MULTI-TASKING

How New Trends In Computing Are Helping Us Work More Efficiently And Safer Than Ever

2.0

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INTRODUCTION

There is a revolution in how professionals are multi-tasking, and in the productivity gains that can be achieved through a focused investment on technology to facilitate it.

Traditional multi-tasking in the workplace involved a person undertaking several parallel, but similar, tasks. They would have email and web browser windows open, for example. Or they would be working on a presentation at the same time they were analysing a document.

Professionals were encouraged to work this way, because theoretically they would get more done by running tasks simultaneously and in parallel. The end-game to multi-tasking was productivity, but science didn't support that perception. Studies showed it had the opposite effect, and found that *people could lose up to 40 per cent of their productivity performing what was considered "multi-tasking", but was in reality task-shifting (moving rapidly from one task to the next).*[1] The constant switching between tasks meant they had a more shallow engagement with what they were doing, and the time it took to shift from one task to another would rapidly add up over the course of a day.

Multi-tasking is impossible to escape today, however the modern computing environment is designed to be optimised around enabling rich, simultaneous interactivity. This can be called **multi-tasking 2.0. It leverages the benefits offered by advanced computer hardware and peripherals – the PC ecosystem – thereby, enhancing performance of both endpoint devices and employees.**

For businesses, achieving multi-tasking 2.0 is an exercise in properly leveraging endpoint device hardware.

This white paper looks at how multi-tasking 2.0 can improve the office environment and reduce risks to employee health and enhance productivity. It also highlights how to achieve a true multi-tasking environment by rolling out the right hardware and peripherals.

[1] https://www.psychologytoday.com/au/blog/brain-wise/201209/the-true-cost-multi-tasking

MODERN MULTI-TASKING:
CHALLENGES AND OPPORTUNITIES

Studies show that a professional's role within an organisation is becoming more fluid, varied and complex. They are effectively doing work that previously would have been split between two or three job descriptions, and this makes multi-tasking inevitable. **IDC research director, Avinav Triganait, said this trend applies to the younger generations of professionals in particular.**

45%

"Almost half – 45 per cent – of organisations recognise the need to bring changes into the workspace, work culture, and technologies due to millennials entering the workforce," Triganait said.

And 36 per cent of organisations have increased or are planning to increase flexible working and anytime, anywhere working policies." [2]

36%

The first step in enabling next generation multi-tasking – multi-tasking 2.0 – is to become aware that the modern workplace comprises of users in varied job roles with distinctive technology requirements. And organizations need to work towards deploying a modern and most updated ecosystem of devices, peripherals, and software solutions that complement the varied job roles, that maximize productivity.
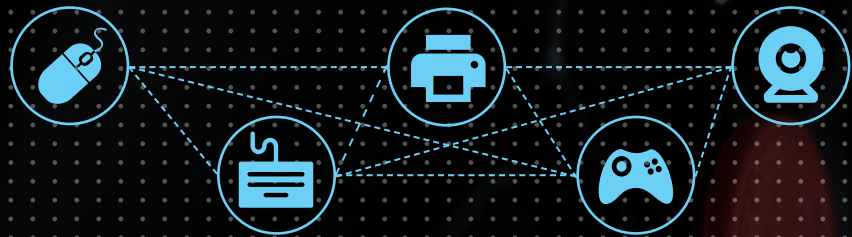
From a technology perspective, this means ensuring the endpoint is capable of handling dynamic requirements on the hardware that are inherent with multiple – often processor-demanding – applications being open at the same time, and facilitating smooth transitions between them.

To meet this challenge, leading hardware designers are incorporating technology such as **Intel® Turbo Boost Technology 2.0** in their designs. It allows the device it's installed on to accelerate processor and graphics performance when workloads demand additional performance. Multi-tasking puts more strain on a processor because of the increased graphics demand of applications. **Intel®'s solution** drives the additional required power from the processor.

[2] IDC AP Future of Work Survey 2018

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Lenovo Vantage technology is a set of program utilities that help facilitate the multi-tasking process by automatically adjusting PC settings to suit the user's needs at a given point in time. It allows the hardware to run at maximum efficiency with respect to the applications in use.

For example, if the user is reading a long document, Lenovo Vantage will alter the PC's display settings to provide a better reading experience, before reverting to more processor-intensive settings if, and when, the user starts creating a presentation and embedding video.

In addition to the ergonomic benefits, discussed later in this paper, Lenovo Vantage ensures each application that the employee has open is fully optimised to run efficiently and enhance productivity.

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USING PERIPHERALS TO BOOST PRODUCTIVITY

PERIPHERALS ARE UNDER-USED WHEN IT COMES TO BOOSTING PRODUCTIVITY

A couple of add-ons can have a major impact on each and every employee's productivity in a multi-tasking 2.0 environment. For example; how many businesses supply employees with a dual-monitor end-point device as standard? Not that many! **Yet, according to the New York Times, a second monitor can enhance productivity by up to 30 per cent.[3] A second monitor can save each employee 2.5 hours each day if they use it for all of their tasks.[4]**

If an organization has 30 employees, a second monitor saves it 75 hours a day, 375 hours a week, 1650 hours a month, and 18,825 hours in a year. Even if the organisation is paying its employees a minimum wage of $7.25, which it's most likely not, it's still saving at least $136,481.25 a year.

https://www.nytimes.com/2006/04/20/technology/the-virtues-of-a-second-screen.ml?mtrref=undefined&gwh=636416064C408270C55D81BA7261A713&gwt=pay

Monitor size should also be considered. Having a larger monitor can also improve productivity by as much as 40 per cent.[5] Even the humble headset can improve productivity. **The ability to seamlessly hold a voice conversation with somebody without needing to use your hands (for example, to hold a phone) is a critical component of the multi-tasking 2.0 environment, and can improve productivity by up to 43 per cent.[6]**

Speed, and being able to work without waiting for the technology to catch up, is another critical element of multi-tasking 2.0. **Businesses should consider investing in Thunderbolt™ 3 docks which enable speeds of up to eight times those possible through USB 3.0, and offer four times more video bandwidth than HDMI 1.4,[7] greatly improving the speed of interactions between the peripheral and end-point device, and further boosting productivity.**

[3] https://www.business.com/articles/increasing-productivity-how-dual-monitors-can-save-you-time-and-money/

[4] https://www.business.com/articles/increasing-productivity-how-dual-monitors-can-save-you-time-and-money/

[5] https://www.businessinsider.com.au/simple-changes-to-dramatically-increase-efficiency-and-productivity-2011-6?r=US&IR=T

[6] https://teleco.ca/43-boost-in-productivity-with-a-wireless-headset-at-work/

[7] https://www.intel.com.au/content/www/au/en/io/thunderbolt/thunderbolt-technology-general.html

Other common peripherals that enhance the productivity of a person working on their end-point device include:

MOBILE CONFERENCE SOLUTIONS

MOBILE WIRELESS HOTSPOT/ MODEM DEVICES

PRESENTATION REMOTES

SMART PENS AND OTHER PAPER-TO-DIGITAL TOOLS
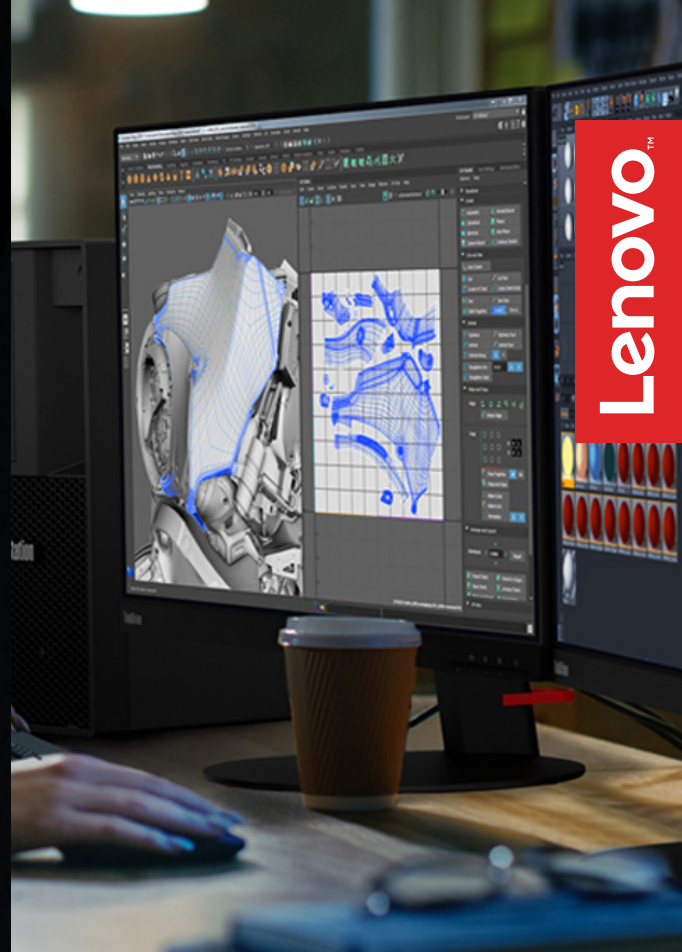
PORTABLE SCANNERS AND PRINTERS

USB STORAGE

MULTI-PORT ADAPTERS

ADDITIONAL DISPLAYS
(allowing you to have two, even three different displays even for laptops)

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When it comes to operating high-end peripherals, a traditional limitation to desktop and other end-point devices has been the power of the device itself. Peripherals all require a portion of computing power with latest generation processors and, as with multi-tasking, the advanced applications enabled through peripherals require significant power to maintain the efficiency of the system.

One way in which hardware can meet the challenge is through technology such as **Intel® Optane™**, a combination of a new memory class (**Intel® 3D XPoint**) and **Intel® Rapid Storage Technology.** Combined with the latest generation processors, Lenovo end-point devices can handle the most demanding peripherals, including additional screens or complete conference solutions.

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UNDERSTANDING THE IMPORTANCE OF ERGONOMICS

It's important to take in account the health risks involved in poorly-managed multi-tasking 2.0 environments seriously. Organisations that don't take ergonomics into account can end up facing significant expenses.

Studies show people who use computers at work have a higher risk of musculoskeletal disorder (MSI).[8] The more they use those computers (for example, when splitting time across multiple tasks when multi-tasking), the more pronounced the risk becomes. MSI and other injuries can result in protracted absenteeism and a severe drain on productivity.[9]

Investing in technology that maintains low blue light levels helps maintain a healthy standard of ergonomics when multi-tasking by helping reduce eye strain. Used in concert with comfort-certified keyboards, the end-point environment offers an improved ergonomic experience, and monitor stands that help employees maintain a healthy posture by allowing them to adjust the angle they look at a screen.

It is also important to ensure workspaces are properly designed and staff have room to work efficiently. A cramped workspace can compromise productivity through the additional strain placed on the body and resulting increased risk of injury.

Businesses should also consider allowing employees to stand at their desks. Research shows standing desks, if implemented properly, can improve productivity and lower the risk of chronic diseases such as heart disease and diabetes.[10] For a standing desk to work as an ergonomic solution, however, the employee needs to be able to work both seated and standing, so flexible and height adjustable stands are necessity.

[8] https://www.arcmedres.com/article/S0188-4409(03)00053-5/abstract

[9] https://www.cdc.gov/workplacehealthpromotion/health-strategies/musculoskeletal-disorders/index.html5 https://www.businessinsider.com.au/simple-changes-to-dramatically-increase-efficiency-and-productivity-2011-6?r=US&IR=T

[10] http://www.abc.net.au/news/2016-02-26/standing-desks-harmful-if-not-used-properly-warns-study/7202404

Establishing a firm return on investment (ROI) on ergonomics is challenging (it can vary wildly by sector), however, one sector of high-intensity computer use – call centres – returned a five per cent improvement in productivity output when using peripherals to improve the ergonomics of the environment.[11] The soft and hard benefits of investment in sound ergonomics practices are extensive, and summarised in the table below:

BENEFITS ASSOCIATED WITH SPECIFIC ERGONOMICS ACTIVITIES			
Ergonomics Interventions	Cost Saved	Costs avoided	New Opportunities
Identify user requirements	V	V	V
Define operational, support and maintenance concepts	V	V	V
Identify and control factors that limit operator performance	V	V	
Identify user functions and tasks	V	V	V
Identify and control excessive operator workload	V	V	
Provide an acceptable working environment	V	V	V
Identify and control excessive operator stress	V	V	
Identify and implement user population stereo-types		V	V
Design for full range of potential users (gender, size, strength, vision, clothing, etc.)		V	V
Develop for user acceptability		V	V
Develop for flexibility of use		V	V
Reduce opportunity for operator error	V	V	V
Reduce need for user manuals	V	V	V
Reduce requirements for new skills	V	V	V
Reduce likelihood of skill decay	V	V	V
Reduce personnel requirements	V	V	V
Develop lowest-cost training system (capital and/or operational costs)	V	V	
Improve personnel selection system	V	V	
Contribute to personnel retention	V	V	
Reduce time lost through accidents or injuries	V	V	

[12]

Technology plays a major role in maintaining ergonomics best practices – particularly in the world of multi-tasking 2.0 where organizations are looking to curb the ill effects of multi-tasking and enhance the benefits.

[11] https://www.ncbi.nlm.nih.gov/pubmed/12554395
[12] https://latam.humanscale.com/userfiles/file/return-on-investement_03272015.pdf

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REALISING PRODUCTIVITY GAINS THROUGH THE RIGHT ENDPOINT DEVICE ECO-SYSTEM

The changing way in which professionals work is driving a clear interest in provisioning better multi-tasking solutions, either through software (applications) or the addition of peripherals to customise the work experience. With workers genuinely interested in taking greater control of their jobs through such applications, businesses have the chance to enhance efficiency and productivity in their workspaces.

The modern end-point device has become a productivity hub that is facilitating an increasing percentage of a user's workflow. This is being driven by a renewed focus on leveraging technology to enable a computer to "split" its resources across multiple applications simultaneously.

But while beneficial to both users trying to get their work done and organisations looking to maximise efficiency, multi-tasking should be embraced cautiously by businesses that need to ensure they don't inadvertently add risks to the workplace which will negatively impact on productivity.

Companies also need a sound ergonomics policy and to provide ergonomically-designed hardware and related peripherals to ensure multi-tasking doesn't adversely affect employee health.

To read more about Lenovo's endpoint device ecosystem that facilitates multi-tasking 2.0 while helping maintain employee mental and physical health, visit www.lenovo.com/TransformingProductivity.

5 REASONS
WHY LENOVO IS A DIFFERENCE MAKER

Trusted around the world

Expertise across categories

Confidence in our products

Business-boosting technology

Flexible support network

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