

# UNDER THE MICROSCOPE: THE ANATOMY OF MOBILE STRATEGY

*How to Ensure the Wellbeing  
of Your Mobile Ecosystem*



**Lenovo**<sup>™</sup>

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# Everywhere, around the world, the workforce is on the move.

## INTRODUCTION

In a Lenovo survey of 4,640 organizations, 77% of respondents agreed that use of mobile devices in the workplace is important to achieving strategic objectives.<sup>1</sup> Meanwhile, 38% of workers feel most productive when working from home, according to Salesforce.<sup>2</sup> And IDC expects that the U.S. mobile worker population will account for nearly three quarters of the total U.S. workforce by 2020, surpassing 105 million workers.<sup>3</sup>

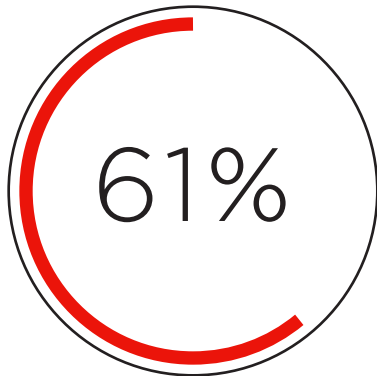
*The mobile workforce in the U.S. will account for nearly 75% of the total workforce by 2020.<sup>3</sup>*

In response, today's organizations are investing heavily in mobile tools and infrastructure—even if their mobile strategy is not fully developed. Policies often differ between departments. And while some employees demand consumer-grade devices, others clamor for performance, and IT just wants devices that are secure, easy to use and maintain.

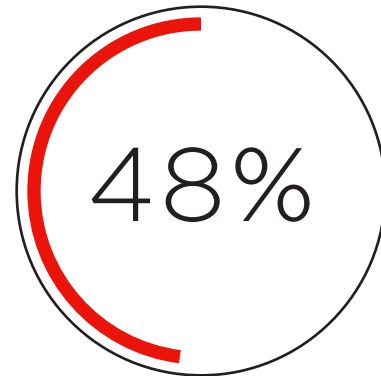
So, how can your organization balance the mobility needs of end users and the needs of IT? **How do you build the right mobile strategy for your entire organization?**

In this eBook, you'll learn how everything in your mobile ecosystem is interconnected—just like the parts of the human body. To stay fit, you need a holistic strategy that addresses all parts of the system, working together, in perfect harmony.

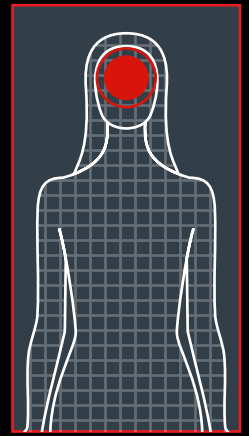
## MOVING TO MOBILE



Percentage of enterprises that plan to enhance their mobility capabilities during the next three years.<sup>4</sup>



Almost half believe they can become leaders in their industries by adopting innovative mobility solutions.<sup>4</sup>



**Part 1 of 5**

# PERFORMANCE

Laptops once used to be a supplemental tool. Salespeople would take them on the road, or managers would use them to work from home. As the devices became more powerful, they started to be widely used for routine office tasks. But laptops were still not known for high performance. Until now.

Today's mobile devices are more powerful and capable than ever. Processors are also more powerful and energy efficient, and now there are very few programs that a high-performance laptop can't run effectively.

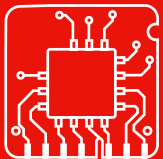
That's good, because for laptop users, it all starts with performance. That's the brains of your mobile ecosystem,

because without the power—without the brain—the whole ecosystem is just a pretty face with not much behind it.

Employees are doing so much work on them that in many cases, laptops have replaced the desktop. That's why laptops need to have enough horsepower to enable employees to work all day, no matter what programs they need to use.



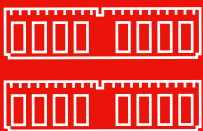
## Key elements for healthy mobile performance<sup>5</sup>



- Dual-core processors, particularly the Intel Core i3/i5/i7 series or AMD E-series and A-series APUs. Quad-core processors are available for more strenuous applications.



- High-resolution LCD screens with 1,920-by-1,080 display with In-Plane Switching (IPS) technology.



- At least 4 GB of RAM. Consider 8 GB of memory for graphics-intensive users and those designing spreadsheets.



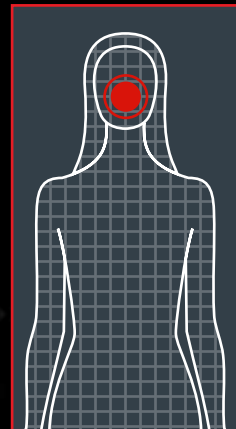
- Dual-band Wi-Fi for flexibility. Remember Wi-Fi signal reception depends on how well the laptop is engineered. An Ethernet connection is also handy for those rare times when Wi-Fi is not an option.



- A 500 GB to 1 TB hard drive offers plenty of space for critical data. For maximum performance, solid-state drives (SSDs) are also available. A high-speed USB port also enables users to conveniently connect external storage.



- Long-lasting batteries. This way, mobile devices can be up and running for as long as users need them.



**Part 2 of 5**

# SECURITY

In January, a computer software engineer in Pune, India left his laptop behind when he got out of a rickshaw.<sup>6</sup> The rickshaw driver returned the bag, but when your employees leave their device behind—more likely in a taxi, plane, or restaurant—the person who finds it might not be as courteous.

On top of that, a laptop is stolen every 53 seconds, and one in ten laptops are stolen or lost over the device's lifetime.<sup>7</sup> According to Lenovo, 60% of lost or stolen smartphones contain one or more of the following types of sensitive data, which are then vulnerable to non-authorized access:<sup>7</sup>

- Contact list
- Emails
- Internet credentials
- Security codes and settings
- Productivity apps
- Mobile payments

What are the risks? A Forrester Research report found that 30% of SMBs and enterprises had experienced at least one security breach due to the use of a mobile device.<sup>8</sup>

That's where security solutions—the eyes, ears and nose of your mobile ecosystem—come in, keeping the senses alert to an intrusion.

Combining the right security policies with employee training can help organizations keep their data safe. Finding the right mix of devices also plays a key role in minimizing the potential for security breaches and loss of data, while easing the manageability burden on IT.

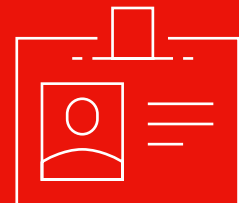
## COMMON SECURITY THREATS<sup>8</sup>



Lost or stolen devices

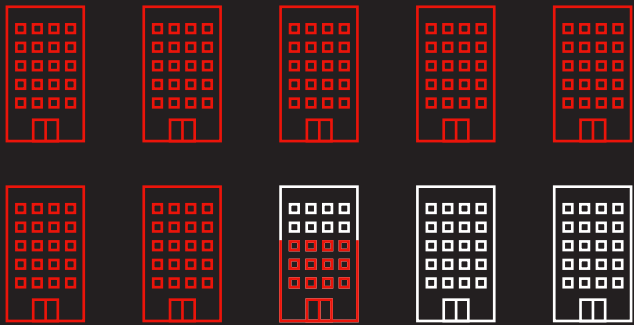


Malicious apps



Unencrypted corporate data sent over public Wi-Fi





76%

of organizations surveyed believed that mobile devices present a “serious” set of risks with respect to physical/data security.<sup>1</sup>



## 10 tips for securing your company’s sensitive data<sup>9</sup>



1. Set passwords and auto-lock protection, and disable auto-complete.



2. Use two-factor authentication, such as fingerprint biometrics, to safeguard access.



3. Ensure all users encrypt data as a matter of habit.



4. Invest in anti-virus software—and keep it up-to-date.



5. Add remote wipe and location tools.



6. Back up mobile devices regularly.



7. Store documents in the cloud—and off devices—as often as possible.



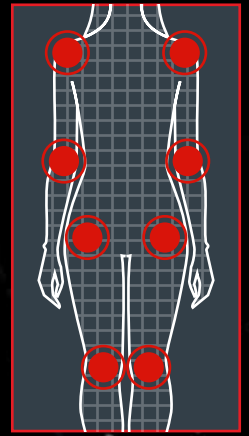
8. Create a whitelist of approved apps and carefully monitor anything downloaded.



9. Set clear policies on which devices are permitted and which are not.



10. Discourage the use of unknown or untrusted wireless.



### Part 3 of 5

# FLEXIBILITY

The average mobile phone user checks his or her phone 150 times a day, and that sense of mobile dependency extends to their work life. Employees—especially Millennials—expect to have access to their work emails, projects and tools even when they're not at the office.

You need flexibility in your mobile ecosystem, just like the muscles and joints in your body, to adapt to a wide range of user needs. The increasing demand (and necessity) for users to access information through any device, anywhere, anytime is driving a shift in workplace infrastructure.

Employers are happy to accommodate a flexible workplace experience because they recognize flexibility not only improves productivity, but also enhances the organization's ability to respond to customer needs faster, compete in the marketplace—not to mention save money on office space and equipment.

For IT pros, this flexible work environment is evolving workplace technology. Bring-your-own-device (BYOD), bring-your-own-apps (BYOA), and cloud computing are molding a new, virtual workplace, increasing the need for collaboration and teamwork options.

Forward-thinking organizations tailor IT support to the unique needs of the end user, providing self-service support and innovative automation tools to help foster self-sufficiency.<sup>11</sup> Plus, by offering flexible choices in mobile devices, IT can also help encourage adoption of approved technology.



**Nearly 75%**  
of MBA survey respondents believe work will mostly take place from remote locations by 2050. According to the 1 Million for Work Flexibility movement, flex work may be so prevalent in just 10 years that the term will be redundant.<sup>10</sup>

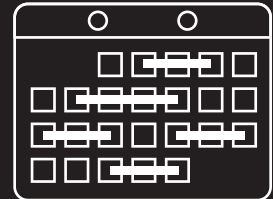
## COMMON WORKPLACE FLEXIBILITY OPTIONS<sup>12</sup>



Telework on an ad-hoc basis



Flex time



Part-time schedules



## How to add more flexibility into your workspace<sup>13</sup>

1

Place a premium on accountability and work-life integration.

2

Hire employees who are suited to work virtually. Some people aren't, such as those who require the social benefits of office settings.

3

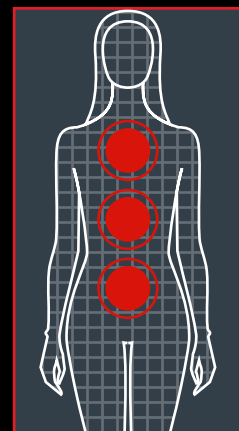
Provide tools that enable employees to connect visually, vocally, and interactively. Employees who chat for 15 minutes with colleagues can gain a 20% boost in performance.

4

Keep information flowing. Set up a system for sharing information and documents.

5

Educate remote employees about security threats and how to stay safe.



**Part 4 of 5**

# CONNECTIVITY

Today's mobile devices are keeping us connected like never before. We can be in the field for sales presentations and still attend home-office meetings. Or, we can work from home—in fact, in a recent survey by FlexJobs, 75% of respondents said they avoid the office when they need to do important work.<sup>14</sup>

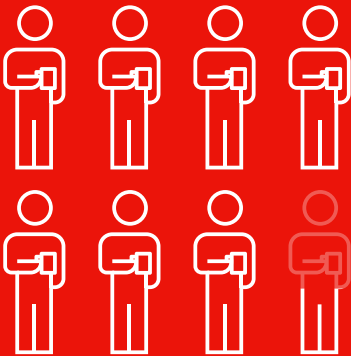
Connectivity provides the beating heart and linked nervous system of your mobile ecosystem by allowing users to work together no matter where they are. If workers with compatible jobs worked from home just half the time—about the national average for those who do so regularly—the savings would be over \$700 billion a year nationally.<sup>15</sup>

Connectivity demands continue to grow, and it's moving beyond simple mobile devices. Today's IT professionals increasingly have to account for network traffic from Internet of Things (IoT) devices, which can consume the bandwidth needed for mobile workers.



 = 10%

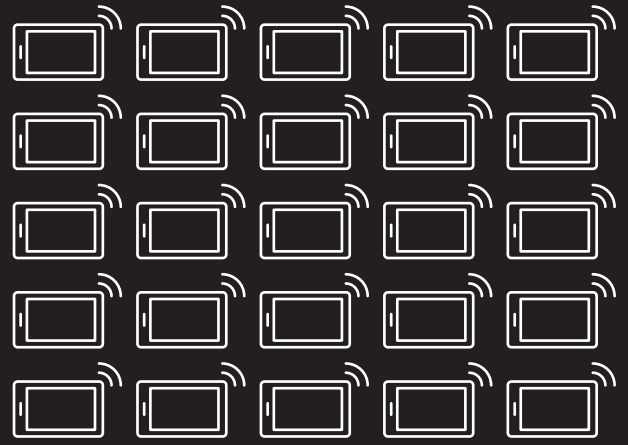
Regular working from home, among the non-self-employed population, has grown by 103% since 2005.<sup>15</sup>



 = 500,000 employees

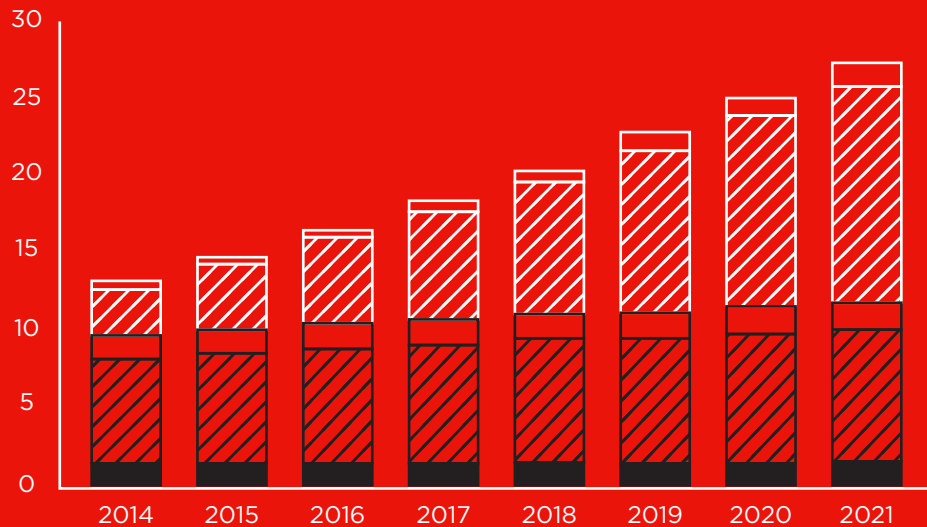
3.7 million employees now work from home at least half the time.<sup>15</sup>






By 2020, the number of connected “things” is expected to reach 25 billion.<sup>16</sup>



 = 1 billion connected “things”

IoT DEVICES ARE ABOUT TO SURPASS MOBILE PHONES AS THE LARGEST CATEGORY OF CONNECTED DEVICES.<sup>3</sup>



	15 billion	28 billion	CAGR 2015-2021
 Cellular IoT	0.4	1.5	27%
 Non-cellular IoT	4.2	14.2	22%
 PC/laptop/tablet	1.7	1.8	1%
 Mobile phones	7.1	8.6	3%
 Fixed phones	1.3	1.4	0%

For IT professionals, this connectivity is increasing demand for capacity. Data-intensive devices are driving wireless throughput requirements upward at an alarming rate, putting a massive strain on networks that don't have the ability to cope with the increased data.

By re-evaluating network architecture, IT professionals can position their organizations for long-term connectivity. Keeping up with the latest innovations, of course, is key, but so is exploring platforms that allow for evolution of your network. That's the best way to find the most flexible and cost-effective infrastructure for not just now, but also the future.

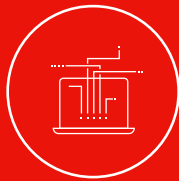


## Tips for ensuring your mobile ecosystem stays connected<sup>17</sup>

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- Be ready to manage a variety of mobile devices. Consider deploying a solution that can identify and track all mobile devices accessing your corporate network.



- Upgrade your corporate network. As you enhance your mobility program, consider using software-defined networking to provide more elastic scaling of resources to meet increased demand.

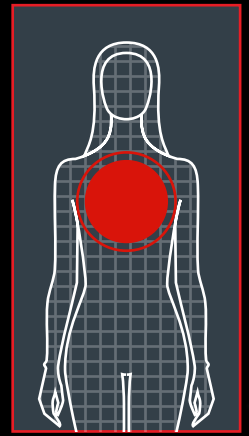


- Secure corporate data. You should provide secure remote access to your employees without damaging corporate networks and data.



- Deal with a single vendor. An end-to-end solution from a single supplier can streamline the mobile procurement process.





**Part 5 of 5**

# DURABILITY


Mobile devices are often in constant, heavy operation, dropped and knocked around, subjected to vibration, and exposed to dust and rain—not to mention rambunctious kids. If dropping a mobile device on a hard floor causes sudden failure of a mission-critical application, the consequences can be disastrous.

What good is your mobile ecosystem without the durability to keep it working—without the lungs to push the technology through? Many consumer-grade devices aren't designed for use in work environments, and the hardware fails more often.

According to a 2015 study from Kyocera Communications Inc., each device failure can cost an organization 170 to 200 minutes in lost productivity and internal support.<sup>18</sup>

Ensuring military-grade durability in mobile computers demands every component be designed and selected for exceptional endurance. And it's essential to ensure that ruggedizing doesn't compromise ergonomics.<sup>19</sup>



 = 10 minutes



## Five considerations for choosing a durable mobile device<sup>20</sup>

1

**Features** including:

- AMOLED displays to provide faster refresh rate than LED displays and consume less power
- CPU speed and processing power
- Drop specifications

3

**Quality.** What certifications do the devices hold? The level of punishment a device can withstand will be determined by industry testing standards and certifications.

- Make sure the IP rating is at least IP65 and the drop test specification achieves a MIL Spec 810G rating.

2

**Warranties.** Research what the device warranties are, how they work, and what the normal lead times are for repair/up-grade. Knowing that information upfront can save money during the life of your organization's devices.

4

**Battery life.** One or more 2500 mAH (or larger) battery would allow the device to work all day long on just one charge.

5

**Operating system.** Windows is a great fit for enabling your employees to use the latest productivity apps on the go.

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## CONCLUSION

Today's workforce relies on a healthy mobile ecosystem—and that's not changing. Mobility is making workforces more flexible, better connected with each other and clients, and more productive.

This ecosystem is just like a body: It requires regular maintenance, a good scrub once in a while, and protection from outside elements. By understanding the issues facing your mobile ecosystem and the different ways you can improve its health, IT professionals can extend the life of the body that is your mobile ecosystem.

Continuing our long history of uncompromised innovation, the Lenovo ThinkPad X1 family—the ThinkPad X1 Carbon, ThinkPad X1 Yoga, and ThinkPad X1 Tablet—offer all the essentials for the mobile workforce, including:

- High-performance processors
- Ultra-portable, durable designs
- Long battery life
- Premium displays
- Full PC connectivity

And with their legendary ThinkPad performance, your users sacrifice nothing in return for ultra mobility.

[LEARN MORE](#)

Intel® Core™ i7 processor. Intel Inside®.  
Powerful Productivity Outside.



Lenovo™

## SOURCES

- <sup>1</sup> “Lenovo Enterprise—Are You Ready?” *Lenovo*. [www.lenovo.com/in/en/enterprisemobility/](http://www.lenovo.com/in/en/enterprisemobility/)
- <sup>2</sup> “How Mobile Is Changing Work Habits,” *Salesforce Blog*, Nov. 14, 2013.  
<https://www.salesforce.com/blog/2013/11/how-mobile-changing-where-we-work-gp.html>
- <sup>3</sup> “Mobile and Mobility—The Impact of Ubiquitous Connectivity,” *i-Scoop*. <http://www.i-scoop.eu/mobile-mobility/>
- <sup>4</sup> “9 Reasons Why Every Enterprise Needs a Mobile Strategist,” *Antenna Software*, 2013.  
<http://www.lenovo.com/enterprisemobility/download/ebook-riseofthemobilestrategist-130225150955-phpapp02.pdf>
- <sup>5</sup> “How to Buy a Business Laptop,” *PC Magazine*, June 3, 2015. <http://www.pcmag.com/article2/0,2817,2346880,00.asp>
- <sup>6</sup> “Honest Autorickshaw Driver Finds Costly Laptop Left Behind, Travels 32 KM to Return it to Owner,” *India Times*, January 5, 2016.  
<http://www.indiatimes.com/news/india/driver-travels-32-km-to-return-a-laptop-left-behind-in-his-auto-local-cops-praise-him-249098.html>
- <sup>7</sup> “Cost of Stolen or Lost Laptops, Tablets and Smartphones,” *Lenovo*.  
[www.lenovo.com/enterprisemobility/useful-resources/cost-of-change-stolen-mobile-devices/](http://www.lenovo.com/enterprisemobility/useful-resources/cost-of-change-stolen-mobile-devices/)
- <sup>8</sup> “Are You Aware of All the Risks?” *Lenovo*. <http://www.lenovo.com/enterprisemobility/minimize-security-risks/>
- <sup>9</sup> “10 Tips for Mobile Device Management,” *Staples*.  
<http://www.staples.com/sbd/cre/tech-services/explore-tips-and-advice/tech-articles/10-tips-for-mobile-device-management.html>
- <sup>10</sup> “How Flex Work is Impacting Business Collaboration,” *1 Million for Work Flexibility Blog*, Jan. 21, 2015.  
<http://www.workflexibility.org/flex-work-impacting-business-collaboration/>
- <sup>11</sup> “Workplace Flexibility: Why Forward-Thinking Companies Implement a Flexible Mobile Environment,” *Mobile Business Insights*, Oct. 13, 2015.  
<http://mobilebusinessinsights.com/2015/10/workplace-flexibility-why-forward-thinking-companies-implement-a-flexible-mobile-environment/>
- <sup>12</sup> “Trends in Workplace Flexibility,” *WorldatWork*, September 2015. <https://www.worldatwork.org/adimLink?id=79123>
- <sup>13</sup> “5 Ways to Overcome the Challenges of a Virtual Work Environment,” *The Huffington Post*, May 27, 2016.  
[http://www.huffingtonpost.com/young-entrepreneur-council/5-ways-to-overcome-the-ch\\_b\\_10069048.html](http://www.huffingtonpost.com/young-entrepreneur-council/5-ways-to-overcome-the-ch_b_10069048.html)
- <sup>14</sup> “5 Reasons You’re More Productive When You’re Not in the Office,” *The CheatSheet*, February 6, 2016.  
<http://www.cheatsheet.com/money-career/5-reasons-youre-more-productive-when-youre-not-in-the-office.html/?a=viewall>
- <sup>15</sup> “Latest Telecommuting Statistics,” *GlobalWorkplaceAnalytics.com*, updated January 2016.  
<http://globalworkplaceanalytics.com/telecommuting-statistics>
- <sup>16</sup> “Ericsson Mobility Report,” *Ericsson*, June 2016. <https://www.ericsson.com/mobility-report>
- <sup>17</sup> “Enterprise Mobility Management: A Few Tips to Maximize Mobile Efficiency and Productivity,” *SutiSoft*, February 17, 2016.  
<http://www.sutisoft.com/blog/enterprise-mobility-management-a-few-tips-to-maximize-mobile-efficiency-and-productivity/>
- <sup>18</sup> “Kyocera Survey Finds Mobile-Device Failures Are Costing Businesses Big Bucks in Lost Productivity and Replacement Fees,” *BusinessWire*, August 17, 2015.  
<http://www.businesswire.com/news/home/20150817005210/en/Kyocera-Survey-Finds-Mobile-Device-Failures-Costing-Businesses>
- <sup>19</sup> “The Importance of Mobile Computer Durability and Ergonomics—Why Rugged Devices Cost Less,” *Honeywell*, 2008.  
[http://www.ahearn.com/pdf/WP/WP\\_Importance\\_of\\_Durability\\_in\\_Mobile\\_Computers\\_Honeywell.pdf](http://www.ahearn.com/pdf/WP/WP_Importance_of_Durability_in_Mobile_Computers_Honeywell.pdf)
- <sup>20</sup> “Top Seven Considerations When Purchasing a Rugged Mobile Device,” *Two Technologies, Inc.*, May 2015.  
<http://www.2t.com/articles/seven-considerations-purchasing-a-rugged-mobile-device.asp>