Supporting Mac

A Feasibility Study

1 Document Details

Title: Supporting Mac – A Feasibility Study

Client: Internal

Status: Final

2 Revision History

Date	Version	Author	Comments
13 Jan 2011	0.1	Adam Finden & Henry Singleton	

Table of Contents

3 Introduction

With over a quarter of Brightlabs staff choosing to work on their own personal Mac's, the issue of whether or not Mac is a suitable fit for Brightlabs is becoming more and more relevant. The purpose of this report is to present a case for Brightlabs to purchase iMacs for those staff who wish to use Mac machines as their work computer. This report tries to avoid a Mac vs PC view, instead a series of issues will be presented and addressed (such as pricing and support) in an effort to provide the basis to an argument that those staff members who prefer to work on Mac are supported to do so.

4 Maintenance and Support

Currently, we have 3 developers who present the skill set required to provide adequate hardware support when necessary for PC machines, as well as new machine setup. This is not ideal, as it takes valuable time away from developers doing what they are being paid to do. It also means we currently have a reliance on these staff members, and if they are predisposed it can have a serious on-flowing impact on productivity.

Brightlabs is currently not at a size where it is feasible to have full-time IT support personnel, which makes the time and cost of maintenance and support even more critical.

As an option when purchasing a new Mac, AppleCare can provide a very high level of support, with turnaround times comparable or better to having staff go to a local retailer and picking up replacement parts. It's also far better than the standard Dell hardware support (in my experience). If a machine requires replacement, a new one is typically available 24 hours after diagnosis. This fast turn-around, coupled with recent time-machine backups, means that a catastrophic hardware failure can result in very little lose of productivity.

5 Passing on of Hardware

Typically, when an existing PC is passed down to a different developer, or if we have a new staff member starting, the machine is formatted and set up anew. The cost for this is comparable to the new machine setup listed below (see 8.0 Pricing). This results in either a senior developer having to sacrifice time working on projects to install the new OS, drivers, security patches and applications.

When a new user needs to be set-up on a Mac, all that needs to happen is for a new user account to be created. All user data, preferences, settings and files are kept completely separate per user, making the passing on of hardware a 5-minute affair.

6 Flexibility

While this may seem counter-intuitive at first, Macs can be quite flexible in the roles that they can perform in the business.

If a machine needs to be passed down to a user who is not comfortable using OSX, Windows can be quickly and easily installed under BootCamp. A fully supported driver pack is included, and any version of Windows can be installed. Windows and OSX can then be easily dual booted to ensure the machine can be used by the widest number of staff members.

The limited upgradability of an iMac can be seen as a disadvantage to it's PC brethren, but this is less of a downside than it appears. In the past 12 months the only PC upgrades which have occurred have been memory. The latest iMacs come with 4 SO-DIMM slots easily accessible to be upgraded when necessary. The hard drive can also be upgraded, but it's not recommended. However, as the iMac comes standard with a 1tb hard drive, it is unlikely that a hard drive upgrade would be required before the machines end-of-life, if used in the typical office environment.

If an iMac does reach end-of-life, it can be repurposed as a high quality display only using the DisplayPort input on the rear.

7 Compatibility

Even though Apple products have been officially 'unsupported' at Brightlabs, there have been virtually no compatibility issues in the last 12 months at least from those using their own machines. If there were show-stopping issues involved supporting Apple hardware, we would have come across some by now. Also, the fact that there are no official hardware or software support personnel, just goes to show how little issues there have been.

8 Security

OS-level security is higher, with a default set of elevated privileges required to install system-altering new software, change significant system settings etc. Users can, of course, be set up as an Administrator-level account if full system access is routinely required.

The OSX operating system is built on a solid Unix foundation, and has very few known viruses in the wild, and virtually no spyware. While some will argue this is due to a lower install base, the level of spyware and viruses does not correlate with the market penetration of Apple products. This results in far less down-time due to infections, and a faster and more reliable software experience.

9 Mobile Application and Web Development

This is still an area of uncertainty for Brightlabs, as demand for web or native based apps from our clients has been relatively slow. The mobile space is an area that needs to be closely watched, and as a web solutions provider there will come a point where developing for the mobile web will be as important as developing for the desktop.

Research conducted by IDC Australia and published by the Australian, identified that in Q1 2010, iOS accounted for 40% of Australian smart phone devices (http://www.theaustralian.com.au/australian-it/surging-iphone-hot-on-the-heels-of-nokia-as-australias-no-1-smartphone/story-e6frgakx-1225879621669). This statistic is more relevant to Brightlabs than world wide market share (of which iOS holds a significant 17%, http://www.gartner.com/it/page.jsp?id=1434613) as the majority of Brightlabs clients are Australian based.

Developing for iOS devices, web or native, can only be done on OSX. Mac ships with the iPhone Simulator pre-installed making testing mobile web sites and web apps for iOS devices quick and easy. If Brightlabs wishes to provide mobile solutions, Mac is the only option. Certainly, other major mobile OS's such as Android, Windows mobile 7, Symbian and Research In Motion must also be considered, but the fact is Mac is the only machine capable of developing and testing for all mobile OS's as it can run OSX, Linux and Windows.

10 Pricing

Apple has long been renowned for charging premium prices for their products. Recently, Apple has started switching a number of the components in its Mac product range from internally produced to out-sourced specialists, most notable being Intel as the main supplier of CPU's. This has in-turn dramatically affected the pricing of Mac products.

10.1 Hardware cost

Below is a cost comparison of Mac and PC; this includes a custom build from uMart (Brightlabs current supplier) and custom builds from Dell for similar specced machines.

Hardware components only (see Appendix 1 for detailed breakdown):

Apple 27" iMac	$2049
uMart (custom build)	$2050.96
Dell (custom build)	$2,388

Prices were recorded on 30/1/2011 from respective online stores. uMart prices are for internet order only, and do not include assembly.

This is a direct hardware comparison, of which puts Mac $1 cheaper than the PC equivalent, and $339 cheaper than the Dell build. However, there are still a range of other costs that must be considered when pricing equipment.

10.2 Additional cost

When performing a custom build, individual parts need to be researched to determine value and compatibility with the rest of the system. We have estimated this at a conservative 1 hour.

The custom machine also needs to be assembled. An experienced build could be reasonably assumed to have a running machine in 2 hours (this includes setup of OS and other software).

This additional 3 hours adds at least $300 extra (3 hours at $100 per hour) to the unit price of a custom built machine over an iMac equivalent.

The hardware setup of a Mac involves taking it out of the box, and plugging in a single cord (the power cord). An exercise of, at most, 5 minutes.

Total initial outlay, from planning, setup and configuration:

	Apple 27" iMac	uMart (custom build)	Dell (custom build)
Research	0	$100	0
Purchase Price	$2049	$2050.96	$2,388
Hardware Configuration	0	$300	$0
TOTAL	**$2049**	**$2450.96**	**$2,388**

10.3 Value

It could be argued that a number of the components included in the iMac are unnecessary. This may not necessarily be true; the obvious extra expense is the large display. For the design team this is a required component; extra screen real-estate is key for improving efficiency and quality when dealing with any design program (the 2560-by-1440 resolution is rare among display manufacturers). For others, research conducted by independent technology research institute and consulting operation Pfeiffer Consulting identified that large displays (specifically 30" cinema display) can result in measurable productivity and efficiency gains (see appendix 2).

In addition to this, the argument can be made that a premium product is not necessary; you can purchase a perfectly good machine for $1000 and it will do the same job. Looking closer, this is not the case. The speed, reliability and long term gains made when buying a higher end machine (whether PC or Mac) cannot be argued. Developers running multiple virtual machines will spend more time working than waiting with a faster machine, designers working on complex site designs will spend more time designing than waiting for Photoshop or other programs to catch up.

Furthermore, it is expected of Brightlabs staff to produce the highest quality product possible, so it stands to reason that staff be provided with high quality tools to produce these products.

11 Conclusion

The purpose of this report has been to address some of the primary concerns any business encounters when looking at investing in a technology; being pricing, support, future technological trends and impact on end product. It has been identified that pricing in most cases favours Mac with PC equivalent coming in more expensive. Support, with a quarter of Brightlabs staff running Mac machines for a significant amount of time with no adverse affects and the option for high grade manufacturer support available through Apple care, this issue seems to be of little concern. Future technological trends, with the mobile web becoming more and more prevalent and Mac being the best option to develop for this trend, it seems reasonable to support Mac now in preparation for future client requests. Ultimately however, it is the product Brightlabs produces that is most important, as this is the core of the business. With Mac already being widely used throughout the production process, and no evidence to support that it negatively impacts the final product we deliver to our clients, it seems reasonable to request Brightlabs to provide staff with the choice of Mac or PC, and to fully support their decision either way.

12 Appendices

12.1 Appendix 1 – Detailed pricing breakdown

12.2 Appendix 2 – Display productivity benchmark