BACKING UP

Backing up data is one of the fundamentals of security. If files or systems become unavailable or inaccessible, it compromises the integrity of our organization and could damage relationships with clients and partners. Always follow our organization's policies regarding how you access and store data. The following information is for informational purposes and and suggests best practices which can also be implemented.

3-2-1 Back Up!

The 3-2-1 backup strategy provides a sound way to ensure your data is protected from nearly every potential event that could damage or destroy your files. It's perfect for home offices and personal backups.

3 - Have at least 3 backups of your data.

2 - Store 2 backups locally.

1 - Store 1 backup off-site. (Like a family member's home.)

PHYSICAL BACKUPS

External Hard Drives & USB Drives

These are easy to use and affordable, and most computers feature software that allow you to auto-update your backups regularly. *(So you don't even have to think about it!)* The drawbacks however are the finite amount of storage space and the susceptibility of being lost *(especially with USBs)*, stolen, or suffering a mechanical failure.

Optical Disks

If you only have a small amount of data to store, optical disks *(such as DVD or Blu-ray)* might work for you. There is less risk of mechanical failure and they are easy to copy and store in secondary locations *(such as a file cabinet or safe)*. The downside, aside from limited capacity, is that as technology progresses, these forms of storage will likely be phased out *(RIP floppy disks, we knew thee well)*.

Servers

For those that need a robust and advanced backup system, servers fit the bill. A RAID 1 *(redundant array of independent disks)*, for example, copies data across multiple hard drives. If one drive fails, simply slide in a new one and it will rebuild itself automatically. Aside from the price, the cons include maintenance and, potentially, the technical know-how needed to set up and run the server. They can also pose security risks if not properly protected.

VIRTUAL BACKUPS

The Cloud

The cloud is the main form of virtual backups. Backing up data to the cloud is a simple solution to off-site storage. You can easily back up multiple devices *(phones, computers, tablets, ect.)* and there are many different data options to choose from to fit your budget and storage needs. Unfortunately, there are some drawbacks, the biggest thing is you have no control over security. The cloud is technically an off-site server where you are just renting space.