Infoxchange

HOW TO CHOOSE THE RIGHT IT HARDWARE FOR YOUR NFP

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WHO AM I

- 5 years in IT support at Infoxchange
- Worked with hundreds of NFPs
- Provides advice to a wide range of NFPs on hardware selection

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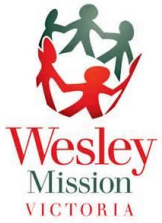
IT CONSULTANT

Infoxchange is a not for profit organisation that has supported hundreds of non-profits to select, purchase and use a wide range of technologies:

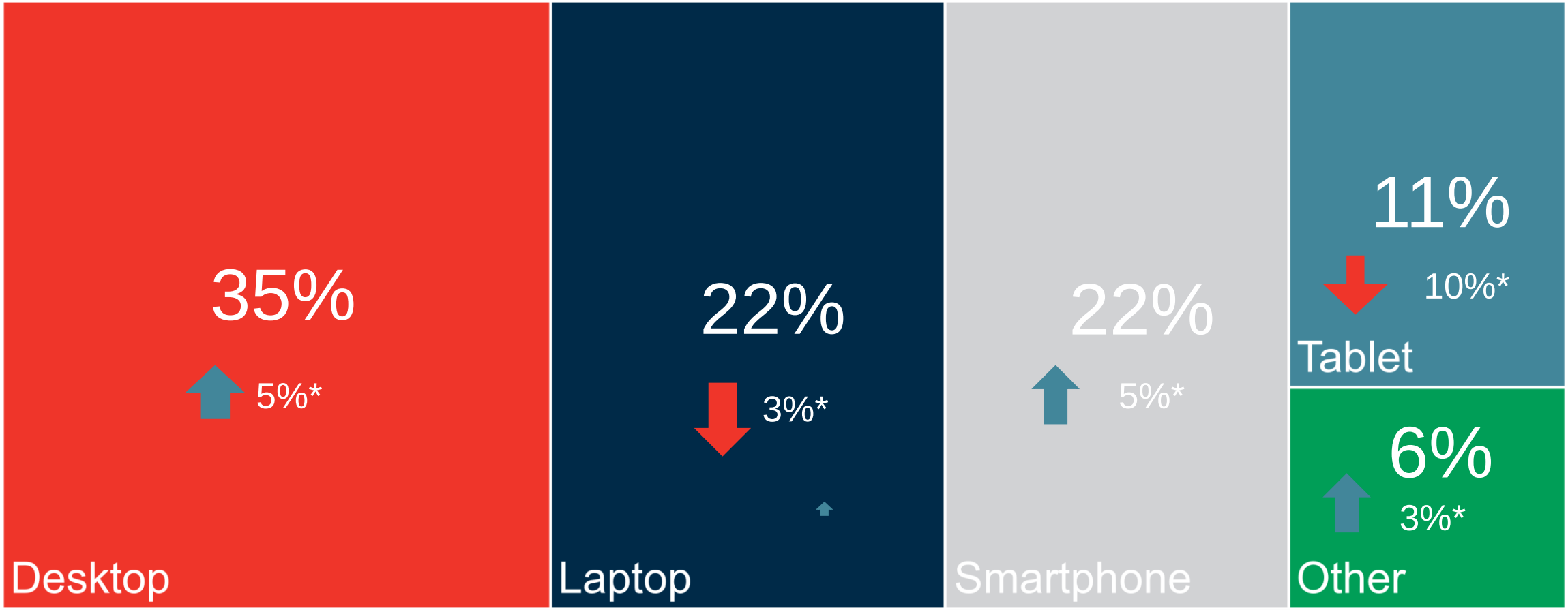
Gold Microsoft Partner
Small and Midmarket Cloud Solutions
Microsoft



Agenda

- Common NFP technology
- Sample use cases
- Gauging your needs
- Desktop vs laptop
- Choosing an operating system
- Hardware components
- Software
- Peripherals
- Purchasing tips
- Replacement strategy
- Top tips

Types of PCs commonly used by NFPs



2018 NFP Sector technology survey – Infoxchange and Connecting Up

Key principles of hardware selection

- **Supportable –** All hardware is purchased and configured consistently to ensure that support can be provided efficiently.

- **Cost efficient –** All hardware will be chosen to maximize the value and create the best return on investment for the purchase over the life of the equipment.

- **Reliable –** The hardware model selected will be chosen to provide reliable performance and to ensure continuity of business and minimise any interruption or need for maintenance.

- **Familiar and easy to use –** The hardware and software needs to be selected and configured to allow for a familiar interface that doesn't require significant adjustment and training of staff.

GATHERING YOUR REQUIREMENTS

Gauging your needs

A few question you could ask yourself are:

- What is my computers primary purpose?
- Is this computer a home computer or for business purposes?
- Do I need my new computer to be mobile?
- How much am I willing to spend on a computer?

Once you have determined the computers main function and your particular needs then you will need to look at what machine is right for you.

Use Case – Office based admin worker

- **User –** only works in the office and has basic software requirements
- ***Hardware*** - Desktop PC
- **Software –** Windows 10 Pro, Office 2016 Pro
- **Features** – low cost, reliable, longevity
- **Peripherals** – Monitor, webcam, keyboard, mouse
- ***Example model***: Dell OPTIPLEX 7050 SFF, i7-7700 8GB (2400-DDR4), 256GB(M.2-SSD), DVD-RW, Intel HD,
- **Warranty / life span –** 3 or 4 years
- **Cost estimate** -$1,190 + GST

Use Case – mobile support worker

- **User –** regularly works offsite or at client sites
- ***Hardware*** – Laptop
- **Software –** Windows 10 Pro, Office 2016 Pro
- **Features** – portable, flexible, integrated
- **Peripherals** – Monitor, dock, mouse
- ***Example model***: HP PROBOOK 430 G5, i5-8250U, 8GB (2400-DDR4), 256GB SSD, Intel Integrated, 13.3in (HD-LED),
- **Warranty / life span –** 3 years
- **Cost estimate -** $1,245 +GST

Use Case – highly mobile manager

- **User –** regularly works offsite or at home or in meetings
- ***Hardware*** – Laptop / Ultrabook / Tablet
- **Software –** Windows 10 Pro, Office 2016 Pro
- **Features** – portable, flexible, lightweight,
- **Peripherals** – Monitor, dock, mouse, stylus, case
- ***Example model***: Microsoft Surface Pro 4, 14” FHD (i7, 8Gb RAM, 256Gb SSD, touchscreen)
- **Warranty / life span –** 1-3 years
- **Cost estimate -** $2,200 ex GST

Use Case – case worker

- **User –** in client meetings or interviews
- ***Hardware*** –Tablet
- **Software –** Apple ios, Office 365
- **Features** – portable, flexible, lightweight, touchscreen
- **Peripherals** – Stylus, case, adaptors
- ***Example model*** iPad Pro 12.9-inch iPad Pro Wi-Fi + Cellular 256GB
- **Warranty / life span –** 1-3 years
- **Cost estimate -** $1,619 + GST

Desktop vs laptop

Laptop

Pros:

» Weight and size

» Ease of use

» Convenience

Cons:

» Upgrades and repair

» Ergonomics

» Price

Desktop

Pros:

» Price

» Upgrades and repair

» Powerful components

Cons:

» Size and Portability

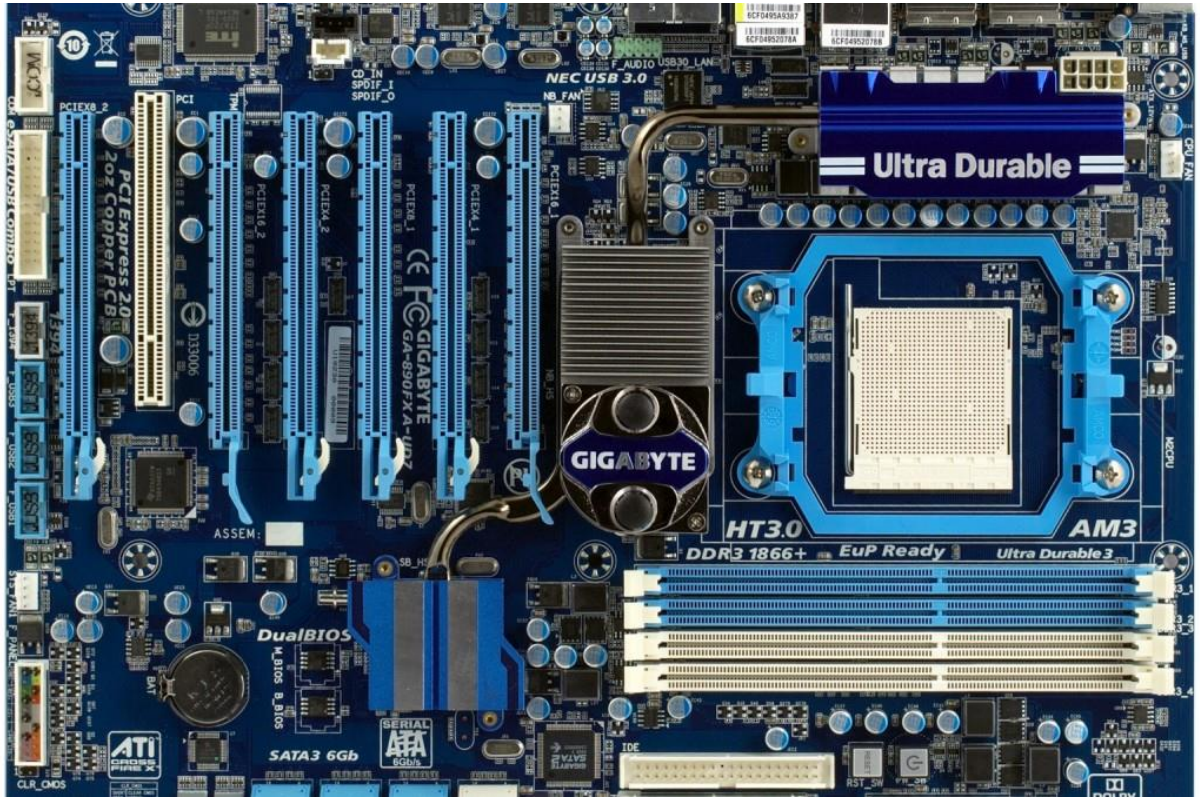
» Additional peripherals i.e. screen(s)

Sample devices

Device purpose	Sample device	Sample cost
Premium laptop – for mobile managers	SURFACE BOOK2 256GB SSD, i7-8650U, 1.90 GHz, 8GB RAM 13.5", Windows 10 Pro, Standard 1 year limited warranty	$2,605
Standard Laptop – for mobile staff	HP ProBook 430 G5, I5-8250, 8GB(RAM), 256GB(SSD), 13.3IN (FHD), Windows 10 Pro, 3 year warranty	$1,285
Desktop - office based staff	DELL OPTIPLEX 7050 SFF, I7-7700 8GB(RAM), 256GB(SSD) DVDRW, W10P, 3 yr warranty	$1,185
Tablet – for highly portable case workers	MICROSOFT SURFACE PRO 256GB SSD, i7-7660U, 2.50 GHz, 8GB RAM 12.3", Windows 10 Pro, Standard 1 year limited warranty	$2,125

HARDWARE COMPONENTS

What is a motherboard?



A motherboard is a circuit board and has different slots enabling other circuitry to be added to it, including:

- CPU
- RAM
- Monitor
- Graphics card
- Hard Drives
- Power Supply

More information:

https://www.computerhope.com/jargon/m/mothboar.htm

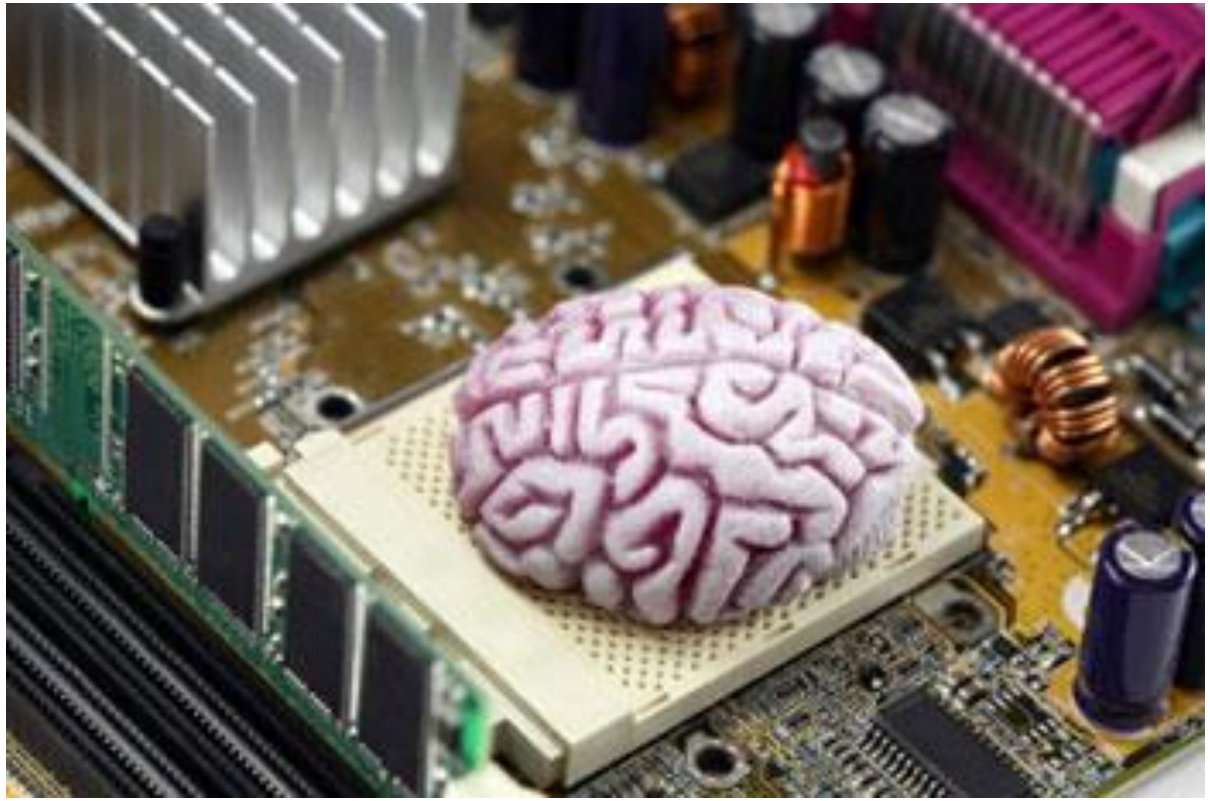
What is memory?

Commonly known as RAM, Random Access Memory, is a type of storage device the CPU uses to assist in processing data, much like a hard drive.

- What types of tasks will you will be doing on a daily basis?
- Available in 1GB, 2GB, 4GB and even 8GB units

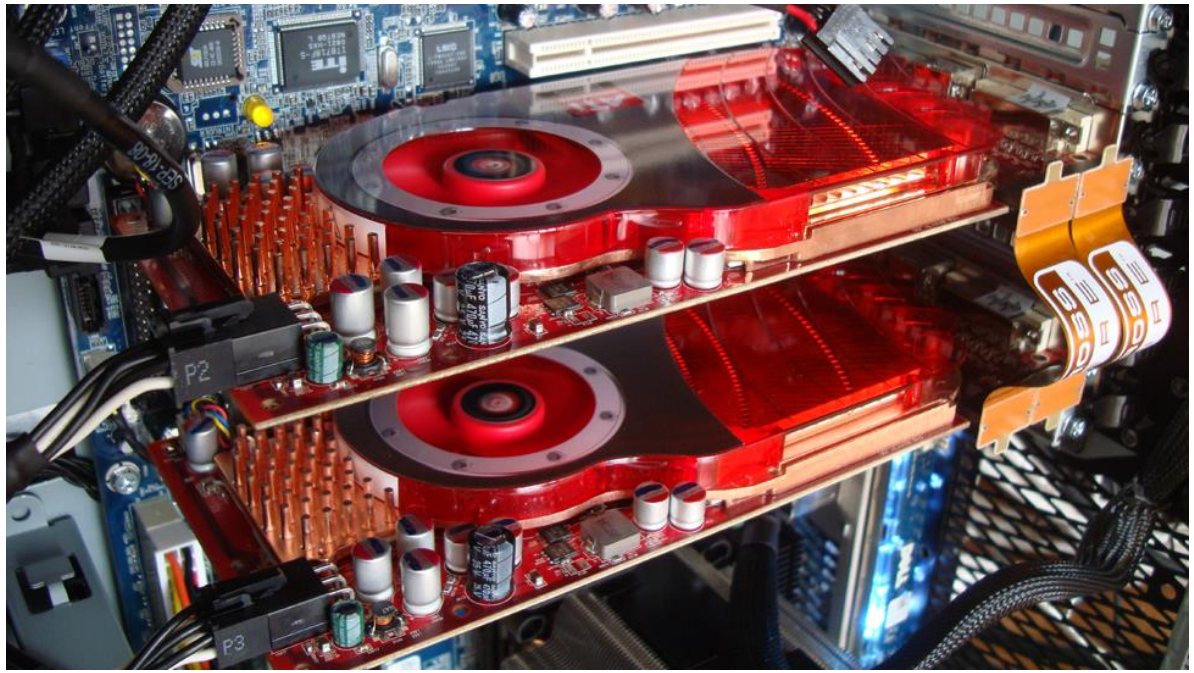
Note: RAM can always be updated later in a computers life and is the best and cheapest way to increase a computers overall output/speed.

What is a processor and why is it important?



- **Number of cores**, performance is the most important factor here, the higher the number, the higher the core count. i.e. i3, i5, i7
- **Clock speed**, measured in gigahertz (GHz), determines how quickly a CPU can process information.
- **Power consumption** is another important factor when deciding on a processor, especially for laptops-lower power consumption means longer battery life.

Graphics cards



One of the most expensive pieces of a computer is the graphics card, used to display the graphics on your monitor.

- Integrated or Dedicated?
- Size
- Resolution
- FPS
- Price $$$

More information:

http://www.tomshardware.com/reviews/build-your-own-pc,2601-3.html

Hard disk types and sizes

Serial ATA (SATA)

- Faster than PATA
- SATA cables are more flexible
- One disk drive allowed per SATA controller

Small Computer System Interface (SCSI)

- Faster than SATA
- They are very reliable.
- Good for 24/7 operations.
- Well-adapted for storing and moving large amounts of data.

Solid State Drives (SSD)

- Faster data access
- Durability
- Less power usage

Peripherals

Computer peripherals are devices connected externally to a computer. There are three types of peripheral, input, output and input/output.

Input devices

Output devices

I/O devices

Printers vs multi function copiers

Printers

Pros:

» Cheap purchase price

» Easy to buy retail

» Good for small quantities

Cons:

» Expensive ink

» Basic functionality

» Minimal support

Hp laserjet example

Copier

Pros:

» Cheaper per page

» Leasing

» Support

» Staple, binding etc

» Good for large quantities

Cons:

» Long contract

» Cost can be expensive

Copier examples

SOFTWARE REQUIREMENTS

Key software requirements

- **Windows operating system –** the ability to run any supported version of Microsoft Windows, however all new devices imaged with the latest Windows offering and an aim to upgrade all current devices, still under warranty, to the respective operating system.
- **Microsoft Office suite –** all staff require the ability to use the Office suite, currently Office 2016, including Word, Excel, PowerPoint and Outlook.
- **Microsoft Office 365 applications –** staff will require the ability to use local applications that integrate with Office 365 including One Drive for Business and Skype for Business.
- **Web browsers** - the latest versions of Internet Explorer, Google Chrome and Mozilla Firefox will be install on each device. Typically most other applications including CRM, finance systems, Website, Social Media, Survey tools and eNewsletter tools will be web based.
- **Domain functions –** the ability to join a Windows server domain and perform standard functions such as printing etc.

What to include in your standard operating environment (SOE) or image?

Software	Notes
Windows 10 Pro	Operating System
Office 2016 Pro Plus	Through Office 365 or Connecting Up
Kaseya or Teamviewer	Remote access software for your IT provider
Kaspersky or AVG	Antivirus and security
Malware Bytes	Malware protection
Quicktime	Media player
Google Chrome/ IE/Firefox/Edge	Web browsers
Adobe Reader	PDF Reader
Adobe Flash	Streaming video and audio
Adobe Pro	$77 from Connecting Up (if required)
PDF Creator	Free PDF converter tool

Choosing an operating system

Choosing an operating system is a big decision to make, go with what you feel comfortable with.

- What operating systems are available? Linux, MAC, Windows etc
- Is the O.S intuitive?
- Research system features and capabilities i.e. will your new system be compatible with your current environment.

How to access donated Microsoft Office?

	Cost	Feature updates	Mobile applications	Licensing
Office 2016 via Connecting Up)	$38 per license, single purchase	Available at major release under Software Assurance	View only	For use on one device for all users (i.e. computer)
Office 365 Pro Plus	$4.40 per user, per month	As they are released	View and edit	Install on up to 5 devices per user
Office 365 E3 (also includes additional benefits above)	$6.10 per user, per month	As they are released	View and edit	Install on up to 5 devices per user

Things to be careful of if buying retail

- Windows version is often not professional eg student – should be Windows professional
- Warranty is often minimal eg 1 year send back – should be 3 year next business day onsite
- Office is often sold as an accessory – should access donation/discount program
- Doesn’t include anti virus or other software
- Doesn’t include support or configuration
- Charity or bulk discounts can often be better through your IT provider

Replacement strategy and considerations

- **Operating system –** any PC with unsupported operating system including XP and Window 7 will need to be upgraded due to the security risks associated with running software that is no longer being supported by Microsoft.
- **Supportability -** Typically, it is not efficient to repair or upgrade hardware that is over 4 years old, therefore if hardware out of warranty has issues its often more costly to fix than replace.
- **Warranty –** we recommend that any hardware not under warranty should be replaced and not repaired. All new hardware should have a warranty of at least 3 years.
- **Capacity –** The processing power, RAM and memory should be adequate to meet the minimum requirements to run all business-critical software and applications. Often after 3 years the newer more power hungry applications such as Office don't perform well

Top tips for designing your technology solution

1. Base your design on your future business model
   What will your organisation look like in 5 year? How will your staff work? Will you grow?
2. Determine your requirements for infrastructure
   What systems do you need? Are these systems available in the cloud?
3. Know how your staff need to work and your use cases
   Are staff working from remote locations or home or on mobile devices?
4. Understand what peripherals you need and factor the costs
   Do you need docks, monitors, cases, stylus etc?
5. Consider a hybrid model of both laptops, desktops and tablets
   Fit for purpose devices based on role and use case?
6. Explore group purchasing with an IT vendor
   Do you have an IT provider who can provide quote? Get multiple quotes
7. Build the business case and compare with other options?
   How can you justify any costs, effort or change – reduce risk, decrease costs, improve performance?

THANK YOU

PLEASE GET IN TOUCH

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THANK YOU!