Dell And Partners
Workforce Productivity Benefits

Three Strategies To Transform Employee Productivity Assessed Through Total Economic Impact
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Executive Summary

Dell and its partners provide a range of solutions that enable their customers to transform the capabilities of the workforce. Dell commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential benefits and costs enterprises may realize by deploying three key Workforce Enablement Solutions, namely:

› **Best device experience**: a hardware policy combining the choice of a range of Dell PCs, tablets, and peripherals with rapid configuration and delivery.

› **Unified endpoint management (UEM)**: an integrated approach to managing mobile devices, PCs, and other workstation technologies. In this case study, implementations of Workspace ONE, VMware’s UEM solution, have been assessed.

› **Enterprise collaboration**: includes capabilities such as messaging, conferencing, document sharing, and business use of social media. In this case study the collaboration elements of Microsoft Office 365, namely OneDrive, SharePoint, Teams, Skype for Business, and Yammer have been evaluated.

Prior to investing into these technologies, the studied organizations’ workforces were inefficient, non-flexible, and lacking commitment. Employees were losing time trying to access resources, waiting for IT, searching for information, and/or participating in cumbersome and unnecessary meetings. They were limited in their ability to be effective in many contexts and had little control over when and where they worked. There was frustration because of frequent interruptions, they did not have the right tools, and they had to depend on IT to install applications, reconfigure devices, and complete other tasks. As a result, both the employee and customer experience were negatively impacted, resulting not only in lower revenue, but also in higher costs.

The purpose of this study is to provide readers with a framework to evaluate the potential impact of these Workforce Enablement Solutions on their organizations. To better understand the benefits, costs, and risks associated with investment in these solutions, Forrester interviewed eight large enterprise customers with years of experience using Workforce Enablement Solutions — this data was supplemented by a survey of over 700 organizations.

Across the three solutions, we identified three categories of benefits: productivity gains, an improved (external) customer experience, and IT cost savings.
### Summary Of Benefits By Solution

<table>
<thead>
<tr>
<th></th>
<th>PRODUCTIVITY GAIN (ANNUAL/USER)</th>
<th>CUSTOMER EXPERIENCE</th>
<th>IT COST SAVINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best device</td>
<td>22 – 27 days</td>
<td>Higher availability</td>
<td>Faster onboarding</td>
</tr>
<tr>
<td>UEM</td>
<td>18 – 27 days</td>
<td>More responsive</td>
<td>Reduced IT management</td>
</tr>
<tr>
<td>Collaboration</td>
<td>21 – 22 days</td>
<td>Better/faster decisions</td>
<td>Cost avoidance</td>
</tr>
</tbody>
</table>

These solutions deliver a productivity gain of around 10%, equivalent to 25 additional working days per year. Assuming half of this time is reinvested productively, a US-based knowledge worker on a salary of $100,000 can deliver $5,000 worth of additional financial benefits. This is a compelling return when, for instance, reducing hardware refresh rates from four to three years, and increasing average spend per device by 50% (from $1,000 to $1,500), incurs an annual incremental cost of $250 per employee. Annual licensing for VMware’s Workspace ONE costs up to $300, while Microsoft’s Office 365 costs up to $180 per year.

Each of the solutions also positively impacts the customer experience because employees are more available and can respond faster and more effectively. There are additional, related benefits in terms of the employee experience: encompassing increased flexibility, improved effectiveness (including improved states of employee flow) and ultimately higher engagement. It has been shown that there is a statistical correlation between employee engagement and revenue growth — a 5% improvement in employee engagement leads to a 3% increase in revenue.\(^1\) The interrelation of these different workforce factors is further explored in the next section, along with some additional benefits. The final benefits category includes a number of IT cost savings that are enabled by the implementation of these workforce solutions.

While each of the individual solutions delivers in each of these three benefit categories, taken altogether, they do not have a purely cumulative impact; they complement each other and deliver incremental benefits.
Productivity Is At The Heart Of The Employee Experience

The workforce enablement solutions have been found to impact employees in four main categories:

- **Higher employee availability** derives largely from eliminating unproductive and wasted time. Faster device onboarding, increased mobility, and application accessibility increase the time employees have to be productive.
- **Increased effectiveness** is when productive time is used to complete tasks more quickly. Both the access of better tools and apps and the faster collection of data make better use of the time that is available.
- **Flow** is the highest state of human performance; it is when people perform at their best and succeed in complex and difficult work. To maximize an employee’s state of flow, distractions and interruptions such as managing access with multiple sign-ins, cumbersome VPN connectivity, and low performance devices should be eliminated, giving employees better control over their working conditions.
- **Flexibility** enables employees to work effectively in different places and at different times by using mobile devices and having access to applications across all devices. Flexibility can also come about from being able to share resources, for instance by facilitating rapid device reconfiguration (in the case of a device being used by multiple users) and offering a broad ecosystem of accessories and peripherals.

All of these elements, in turn, enable the workforce to be more productive and more engaged, to provide better customer experiences and ultimately improve revenues and profits. They also enable the organization to be more agile, that is, to be able to (re)structure its workforce, which can reduce office real-estate requirements, facilitate talent acquisition/retention, and enable it to respond faster to disruptions and unexpected changes.

**Key Findings**

There are three key categories of benefits for each of the workforce enablement solutions: productivity gains, improved customer experience, and IT cost savings.

**Quantified benefits.** The points below summarize the key ways in which the three workforce enablement solutions deliver productivity gains across the organization:
Implementing a best-device policy improves productivity by 22 and 27 days per user. Task completion times are reduced and increased mobility positively impacts productivity. Faster device onboarding and avoidance of reconfigurations are key areas of time savings: new employees have access to resources from day one and device reconfigurations are mostly avoided. Better and interoperable peripherals and accessories enable improved efficiencies and there is a marked increase in employee engagement.

Workspace ONE delivers productivity gains of between 18 and 27 days per user. The biggest part of this gain comes from enabling employees to be more IT self-sufficient; in particular when they are able to find and install applications without any IT support. UEM enables access to applications across all devices in a uniform way, enabling employees to be more available and flexible in terms of when and where they work. Furthermore, they need only sign into a single unified portal in order to access all the resources, being able to complete basic tasks without ever needing IT involvement such as password resetting. Additional time-saving benefits come from no longer needing to connect through the VPN. New device set-up times are also shorter and various IT processes, such as installing upgrades and patches are automated.

Microsoft Office 365 delivers productivity gains of between 21 and 22 days per user. The workforce can find documents, information, and other resources much more quickly and better decisions can now be made in less time. There is a reduced need for in-person meetings, but those that do take place are more efficient. Improved employee engagement was also an important outcome, promoting cross-departmental collaboration, facilitating communications between employees in different locations.

Forrester’s interviews with eight existing customers and subsequent analysis found that organizations, depending on their degree of employee location dispersion (Centralized, Dispersed, or Average), enjoyed the following productivity gains (assuming an average workstation penetration rate of 15%):

<table>
<thead>
<tr>
<th>Average Productivity Gain By Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best Device</td>
</tr>
<tr>
<td>UEM</td>
</tr>
<tr>
<td>Collaboration</td>
</tr>
</tbody>
</table>

In each case, more dispersed organizations benefit more from these solutions than those that are more centralized. UEM is particularly beneficial for less centralized organizations, while collaboration benefits employees across locations more evenly.

Note that these productivity gains have been risk-adjusted to reflect different implementations and organizational conditions. However, if you would like to evaluate their financial impact, Forrester recommends a
further 50% reduction to reflect the risk that the time gained might not be fully used for productive purposes.

**Unquantified benefits.** The interviewed organizations experienced the following benefits, which are not quantified for this study:

- **Each of the solutions delivers significant improvements in customer experience.** In order to support customers, employees are more available and responsive, increasing customer conversion and satisfaction. More engaged employees support customers better.

- **All three solutions also provide cost-saving opportunities.** There is much less pressure on IT teams: help desk requests are reduced and the time of support staff is freed up to do more valuable tasks. Various third-party product and service costs, such as VPN, telecommunications, device management platforms, and even TV broadcasting-related services can be avoided. Migration to the cloud reduces hardware costs and provides for other IT-related benefits.

- **Improved employee engagement.** Enabling the workforce to get things done by providing them with the right tools is what makes employees happiest. Giving them more control of their work conditions also increases engagement, which, in turn, results in better performance, higher discretionary effort, lower turnover, and a better customer experience.¹

- **Increased organizational flexibility.** By implementing these solutions, organizations are more flexible, enabling employees to work in different locations, increasing overall availability, and being able to respond to different situations more quickly. This opens the possibility of reducing office space and real-estate costs and makes the organization more attractive for talent acquisition.

**Costs.** The interviewed organizations experienced the following costs:

- **The implementation of a best-device policy incurs hardware costs.** Moving from a four-year to a three-year refresh cycle means additional hardware costs. Furthermore, giving employees device options generally results in higher cost per device. These costs are somewhat mitigated by not needing to support older PCs. Implementation and ongoing management costs are negligible.

- **UEM costs include subscription fees, implementation, and ongoing support.** UEM solutions are typically charged on a per user and/or per device basis. Implementing and maintaining the platform results in additional costs, although there are also opportunities for IT cost reduction and avoidance.

- **Collaboration solutions incur licensing fees and costs for implementation and ongoing support.** Microsoft Office 365 bundles Office productivity software with collaboration capabilities which are charged on a per user basis, the amount of which depends on what is included and can easily be scaled up or down with business needs. Implementation and ongoing support costs can include managed services, training, and additional bandwidth, although the suite enables users to choose and install applications themselves, including end-user friendly cloud migration tools and upgraded disruption-reducing management.
The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

TEI Framework And Methodology

From the information provided in the interviews and the survey, Forrester has constructed a Total Economic Impact™ (TEI) framework for those organizations considering implementing Dell and its partners’ Workforce Enablement Solutions.

The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the impact that these Workforce Enablement Solutions can have on an organization:

- **DUE DILIGENCE**
  Interviewed Dell stakeholders and Forrester analysts to gather data relative to Workforce Enablement Solutions.

- **CUSTOMER INTERVIEWS**
  Interviewed eight organizations using Workforce Enablement Solutions to obtain data with respect to costs, benefits, and risks.

- **ONLINE SURVEY**
  Conducted an online, global survey of over 700 workplace technology decision makers in large organizations.

- **COMPOSITE ORGANIZATION**
  Designed three composite organizations to compare the impact of the solutions on employee productivity.

- **FINANCIAL MODEL FRAMEWORK**
  Constructed a model representative of the interviews and survey data using the TEI methodology and risk-adjusted the outcomes based on issues and concerns of the interviewed organizations.

- **CASE STUDY**
  Employed four fundamental elements of TEI in modeling Dell Workforce Enablement Solutions’ impact: benefits, costs and risks. Given the increasing sophistication that enterprises have regarding ROI analyses related to IT investments, Forrester’s TEI methodology serves to provide a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

**DISCLOSURES**

Readers should be aware of the following:

This study is commissioned by Dell and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of an investment in Dell and/ or its partners Workforce Enablement Solutions.

Dell reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester’s findings or obscure the meaning of the study.

Dell provided the customer names for the interviews but did not participate in the interviews.
The Workforce Enablement Solutions Customer Journey

BEFORE AND AFTER THE WORKFORCE ENABLEMENT SOLUTIONS INVESTMENT

Interviewed Organizations

For this study, Forrester conducted eight in-depth interviews with Dell Workforce Enablement Solutions customers. Interviewed customers include the following:

<table>
<thead>
<tr>
<th>INDUSTRY</th>
<th>REGION</th>
<th>INTERVIEWEE</th>
<th>NUMBER OF EMPLOYEES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public sector science agency</td>
<td>Headquartered in Europe</td>
<td>Manager of digital workplace program</td>
<td>2,500</td>
</tr>
<tr>
<td>Airline</td>
<td>Headquartered in US</td>
<td>Director of technology solutions</td>
<td>80,000</td>
</tr>
<tr>
<td>Non-profit</td>
<td>Headquartered in US</td>
<td>Director of technology solutions</td>
<td>22,000</td>
</tr>
<tr>
<td>Technology</td>
<td>Headquartered in Europe</td>
<td>Senior manager of devices</td>
<td>6,000</td>
</tr>
<tr>
<td>Research and development agency</td>
<td>Headquartered in US</td>
<td>Director of client services</td>
<td>1,750</td>
</tr>
<tr>
<td>Consumer products</td>
<td>Headquartered in Europe</td>
<td>IT architect end-user computing</td>
<td>20,000</td>
</tr>
<tr>
<td>Scientific instrumentation</td>
<td>Headquartered in US</td>
<td>Senior manager of intranet solutions</td>
<td>73,500</td>
</tr>
<tr>
<td>Construction</td>
<td>Headquartered in Europe</td>
<td>CIO</td>
<td>52,000</td>
</tr>
</tbody>
</table>

Forrester also undertook an online survey of 732 workplace technology decision makers in medium to large-sized organizations in order to back up these findings and provide additional data points. The global survey took place during September 2018 and was representative of different industries.
Key Challenges

› **Growing revenue is the most important business priority for large organizations, followed closely by improving productivity.** These priorities are followed by product development and addressing customer expectations.

› **In terms of technology-related initiatives, improving overall efficiency and employee productivity head the list of priorities.** Eighty-four percent of decision makers say that improving employee productivity is a critical or high priority. These priorities are followed by improving the customer experience, investing in new technology, and increasing collaboration and knowledge sharing. Seventy-seven percent of decision makers say that improving employee experience is also a critical or high priority.

› **The challenge of implementing technology is the biggest factor influencing technology purchasing decisions.** The second-most important priority is how it affects employee productivity, while the third-most is the likely cost of maintaining that technology.
### Key Results

The interviews revealed that key results from the Workforce Enablement Solutions investment include:

- **Productivity improvements of around 10% across different user types.** Increased employee availability and effectiveness was the key outcome for all three workforce enablement solutions. Self-sufficiency, less disturbances, and better tools enable employees to focus on their roles and maximize their state of flow. Improved access to different resources also increases employee availability and efficiency.
› Improved customer responsiveness. Employees were better equipped to provide fast and high-quality responses to customer requirements. Having access to more resources more of the time enables employees to increase customer conversion and satisfaction rates.

› Engaged employees. Enabling employees to better do their jobs means they are more engaged, interested, and motivated. This goes hand-in-hand with increasing productivity and improving the customer experience.

› IT cost savings. Each of the workforce enablement solutions provided ways in which IT costs could be reduced. Primarily this was by reducing IT management resource requirements and avoiding the need for other technologies.

Composite Organization

Different solutions, depending on where they are located, impact employee productivity differently. Therefore, Forrester constructed three composite organizations based on the ratio of employees working remotely, in the office, or elsewhere (mobile).

Breakdown Of Composites By Employee Location

Description Of Composites:

› Dispersed composites are representative of a decentralized and highly distributed workforce, with just 30% working in offices, 35% working remotely, and the remaining percentage (35%) being highly mobile.

› Average composites are representative of a typical organization, with 55% working in offices, 25% working remotely, and the remaining percentage (20%) being highly mobile.

› Centralized composites are representative of a concentrated and undispersed organization, with 80% of the workforce in the office, 10% being highly mobile, and the remaining percentage (10%) working remotely.

The portion of employees using a workstation has a secondary influence. For each of the three composites, we have modelled the impact of the solutions, assuming workstation penetration rates of 5%, 15%, and 30%. The outcome is that we have a range of expected productivity gains for each of the three composites. Note that in the case of the implementation of collaborative solutions, the workstation penetration
rate does not impact the productivity gains and so the ranges are very limited.

For all of our calculations, we have assumed that there are 225 productive days every year.

**Deployment Characteristics**

In order to avoid complexity, we have not made deployment assumptions, although these solutions typically take time to implement, especially across larger organizations, and depend on different factors. The extent of Windows 10 rollout has a strong impact on how quickly they can be deployed, for instance. The results, therefore, reflect the impact of rolling out these solutions across the whole workforce from one day to the next.

“Dell is really an extension of our IT and the savings they provide is tremendous. They do all of the remote support that we cannot do or choose not to do. We are probably saving at least two or three full-time positions on a support desk.”

*Emerging technology manager, professional consulting firm*
The Total Economic Impact™ Of Dell Workforce Enablement Solutions

Best Device Experience: Analysis Of Benefits And Costs

A best-device policy offers employees a range of best-suited Dell PCs, laptops, 2-in-1s, and related peripherals that are quickly delivered, preconfigured, to better meet employee needs. Some organizations deliver this on a persona-type basis, whereby employees fall into various categories including remote workers, on-the-go pros, and office-based employees. Others offer various PCs, workstations and other primary devices from which employees can choose and it can include a PC Lifecycle service whereby Dell deploys and supports the device from purchase and configuration through to the end of life retirement.

“What have been the biggest drivers for your investment in new computing devices and related accessories to support employee productivity?”

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Key Outcome</th>
<th>Other Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Productivity gain</td>
<td>10% to 12% gain, 22 to 27 days/user</td>
<td>Marked increase in employee engagement</td>
</tr>
<tr>
<td>Customer experience</td>
<td>Increased employee availability</td>
<td>Improved customer support</td>
</tr>
<tr>
<td>IT cost savings</td>
<td>Significant reduction in IT resource requirements</td>
<td>Reduction in IT complaints</td>
</tr>
</tbody>
</table>

Base: 723 workplace technology decision makers
Source: A commissioned study conducted by Forrester on behalf of Dell, September 2018
Productivity Benefits

The implementation of a best-device policy increases productivity between 9.7% and 12.0%, equivalent to 22 to 27 days per user per year. Organizations with more dispersed workforces tend to see a somewhat bigger gain, but it is those with a higher portion of employees using workstations which see the biggest improvement because the best device impacts what they do the most.

Productivity benefits of offering best devices are derived in a number of different ways:

› **With better devices, employees are able to complete tasks more quickly through faster processing, reduced glitches (which disrupt an employee's state of flow), and increased reliability.** The biggest impact is for workstation users who save time with more powerful machines for media rendering, but there are other use cases such as ruggedized devices in extreme environments.

› **Interviewees told us that given the choice, many employees choose a laptop over a desktop, resulting in improved mobility, which in turn increases their ability to be productive more of the time.** Mobility also improves productivity on-premises, facilitating collaboration, more effective meetings, and flexibility.

› **There is a significant time-savings in onboarding and reconfiguring devices.** One interviewee reported it used to take weeks for a new employee to receive their device; not only is this time lost, but it also negatively impacts employee engagement from day one. Thanks to rapid onboarding, the impact of device failure on productivity (such as accidental damage) is reduced and the need for reconfiguring devices is avoided.

› **Interviewees reported significant improvements in employee engagement.** Technology is an important element in improving workforce satisfaction, especially for the growing number of millennials in the workforce. Talent recruitment is also facilitated if applicants are aware of the best-device policy. One organization highlighted that their employee satisfaction rate was 90% following the introduction of the best-device policy.

› **Advanced ecosystems further benefit the workforce in a number of different ways.** Additional monitors help desk-based workers to be more efficient and accurate, while hot-swappable batteries enable rapid device handover, typically for shift-based employees. Vehicle docking stations improve in-car worker capabilities, avoiding lost time from non-compatible chargers and accessories.
Organizations with a more dispersed workforce tend to enjoy somewhat higher productivity gains, between 10.9% and 12.0% (corresponding to workstation penetration rates of 5% to 30%). Highly centralized organizations tend to benefit a little less, between 9.7% (at 5% workstation penetration) and 10.9% (at 30% workstation penetration). Organizations with a more balanced employee dispersion gain between 10.4% and 11.6% in productivity.

**Best Device Productivity Gains By Employee Type: Calculation Table**

<table>
<thead>
<tr>
<th>REF.</th>
<th>METRIC</th>
<th>CALC.</th>
<th>REMOTE-BASED</th>
<th>OFFICE-BASED</th>
<th>HIGHLY MOBILE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Reduced task completion time and improved mobility (days)</td>
<td>29.8</td>
<td>18.6</td>
<td>32.1</td>
<td></td>
</tr>
<tr>
<td>A2</td>
<td>Device set up/reconfiguration (days)</td>
<td>5.7</td>
<td>4.4</td>
<td>5.7</td>
<td></td>
</tr>
<tr>
<td>A3</td>
<td>Advanced ecosystem (days)</td>
<td>4.4</td>
<td>4.4</td>
<td>4.4</td>
<td></td>
</tr>
<tr>
<td>At</td>
<td>Total</td>
<td>A1+A2+A3</td>
<td>39.9</td>
<td>27.3</td>
<td>42.2</td>
</tr>
<tr>
<td>Risk adjustment</td>
<td>↓20%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atr</td>
<td>Total days gained (risk-adjusted)</td>
<td>32.0</td>
<td>21.9</td>
<td>33.8</td>
<td></td>
</tr>
<tr>
<td>Atr %</td>
<td>As percentage</td>
<td>Atr/225%</td>
<td>14.2%</td>
<td>9.7%</td>
<td>15.0%</td>
</tr>
</tbody>
</table>

The impact of these productivity gains might be less for a number of reasons:

- Devices may have been refreshed more recently and/or employees may already be using a device well-suited for them, reducing the degree of productivity gains.
- The impact of better devices on reducing task completion time and increasing mobility may be less than expected.
- Device onboarding and/or reconfiguration productivity savings may be less in different environments.
- The impact on employee engagement might be less in different environments.

To account for these risks, Forrester adjusted this benefit downward by 20%, bringing the productivity gain for the average organization down.
The Total Economic Impact™ Of Dell Workforce Enablement Solutions from 14% to 11%.

Customer Experience Benefits

By implementing best devices, better engaged employees serve customers better. More productive and available employees are able to respond faster and provide better customer support, particularly those who now have laptops and are thus able to have access to resources at home and on-the-move.

One interviewee highlighted that because new hires receive their devices on day one they are productive much sooner. As a result, they were able to increase the number of billable hours, increasing availability for customers and directly increasing the top-line.

IT Cost Saving Benefits

The availability of a best-device policy not only benefits employees, but it also reduces the impact on IT resources. Interviewees reported this came about in a number of different ways:

› New device onboarding time is significantly reduced. In one case, hardware tickets used to take 15% of the IT’s time, but after the investment this came down to just 1%, and IT resources were freed up for more productive tasks.

› Device reconfigurations reduce dramatically, which can take up a lot of IT’s time. One interviewee highlighted that this was the major component of their being able to reduce the number of IT resources by half in their two main offices.

› There is a significant reduction in peripherals, budgets, and spending on additional memory, graphics cards, or other device components. One interviewee highlighted that their peripherals budget had fallen by 80%, following the implementation of a best-device policy.

BEST DEVICE COSTS SUMMARY

<table>
<thead>
<tr>
<th>COST</th>
<th>DETAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased device refresh rate</td>
<td>Shortened device refresh rate or hardware cost</td>
</tr>
<tr>
<td>Increased average price per device</td>
<td>Choice of higher-end devices increases average per device cost</td>
</tr>
</tbody>
</table>

Increased Device Refresh Rate Costs

The main cost consideration to follow a best-device policy is the impact of a shorter device refresh cycle. Updating devices every three years instead of four, the most likely change, for instance, increases the average annual hardware cost.

However, this increase is typically less than the pure hardware element, because supporting a device in the fourth year encompasses some higher costs. Firstly, older devices are more prone to freezes, bugs, and glitches resulting in employee downtime. Secondly, as shown in a survey, as part of the Total Economic Impact of Dell’s PC Lifecycle

“We have been able to halve the number of IT resources required, mainly because of the reduction in hardware trouble tickets “
Senior manager, devices, technology vendor
Services, conducted by Forrester in February 2018, PC support costs increased by around 5% in the fourth year and more in following years.4

Increased Average Price Per Device

By offering employees a choice of devices, they tend to choose higher-end and higher-priced hardware. For instance, users are likely to choose a higher performance workstation, if they have the choice. One interviewee also said that most employees, given the choice, choose a laptop over a desktop device. Assuming the average price per device increases 50% from $1,000 to $1,500 and the refresh rate is reduced from four to three years, the incremental hardware cost is $250 per employee per year.
Unified Endpoint Management: Analysis Of Benefits And Costs

Unified endpoint management enables PC and mobile endpoints to be managed from a single console. In this way, all applications are available through a single portal across all devices with the same sign-in. VMware Workspace ONE, VMware’s UEM incarnation, in combination with Windows 10, enables users to be much more self-sufficient and also simplifies many IT processes.

“Please indicate which activities affect your ability to get consistent access to your work using the devices at your disposal.”

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legacy systems/devices/tools</td>
<td>38%</td>
</tr>
<tr>
<td>Too many applications</td>
<td>37%</td>
</tr>
<tr>
<td>Restrictive ecosystem/unable to download apps</td>
<td>36%</td>
</tr>
<tr>
<td>Too many log-in requests</td>
<td>33%</td>
</tr>
<tr>
<td>I have to transfer files from one device to another</td>
<td>31%</td>
</tr>
<tr>
<td>The lack of digital signage capabilities</td>
<td>30%</td>
</tr>
<tr>
<td>Inflexible IT policies</td>
<td>30%</td>
</tr>
<tr>
<td>Poor workplace utilities</td>
<td>25%</td>
</tr>
<tr>
<td>Inadequate meeting room technology (e.g., smart rooms)</td>
<td>25%</td>
</tr>
<tr>
<td>The physical layout of the workspace</td>
<td>23%</td>
</tr>
<tr>
<td>Accessories and peripherals issues (e.g., printers, phones, projectors not working)</td>
<td>22%</td>
</tr>
<tr>
<td>None</td>
<td>5%</td>
</tr>
</tbody>
</table>

Base: 723 workplace technology decision makers
Source: A commissioned study conducted by Forrester on behalf of Dell, September 2018

**UEM BENEFITS SUMMARY**

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Key Outcome</th>
<th>Other Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Productivity gain</td>
<td>8% to 12% gain, 18 to 27 days/user</td>
<td>Increased workforce flexibility improves EX</td>
</tr>
<tr>
<td>Customer experience</td>
<td>Faster customer response</td>
<td>Improved customer experience</td>
</tr>
<tr>
<td>IT cost savings</td>
<td>Reduction in IT management resources</td>
<td>Reduced third-party costs such as VPN-related services, device management, and patching-related services</td>
</tr>
</tbody>
</table>
Productivity Benefits

Our customer interviews and survey data showed that organizations can expect productivity gains of between 7.9% and 11.8% from implementing UEM. This is equivalent to 18 to 27 additional days per user per year. More decentralized organizations are towards the higher end of this range and conversely, highly centralized organizations with high portions of the workforce working on-premises, are towards the lower end.

There are a number of ways in which UEM improves productivity; IT self-sufficiency is the most important, impacting productivity in a number of ways:

› Users are able to choose and install applications themselves. Not only does this avoid a slow approval process, but it also avoids having to rely and wait for IT to undertake the installation, which, in turn, gives the employee access to that application that much sooner. The application installation and upgrade processes are also much faster.

› Single sign-on facilitates access to all applications through a unified portal, avoiding the need for multiple logins and passwords. Access is simplified by having all applications in a single place presented in a uniform manner across all devices.

› Users are able to undertake simple IT tasks themselves. Doing so without approval of help desk support, such as resetting passwords and unlocking BitLocker.

New devices can be set up much more quickly using UEM. Our interviews showed that typically one to two days can be saved from setting up a new device (depending on whether the employee is on-premises or off-premises). There are additional benefits in situations where device configurations need to be changed frequently, such as when they are used by multiple users or all data on devices need to be wiped when data sensitive projects have been completed.

“"We have seen a 5% to 10% productivity impact, mostly because of reduced delays for new apps. The goal is to get rid of VPN as well, that could bring it up to 20%.”

Digital workplace program manager, public sector science agency

<table>
<thead>
<tr>
<th>REF.</th>
<th>METRIC</th>
<th>CALC.</th>
<th>REMOTE-BASED</th>
<th>OFFICE-BASED</th>
<th>HIGHLY MOBILE</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>IT self-sufficiency (days)</td>
<td>14.1</td>
<td>8.5</td>
<td>14.1</td>
<td></td>
</tr>
<tr>
<td>B2</td>
<td>VPN avoidance (days)</td>
<td>14.1</td>
<td>2.8</td>
<td>7.0</td>
<td></td>
</tr>
<tr>
<td>B3</td>
<td>Increased availability (days)</td>
<td>9.4</td>
<td>2.8</td>
<td>14.1</td>
<td></td>
</tr>
<tr>
<td>Bt</td>
<td>Total</td>
<td>B1+B2+B3</td>
<td>37.5</td>
<td>14.1</td>
<td>35.2</td>
</tr>
<tr>
<td></td>
<td>Risk adjustment</td>
<td></td>
<td>↓20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Btr</td>
<td>Total days gained (risk-adjusted)</td>
<td>30.0</td>
<td>11.3</td>
<td>28.2</td>
<td></td>
</tr>
<tr>
<td>Btr %</td>
<td>As percentage</td>
<td>Btr/225</td>
<td>13.3%</td>
<td>5.0%</td>
<td>12.5%</td>
</tr>
</tbody>
</table>

VPN avoidance can also deliver significant productivity gains, up to 10% according to one interviewee. The amount of time saved depends on the type of employee, with those regularly accessing the network remotely enjoying more significant benefits. Less agents on the PC also results in higher performance.

Access across devices is beneficial to all users, but particularly those who work from diverse locations and situations. By having access to all applications across all devices in a uniform and consistent manner,
including smartphones, employee availability and flexibility increases significantly. Access is possible from home, on the move, commuting, and/or at client/partner sites. For organizations with tight security restrictions, UEM can also provide smartphone access to basic applications such as mail and calendar not previously possible.

All of these benefits result in many less distractions and reduces interruptions to employee flow, which in turn will further enhance these productivity improvements. Furthermore, by making applications available across devices and enabling users to be more self-sufficient, organizations are more flexible and employees are able to work efficiently from different locations and in different contexts.

**UEM Productivity Gain (Risk-Adjusted) Ranges By Composite**

<table>
<thead>
<tr>
<th>Composite</th>
<th>Workstation Penetration (5% to 30%)</th>
<th>Risk-Adjusted Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centralized</td>
<td>7.9%</td>
<td>9.3%</td>
</tr>
<tr>
<td>Average</td>
<td>9.4%</td>
<td>10.6%</td>
</tr>
<tr>
<td>Dispersed</td>
<td>10.9%</td>
<td>11.8%</td>
</tr>
</tbody>
</table>

Dispersed composites, with a higher portion of the workforce off-premises, has the highest productivity gain, ranging between 10.9% and 11.8%, corresponding to workstation penetration rates of 5% and 30%. Off-premises employees have more flexibility and save more time through IT self-sufficiency. A higher portion of employees using a workstation also results in higher productivity gains, largely because of faster application installation. Centralized composites enjoys somewhat lower productivity gains ranging, between 7.9% (with 5% workstation penetration) and 9.3% (with 30% workstation penetration). For Average composites, with 15% of employees using a workstation, the overall average productivity gain is just under 10%.

The impact of these productivity gains might be less for a number of reasons:

› It might take employees longer to adopt the IT self-sufficiency capabilities.

› Security concerns might require that VPNs continue to be used, at least in the short to medium term.

To account for these risks, Forrester adjusted this benefit downward by 20%, bringing the productivity gain for the Average composite organization down from 12% to just under 10%.

Impact risk is the risk that the business or technology needs of the organization may not be met by the investment, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for benefit estimates.
Customer Experience Benefits

The key capability that UEM enables in terms of the customer experience is, as discussed above, access to all applications across devices. This increases an employee’s availability and so they are able to respond to customer requests much more quickly. Most notably, smartphone access to email and contacts enables employees to communicate even when they do not have their primary device with them. The airline rolled out UEM to in-flight staff, which they can use as a POS device, but also provides access to customer preference data, enabling them to provide a more personalized experience. Improved communication across airline teams has also enabled faster plane boarding.

Employees meeting with customers off-premises to provide a better experience by having access to all applications on all devices. Prospect meetings are more effective because more resources are available, helping to increase conversion rates and faster responsiveness helps to improve loyalty rates and increase customer spend.

UEM enables faster device set-up, which can have a significant impact on the customer experience. For instance, one organization, a global volunteer network, often has to reallocate devices when responding to a crisis; the faster they are reconfigured and set up, the faster volunteers can provide essential help and support to their customers.

IT Cost Saving Benefits

All the interviewed customers highlighted various ways in which they had been able to reduce IT costs through UEM. Many of these relate to some of the productivity gains discussed above:

› The most significant cost saving is likely to be the time saved for IT administrators to address application requests. Users are able to complete the whole process themselves, in many cases without any IT involvement. Those that do require IT involvement are installed much faster, typically down from 2 hours to just 10 minutes.

› The number of help desk requests in addition to the above is also reduced. Password reset no longer requires IT intervention, patches and upgrades are updated faster, even for users off-premises (reducing potential security issues and related resolution costs) and employees are able to unlock BitLocker without IT intervention.

› Device onboarding and upgrading is much easier and faster. Technicians typically need just 10 minutes to configure a new device, where previously this would take an hour or more. Device retirement or reconfiguration is also much easier using UEM.

› Other savings can be derived from the avoidance of spending in other areas, in particular from the consolidation of MDM and PC management software. Spend on VPN and other technologies such as patch and upgrade services may be avoided. Automated alerts can also warn users of mobile cellular usage limits and in the case of the airline there were print and fuel cost savings because of the digitalization of pilot manuals.

“We have seen some real improvements in terms of problem solving with Workspace ONE and Windows 10.”
Flight operations manager, airline
The Total Economic Impact™ Of Dell Workforce Enablement Solutions

**UEM COSTS SUMMARY**

<table>
<thead>
<tr>
<th>COST</th>
<th>DETAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licensing costs</td>
<td>Monthly licensing by device or by user, from Standard through to full Enterprise for VDI Edition</td>
</tr>
<tr>
<td>Implementation and ongoing support costs</td>
<td>Upfront, deployment, and ongoing management costs</td>
</tr>
</tbody>
</table>

**Licensing Costs**

The table below details Workspace ONE licensing costs; subscriptions are charged either on a per device basis, for employees only using one device, typically a laptop or desktop, or on a per user basis, for those who use more than one. VMware offers four different editions, from a standard secure access and device management service, through to a full digital workspace solution including virtual desktops.

Assuming the Advanced Edition is chosen by all employees, the annual licensing cost is nearly $131 on a per user basis, or $300 for the Enterprise for VDI edition.

**Workspace ONE Monthly Subscription Rates**

<table>
<thead>
<tr>
<th>EDITION</th>
<th>PER DEVICE</th>
<th>PER USER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>$3.78</td>
<td>$6.52</td>
<td>Secure access and device management</td>
</tr>
<tr>
<td>Advanced</td>
<td>$6.00</td>
<td>$10.90</td>
<td>Advanced UEM and secure mobile apps</td>
</tr>
<tr>
<td>Enterprise</td>
<td>$10.00</td>
<td>$15.00</td>
<td>Intelligence driven secure digital workspace</td>
</tr>
<tr>
<td>Enterprise for VDI</td>
<td>$20.00</td>
<td>$25.00</td>
<td>Digital workspace plus virtual desktops</td>
</tr>
</tbody>
</table>


**Implementation And Ongoing Support Costs**

Other costs include upfront and ongoing support for UEM. Upfront costs include planning and implementation. It is assumed that upgrading devices to Windows 10 is included in its own Windows 10 deployment initiative and business case. There is also a minimal additional ongoing management resource time, mainly for configuring updated Windows 10 API within the Workspace ONE engine.

However, all these other costs are far outweighed by the IT cost savings outlined in the benefits section. In the Forrester TEI of VMware Workspace ONE, the IT cost savings were nearly two-and-a-half times that of these other costs after risk adjustments on both the benefits and costs.\(^5\)
Collaboration: Analysis Of Benefits And Costs

Technology facilitates better workforce collaboration. This analysis is based on the implementation of Microsoft Office 365, which includes a number of collaboration capabilities including messaging, conferencing, document sharing, shared drives, and social media as well as the standard suite of office productivity applications.

**SUMMARY OF BENEFITS**

<table>
<thead>
<tr>
<th>BENEFIT</th>
<th>KEY OUTCOME</th>
<th>OTHER OUTCOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Productivity gain</td>
<td>9% to 10% gain, 21 to 22 days/user</td>
<td>Better employee engagement; streamlined communication</td>
</tr>
<tr>
<td>Customer experience</td>
<td>Faster resolution and decision-making capabilities</td>
<td>Facilitation of support, lead sharing and deal closing</td>
</tr>
<tr>
<td>IT cost savings</td>
<td>Avoidance or reduction of various IT costs</td>
<td>Travel savings</td>
</tr>
</tbody>
</table>

**Productivity Benefits**

The implementation of collaboration increases productivity between 9.1% and 9.7%, equivalent to 21 to 22 days per year per user. Organizations with a more flexible workforce benefit more than those which are more centralized, but in this case only marginally because on-premises based workers benefit by a similar amount.

Note: Percentages may not total 100 because of rounding.
Base: 723 workplace technology decision makers
Source: A commissioned study conducted by Forrester on behalf of Dell, September 2018

Productivity benefits of collaboration solutions are derived in a number of different ways:
The ability to find data and documents faster is one of the key benefits of collaboration. Interviewees highlighted typical employee savings of 2 to 4 hours per week.

Collaboration capabilities not only reduce the need for meetings, they also make for more efficient meetings. The facilitation of online meetings and use of instant messaging reduces the need for in-person meetings. The intuitive nature of Microsoft Teams and Skype for Business means meetings are set up more quickly. In some cases, collaboration capabilities can also reduce the need for travel; one interviewee told us that although they had not actually seen any specific travel cost savings, the implementation of a travel ban became much less painful having implemented collaboration capabilities.

Improvements in employee satisfaction and engagement were also an important outcome. Off-premises employees feel more connected, there is better interaction across different departments and organizations which have grown by acquisition. One interviewee uses SharePoint for feedback in order to improve employee satisfaction and retention and introduced a training and career progression platform. Another interviewee reported that before the implementation there was growing user frustration, but afterwards employee satisfaction was eight out of ten.

Implementing Microsoft Office 365 is often accompanied by a move to cloud-based solutions. Interviewees highlighted that, as a result, downtime was reduced, particularly in the case of email and SharePoint implementations.

Collaboration Productivity Gains By Employee Type: Calculation Table

<table>
<thead>
<tr>
<th>REF.</th>
<th>METRIC</th>
<th>CALC.</th>
<th>REMOTE-BASED</th>
<th>OFFICE-BASED</th>
<th>HIGHLY MOBILE</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>Faster information collection and decision making (days)</td>
<td>16.9</td>
<td>14.1</td>
<td>11.3</td>
<td></td>
</tr>
<tr>
<td>C2</td>
<td>Less meetings/more efficient meetings (days)</td>
<td>5.6</td>
<td>5.6</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td>C3</td>
<td>Downtime avoided</td>
<td>2.5</td>
<td>2.5</td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td>C4</td>
<td>Improved employee engagement</td>
<td>8.4</td>
<td>2.8</td>
<td>5.6</td>
<td></td>
</tr>
<tr>
<td>Ct</td>
<td>Total</td>
<td>C1+C2+C3+C4</td>
<td>33.4</td>
<td>25.0</td>
<td>20.9</td>
</tr>
</tbody>
</table>

Risk adjustment ↓20%

| Ctr  | Total days gained (risk-adjusted) | 26.8 | 20.0 | 16.8 |
|      | As percentage | Ctr/225 | 11.9% | 8.9% | 7.4% |

The productivity benefits of collaboration solutions have a relatively uniform impact on different organizations, both in terms of the location of employees and the degree of workstation penetration. Risk-adjusted productivity gains were found to be between 9.1% and 9.7%.

Collaboration Productivity Gain (Risk-Adjusted) By Composite
The impact of collaboration solutions might be less for a number of reasons:

› Organizations may have less knowledge-based employees, lowering the benefits of faster information collection and decision making.

› Organizations may already enjoy low downtime rates.

To account for these risks, Forrester adjusted this benefit downward by 20%, bringing the productivity gain for the Average composite organization down from nearly 13% to just over 10%. However, we believe that these risks will not impact these benefits, in large part due to the concept of flow, as discussed after the Executive Summary. Less meetings and less time taken finding data or documents reduce interruptions to flow, enhancing productivity and improving engagement.

Customer Experience Benefits

The customer experience benefits are largely related to the productivity gains. Faster information gathering and decision-making helps to benefit customers because they receive faster and better responses. Responding to customer questions is also much easier in a collaborative environment and avoids having to reinvent the wheel, thus re-using other’s work and not having to go through the process from the start. It is much easier to find answers and gain team support when tools such as Microsoft Teams and Skype for Business are available, while searches on Yammer can quickly produce answers to questions others have already posed.

One interviewee highlighted that Yammer has significantly helped sales teams through lead-sharing to closing deals faster, with one team claiming to have generated nearly $2 million in opportunities in this way. Another interviewee discussed how business processes have become much more efficient, including customer support.
IT Cost Saving Benefits

Collaboration solutions enable cost reduction, including IT as well as other categories, in a number of different ways:

There is a reduction in alternative or third-party collaboration products and services, most notably telecoms equipment and services, file sharing licensing, local TV hiring/video broadcast services, alternative collaboration solutions, and a reduction in email storage requirements.

Significant cost savings were also reported from moving away from on-premise platforms to cloud-based services. Not only did this reduce downtime for key services such as email, but it also reduces the need for hardware and related internal support capabilities. Additional benefits were reported from converging on a single, integrated Microsoft platform, with a variety of capabilities working well together.

Although reduced travel costs were not a primary factor, this was also mentioned as enabling additional savings.

Unauthorized solutions are avoided, user authentication is improved and the use of cloud-based solutions also helps reduce security risks.

COLLABORATION COSTS SUMMARY

<table>
<thead>
<tr>
<th>COST</th>
<th>DETAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solution licensing</td>
<td>Annual cost of using collaboration solution, such as Microsoft Office 365</td>
</tr>
<tr>
<td>Implementation and ongoing management</td>
<td>Deployment, professional services, and training and ongoing management, whether as a managed service or supported in-house</td>
</tr>
</tbody>
</table>

Solution Licensing

Microsoft Office 365 includes a range of different capabilities; as per the Total Economic Impact Of Microsoft 365 Teamwork Solutions, conducted by Forrester in June 2018, it can be assumed that 75% of the costs and benefits associated with Microsoft 365 are closely tied to teamwork and collaboration capabilities.²

It is available in a number of different editions; all versions include email storage, Skype for Business, OneDrive, Yammer, SharePoint, Video Sharing, web-based Office productivity applications and Team sites. Per user per month costs are up to $15.00, or $180 on an annual basis.³

Implementation And Ongoing Management

There are a number of different cost categories for implementing and maintaining a collaboration solution and these depend on a number of different factors including the legacy environment, size and structure of the organization, relative use of on-premises and off-premises solution, and the range of services to be included. The implementation is often relatively complex, requiring new technology purchases, professional services support, training, and new in-house skillsets.

As per the Microsoft Team TEI case study, managed services account for just over half of the implementation and ongoing management costs. Internal resources required for deployment is the second largest,
followed by ongoing management and finally training.⁸
Conclusions

› After revenue growth, productivity is a key overall business priority for large organizations. In terms of technology-related initiatives, overall operational efficiency and employee productivity are the most important priorities, followed by customer experience improvement.

› Workforce enablement solutions such as best device experience, UEM, and collaboration deliver productivity gains of around 10%. Each of the three solutions positively impacts employee availability, effectiveness, flexibility, and flow. The ratio of employees working primarily on-premises and off-premise are important factors which dictate the scope for productivity gains; workstation penetration has a secondary impact.

› Productivity goes hand-in-hand with both the customer and employee experience. An engaged workforce performs better, delivers higher discretionary effort, remains more loyal and better satisfies customers.

Summary Of Workforce Enablement Solution Benefits

› Delivering on flexibility empowers employees by giving them more control over their working conditions. This also boosts an organization’s agility, enabling it to better react to unforeseen changes. It can also result in reduced real-estate costs and facilitate talent acquisition and retention.

› Workforce enablement solutions such as best device experience, UEM, and collaboration can help reduce IT costs. They enable faster device onboarding, reduced IT management resources, and provide for opportunities to avoid third-party IT and telecom costs.
Appendix A: Total Economic Impact

Total Economic Impact is a methodology developed by Forrester Research that enhances a company’s technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

Total Economic Impact Approach

**Benefits** represent the value delivered to the business by the product. The TEI methodology places equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization.

**Costs** consider all expenses necessary to deliver the proposed value, or benefits, of the product. The cost category within TEI captures incremental costs over the existing environment for ongoing costs associated with the solution.

**Flexibility** represents the strategic value that can be obtained for some future additional investment building on top of the initial investment already made. Having the ability to capture that benefit has a PV that can be estimated.

**Risks** measure the uncertainty of benefit and cost estimates given: 1) the likelihood that estimates will meet original projections and 2) the likelihood that estimates will be tracked over time. TEI risk factors are based on “triangular distribution.”

The initial investment column contains costs incurred at “time 0” or at the beginning of Year 1 that are not discounted. All other cash flows are discounted using the discount rate at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations in the summary tables are the sum of the initial investment and the discounted cash flows in each year. Sums and present value calculations of the Total Benefits, Total Costs, and Cash Flow tables may not exactly add up, as some rounding may occur.
Appendix B: Endnotes


