Are you really cloud ready?

By Joseph A. Axne

The veterinary IT technical landscape is changing extremely fast! Internet, computer, and network security for veterinary clinics and hospitals have to be a priority now that more and more veterinary practices are becoming dependent on technology. If you are paperless, or thinking of going paperless, or use a Practice Management System (software to run your business), a strategic and proactive approach to computer and network security is a must!

I hear things from some veterinary practice owners like, "What would a hacker want with my information?" or "We are too small for hackers to care about" or "We don't have anything important that a hacker would want". The truth is, they want anything they can get their hands on, and in fact, the recent trend is to lock you out of your own data, and make you pay a ransom to get your data back!

I stay active in the IT community by going to related trade shows and conferences. Recently, we were discussing the latest IT threats, like ransomware, and a question was asked to the 100+ IT professionals in the room. "Who has had to deal with a ransomware threat?" Every single person in that room raised their hand; that's right, 100% of the IT pros in the room have been exposed to this, so it's here in a big way and it's getting worse every day.

Ransomware is now three years old and it is getting more and more sophisticated. The bad guys/gals are figuring out ways around standard protections that IT professionals have traditionally put in place. It used to be easy to just purchase a piece of software, like Antivirus, to protect computers and networks. But that isn't the case anymore, because the hackers have figured out ways around these protections.

So a layered approach to security is a must. This means there is no one solution that will fix current and future Internet threats. We have developed IT Standards of Care for veterinary clinics and hospitals that, if followed, will dramatically reduce your risk, but as I tell all of our clients, nothing is 100% secure. As we continue to assist clinics and hospitals, here are the common things we are reviewing and discussing:

Backup and disaster recovery. This is the single most important plan that has to be in place and working correctly. We are seeing outdated methods of protection, like tape drives and USB hard drive backups. If you are using this type of technology I highly encourage you to review a solution that will provide better results. Tape backup technology is OLD, slow, and unreliable. USB drives don't provide protection against ransomware. A good solution is to have a system that backs up your important systems hourly during the day, with hourly offsite replication of that data to east and west coast datacentres. The solution should allow you to get back up and running in minutes, not days! Review your backups and ask the following questions: "How often are you backing up?" "How quickly can I get back up and running should my important system (server, dentistry workstation, x-ray system, etc.) fail?" "If fire, flood, or theft occurs, how would you recover my data and how long would it take?"

Business class firewall. A firewall is the gateway into and out of your network. We see many clinics and hospitals that neglect to have the proper gateway protection. Often, veterinary practices only use their Internet service provider's gear, or something they purchased at Best Buy or Office Depot. Having systems behind a firewall is a must, but veterinary clinics and hospitals should use a business class device. These devices typically have a security subscription service, and will inspect each and every data packet that goes in and out of your network, scanning for threats like malware, virus, etc. Business class firewalls also give you the ability to connect two Internet service providers to this equipment, allowing you to always connect to the Internet. Meaning, if one Internet service provider link fails, a second will go into effect, giving you a connection to get to the cloud. These devices can also provide both public and private WIFI connections so your guest network doesn't touch your private network. Review your firewall and ask the question: "Does it have some sort of security subscription?" "Is it currently active and set up correctly?" "Is it business class, or something you picked up at a local office supply store, or are you just using your Internet service provider's firewall?"

Antivirus, antimalware, and web security software. Yes antivirus is still needed, but an antimalware solution should also be used. Malware are not viruses, but instead unwanted software that is used to disrupt computer operations. Many antivirus programs now include some sort of malware and web security protection. You can't just have simple antivirus, because malware infects a machine much differently than a virus does, and virus-only protection won't detect or stop malware. Also, web security is extremely important because all it takes is visiting a website like Yahoo.com to be exposed to risks. The bad guys/gals are buying ads on major websites (Bing, Google, and Yahoo) and using pop-up ads to try to get you or your staff to click. Remember, if you ever get a prompt that says "Click Yes or No", "No" usually is just coded on the back end to mean "Yes", and your software will become infected. So, you have to have something in place to assist with human errors. Ask yourself, "What antivirus am I using on all of my computers?" (this should be consistent on all machines) . "What antimalware program am I using, and what web security do I have in place?" Last, but most importantly, "When was the last time it was updated?", because antivirus/antimalware/web protection software must be kept up to date!

Patch management. Apple, Microsoft, Adobe, Java, Flash, Silverlight, Firefox, Chrome, Internet Explorer, etc. have to be maintained and patched. Any software that interacts with the Internet has to be kept up to date. Having older, non-patched, and out of date software and systems allows hackers to penetrate the software and use it as a back door into your computer and networks. Windows XP is no longer supported by Microsoft, so assuring your operating system is on a supported platform that continues to get

patches is important. Review your systems and verify that you are patching your machines at least monthly, but weekly is even better. Ask yourself whether your computers are patched with the latest security patches. Do you use any third party programs like Firefox, Chrome, Java, Flash, etc., and are they the latest versions up to the latest patch level.

These are the top 4 things you should review right now to see if you comply with today's IT Standards of Care recommended for veterinary clinics and hospitals. There are more than 150 IT Standards of Care that we review on a quarterly basis to assure that our clients are up to date. They continue to change as the IT landscape changes. It's going to get worse before it gets better, so protecting yourself is a must. You definitely don't want to have days of downtime due to IT security issues, or even worse, find yourself paying thousands of dollars to get your data back!

Joseph Axne has 20+ years of IT experience and in 2012 he decided to focus solely on veterinary IT. He and his team developed www.veterinaryitsupport.com, an IT resource for the veterinary community. He is an active member of VetPartners, and speaks regularly at veterinary conferences.

This article is based on Mr. Axne's presentation at the Veterinary Hospital Managers Association Conference in Vancouver, WA.

Creating memorable moments

By Debbie Stoewen, DVM, MSW, RSW, PhD

According to Pine and Gilmore in their book, *The Experience Economy: Work Is Theater & Every Business a Stage* (1999), society is transitioning into a new economy. *The Experience Economy* is referred to as the next economy following the Agrarian Economy, the Industrial Economy, and the most recent Service Economy. Each economy, based on commodities, goods, services, and experiences, respectively, differs from the others in a range of fundamental ways (See Table 1).

The first shift, from the Agrarian Economy to the Industrial Economy, occurred just over two centuries ago, and the next shift, from the Industrial Economy to the Service Economy, approximately thirty years ago. The service sector is by far in the lead in Canada, employing about three quarters of Canadians and accounting for 70% of GDP. The Service Economy is the dominant engine of economic activity in North America.

With the pressure of growing competition, companies everywhere are working to differentiate themselves, seeing this as necessary for profitability, and even survival. With goods becoming commoditized, price differentiation no longer sustainable, and customer expectations rising, companies have directed their focus to delivering superior customer experiences. *The customer experience* has emerged as vital for companies *in all industries* to achieve success. Goods and services are no longer enough; future economic growth lies in the value of experiences. As forewarned by Pine and Gilmore, *"Those businesses that relegate themselves to the diminishing world of goods and services will be rendered irrelevant. To avoid this fate, you must learn to stage a rich, compelling experience."*

The staging of experiences is argued to be a natural progression in the value added by businesses over and above the delivery of services, and the next step in the progression of economic value (See Figure 1).

Successful companies are already packaging their services as customer experiences.

Although it may seem ambiguous, *the customer experience* is as real an offering as any service, good, or commodity. Outwardly, it is defined as all of the events experienced by customers in their interactions with the goods and services of an organization. Inwardly, it may be understood as "the internal response of an individual to their interactions with a company's products, people, processes, technologies, and environments," and includes "the thoughts, feelings, senses, physical reactions, and emotions experienced." Altogether,

Economic distinctions				
Economic offering	**Commodities**	**Goods**	**Services**	**Experiences**
Economy	Agrarian	Industrial	Service	Experience
Economic function	Extract	Make	Deliver	Stage
Nature of offering	Fungible	Tangible	Intangible	Memorable
Key attribute	Natural	Standardized	Customized	Personal
Method of supply	Stored in bulk	Inventoried after production	Delivered on demand	Revealed over a duration
Seller	Trader	Manufacturer	Provider	Stager
Buyer	Market	User	Client	Guest
Factors of demand	Characteristics	Features	Benefits	Sensations

Table 1. The features of various economic offerings (Source: BJ Pine II and JH Gilmore. "Welcome to the experience economy", *Harvard Business Review*, July-August 1998;97-105.)
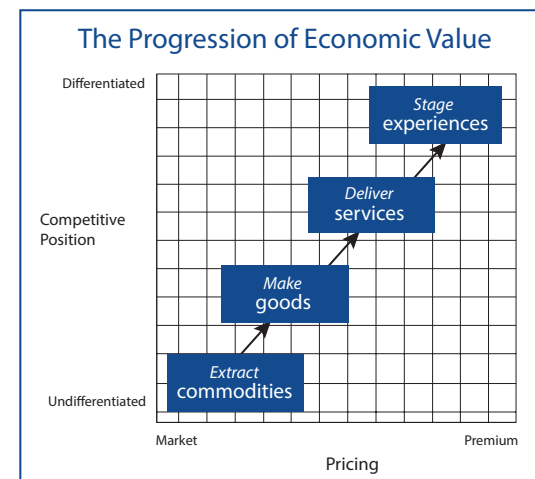
Figure 1. The Progression of Economic Value (Source: BJ Pine II and JH Gilmore. "Welcome to the experience economy", *Harvard Business Review*, July-August 1998;97-105.)