Benefits of a Solid State Drive
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Your Time Expense with a Hard Drive VS Solid State Drive

Would you like to get that new computer feel all over again? I remember the performance difference from fresh out of the box to six months later, then the one year mark after the normal warranty expired. I've worked with many people over the years that tell me when they're thinking about buying a new computer: "Well, all I need is an Entry-Level computer...!" The one item that is worth more than gold is **your time**. We are not talking about a gaming computers here, or even a top performance level model.

Three parts that are of primary importance to make a computer worth while:

PROPER NAME	COMPARED TO	SPECS WE RECOMMEND
1) The **processor**	"Brain"	Intel i5 recommend as a minimum
2) The **RAM**	"Memory"	8 GB to 16 GB of Ram recommended
3) The **Hard Drive**	"Storage"	500 GB to 1.0 TB in size of 7200 rpm

A 4th factor to consider is the computer manufacturer that you chose. There are so many brands out there it would be difficult to name them all, so just keep this is mind: All computers run the risk of defects and break-downs. Your goal is to find and buy one that breaks down the least, and gets the job done efficiently. Our company recommends HP or Dell, in that order, of both types: laptop or desktop. You will notice that laptops out number desktop computers 10 to 1 on the store shelves. A good laptop is more flexible than a desktop computer, and allows you to connect to an external monitor, a keyboard, and wireless mouse very well. This would give the you the feel of using an office computer while having the convenience of a portable laptop to take with you.

Since all hard drives are mechanical, meaning they have many moving parts that all move slower with age and exposure to heat. Normal hard drives will slow down noticeably over time even if you do the regular maintenance and keep them cool. Chances are that you've noticed the moment you added printing software when you set it up at your home or office that it seemed more sluggish than when it was first demoed by the sales person in the store.

So, what are we talking about in time difference between an entry-level computer at **$399**, and a better model at **$799**. It makes sense to get the best deal possible, Right? That means getting the most done in the shortest period of time. In the business world we call that efficiency!

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When we buy a car we want the greatest gas mileage possible. It may not seem like a big deal when cars used to get between 10 to 15 miles per gallon (MPG). Then fast forward 20 years when the MPG moved up to getting 25 miles to 35 miles per gallon of gas. That that was a big deal, but when you looks at the big picture with the CAR example lets say you travel 10,000 miles a year at the 12 MPG that's 833 gallons per year at $2.50 a gallon, that's a fuel cost of $2165 a year.

Compared that to getting 25 miles per gallon which equals using 400 gallons of gas to travel 10,000 miles per year at a cost of $2.50 per gallon which costs the driver $1000 a year, so you just saved $1165 dollars a year over driving a car that gets 12 miles per gallon.

To understand the gravity of the differences here lets looks at the time it takes for you to do daily tasks on your computer! Granted a big obstacle for smooth performance on computers today is Internet connection speed, but for our topic in this article lets look at just the comparison of an Entry-Level computer compared to a Mid-Grade computer as listed in our recommendation section above.

In a normal single session a home user may check their email once, and view at least 5 websites. Sounds low right? Now this may occur once a day, and maybe five (5) times a week, again these are very low numbers based on a home user. So on the ENTRY LEVEL computer this takes roughly 20 minutes from boot-up to shutdown for each session. On a Mid-Grade computer that time is about 12 minutes a session. That's a savings of 8 minutes per session.

Lets see what this really means for a year of usage: lets establish that you use your computer only 5 times in a week for 20 minutes per time. Now there are 52 weeks a year, so (52 X 5) is only 260 days that the user touches their computer each year. In the example here we say the user spends 20 minutes a day on the Entry-Level computer multiplied by 260 days = 5200 minutes, or roughly 87 hours a year on their entry-level computer.

On the Mid-Level computer using the same time scenario a user would spends 12 minutes per usage x 260 days that's 3120 minutes spent annually, or 52 hours. This is a savings of 35 hours a year, or roughly a full work week difference. If you made $12 an hour the **first year time savings** from Entry-Level to Mid-Level computer is: $420. That's a 60% time improvement. The estimate on these examples can

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allows you to estimate your savings on the difference between an Entry-Level computer and a Mid-Grade computer is roughly a 60% time improvement. In a next scenario lets look and a computer used in business for real time.

EXAMPLE:
USER-1:   Works approximately 32 hours or more of production on their computer weekly. So for a 50 week work year. Let's be conservative and say instead of 60% lets use 15% time savings by improving the computer production. So 1600 hours X 15% = 240 hours saved. That equals 6 weeks of increased production time. Whoa that sounds great, but what if you reduce the time savings to only 3 weeks. That would be only a 7.5% efficiency improvement. How much more could you get done in that extra three weeks. No matter how this gets calculated its simple to see that a small speed improvement of a computer saves big money long term.

SAVE EVEN MORE

Ok we'll switch gears here and go from computer purchases to hardware investments. The numbers used above in reality are for one computer. Multiple the number of computers your business uses times the hours that user works times 7.5%. The numbers can quickly zoom into the tens of thousands of dollars. Wise management when buying new equipment could generate more productivity and far greater profits.

So what if you could take these time numbers and cut them in half again?

Solid State drives (SSD) are the fastest upgrade you can do to a new, or used computer to double its speed. That means less time waiting and more time getting things done. So, we are back up to a 15% savings for gross computer production. The speed of SSD manufacturers often brag that they can go 10 times the speed of a regular hard drive. That is a lot of fluff that never really happens in real life, it sounds great though. So I'll take just doubling the speed of a computer in a heartbeat as an expression of time increase.

Solid State drives have no moving parts and are generally 2 to 2.5 times as expensive as a regular hard drive. There are many brands you can buy as after market. The best is "SAMSUNG". You can even

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download their migration (Cloning) software for free at:
https://www.samsung.com/semiconductor/minisite/ssd/download/tools/

Oh by the way Cloning will cut the time of upgrading to a third of what a full system re-build would take including the reinstall of all your software plus settings would cost you. Your information is the most valuable item on a computer.

CLONING

Cloning reproduces an exact duplicate of your existing system from the operating system to the programs and files, and all your settings. It takes about 4-6 hours to do the technical transfer and install the new SSD unit for a technician. You will need an external adapter to attach your new SSD to a USB port and the cloning software. Your time will vary depending on the size of your current Hard Drive and the size of the new Solid State drive you chose. TigerDirect and other computer retailers may offer SSD Kits that include Cloning software and SATA drive adapters. If you are attempting a desktop computer upgrade you must have an adapter to hold the SSD which is only a 2.5" drive.. All the wiring connections are all the same for either drive size.

A Samsung 500 GB SSD as of March 2020 costs about $95.00, and a One TB (1.0 TB) is about $180, plus tax of about 7%. Labor again varies from $275 to $375. So buying a computer that comes with a Solid State drive has its initial benefits.

NOTE: It is best to match the drive size to your currently installed drive, but look to see how much drive space you are actually using. Chances are if you are only using 350 GB on a 1.0 TB drive you can get by purchasing a 500 GB drive and it will work fine.

UPCOMING ARTICLES
Tune in to our next efficiency tricks to fine-tune your IT-Department. It is in all fairness that the IT department works to reduce cost, not create job security. Methods to streamline IT Teams is a critical job for the board members of your company. Poor protocol in an IT-department can cost a business many thousands of dollars, or bring profit into a smothering business!
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Call us today at (828) 400-7271 to setup an appointment to review your situation and recommend what

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would fit into your budget, and needs. You can get a price quote by calling us or emailing us with your needs. Make a security software purchase of your choice with a license key and download link so you can install it yourself, or make an appointment for a technician to install your software professionally. Boxed version are available at a slightly higher price, be sure to include whether you want an electronic download or a boxed version shipped!

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Thank you!

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