**iOS Vs Android**

Currently BLS uses two Blackberry Enterprise Servers (BES) version 10 to deploy and operate a fleet of 620 devices in the National Office and the Regions. The fleet of devices in use are Blackberry Q20’s which have been discontinued as of July, 2016. To that end, BLS has decided to move to version 12 of the BES software to better move to the Apple iOS or Android system platforms.

The Android models DTNM tested are the Google Pixel and the Samsung Galaxy S8. Unfortunately, DTNM was not able to test the platform as extensively as the iPhones. The phones performed adequately. Here are some pro’s and con’s of going with the platform:

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| Pro | Con |
| * The phones tested performed well and are similar to what most people use now. | * Androids [comprise 81% of phones infected with malware and viruses](http://www.techrepublic.com/article/businesses-beware-smartphone-malware-rises-400-in-2016-nokia-reports/). The year before, they comprised 95%. |
| * Google has made great strides to lock down their platform against data breaches and infections, and has a roadmap of how they would like patches to be handled by all of their manufacturers. | * Even now, all patches are released immediately to Google manufactured phones, but every other manufacturer takes the code, tweaks it, releases to the [carriers like Verizon](https://android.gadgethacks.com/news/psa-verizons-shady-dt-ignite-app-is-silently-installing-adware-phones-0175780/) who can add code that decreases your security, and then it is released. Flagship phones get patched fairly quickly (within a week usually) and [older/cheaper phones can take many, many months](http://www.droid-life.com/2016/08/16/android-security-updates-suck/). |
| * Google rolled out a new type of device encryption based on files, instead of the entire disk (like we have with our Checkpoint encryption at BLS). It allows for a much more secure way of safeguarding your data. | * Apple has implemented File Based Encryption on all of its phones since iOS 4.0 which was released many years ago. Google appears to think of security as an afterthought. Many of the items DTNM would like to lock down are missing from the Blackberry Server, and we would need to purchase the next level up of license – currently about $2 more per person, per month. |

DTNM also tested several Apple iPhone models and put them through an extensive test. In addition to testing at the National Office, several Regional users received the phones and sent in detailed reports on how they performed. The phones performed adequately and were seen as easier to use than our current Blackberry Q20 stock.

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| Pro | Con |
| * Apple released iOS 10.2.1 one month ago. That operating system could be installed on an iPhone 5, which is nearly 5 years old. | * The phones are a bit more expensive and Apple discontinues older models. A new iPhone model only lasts for 2 years. |
| * Apple employs a much better encryption system than the Android platform provides. The newest iPhone 7 has the best consumer grade encryption available and many government agencies would be unable to break into the phone. | * Apple decides when to release patches and is often secretive about new malware, vulnerabilities, and exploits. |
| * iPhone hardware, as a flagship model, is of great quality, and they have great support. In addition, they have a large market share in North America so there will always be “an App for that.” | * The iOS adoption will require DTNM keeping an iMac on hand. This will ensure a central “image” for the phones, as well as pushing out updates over the air. Unfortunately, this has yet to be tested as the iMac is going through final vetting procedures in DNIA. |

**So What?**

iOS devices, and in particular the iPhone 7, have a nigh-impossible to crack device encryption in place. Android devices use an encryption standard that is flawed and not as good as Apple already implements. In addition, the way Android devices receive updates, will come back to bite us as we have Blackberry’s being used right now that are 3+ years old – which still receive updates from RIM. Samsung will eventually stop supporting older models, which means a faster upgrade cycle for smartphones, which increases overall cost. The latest version of iOS (10.2.1) can be installed on an iPhone 5, which is nearly 5 years old.

We would be able to use smartphones for a longer period, while not reducing BLS’s security, and spending less time vetting updates for phones across multiple carriers, if we go with the iOS solution. If we go with Android devices, even with the flagship models, would mean BLS would spend more money to upgrade devices, supporting a wider range of models due to carrier exclusivity, and a ton of time in labor vetting and testing device patches even with the same manufacturer but using a different carrier.