The Internet of Things:
How automation, connectivity and Intelligence are transforming the insurance ecosystem
INTRODUCTION

The Internet of Things (IoT) is taking our everyday lives and the modern business landscape by storm; so much so, that it is estimated that consumers, companies, and governments will install more than 40 billion IoT devices across the globe by the end of 2023.¹ The impact these devices will have on automation, connectivity and intelligence is unprecedented. And from a business perspective, the data they harvest holds even greater promise for companies looking to improve efficiency, pricing, product, service delivery, and the monumental promise of increased customer satisfaction and customization like we’ve never seen before.

But what exactly is IoT, how does it affect the insurance industry, and what role does data play in the IoT equation? Read on as we explore how IoT is shaping the future of insurance.

WHAT IS IoT

If you Google the “Internet of Things” or “IoT” chances are you’ll find a myriad of highly technical explanations that leave you even more confused than when you initially entered your search term. For the purpose of giving you an introduction to IoT, we’re going to keep our explanation simple. The Internet of Things (or IoT) simply means taking “things” and connecting them to the internet. When something is connected to the internet, it can send information, receive information, or both. This ability to send and/or receive information makes things “smart.”

To be smart, a thing doesn’t need to have massive storage capabilities or a supercomputer inside it. All a thing must do is connect to super storage or to a supercomputer.

With respect to IoT, the things connected to the internet can be put into three categories:

1. **Things that collect information and then send it.**
2. **Things that receive information and then act on it.**
3. **Things that do both.**

Each of these three categories deliver huge benefits that sustain one another.³
Current State

There is great potential for IoT in insurance – potential that insurers and agents/brokers have only recently began exploring with less of a bird’s eye view. Only a short time ago, IoT in insurance was most notably used to support customer interaction and improve underwriting and claims processing. However new IoT technologies and strategies are quickly changing and have exposed much greater potential that would transform the digital insurance ecosystem, reducing costs and generating new streams of revenue along the way.⁴

Here’s a glimpse at what some of these cost reductions and additional revenues could include:⁴

<table>
<thead>
<tr>
<th>Cost Reductions</th>
<th>Additional Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apply analytics to reduce the occurrence of insurance fraud</td>
<td>New &amp; more frequent customer interaction and cross-selling</td>
</tr>
<tr>
<td>Improved safety and active prevention (ex: immediate dispatch of ambulance following an automobile accident)</td>
<td>Create new service &amp; business models by monetizing data insights</td>
</tr>
<tr>
<td>Greater efficiency in optimized resources via improved prevention mechanisms</td>
<td>Create new price models based on usage or demand</td>
</tr>
</tbody>
</table>

Types of Data for Insurance and Where IoT Comes into Play

Researchers have identified two new sources of data that are particularly relevant to the insurance industry:

1. Auto-Generated and Stored Data – Data that is directly linked to our online behavior. This includes data shared via social media channels, online shopping, and personal search and browsing activities.

2. Sensor Data – Data that streams from sensors built into consumer goods such as appliances, automobiles, tech wearables, and drones. This data tends to be more fragmented and specific to real-life functions and is commonly drawn from IoT-connected devices.

More specific examples of sensor data related to IoT in insurance include telematics for auto, connected thermostats and smoke alarms in smart homes, tech wearables for life/health, smart doorbells for decreased burglary incidents, and a host of other sensors that are helping insurers reduce risk.

Real World IoT Examples in Insurance

IoT technologies enable insurance companies more accurately determine risk. For example, automobile insurers have traditionally relied on indicators, such as the age, address, and creditworthiness of a driver to determine premiums. But today, driver data (such as how fast a vehicle is driven and the frequency with which an automobile is driven at night) is available. Applications of such technology in countries where the market is already much more mature reveal that insurers can assess risk far more accurately than in the past.⁴

Below are some real-world examples of ways insurers and agents/brokers are using IoT to better assess risk and shape the future of the industry:

**MILEWISE**

Allstate’s Milewise program is a pay-per-mile car insurance. Designed for people who spend less time on the road than the average driver, such as stay-at-home parents, retirees, and telecommuters, the pre-pay plan allows drivers to pay based on the number of miles they actually drive.⁶

**BEAM DENTAL**

Beam Dental employs IoT technology to offer reduced-rate dental insurance. Every customer receives a ‘smart’ toothbrush that tracks how well they take care of their teeth and provides personalized insurance plans based on this teeth-brushing data. They even let customers know when their brushing isn’t meeting standards! In doing so, Beam strives to offer insurance rates up to 25% cheaper than competitors.⁷

**ERIE INSURANCE**

The use of drones for commercial purposes has become increasingly common. The insurance industry is no exception. Pennsylvania-based Erie Insurance uses drones for property inspections in the event of a damage claim. The company says benefits of drone usage include accelerating the claim process assessing damage without endangering employees and getting a better pulse on potentially fraudulent claims.⁸

**LIBERTY MUTUAL**

Liberty Mutual partnered with Google’s Nest to send its customers free connected smoke alarms. The connected alarms enable customers to reduce the risk of a fire, and in turn, reduce their home insurance premiums by as much as 5%.⁹

**CM SENSOR**

Church Mutual’s CM Sensor helps commercial customers prevent damage and service disruption from water-related incidents, including frozen pipes. The CM Sensor 24/7 temperature and water alert system notifies customers via text, email or mobile app when water or cold temperatures are detected. The result? Prevention of time lost to potential cleanup, administrative headaches and rescheduling related to commercial property damage.
A mere 15% of customers say they are satisfied with their insurer’s digital experience. For insurers and agents/brokers alike, such a low level of satisfaction is a cry for much needed transformation – transformation that many see coming to fruition with the Internet of Things. In fact, IOT-connected devices have made it possible for some insurance carriers to lower their premiums by as much as 25%.

But while the insurance industry is discovering a whole new world of possibilities for technology in insurance, there are still challenges to overcome in such a highly regulated environment. As insurers and agents/brokers strategize on how to continue to improve the customer experience and become more relevant in a world that is undeniably driven by data and technology, they must also address challenges related to regulation, data management, disruption to existing insurance business models, and more.

Perhaps keeping the focus on the consumer and consumer expectations is the key to successfully transforming the industry. As Sudhama Gopalan, Senior Vice President and head of InsurTech at data analytics company Tada notes, “Customer experience expectations in all industries including insurance have been set by highly successful models in tech such as Amazon, Apple, Uber, and others. Where insurance is specifically concerned, new generations of consumers use automobiles, homes, personal health and other “insured assets” quite differently than they did in the not so distant past. This shift is re-shaping consumer expectations and demands that will pave the way for the future of insurance.”

### Having the Greatest Impact

Now that you have some context for exactly how IoT is being used in insurance, that leads us to the question of how insurers can establish IoT-based ecosystems that will have the greatest impact.

There are four main emerging digital ecosystems that are considered most critical for insurance carriers moving forward:

1. Mobility/connected car
2. Smart housing
3. Connected health
4. Commercial lines

While these ecosystems certainly have commonalities, there are key differences – such as market dynamics, regulations, and impacted parties – that dictate the need to develop dedicated and data driven IoT strategies for each.

### THE FUTURE OF IoT IN INSURANCE

Which areas of insurance will benefit the most from IoT technologies?

Here’s what respondents in a recent Reuters Events survey replied:

<table>
<thead>
<tr>
<th>Area</th>
<th>Customer Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Analytics</strong></td>
<td>81%</td>
</tr>
<tr>
<td><strong>C2 Customer-Centricity</strong></td>
<td>68%</td>
</tr>
<tr>
<td><strong>Pricing</strong></td>
<td>64%</td>
</tr>
<tr>
<td><strong>Digital</strong></td>
<td>61%</td>
</tr>
<tr>
<td><strong>Claims</strong></td>
<td>60%</td>
</tr>
<tr>
<td><strong>Underwriting</strong></td>
<td>59%</td>
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While new entrants seek to disrupt, carriers are uniquely positioned to delight their customers with fulfilling experiences. With Tada, you can innovate and engage your customers by combining data sources across your business systems including IoT and other external data to enhance risk-based pricing, customer acquisition effectiveness and operational productivity.

Using the Tada platform, insurance businesses can visualize their entire business end-to-end – thanks in great part to a proprietary and patented Digital Duplicate® that uses the language of your business (the terms, metrics, and KPIs that matter to you) to organize information. This holistic perspective provides the opportunity to make informed operational decisions from customer acquisition to post purchase customer support and insight (and all the data-driven details in between).

As a decision maker, you can navigate your entire business ecosystem 10 times faster than the traditional approach of using consulting resources and Business Intelligence tools, by utilizing Tada’s suite of highly customizable, purpose-built applications. Learn more about how we can help you tap into the power of data analytics and IoT in your day-to-day decision making here.

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