



Diffusion® & Diffusion™ CLOUD

The Diffusion® Intelligent Data Platform™ manages, optimizes, and integrates data among devices, systems, and applications for real-time data streaming and communications that easily, efficiently, and reliably scales to support development of insurance applications by harnessing the wealth of IoT data and integrating data in legacy systems -- to improve risk mitigation, lower claims, and effectively compete in the new, data-driven, insurance marketplace.

Insurance Highlights

The general business benefits of investing in the IoT are clear reduced operating costs, increased productivity, development of new products, and expansion into new markets. For insurers specifically, the IoT's real-time data collection and sharing power creates significant new opportunities to:

- Establish direct, unmediated customer relationships that improve loss control and accelerate premium growth.
 - Gain a granular and precise understanding of the customers, their needs, and how their needs change over time.
 - Develop specialized pools of risk and predictive modeling to improve risk assessment.
 - Create finer product segmentation with individualized offerings of products, features, and access options.
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The insurance industry is undergoing a digital transformation fueled by The Internet of Things (IoT). The billions of connected devices are forecast to produce 50 trillion gigabytes of IoT data by 2020 (IDC). The IoT changes the customer relationship, shifting the insurance model from reactive too preventative.

The challenges Insurers face in developing applications that harness the wealth of IoT data and effectively integrate and capitalize on the value of the historical data in legacy systems are many:

Disruption of existing business models - IoT will drive risk mitigation and lower claims. However, in the competitive insurance market, fewer losses mean lower premiums and less revenue. New sources of revenue will fuel IoT adoption.

Data management & Integration – of the existing historical data in legacy systems and the high-volume of real-time IoT data. Tools to synchronize and manage the data will be key to a successful data management strategy.

Data ownership – of expanded and often private customer information regarding health or lifestyle behaviors. Regulation - Additional regulation will be required for the more intrusive IoT data.

Data security and fraud – IoT is vulnerable to increased fraud and cyber attacks and offers a new product opportunity for insurance protection. Despite these business challenges, IoT data use has begun to produce positive results making potential losses easier to predict and prevent.

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"The first movers in the insurance industry will define the landscape and capture the future value, as well as protect themselves from disintermediation."

Jon Carter, Deutsche Telekom UK Head of Business Development for Connected Home

Insurance Industry Use Cases

Traditionally, insurance carriers have relied on their own historical data, and upon structured information from various bureaus and agencies to operate their businesses. With the Internet-of-Things, the insurance game has changed and the pace of change is rapid. Established insurers are finding that they must creatively explore, mine, and harness huge amounts of external data to remain competitive, to convert new opportunities for growth, and to achieve improvements in the loss ratio. The flood of external data is transforming not only the way insurers evaluate and price risk, but also the way they interact with customers, transact business, and design products and services.

Personalization

Both traditional and new insurance companies are using real-time user data to provide personalization to deliver services based upon individual customer needs. As accurate real-time data is gathered it becomes valuable historic data for predictive and prescriptive analytics which can be augmented by machine learning and AI systems.

The Internet-of-Things gives insurers valuable, real-time, insight into customer behavior, creating greater levels of granularity in risk models, and shifting insurers towards personalization.

The large, established insurance carriers are pressured competitively by both new, and established, technology-centric companies entering the insurance market with appealing, personalized consumer insurance solutions that threaten the established insurance carriers traditional pricing and delivery paradigms.

Usage Based Insurance (UBI)

The world's largest auto insurers now offer usage-based policies, which price premiums based on vehicle telematics data collected directly from the car. A recent Allied Market Research report predicts that, by 2022, usage based insurance will be a \$123 billion global market based upon telematics and sensors that send real-time driving data to insurers to help establish accurate risk profiles and pricing data.

Wearable Devices

Health and life insurance firms are offering customers fitness trackers to encourage healthy behavior, and discounts for meeting certain goals. Companies everywhere are presenting their employees with insurance coverage that supports these options because healthy employees are productive employees.

Smart Homes

Home insurers are offering discounts on smart home devices to current customers, and in some cases, free devices to entice new customers to sign up for insurance policies.

Drones

Large home and commercial property insurers are using drones to inspect damaged properties, which can improve workflow efficiency and reduce their reliance on human labor. .

"IoT is having a huge disruptive effect on the insurance industry and it is transforming the insurance business model."

McKinsey Report

Proactive Monitoring and Assessment

IoT data also gives insurers the ability to massively reduce cost and exposure to risk through proactive monitoring and assessment. By using new sources of real-time data, insurers can be proactive rather than reactive. The power of the IoT use case is massively amplified when Insurance applications integrate the internal historical data and external IoT data. The resulting data model allows insurers to alert customers of potential loss BEFORE it occurs – delivering valuable prevention rather than merely a cure.

The availability of huge amounts of real-time customer data such as telematics, sensors, and GPS data can feed applications that determine how often people need coverage, the risk behaviors, and the chances of a claim being filed. The IoT changes the customer relationship shifting the insurance model from purely reactive to more preventative.



“74% of insurance executives believe the IoT will disrupt the industry by 2020, and 74% plan to invest in developing and implementing IoT strategies.”

SMA Research survey

The Threat

The IoT is a massive opportunity for large traditional Insurers, with an established base of existing subscribers; and, the IoT creates a market threat to the traditional insurance business from new entrants - nimble, innovative, technology-centric, data-savvy companies, as well as new divisions of established technology companies.

The new technology entrants into the insurance business:

- Understand the value of the real-time IoT data receipt and prevention response,
- Recognize the need for an intelligent data platform that manages and integrates the real-time IoT data, historical data, and other external data sources,
- Are developing new, hyper-personalized insurance models and customer-centric applications.

The traditional insurance companies already entrenched in the market must adapt and develop to maintain their dominance.

The Solution

At the heart of the insurance industry's digital business transformation is the ability to reliably aggregate, send, receive, and manage huge amounts of real-time data - among people, devices, and systems via congested and often unreliable Internet, mobile, and satellite networks.

Specific tools, experience, and expertise in integrating and managing the disparate sources of data is a requisite for successful IoT application development and deployment in the insurance Industry.

The Diffusion Intelligent Data Platform from Push Technology:

- **Simplifies Development** - of data-centric applications by integrating, managing, and distributing data among devices, applications, & systems.
- **Handles all forms of data** - mix and match all data types of data including: binary, JSON, text, file etc.
- **Adapts to the Business Environment** - you choose, on premise, private cloud, hosted cloud or in a hybrid configuration - no restrictions.
- **Enables Deployment on Limited Infrastructure & Networks** - via patented delta-data steaming technology.
- **Provides Real-Time Streaming Data, Messaging, & Historic Time-Series Data** - no matter the application data use, and response requirements.

The Diffusion Intelligent Data platform delivers insurers an out-of-the-box, efficient, highly scalable, data management solution needed to develop applications that: improve the customers' experience, deliver operational efficiency gains, and integrate and manage IoT and legacy data. Diffusion simplifies development for digital transformation and reduces time-to-market for innovative mobile and web insurance applications.