## This Issue:

### What Effect Could Artificial Intelligence Have On Your Business?

Artificial intelligence is becoming more and more accessible to businesses of all sizes. In fact, it is swiftly becoming apparent that businesses that aren't actively considering how to leverage AI in their processes are doing themselves a disservice. It can be difficult to grasp how exactly businesses can leverage artificial intelligence, especially with our impressions of AI shaped by Johnny 5, R2-D2, and HAL 9000. The difference is that…

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## About Directive

We are a technology consulting firm specializing in technology implementation and management for businesses. We're known for providing big-business, Enterprise-Level IT services to small and medium-sized businesses.

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## Should Companies Be Punished for Data Breaches?

We've all seen and heard about companies and government departments that have experienced major security and data loss events. Once the event is made public, there is a media frenzy of coverage disclosing answers to questions like: Were your records compromised? How can you protect nonpublic information in the future? What should you do if you are a victim? However, as the media focus moves to another topic, the breach becomes yesterday's news - and there is very little coverage of what repercussions and penalties those entities that were breached faced - if any.

The United States Federal Government determined that general data breach events were 'sectoral', meaning that each state where at least one victim resides have the jurisdiction to create and enforce laws regarding general data breaches and security. When a breach occurs, offenders are normally required to give notification to that state's Attorney General, who then determines if the state will seek further action against the offending party.

The U.S. government has only stepped-in so far as to protect two specific-categories of nonpublic information; medical information, through the Healthcare Insurance Portability and Accountability Act (HIPAA), and financial information, through the Gramm-Leach-Bliley

## Useful Tips for Project Management
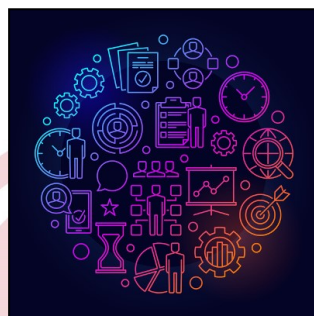
If you've ever managed a major IT project, you're probably well acquainted with Murphy's Law: "Anything that can go wrong, will go wrong." Every project is going to have some rough patches. The key to overcoming these challenges lays not with the execution of the plan, but with the preparation. Here are four things to consider when you're planning your next long-term IT project.

**Know Your Needs**
Believe it or not, understanding exactly what your company needs from a project and translating that into a well-defined strategy with realistic goals, may be the difference between success and failure. First, it's best to look at the big picture.

**What is the desired result?**
- What does the project do for your business?
- How will the implementation of this project affect other departments?
- Will the project directly impact clients/prospects?
- Will there be any downtime?
- Does the team need to be educated about this project?

**Budgeting for the Unknown**
Prices go up. Projects get delayed. Accidents happen. You need to accept the fact that you're going to run into an unplanned incident or two at some point throughout the duration of your project. The best way to make sure that your budget doesn't come up short is by anticipating that there will be unforeseen expenses. Whenever possible, it's preferred that you give yourself a bit of 'wiggle room' within your budget. Of course, you can't pre-

# Remote Maintenance Makes Technology Management So Much Easier
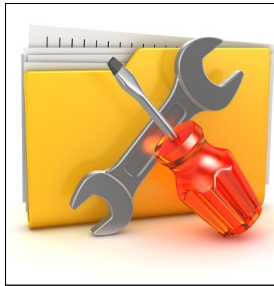
"The good old days" usually refer to times long past, where things were more simple. Businesses a few decades ago didn't have much complex technology in their office, but nowadays organizations have multiple server units and plenty of workstations--all of which need more maintenance than ever before. What's the best way for your organization to approach IT maintenance?

Small businesses often don't have many choices when it comes to IT maintenance. Either they have a small in-house team that dedicates itself entirely to maintaining the company's technical assets, or they don't have one at all.

Either way, they are either receiving barely passable maintenance that covers the bare minimum of what's required, or they're not receiving any maintenance at all. Both of which are unfortunate circumstances that can easily be solved with the help of a managed service provider.

A managed service provider helps your business by delivering dedicated IT services to help an organization handle all their technology-related tasks. These responsibilities could be something as simple as setting up an email server, or as complex as managing and maintaining the entirety of your IT infrastructure. Basically, whatever you need out of your technology, it's the managed service provider's responsibility to offer prompt and efficient support.

One of the biggest ways that managed IT providers offer value to clients is through remote support. More often than not, a business's employees need help with their technology solutions. Think about it, how often during the day do you get complaints about technology not working as intended?

What if you had a dedicated professional organization ready and willing to help you with any technology issue that surfaces? A help desk is the perfect solution in this case, and is something that a managed IT provider can offer you completely remotely.

This is what Directive provides for small businesses like yours. We offer a comprehensive list of managed IT solutions that can help you take a proactive and preventative approach to technology management.

This includes network security, remote maintenance and management, data backup, disaster recovery, email management, and so much more - all to keep your operations moving as smoothly as possible.

Did you know that most IT maintenance can be performed without an on-site visit? This just adds to the value you get from working with a managed IT provider like Directive. Our technicians can remote into your devices to resolve any issues that are present, before they turn into large problems that require more work and present more risk to your company's computing infrastructure. Furthermore, since issues don't necessarily need an on-site visit to be resolved, you save both time and assets that are better spent elsewhere.

Does your business need a hand with technology management? To learn more, give us a call at 607.433.2200.

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# Should Companies Be Punished for Data Breaches?

Act (GLBA). Even though these laws were established in the late 1990s, their application to information technology is still being explored by the court system. Compared to many other types of crime, prosecuting a data breach is still new, with federal courts having just completed a trial for the first time, in 2015.

Other parts of the world have already seen the importance of a unified standard for regulating data protection, breach prevention, investigation, and violation. The European Union has already passed a 'General Data Protection Regulation' which goes into effect in May 2018. In addition to giving data protection authorities more power and

resources to investigate and enforce the law, the fines for an offending organization are $20 million or 4% of their revenue - whichever is the larger amount of money.

The secular responsibility of data security laws has lead to some pretty extreme variations among how breaches are handled by the United States. For example, it is the discretion of the state whether they choose to penalize the offending company per violation (records lost), per series of breaches (all charged as a single breach event), or, as impractical as it sounds, per resident. Furthermore, even if they're prosecuted for their actions that led to the breach (or inactions in some cases), only four states and the District of Columbia give

their Attorney Generals the explicit right to collect restitution. Those states are Arkansas, Illinois, Nevada, and Pennsylvania.

Additionally, many states completely bar individuals and organizations from taking independent action against the entity that had been breached, even if said entity is not prosecuted by the state or ordered to pay any type of restitution.

In what could be the most severe repercussion of all the possible punishments for a data breach, is the right of a...

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## Useful Tips for Project Management

*(Continued from page 1)*

dict the future - but you can look to previous projects for an idea of what sort of snafus you are likely to encounter. Giving yourself a bit of cushion when planning out your budget might end up saving you big time down the road - and if it turns out that you didn't need that extra money, then congratulations! Your project was completed under budget!

### Determine Benchmarks and Measurements

Especially important during a long-term IT project, figuring out ways to measure and gauge the project's progress before you begin the execution of it. This will help you maintain forward momentum, keep your budget in check and show areas that need improvements for the next time a similar project is required. Key performance indicators (KPIs) are ways to measure that success. Keeping track of the following metrics will help you get a grasp on the way your projects progress throughout the execution:

- Actual Cost
- Cost Variance
- Earned Value
- Planned Value
- Return on Investment

### Keeping Everyone Informed

Too often in a project's execution, only the project managers know how the project is fairing. Everyone else is only privy to the sections of the project that apply directly to them. Project managers are there to drive the project - and part of that is communicating with resources - both inside and outside of the project. For example, if your project is going to require your network to be offline, you should give advanced warning to those who will be impacted by this downtime. It is not only courteous, but helps to keep your project on track. There is nothing like having to delay your progress because there was an important meeting scheduled at the...

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## Natural Disasters Can Have a Major Impact on Business
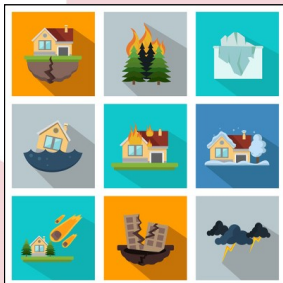
A recent surge of hurricanes, wildfires, earthquakes, and floods have crippled major cities and devastated entire regions all over the world. In the aftermath of these events, business owners are faced with a few glaring truths - one of which is the undeniable vulnerability of their business' future in the event of a disaster.

Most of the major news outlets are reporting this figure: according to the Federal Emergency Management Agency (FEMA), 40% of small businesses never recover from a disaster. Despite all the literature and precautionary tales surrounding these catastrophic events, there are still an overwhelming amount of businesses that choose not to prepare for a disaster until it's too late.

There are two things that business owners need to be cognizant of in order to truly understand the importance of business continuity planning.

- There are no locations that are 100% exempt from natural disasters.

- The effects of natural disasters on commerce expand much further than the businesses physically affected by the event.

What many businesses don't realize until it is too late is the importance of business continuity planning. In a recent article published in The Hartford, five businesses told their harrowing stories of their struggle to resume operations after a natural disaster. As they describe their post-event process, each business faced a different disaster and different recovery issue. For one company, the challenge was having to repurchase machinery and inventory before resuming businesses operations. For another, it was realizing that the majority of businesses they worked with were no longer operational and required a strategy for post-disaster sales.

***The lesson learned from these stories is this: forward thinking and planning ahead can be the difference between a business' survival and failure to maintain operations.***

Below we examine seven critical aspects of business continuity planning, as well as, a bit about what they are and why they're important:

### Important Documents and Records:

One of the first things that you're going to want to make sure of, is that you have all of those paper documents you're likely going to need to reference in the event of a disaster. If possible, keep multiples of these documents - one on site at your offices and the other offsite in case your office is unreachable. When possible, consider following the 3-2-1 rule, as detailed under Data Backup and Technology Planning.

A few examples of critical business documents include:

- Deeds
- Leases
- Insurance Papers
- Certificates/Licenses
- Banking Records
- Hard Copy of Business Continuity Plan

### Contact and Communications:
For most businesses, the first thing to account for in the event of a disaster, is **their people**. In fact, even social media platforms have added a feature that allows people near a disaster to let...

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# Leaks From Apple Show the Newest iPhones To Be A New Approach

It seems hard to believe that the smartphone has been around for over a decade. When Apple rolled out the first iPhone in 2007, it triggered a momentous shift in the way people access information. Over the past 10 years these devices have gone from somewhat of a novelty to a staple of modern computing. More data is transmitted and accessed by smartphone than by any other means, and Apple has been at the forefront of this computing shift from its inception.

The world's most profitable consumer technology company is said to have something special in mind for their 10th anniversary flagship smartphone, while still rolling out two additional phones. Deciding to scrap the iPhone 7s, Apple has recently introduced the new iPhone 8, iPhone 8 Plus, and the iPhone X. For all those Apple aficionados out there, which device will you have to get your hands on?

All three phones feature Apple's new A11 Bionic chip, which brings a more efficient device performance--a qualification that every user willing to shell out a pretty penny for a new iPhone, must consider. The A11 comes equipped with two performance cores, which are up to 25 percent faster than the ones found in the iPhone 7, Apple's most recent device offering. Additionally, the new chip offers four high-efficiency cores, which allow less resource-intensive applications to run efficiently to preserve the device's battery life.

The two versions of the iPhone 8 and the iPhone X have many similarities (as you'd expect), but one major difference the iPhone X offers is the display. The iPhone X not only features the use of an OLED display, it also takes a page from other smartphone manufacturers and removes the famous bezel and home button every other iPhone has featured. Traditionally, OLED displays offer perfect blacks and much more vivid colors than LCD displays (which have come standard on every iPhone for some time). The OLED display on the iPhone X is Dolby Vision and HDR 10 capable and has a resolution of 2,436

x 1,125--far superior to the 1080p display of the iPhone 8 and 8 Plus. The iPhone X also has a small cut-out at the top that actually dips into the screen a bit. This bar houses sensors and the front-facing camera of the device.

As far as software goes, all three of the new devices run iOS 11. iOS 11 features a litany of new features that include a much-improved Siri, a new Control Center, and a redesigned App Store. Since the iPhone X does not come equipped with Apple's standard Touch ID system, some tweaks in iOS will allow the edge-to-edge display to have a virtual home button. As a result, the iPhone X features Face ID, which scans a user's face for authorization opening the phone, and more amazingly as a way to authenticate App Store purchases.

The cameras on the devices are much improved. While the iPhone 8 has a single 12MP sensor, the cameras on both the iPhone X and iPhone 8 Plus have dual 12 MP cameras with an extra sensor that acts as…

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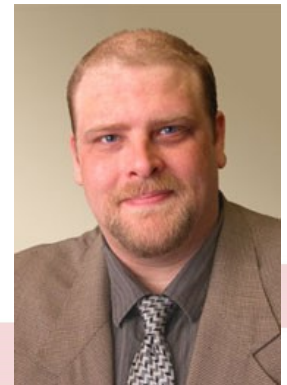
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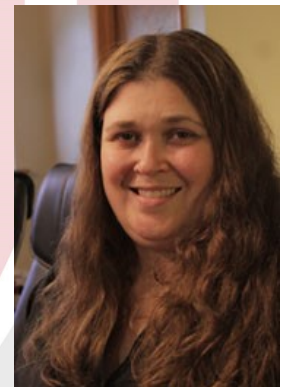
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