

Taming Technology (Bit by Byte)



Just as the printing press modernized publishing and the ATM revolutionized banking - technology is constantly reshaping the insurance industry. Comparing policy pricing online, managing coverages by a mobile app, or having a device monitor driving patterns to provide risk data, each year the rate of innovation increases exponentially.

The speed and size of technological advances can be bewildering, but a simple reframing can help ease the stress and broaden understanding. Think of the technology evolution as nothing more than applying ingenuity to solve a problem.

“Change is hard at first, messy in the middle, and gorgeous at the end.”

~ ROBIN SHARMA

Problem: People needed access to their money even when banks were closed and keeping it under their mattress provided no interest and no security.

Solution: Put the money in a secured box located outside of a bank that customers could access at their convenience. The ATM was born.

Acceptance: At the time, the notion was frightening – many people did not trust the ledger accuracy and wanted to do their banking with a human being. The first step of gaining access to money was crucial in the evolution of online banking.

Problem: Frequently, underwriters, managers, claim handlers, and in-house counsel, required simultaneous access to the same paper claim file.

Solution: Scan all policy and claim-related paperwork to create an electronic file, enabling simultaneous access.

Acceptance: Many insurance professionals working with the new electronic claim files appreciated the immediate access but solving one problem created new hurdles. Claim handlers lost “flipability,” the action of flipping through a policy to find the needed endorsement to verify coverage or the policy language needed for a response. They had to adjust their file noting process because using sticky notes on the paper file to quickly identify important content was gone. The now uniform type that replaced the easily identifiable handwriting in claim file notes was another struggle.

The initial scanned electronic file was the inaugural step to working in a paperless environment with immediate access to new data being stored in a document management system. The changes once seen as hurdles were adapted to, and the ease of access to information, accuracy of data retrieval, and increased speed of service was realized.

Change can be scary, but it can also be rewarding and invigorating. A fundamental understanding of what the technology is, what the terms mean, and how it can be applied can help ease the transition and act as a catalyst in the acceptance process.

Here are a few terms that are bandied about in reference to new and emerging technology services.

API

Application Programming Interface. APIs give developers access to an application's data and the ability to use its functionality. Developers use microservices (explained below) to break applications into smaller pieces and use APIs to facilitate communication between the components.

Example: Using your Facebook Login to authenticate your profile on a different website or application such as Pinterest, LinkedIn, or Words with Friends.

Big Data

Big Data is a term used to describe large sets or collections of data. The data that is captured, stored, shared, and analyzed has many uses; one of the most common is identifying patterns and trends in behavior.

Example: Ever been shopping online and get suggestions for other items you might be interested in? That is Big Data at work! It used your search and purchase behavior to identify a trend and make a recommendation based on that data. Have you ever used the navigation on your phone or through your car? Those directions are courtesy of Big Data...and not Big Brother – but maybe him too!

Blockchain Data

Blockchain is a type of database. Unlike a typical database, it stores information in blocks with limited storage capacity that are chained together. When new data comes in, it is put into a new or fresh block. When that block is filled, it is chained to the previous block, and the data is kept in chronological order. Each block is given a timestamp of when it is added to the chain, making the timeline of the chain irreversible.

Example: Blockchain is used for recording transactions made with cryptocurrencies, such as Bitcoin, and has many other applications such as storing and sharing medical records and ensuring the safety of public records.

Internet of Things (IoT)

The Internet of Things refers to objects, devices, or things that are connected and can collect and transfer data over a wireless network without human interaction.

Example: Do you own a smartphone or smartwatch? Do you have a thermostat in your house that you can control with your cell phone? What about an alarm or garage door app on your phone? These are all examples of devices connected to the internet that share data without human intervention.

Machine Learning

Machine Learning is a form of Artificial Intelligence (AI) that learns from data and applies that learning without human intervention.

Example: Image or facial recognition is an everyday use of Machine Learning. Do you have a robot vacuum? Yep, that too is an example of Machine Learning.

Microservices

Microservices are a method or architectural style for software applications, which are made up of or broken up into smaller, modular pieces. Developers create each function of an application as an independently running piece of the bigger puzzle. Microservices allow developers to build and work on each item separately and add, improve, or fix each piece without breaking the entire application.

Example: Amazon, Netflix, and Uber are all current examples of companies that deploy microservices. To read more details about how these companies broke up their monolithic applications read, [How Amazon, Netflix, Uber, and Etsy Broke Their Monoliths and Scaled to Unprecedented Heights with Microservices](#). (H, 2020)

Telematics

Telematics is a system that joins information technology with telecommunications. Think of it as a long-distance transmission of data. It is based on wearable or installed devices that use cellular networks to send data.

Example: The device in a car that captures the speed, location, braking time, and fuel consumption and Apple watches can tell your speed on runs, heart rate, and locate you by GPS, over a 5G network.

Web Services

Web Services is a communication between two electronic devices over a network. Many companies today use various software systems to carry out their processes; these systems need to share or exchange data, and Web Services is a method to facilitate the exchange of that data over the internet.

Example: An insurer has rates and forms for their policies, and agents need quick access to that data to quote business. Web Services allows for the sharing of that data across different systems.

Web Services and API are similar, yet different. Web Services needs a network, and API does not. In simple terms, Web Services helps two computers speak to each other where API helps two applications speak. For the bourbon enthusiasts out there, much like every bourbon is a whiskey, but not every whiskey is a bourbon... all Web Services are APIs, but not every API is Web Services.

With a basic understanding of the technology, it is easier to see how it can be applied to the insurance industry.

- **Big Data** is used to help price insurance policies more competitively. Data from social networks and free media can be used to learn more about insureds and real-time data on utility usage can help with pricing property policies.
- **Machine Learning** can improve claims processing time with the application of automation. Digital files can be accessed via cloud technology and analyzed with pre-programmed algorithms, improving processing speed.
- **A Microservices Architecture** can facilitate an insurer's ability to peel off its web services offerings into smaller, more customizable pieces for brokers or retailers to use only the data they want or need.

- **Telematics** can help track data to help price car insurance based on driving habits.


As explained in the *Insurance Journal* article "Age of Insurtechs Poses Unique Challenges for Surplus Lines Insurance Industry" (Cavaliere, 2018), the effective use of the latest and greatest technologies presents challenges for the Excess and Surplus lines market. E&S insurers have different requirements, constraints, and obligations than exists for the admitted market, such as diligent search requirements and advertising restrictions.

These impediments do not prevent the industry from taking advantage of the novel advancements and reinventing how they do business – it just requires E&S insurers to be innovative in deploying the technology to improve their products or services.

The world is becoming more digital every day. Consumers want things faster, easier, more convenient, and customized.

Sales and marketing messages are instantly tailored (with little to no human interaction) for the consumer without them really knowing it is happening. The insurance industry is morphing with these automations and using the technology to adjust their services and offerings to match the demands of the Agents and end-users.

There will always be a problem to solve, and sometimes the solutions will take us out of our comfort zone. Giving up the personal relationship with our bank tellers and withdrawing

cash from a machine seemed impersonal and scary at first. Over time, we got comfortable with it and now could not imagine the drudgery and inconvenience of having to park, stand in line, and wait - to get access to our money. We had to get familiar with the technology to accept it. Now millions of people bank, shop, and invest from their mobile devices with ease and comfort. Reframing our mindset toward technology and understanding how it works can be positive steps toward acceptance. 

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