Advisory Topic: IoT (Internet of Things) - Why I Should Care!

Industry Maturity Index: '*Now*,' '*Short-term*' (1-2 years), '*Long-term*' (3-7 years or more)

Why this is important: The ACT Changing Nature of Risk workgroup feels that the IoT is more than just a buzzword.   It is very broad in scope and very pervasive in its nature. It isn't about one technology, but the combining of technologies to solve problems which will eventually result in a connected world that few have imagined. Over time it will not only transform the insurance industry, but it will also have a profound impact on many aspects of our society, including governments, businesses, and our personal lives.

What is it? Simply put, the Internet of Things (IoT) is a connected system of interrelated devices, mechanical and digital machines, objects, animals/pets or people that have the ability to communicate, sense or interact without human-to-human or human-to-computer interaction.

Broad Implications / Uses: IoT has impact across many spectrums of our lives;
- Security, safety, and convenience
- Quality of life
- Efficient operations
- Enhanced services
- Real-time information
- Immediate transactions
- Connected to…virtually everything

In the future, as costs fall and new IoT platforms evolve, everything that can be connected will be.   From simple devices such as light bulbs and fitness devices to more complex devices such as injectables and jet engines, hundreds of billion things will eventually be connected.

Economic Impact(s): Industry experts predict that in the future, trillions of dollars in economic value will be generated from IoT;
- New business models creating revenue for those using or supplying IoT technologies.
- Increased productivity, efficiency, and logistics.
- Improved asset management, predictive maintenance and energy efficiency.

Insurance Industry Implications: The IoT is broad in scope and pervasive, and will have positive and negative impacts to many areas of the industry;
- Positive Impacts
  - Risk reduction primarily from improved safety and security.
  - Data from IoT devices will result in the more accurate pricing of insurance products.
  - New opportunities will emerge that will enable differentiation through new products and services
- Negative Impacts
  - Exposure to existing cyber risks, such as data security and privacy will greatly increase
  - New exposures to risk will emerge
- Indeterminate Impacts
  - Long standing revenue streams to the P&C industry could be impacted

- o The IoT has the potential to dramatically disrupt many industries, in ways that are likely beyond our current ability to predict.

Recommended Actions:

Agents -

- Ensure you and your staff are aware of basic IoT concepts (see 'Resources') and continue to educate yourself on emerging risks and new products to properly advise your clients.
- Remember that the IoT will impact everyone; consumers, businesses, and governments as either a manufacturer or supplier of IoT or as a consumer of IoT products.
- Cyber liability is no longer just for technology companies.
- Work with your vendor and carrier partners to identify IoT offerings that will enable you to differentiate the services to your clients.

Carriers -

- Think unconventionally. IoT and the collection of data from interconnected devices WILL change the nature of risk.
- The rate of technological change in IoT is so great that waiting is not an option.
- Start small, investigate data sources and choose a test area.
- Charge actuarial teams to explore potential changes in loss frequency and severity due to IoT connections.
- Consider hiring "outside the box" candidates who have technical and engineering expertise.
- Fund test laboratories and prototyping to gain insights.
- Look to carriers who are already participating & leading in IoT for insights – Examples: Hartford Steam Boiler, Liberty Mutual, even direct carriers.

Vendors –

- Dedicate a strategic team to research, discuss and review what functionality may need to be created to support IoT; what will agents need to support customers and staff?
- What system functionality will need to be enabled?
- Explore how data from IoT can enhance and improve product offerings.
- Work with others to identify existing data standards for IoT products.

Examples/Resources:

IoT is bigger than you think
Opportunity for Insurers
Insurer addresses water leaks with IoT

Evolving Technology Caution:

The IoT is moving very quickly. What is barely possible today will be commonplace tomorrow, and what is inconceivable today will be in beta next year. It is vital to your organization that you understand the potential opportunities and threats presented by the IoT.

Other: Since the impacts are so far-reaching and broad, this will be an evolution, not a revolution. It is recommended that all firms have someone watching the horizon for the next thing.

Call to Action:

- Educate yourself on this topic – Though this is moving very quickly, determine what level of knowledge is adequate.
- Educate your staff on this topic
- Work with your partners to educate yourself on their IoT capabilities.

Authors: Sharon Drawdy, Marty Agather, Jerry Fox