

# Choosing the right tool for the job

## Ten reasons why workstations trump your PC

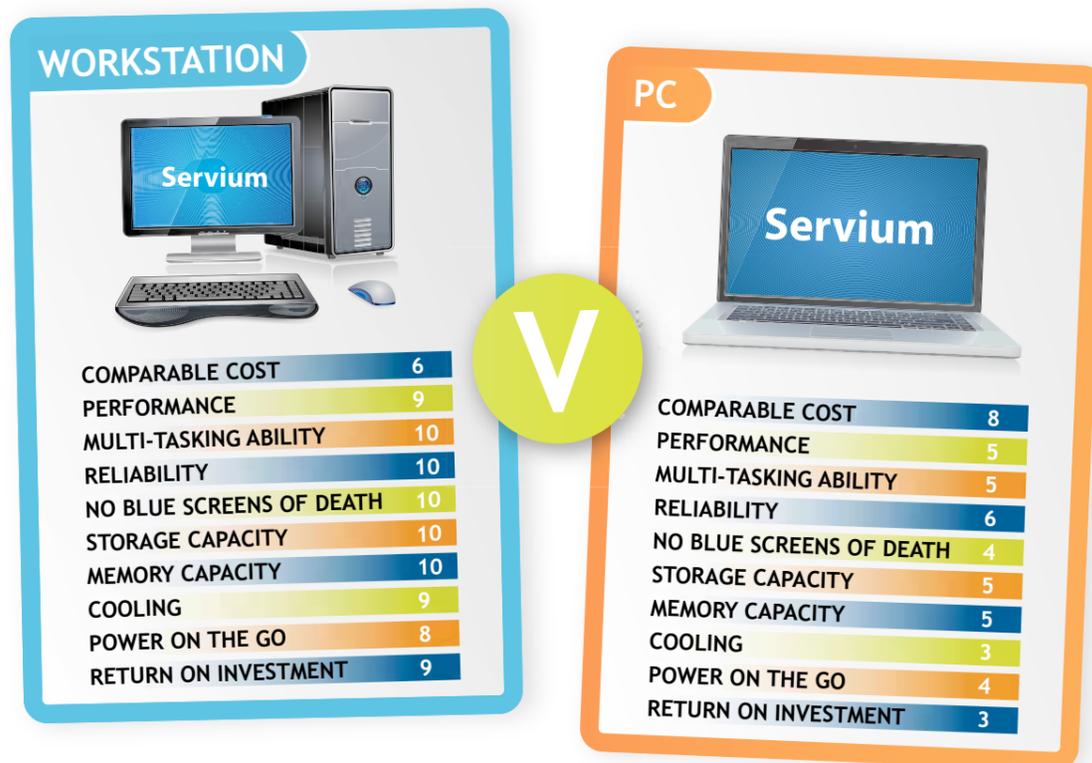


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Not every one of your users will require a workstation, although it's clear that for many applications and a wide variety of tasks even an entry-level workstation will deliver tremendous performance in comparison to a high end PC. Even though industries like manufacturing, design, engineering, finance and research have long realised huge value from workstations, an increasing number of "power office users" within organisations outside of these traditional sector can benefit from untapped potential and the role workstations can play.

It's perhaps worth defining what a workstation is however before delving further into the differences versus a PC. Workstations are not just a powerful desktop. They are purpose-built for high performance and heavy workloads. They are also designed so you can tailor the system and price to match your requirements largely thanks to component advantages surrounding CPU's (multiple if necessary), graphics, memory and storage.



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### So who needs a workstation?

Whilst there are more obvious users like Designers, Financial Analysts, Animators, Engineers and Researchers who's computing requirements demand the functionality of a workstation, "power office users"; responsible for data intensive functions like complex reports, accessing vast databases to mine for information or where a high degree of collaboration is expected with other organisations like engineering will enjoy considerable benefits. These activities push the humble PC, designed for every day mainstream tasks, beyond its practical limits.

It's therefore important to equip your users with the right tool for the job to help them (and you) get the work done quickly, error-free and at the lowest possible cost. Thanks to the latest HP-only innovation and many substantial advantages over a PC, the case for investing in workstations is compelling. Here are ten reasons why workstations trump your PC and warrant serious consideration when investing in desktop hardware to make many of your most important users as productive as possible.



#### 1. Comparable Cost

It's a fact that a PC is cheaper than a workstation. It's easy to simply make do with a PC and in doing so you'll be guaranteeing that you don't get the best out of your machine and your employee. However, entry level workstations do not carry the price premium you might expect and deliver greater responsiveness than a traditional PC. On average the premium to step up to a workstation is just over £70. Based on this slight cost difference there are significant increases in performance, capacity and reliability, making workstations an excellent investment in many scenarios.

throws open the ability to tackle an even wider variety of applications and tasks, all of which help speed up business processes and provide faster access to information.

#### 2. Mind Blowing Performance

Unlike a PC workstations are built from the ground up and engineered for performance. Multi-core 64 bit processors deliver real punch to handle today's multitasking applications and allow a greater amount of data in memory, whilst faster and more I/O channels enable increased throughput to deal with the most demanding requirements. Furthermore, multi operating system support

Support of high-end graphics is significant in the role of the workstation and adds to the performance advantages delivered. Powerful graphics cards and visual engines deliver unrivalled visual quality and the best possible user experience.

With so many variables contributing to workstation performance tuning is important and can be challenging. Thanks to the HP Performance Advisor your workstation will be optimised for its task on day one – and every day thereafter so you can be sure your machine is always ready to perform at the highest level it was designed for. Created for non-technies, this intuitive wizard-driven software ensures you get the most from the investment.

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### 3. Reassuringly Reliable

Workstations are rigorously tested to much higher levels than a traditional PC. What's more they are equipped with more robust technology, taking many design features from servers, including larger power supplies, server-class motherboards and built-in redundancy.

In short they are built for 24x7 operation over a much longer life and at a much higher capacity so they are ready to go when you need them most. Moreover, HP workstations are designed for quick upgrades and repairs. And thanks to their toolless serviceability this can be done by anyone. A 3 year warranty with all HP workstations also ensures additional peace of mind.

### 4. Multi-Tasking and Collaboration

Imagine having the compute resources and headroom to test or render designs whilst you are still designing or analyse results whilst you are still updating financial models. Workstations can completely transform how you can achieve greater creativity, innovation and productivity in less time.

Workstations will support significantly more monitors than a PC; in some cases up to eight monitors, allowing new opportunities for users to work more productively without the frustration of tiling windows. Multiple monitor set-ups also enable greater collaboration and according to research from IDC make for happier employees.

Included with every HP workstation is HP Remote Graphics Software (RGS). This clever tool enables remote access to workstation performance so your users can keep working with intensive applications and data wherever they go. Similarly, consider consolidating workstation resources and allowing your professionals to connect in from any computer at any location.

As rackable machines HP workstations can even be installed in your data centre and accessed remotely using RGS.

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### 5. Vanquish the Blue Screen of Death

Workstations take advantage of Error Checking and Correcting Code (ECC) memory which increases performance and limits downtime by preventing naturally occurring errors that traditional computer memory is susceptible to. Whilst the errors do not damage system hardware, it commonly changes an instruction in a program or a data value and often causes the programme to crash - potentially very damaging when working on critical projects for your organisation. This means no more 'Blue Screens of Death' and users incapacitated with a machine incapable of meeting their task requirements.

### 6. Large Storage for Massive Jobs

Workstations are designed to support up to Terabytes of internal storage (even on Mobile Workstations), so jobs of almost any size can be stored on the system. HP Workstations provide maximum expandability with up to 10 TB of on-board storage. This is high-performance storage typically based on SATA 3.0, which provides better reliability than the drives used in PC's and meets data intensive application needs.

### 7. Cool under pressure

Increases in compute and power requirements come with a corresponding increase in heat. When PC's are pushed to their limits they get hot and eventually fail as their components are not designed for high performance and on-going use at this level. Enterprise-class cooling keeps workstations cool and enables them to function in line with your demands. In fact because of unique cooling technologies from HP - developed in conjunction with BMW - and utilising both fan and liquid cooling even greater workstation performance is realised on a more consistent basis.

### 8. More 'Grey Matter'

An entry-level workstation can typically be configured with twice as much memory as its desktop counterpart. This can improve business workflows in fundamental ways as it is an important requirement for running large models and increasing performance of interactive sessions.



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### 9. Power on the go

Laptops are a great mobile device but they're built to meet a competitive price point. As such configurations are geared to low power use, long battery life, modest performance and light use, features not compatible with your power users.

If you need the power of a workstation all wrapped up in the portability of your notebook then a mobile workstation should fit the bill. Nearly as powerful as their desktop counterparts they can free your staff to be creative, responsive and productive wherever they are. For many professionals, this can substantially improve the value they deliver to their business and to their customers.

### 10. Return on Investment

Of course if you are spending more you expect to get more. If you planned on spending a budgeted amount on a PC you will end up spending more on a workstation.

However, you need to ask how much does it cost you in downtime and in time spent dealing with issues that come from underperforming computer hardware?

If it saves you 30 minutes a week over the course of three to six years (the average lifespan of an office computer), that adds up to 26 man-hours per year. Multiply that with your billing rate, and that is the money you are losing. If your rate is £50 per hour, then 26 hours saved is £1,300 per year. That's more than the entire cost of the workstation annually. Also, keep in mind that your employees will be much happier while they work if their equipment is more reliable and functions the way they expect it to. That alone will increase production and add further to the value of a workstation over a PC.



## Conclusion

We believe that for a vast number of organisations a workstation can have an important role to play in desktop computing strategy. It's easy to think 'we don't have designers, engineers or animators in my business so this technology isn't relevant to me'. It's this attitude however that means the untapped potential and extraordinary benefits of workstation technology is being missed by many businesses. Thanks to only a modest price difference between a workstation and a decent PC the decision to consider workstations is becoming less of a concern and is made even easier when the performance advantages are witnessed first-hand and considered in the context of time saved, productivity gains and happy staff. Fundamentally, it's about equipping your staff with the right tools for the job and workstations can often be an overlooked tool that justifies serious consideration by the many not just the few.

We've worked with HP for a long time and believe their workstation technology to be the best there is. Some of their unique innovations have been touched on in this document all of which make using workstations easier and ensure the technology performs as its intended.



# What next?

We hope this paper has been helpful and if nothing else has offered some 'food for thought' if you're considering what you do next with your desktop computing environment.

If you'd like to explore any of the considerations outlined in this paper further please get in touch. We have substantial experience advising customers on where workstation technology is best placed to deliver the best possible value and would welcome the opportunity to share with you our insights.

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