

eBook:

Your Guide to Building an **IT** Infrastructure





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Discussing your IT infrastructure can be difficult. Keep in mind that we've probably never met – and if we have, there's a chance we probably haven't dug deep into the nitty-gritty of what business technology makes your business tick.

Before we go into the how of building a world-class IT infrastructure, it's important to look at the why. Since it's a complex subject, we like to use the metaphor of a plane.

The Beauty of Flight

The Boeing 777 is the world's largest twin-engine passenger jet. It's a modern feat of engineering – it can travel nearly 11,000 miles without refueling, and it seats an average of 400 people (comfortable legroom notwithstanding).

But the real magic of the [Boeing 777](#) isn't just in the streamlined airframe or the dynamic features of the passenger areas. No, the real magic happens at the very front of the plane inside the cockpit.

Except it's not magic at all.

To an outsider, the cockpit of the 777 looks like a sci-fi film come to life. Flashing buttons, illuminated knobs, glaring screens, and ample control sticks adorn the interior, each equally important to the overall operation of the aircraft.

While it may look like magic, it's most certainly not. The operation of the plane depends on the training and skills of the flight engineers and pilots.

Your Business is Your 777

Operating a 777 isn't too different from operating your business. The core principles are extremely similar – you must deliver exceptional services/goods to your clients (or passengers) with repeatable safety, quality, and consistency standards in mind.

For an aircraft, that means literally carrying passengers and cargo from point A to point B. For your business, that might mean delivering products to customers or fulfilling services for clients.

And the operation of both modern planes and growing businesses share another similarity: they each rely heavily on technology to achieve their goals. It doesn't matter if that's in the cockpit or in the server room.

Though the goals may be different, one thing stays the same. It's nearly impossible to reach your objectives without the right technology at your disposal.

The Four Core Business Drivers of Technology

There are four distinct business drivers that every business should expect to see as a result of technology:

- Reduced Expenses
- Increased Productivity
- Minimized Risk
- Driven Growth

Achieving these drivers is no small feat. It takes coordination and strategy to

reach them. But once you master your technology to allow you to prioritize those drivers, your business will benefit from increased profitability and progress.

So where do you start? Focus on building a solid IT foundation (that's your IT infrastructure).

“Worldwide IT spending is projected to total \$3.7 trillion in 2018, an increase of 4.3% from 2017.”

— [Gartner](#)

You can't expect your technology to propel you toward these business drivers if you don't have the right IT infrastructure. That means everything from your day-to-day hardware and emails to your network security systems and data backups.

Without these parts working together for a purpose, there's virtually zero chance you'll ever achieve the four core drivers. While it's not all about your hardware and software assets, it's important to start here to build the strongest possible IT infrastructure.



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We've created a simple acronym that helps keep all elements of your IT infrastructure on track to achieve your business goals. It's called ASM, and it stands for **A**vailability, **S**ecurity, and **M**obility.

It literally refers to your technology's ability to be available (functional and seamless), secure (protected and hack-proof), and mobile (accessible and flexible).

It's not magic. We promise.

With your technology meeting those three simple parameters, you'll achieve the four core drivers. In fact, there's a direct correlation between ASM and the drivers. It directly translates to:

Availability

- » Increased Productivity
- » Reduced Expenses

Security

- » Minimized Risk
- » Increased Productivity
- » Reduced Expenses

Mobility

- » Increased Productivity
- » Driven Growth

The ASM Approach

[ASM aligns your technology](#) to achieve the core business drivers. In the cockpit of a Boeing 777, there are countless controls that all work in tandem to successfully keep the plane operational.

If you don't know when and how to use the controls correctly, they're of no use at all. You won't be able to achieve your goal of flying the plane successfully.

For businesses, it's a similar train of thought. Having a solid IT infrastructure doesn't mean much if you don't know how to actively and purposely use it to achieve your goals.

Here's how you can use ASM in practice to build your IT infrastructure up to be a solid foundation for your business that will help you reach your ultimate goals.

Availability

“2016 virtualization revenues increased to \$5.6 billion, up 5.7 percent from the previous year. The trend continues to grow to this day.”

— [TechGenix](#)

Simply put, availability refers to the uptime and functionality of all the things in your IT infrastructure.

Availability in technology increases employee productivity by allowing them to work whenever they need to. It also reduces your expenses in the long run by making your IT management proactive rather than reactive.

To achieve availability with your technology, you'll need to focus on four key things.

1 Modernized Infrastructure

First and foremost, you must examine your current IT infrastructure. Basing your business operations on outdated and incompatible technology is a short-sighted move that will very quickly hinder your organization's overall performance.

After all, your day-to-day business operations are dependent on the capability and longevity of your technology.

However, that doesn't necessarily mean you should rush to buy the most expensive hardware and software on the market.

Choosing the **right** technology means choosing the hardware and software that sufficiently meets your current and future needs. That probably includes newer, more compatible technology that's covered under a warranty.

2 IT Systems Management (ITSM)

ITSM is perhaps the most critical part of availability. Even though modern technology has advanced considerably, it still requires proactive maintenance and support.

Keeping your core technologies operating smoothly means active management with up-to-date reporting. That means multiple applications ranging from monitoring programs to performance trackers.

Visibility is the key to knowing how things are running in the background.

3 Virtualization

To ensure availability at all times, businesses have increasingly turned to virtualization. Businesses often buy virtualized server (cloud) space from reputable vendors specifically because it comes backed with uptime SLAs.

Conversely, keeping an on-premise server only puts additional pressure on your company to keep it running. You're responsible for all maintenance and support.

In short, if the server goes down... you'd better hurry and start troubleshooting.

4 Business Continuity

It's basically impossible to account for and prevent all disasters from affecting your business. That's why it's vital to have a business continuity solution and plan ready to go so you can recover quickly.

Without a proper business continuity plan, you'll experience downtime – the business killer.

Planning and preparation ensure that your organization will continue to operate in case of serious incidents or disasters. Having and maintaining a plan allows for recovery to an operational state within a reasonably short period.

Security

“Smartphones will account for more than 55% of total IP traffic in 2025.”

— [Cybersecurity Ventures](#)

In a world filled with evolving cyberthreats and digital attackers, network security is more important now than ever before. Ensuring all of your technology is secure is critical to the survival of your organization’s critical data and information.

A good cybersecurity posture inherently decreases the risk in your organization by negating problems such as cyberattacks and data breaches. Certain security measures also reduce expenses by eliminating chances of regulatory compliance violations.

Here are four things to focus on to achieve security in your IT infrastructure.

1 **Managed Cybersecurity**

Unlike IT systems management, security is a bit more tricky to manage. There are no set standards or catch-all defenses for the malicious applications that exist on the internet.

Keeping up with changing security frameworks can quickly become overwhelming. You must also stay up to speed on all the latest security applications and services, as well as how to implement them.

Managed security takes the burden off of you by using a combination of advanced applications and [dedicated security professionals to protect your organization.](#)

2 Mobile Device Management (MDM)

New technology has always brought new challenges, and mobile devices are no different. Users can directly access and store company data from these mobile devices, leading to a new type of security management.

If an employee loses their mobile device that has direct access to sensitive company data, the company will be unprotected from potential extortion, ransom, tampering or even simple data deletion.

[Mobile device management](#) policies exist to actively manage the security definitions and prevent these things from happening. They can include additional encryption, VPN tunneling, and even complete remote data wipes.

3 Email Security

For most organizations, emails are necessary in all day-to-day operations. Therefore, it should be no surprise to find out that emails are one of the biggest gateways to viruses and cyberattacks.

To bolster the defense of your organization's emails, you'll need additional security applications that can provide encryption, data leak prevention, targeted threat prevention, and more.

4 Secured Data Backups

Sometimes, things still go wrong despite your best efforts and most meticulous planning. You must prepare ahead of time with comprehensive, encrypted data backups that are stored both onsite and offsite.

These backups are also a key element in your disaster recovery plan. When it comes to backup frequency, the choice is up to you. Defining your RTO (Recovery Time Objective), RPO (Recovery Point Objective) and data retention requirements is essential to minimizing corporate risk.

However, remember that you may lose a sizable amount of data if your last backup was too long ago. How much changes in a day, or an hour, at your business?

It's also not enough to simply have the backups. You'll need to test them to ensure full functionality on demand. There's not much worse than having full backups and finding out they don't work when you need them.

Mobility

“Improved communication and collaboration through social technologies could raise the productivity of interaction workers by 20 to 25 percent.”

— [McKinsey Institute](#)

Mobility dictates the ebb and flow of your company’s productivity output even when nobody is physically present. In short, it’s what makes work flexible. Mobility in technology opens up new possibilities for both companies and employees alike.

For starters, it greatly boosts productivity. Gone are the days where you’d have to be at an office to do work. Now, people are free to work whenever they need to, from wherever they are.

To unlock the benefits of mobility in your IT infrastructure, consider these four key elements.

1 Email Messaging & Collaboration

Your organization should use only the most reputable and supported cloud-based email and collaboration tools. These tools are the ones that will form the basis of most of your work output internally and externally (so choose wisely).

It’s also helpful to choose a platform that adds new features regularly. Take Microsoft Office 365 as an example – it improves upon the classic Office suite, along with including dedicated email service for your company.

It also includes SharePoint, a hub for document sharing and collaboration.

Choosing the right collaboration application can be a huge help in streamlining your organizational processes and workflow.

2 Remote Application Availability

There are multiple ways to connect to your files and applications over the internet. That might include virtual private networks, remote desktop services, or even straightforward cloud connections.

Selecting the one that best fits your organization depends on your existing infrastructure. Most modern applications are hosted in the cloud, so a cloud connection is more than enough to access them securely.

For files and applications hosted in on-premise servers and storage devices, VPN and RDS will probably be the better choice to ensure full authentication for authorized access.

3 File Sync & Share

Mobility goes hand-in-hand with collaboration. But how do you get people from various locations to collaborate effectively and share the files they're working on?

Simply put, you'll need a [file sharing platform](#). The ideal platform will automatically sync data between

servers, workstations, mobile devices, and the cloud.

Establishing this platform gives your company the ability to pull cohesive data from a singular point, from anywhere in the world.

4 VoIP & Unified Communications

Voice over internet protocol (VoIP) is a standard for making phone calls over the internet. Rather than using expensive and limited-use telephone landlines, your organization can use VoIP to cut costs, expand voice features and increase flexibility.

VoIP is better than typical phone services because it allows for absolute mobility. You can take your VoIP phone with you as an application on a laptop or on your mobile device.

It's all part of a grander strategy known as unified communications (UC). UC works by integrating each communication and collaboration application you have into [a singular, easy-to-use platform](#) that keeps all your messages connected across channels.

Whatever your team's communications challenges, implementing UC into your IT infrastructure is a surefire way to drastically improve your overall mobility.

Troubleshooting
to view various Troubleshooting
CMD Shell, Enable SSH and Restart
[Enter] More
v.5.0 (v)Kernel Release Build 2000190



Your New IT Infrastructure

Combining all these parts together gives you an extremely solid IT infrastructure. Though ASM is a simple concept, executing it is not easy. It's still not magic.

Using ASM is the best way to align the four drivers of business that propel your business to growth. After all, each and every aspect of your business is supported and enabled by your core IT infrastructure.

Instead of having an unwieldy mess of technology that stops you from reaching your goals with a headwind, you're now being propelled to your objectives by a technological tailwind.

The Next Steps for Your IT

Take another look at the cockpit of your Boeing 777. Yes, there's an overabundance of flashing lights, illuminated knobs, and control sticks – but now you **know** them all.

Understanding how these all come together and work for the successful operation of the flight is imperative to success. However, there's still a lot to

consider. There's still a chain of command, there's the control tower, there are flight plans... understanding the controls is really just the basics.

For your business, you must still consider your IT strategy, operations, and organization. Each is integral to the overall success and best possible use of your technology.

DynaSis: Your Technology Co-Pilots

We're here to help you fly the plane exactly where you want to go – the way you want. We've been helping Atlanta businesses align their technology to meet their business goals since 1992.

If you have any questions on our ASM approach, or if you're looking for advice on anything IT, feel free to [reach out to us](#).



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