Today I am going to take this time to discuss Open Source software, often referred to as OSS. Originally all software was developed by groups of people freely sharing the code and its updates back and forth. Eventually companies realized that they could make money by selling the software and decided to stop sharing it. This brought about the closed source software most of us are used to seeing, like Microsoft products. **Fortunately** there were still programmers that wanted to freely share their code without someone else claiming credit and selling it. At this point the idea of open source software was re-developed and introduced to the world under many different intellectual property licenses. One of the earliest and most prominent OSS licenses was GNU’s General Public License, which still dominates the market today. I have seen where software is heading and believe the future of software development will be open source because it produces a better product and benefits all of society, instead of just one person.

Closed source or proprietary software relies on “security through obscurity”, which basically means that if on one knows there is a bug that could be exploited then the bug doesn’t exist. Unfortunately this only benefits malicious hackers who like to exploit such unknown flaws. These flaws are often called 0 day bugs because the developers have known about it for 0 days before it was exploited. Open source software has a different approach. Since everyone can look at the programming code these potentially harmful bugs are found and fixed really fast. Which helps open source software be more secure and up to date than most closed source software.

There is also less chance that multiple people will be writing the same code for different projects, thus wasting everyone’s time. Open source software has less waste because you don’t constantly have to re-invent the wheel every time you write a new program. Instead you see someone has already created it, and you modify their code for your purpose. Which saves you time and money, plus if the community likes the code you upload then the whole project could get a push in the direction you need it. This means more community contributions towards your goal and more savings for you. The notion that “All of us are smarter than any one of us” and “Given enough eye balls, all bugs become visible” means only the best ideas and the best implementation of these ideas getting incorporated into the final project. Another cost benefit is you can actually try the software for free before committing to it. With closed source software you are dependent on the creator having worked all the bugs out before selling it to you. And once you have bought it there is no guarantee that the creator will do anything to fix any problems you find.

This is why, these days most of the internet runs on open source software. Programming languages like HTML, Perl, and Python are all open source. And there are many major companies running Open source software. For instance the NY, European, London, and Tokyo stock exchanges all run on Linux which is completely open source. Companies like google, steam, and apache webserver use open source software for everything they can. Even the US government uses open source software in everything from nuclear submarines to air traffic control. And most people don’t realize that SSL is open source and responsible for encrypting most internet transactions.

Today there are open source alternatives for just about every closed source program that exists. For instance, if you want a free office suite comparable to Microsoft office you could use open office or Libre office. If you need a free alternative to Photoshop, which normally costs a couple hundred dollars, you could use Gimp which stands for GNU’s image manipulation program. Open source programs are so beneficial that schools are even adopting projects like the raspberry pi and the Arduino to teach students about software programming and hardware interfacing.

This is no surprise, since there are so many benefits to using open source products. Like the ability to cut costs by not spending money on expensive licenses for software, or paying to update to new versions. And for those that believe this isn’t an issue I’d like to give an example. There was a mechanical car parking garage in Hoboken NJ that used elevators instead of ramps to park cars. When the software license that allowed that parking garage to function expired the renew price was more than they could afford. This led to a large number of cars being trapped in the structure for several days. The legal battle that ensued was over the use and cost of proprietary software required by the parking garage to mechanically park cars and run the elevators. And to hit a little closer to home Microsoft has talked about leasing the operating system license so that you have to pay them yearly, whether you update or not. And this might not seem so bad until you forget to pay and can’t access important documents saved on the computer. This could be disastrous and have serious financial repercussions for a business

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Another major benefit to open source software is how flexible it can be. You can take any open source code you find and change it to fit your needs without asking for permission or paying a fee to do so. Open source software is known for becoming high quality software with lots of accountability, especially since everyone can see what changes have been made and who made the changes. This peer review process is its greatest strength. And since there are lots of people looking at the code, every time a bug is found a patch is quickly produced to fix it.

When I was introduced to Linux in 2000 I was immediately drawn to the morals and values of the open source philosophy. I love the idea that all of humanity can come together, and participate as a community working towards a common goal. It gives us all a chance to volunteer for a cause greater than ourselves, without having to leave our homes. And this kind of collaboration not only benefits us all, but it can never be taken away from us.

I hope I have shed some light on the many benefits of open source software and maybe changed a few views on its ability to be adopted by businesses. Thank you for your time.