a massive disrupter of society. They are yet another example of emerging technologies, and those we haven't even begun to imagine yet, that may well reshape how we live, work, play and insure the things of value in our lives.

Not unlike driverless cars, Robotic Process Automation (RPA) sounds like science-fiction: intelligent software developed to capture and interpret existing applications for processing transactions, manipulating data, triggering responses and communication with other systems. In other words, machines can take over general knowledge process work that is currently performed by people. RPA is science fact. It is already in use in healthcare and other industries, and the [Institute for Robotic Process Automation](#) predicts it will become a growth engine in the next decade. IRPA estimates that one robot can do the work of two to five full-time equivalent employees, and unlike people, robots can work 24/7/365. The benefits of RPA include savings of time and cost, and freeing up people to perform other, higher-value tasks.

The benefits of disruptive innovations for people and businesses are many. They may save lives. Certainly they may save time and, ultimately, money. Automating tasks or providing timely reminders should free up time for other, more productive activities. People using wearable technology may live healthier and more safely. As connected homes and devices become more common, they will capture more data and enable users to make better decisions.

While not a replacement for the human interactions on which insurance was founded and continues to rely, integrating such innovations into the claims process potentially could speed the flow of funds to help individuals, families, businesses and communities recover when losses do occur.

Risks for insurers

But what of the risks of these disruptive innovations? Beneficial as these emerging technologies are, they are at an absolute minimum requiring the insurance industry to accelerate its pace of change. Majesco, a provider of core insurance operations technology solutions, notes in its recent report, ["Future Trends: A Seismic Shift Underway."](#) that people, technology and market boundary trends are creating for insurers both the pressure to innovate and the opportunity to be more competitive.

Loss of premium and shifts in lines of business are distinct possibilities, where innovations reduce accidents, equipment breakdowns and injuries. Product enhancements and revisions, as well as pricing changes, may become necessary. Disruptive innovations that alter human behavior also are necessitating increased knowledge and expertise in underwriting and claims.

Greater investment in information technology and data analytics is required. To be sure, analytics cannot exist without data, and the industry must update and enhance its data-collection systems to keep pace with connected devices.

From a claims adjusting standpoint, not every claim is the same. While predictive analytics is hugely important in workers comp, for example, the extent of loss in construction or liability claims generally cannot be known until those are investigated by competent adjusters.

The proliferation of data capture increases cyber security risk, which the insurance industry is just beginning to come to grips with. Accompanying that growth may be a raft of regulatory requirements to further safeguard sensitive information – and perhaps expand the scope of cyber liability. Unauthorized release of private health information, personally identifiable information and payment card information already carries stiff penalties.

With the greater need to increase investments in systems, training and talent, will disruption usher in an unprecedented era of consolidation in insurance? Will midsize and smaller insurance companies be able to adapt and survive in this technology-driven environment?

Time will tell, but clearly there will be leaders and laggards. History has shown that laggards, in various industries, eventually are left behind or forced to make radical transformations. Take, for example, IBM. At one time, it led the world in typewriters and other mechanical business equipment, then it moved into large-scale computing. Today, it has abandoned its computer hardware businesses and provides software and business consulting services. Eastman Kodak once was the market leader in photographic film but failed to adapt as digital imaging emerged. Polaroid met a similar fate. Video and music retail stores have all but disappeared, as digital technology has revolutionized the way people buy and consume entertainment. These are but a few of the industries that have been forced to change by disruptive innovation.

One of the biggest challenges for the insurance industry may well be meeting heightened customer expectations. The Internet Age has already ratcheted upward consumers' desire for speed of service. The insurance industry is going to have to raise its game on customer connectivity and responsiveness, especially on claims – the moment of truth in the insurance promise -- to improve its overall customer experience.

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