# Consumer Demand
## for PC Form Factors
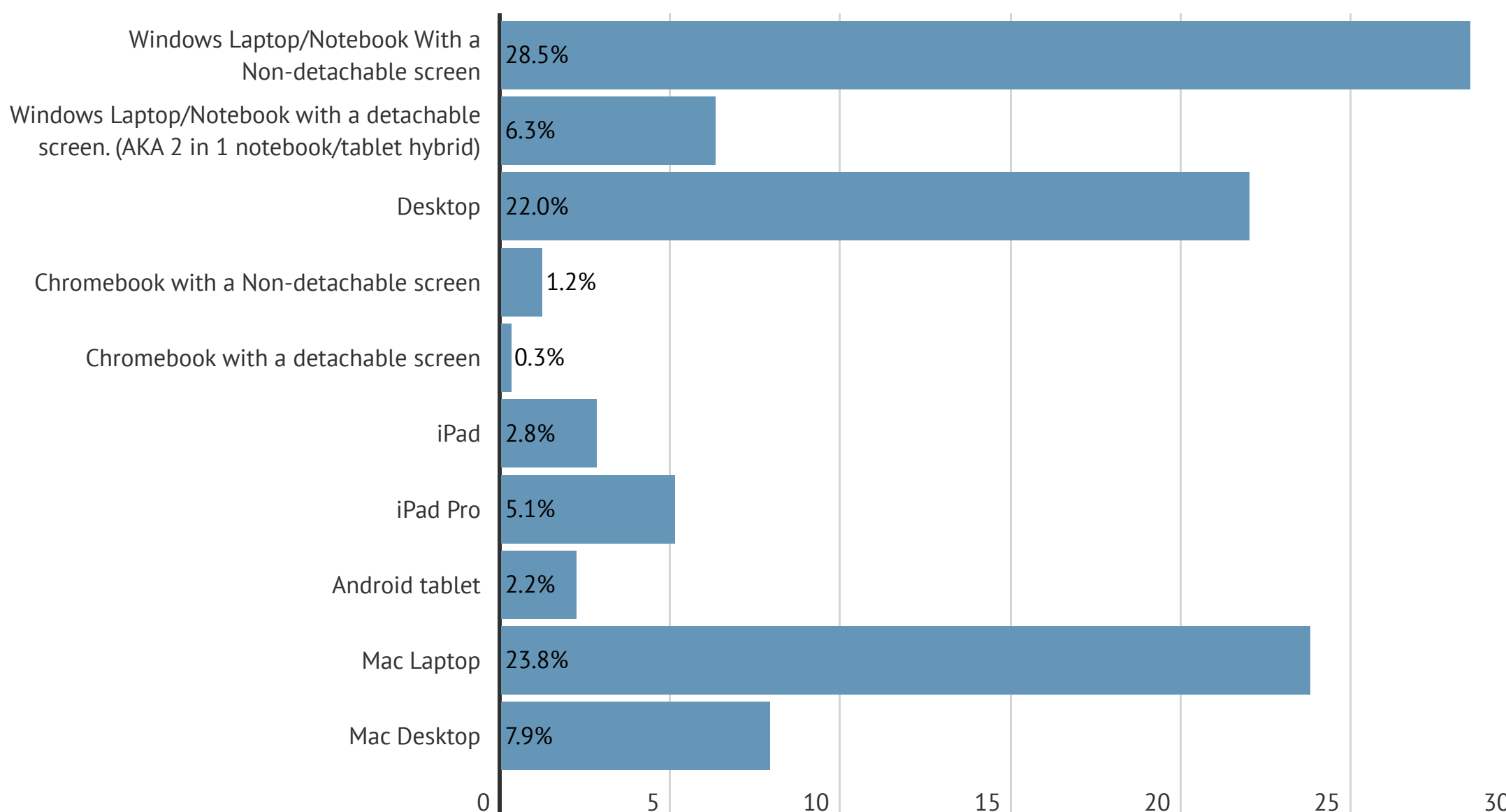
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A rebirth of innovation in personal computing is underway, driven by the mobile experience. More than a decade into the smart-phone revolution, users now demand more in their laptop experiences based on what they've grown to like on their mobile devices.

Features such as instant-on, day-long battery life and always-connected functionality are migrating to the laptop form factor. Consumers are also more interested in using some of their most popular applications more often on laptop factors on models that carry the new features.

This chart shows how diverse the U.S. computing installed base has become, partly due to influences and pressures from the mobile world. It's important to notice is the diversity of the types of devices being used for general-purpose computing. This lines up with a growing trend of segmentation we at Creative Strategies have been studying for several years. Unlike the PC market of years ago there is no longer a one-size-fits-all solution for consumers and employees. People want a wide range of options and choices to select the type of hardware they want to do work with.

**What is the primary type of computer you do most of your work (productivity) related tasks on?**

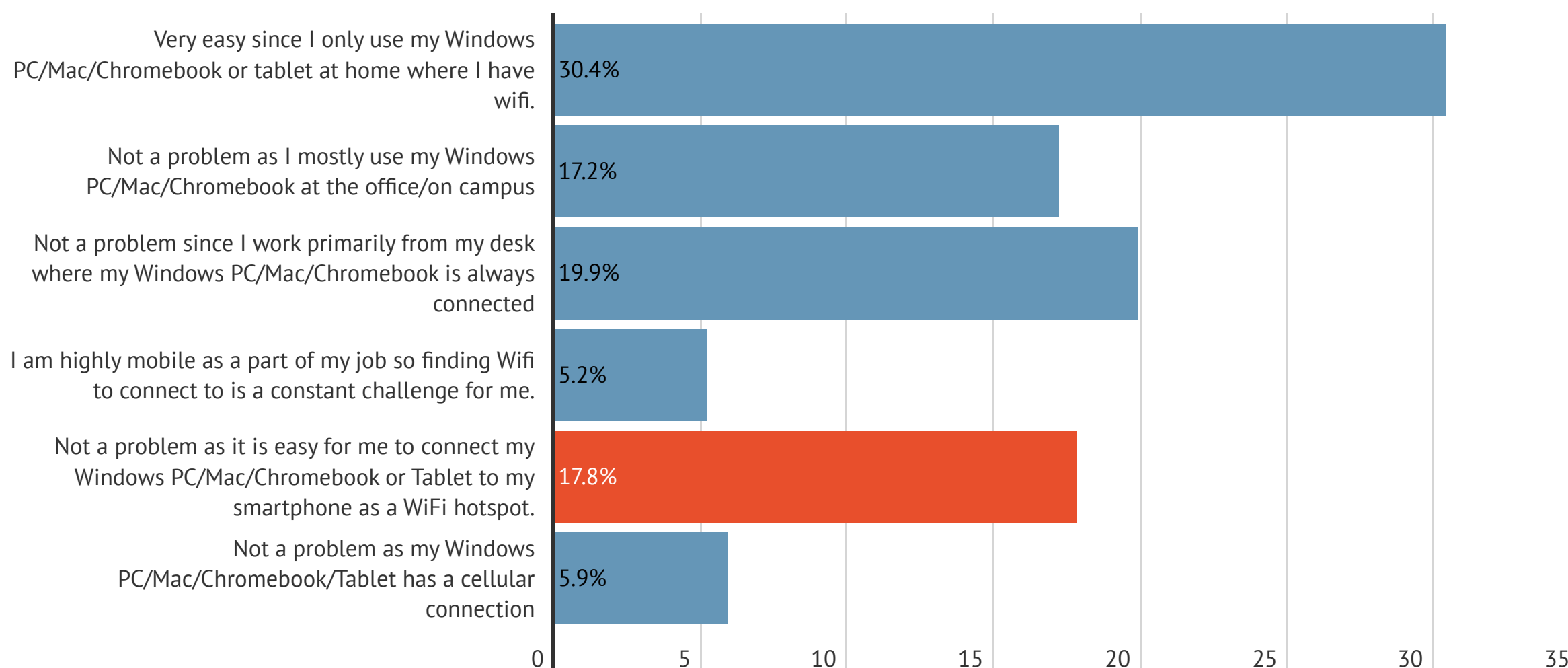| Device | Percentage |
|---|---|
| Windows Laptop/Notebook With a Non-detachable screen | 28.5% |
| Windows Laptop/Notebook with a detachable screen. (AKA 2 in 1 notebook/tablet hybrid) | 6.3% |
| Desktop | 22.0% |
| Chromebook with a Non-detachable screen | 1.2% |
| Chromebook with a detachable screen | 0.3% |
| iPad | 2.8% |
| iPad Pro | 5.1% |
| Android tablet | 2.2% |
| Mac Laptop | 23.8% |
| Mac Desktop | 7.9% |

In this study we explored whether finding or getting a connection to the Internet was a major pain point in the market. Interestingly, **6% of respondents said they already owned a laptop with integrated connectivity**, even though it is important to note that most people do the vast majority of their work from a stationary place.

Roughly 5% of respondents indicated their job required them to be mobile and move around frequently and it is within this market segment we believe the connected laptop has the most immediate appeal.

Another thing to observe with this data is the **17% of respondents who find it easy to use their smartphone and tablet as a hotspot**. Our belief is a segment of this cohort will also find value and convenience in using a laptop designed with an emphasis on connectivity as it eliminates the friction of managing their device as a hotspot.
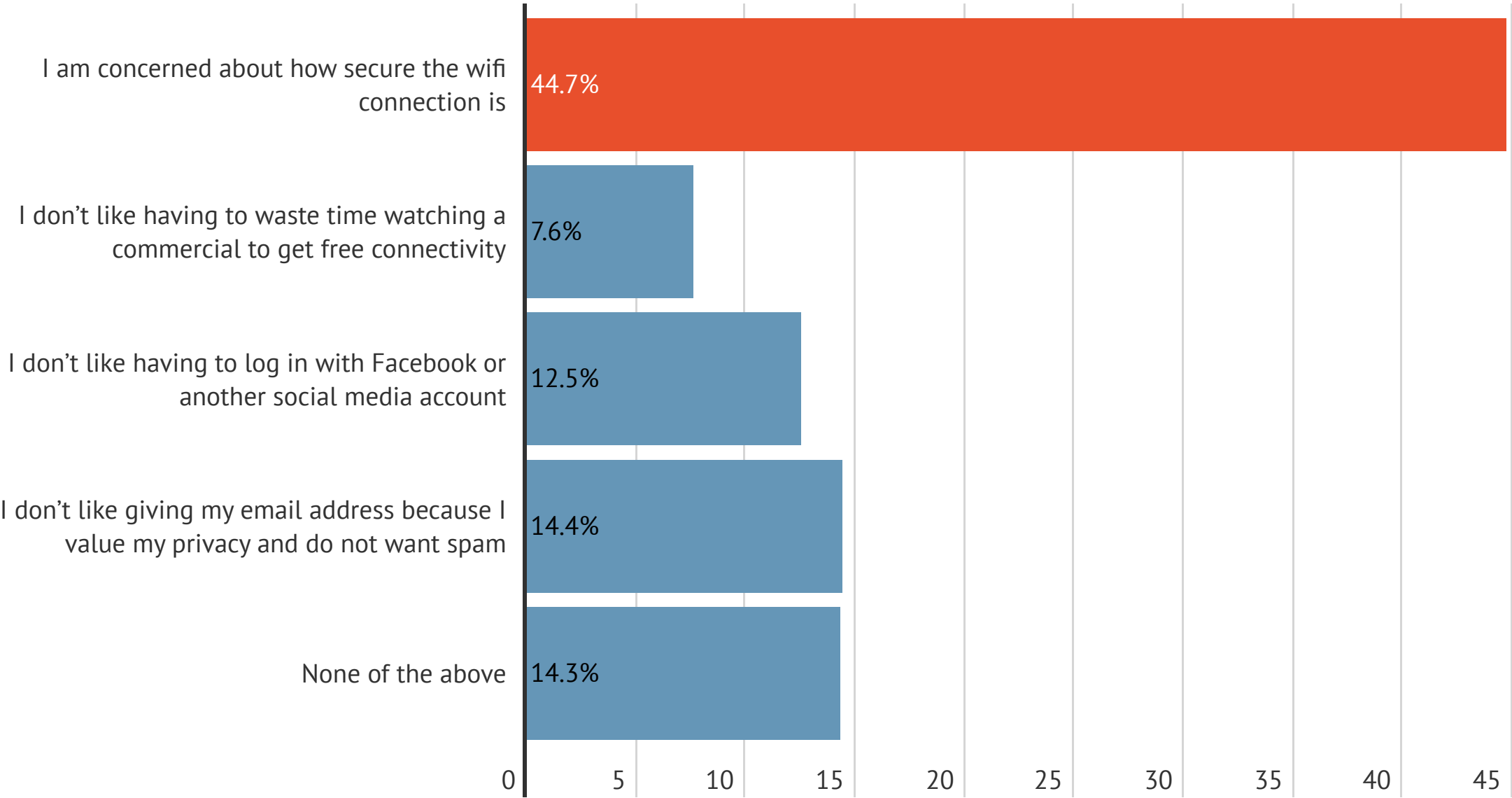
**How easy do you feel it is to find an Internet connection for your Windows PC/Mac/Chromebook or Tablet when you need it?**

| Category | % |
|---|---|
| Very easy since I only use my Windows PC/Mac/Chromebook or tablet at home where I have wifi. | 30.4% |
| Not a problem as I mostly use my Windows PC/Mac/Chromebook at the office/on campus | 17.2% |
| Not a problem since I work primarily from my desk where my Windows PC/Mac/Chromebook is always connected | 19.9% |
| I am highly mobile as a part of my job so finding Wifi to connect to is a constant challenge for me. | 5.2% |
| Not a problem as it is easy for me to connect my Windows PC/Mac/Chromebook or Tablet to my smartphone as a WiFi hotspot. | 17.8% |
| Not a problem as my Windows PC/Mac/Chromebook/Tablet has a cellular connection | 5.9% |

One of the value propositions with new always-connected PC designs is that you never have to jump through hoops to use a public connection. Often, public WiFi asks you to register your email to use, or to watch an ad or commercial. But mostly, they are security risks.
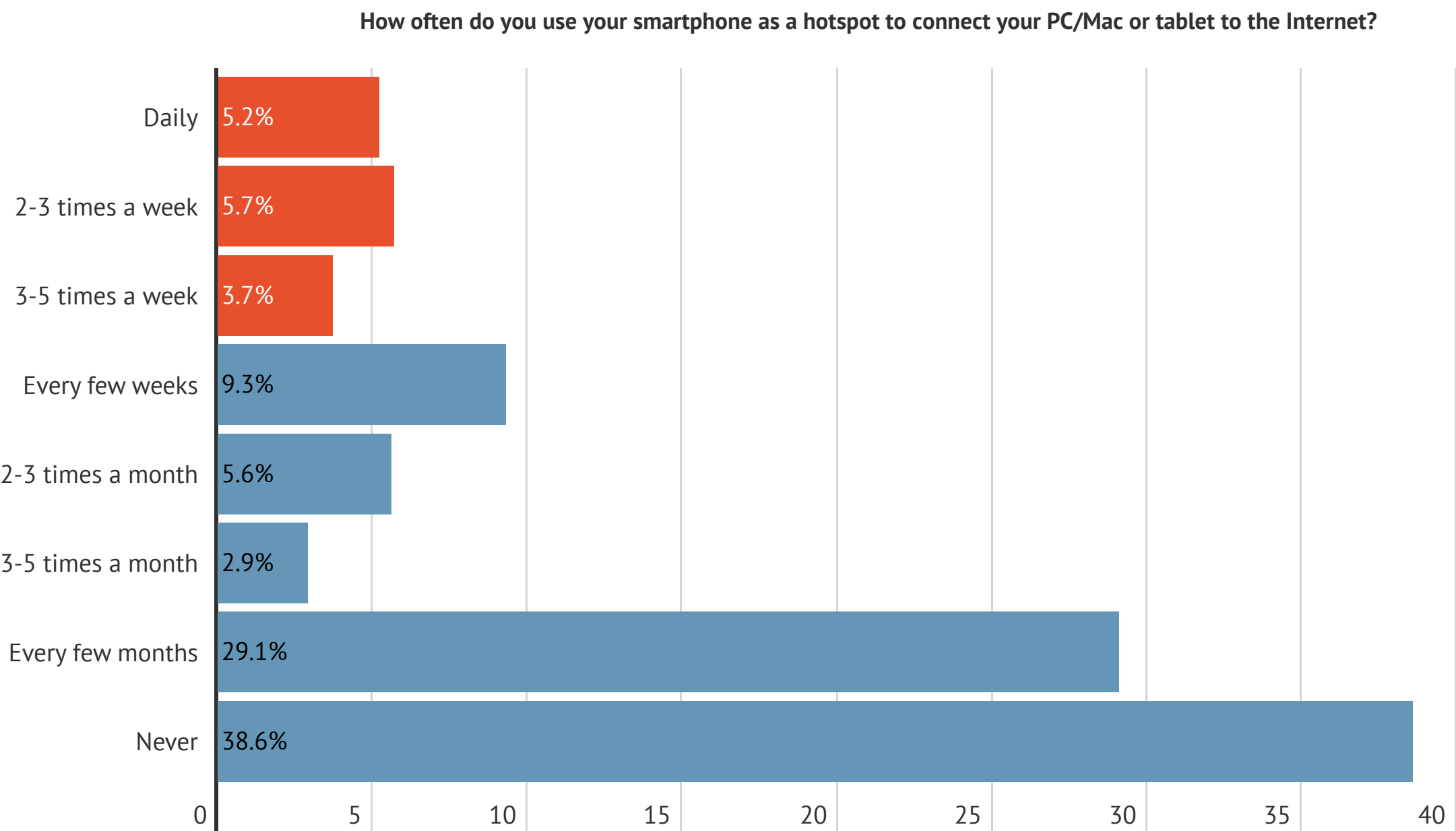
The data below highlights how these things, especially the security concerns, are barriers to free WiFi locations and further highlight the appeal of owning a laptop designed with connectivity integrated and specific security features.

**When you work from a public place to use WiFi. Which of the following statements apply to you. Pick one.**



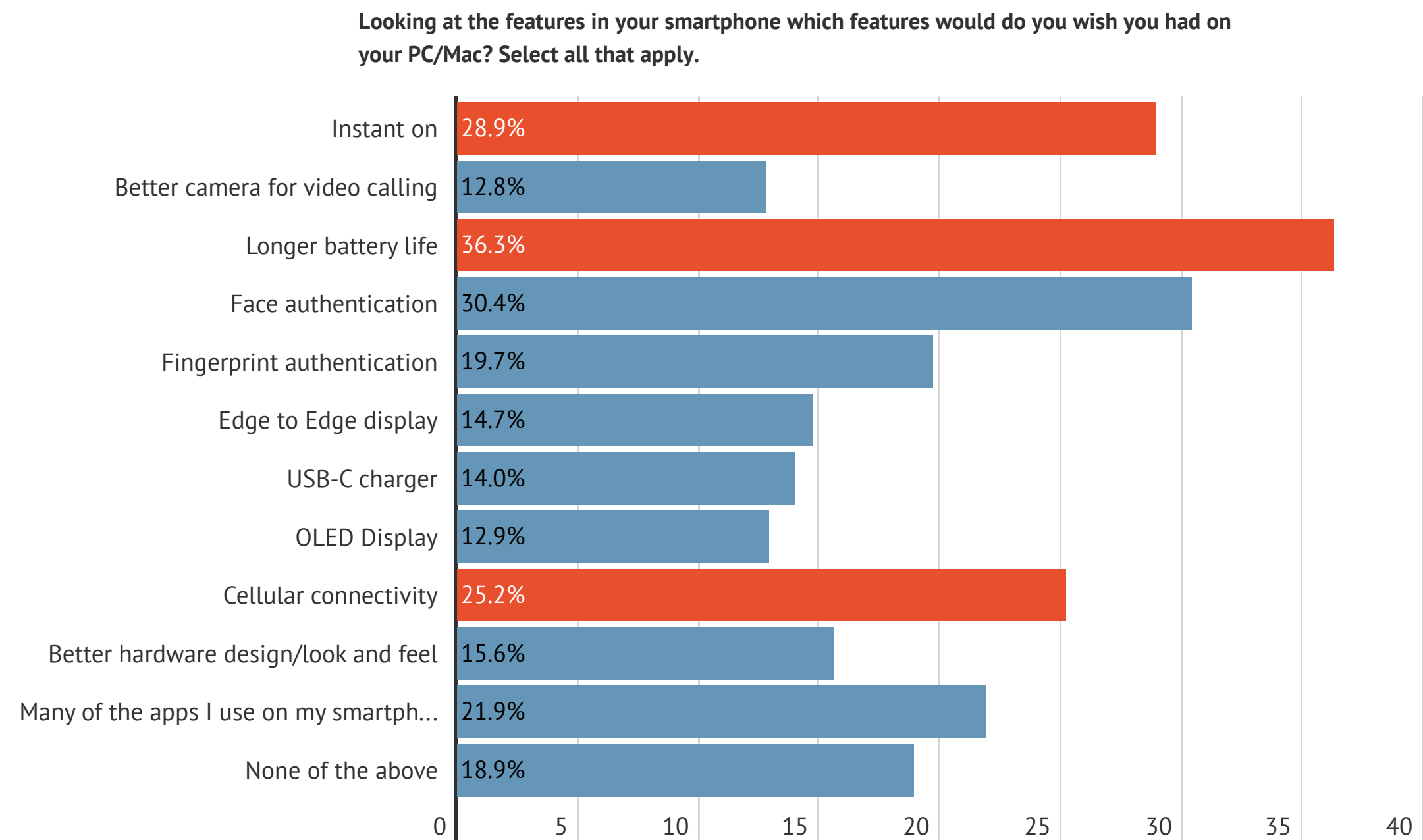| | |
|---|---|
| I am concerned about how secure the wifi connection is | 44.7% |
| I don't like having to waste time watching a commercial to get free connectivity | 7.6% |
| I don't like having to log in with Facebook or another social media account | 12.5% |
| I don't like giving my email address because I value my privacy and do not want spam | 14.4% |
| None of the above | 14.3% |

Knowing how often people need connectivity on their computer is key to knowing how often people would value new laptop form factors that focus on connectivity and long battery life. To gauge this, we asked respondents how often they use their smartphone as a hotspot.

It is important to note here, that on a weekly basis **nearly 15% of respondents** find themselves in a spot where turning their smartphone into a hotspot is their only connection option. This stat sheds more light on the market potential for new form factors created specifically for mobile consumers who need long battery life and/or connectivity.

**How often do you use your smartphone as a hotspot to connect your PC/Mac or tablet to the Internet?**

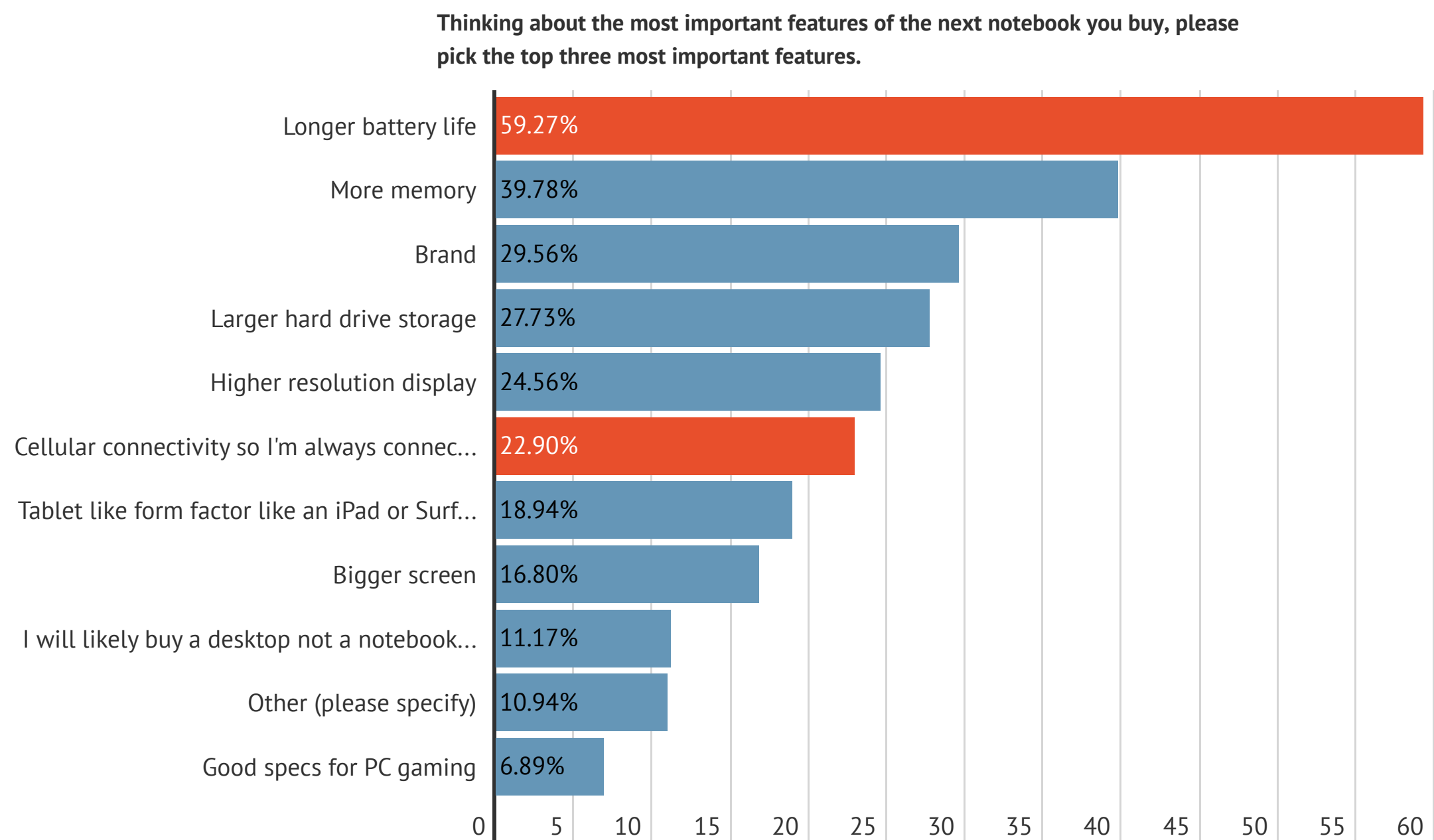| Category | Percentage |
|---|---|
| Daily | 5.2% |
| 2-3 times a week | 5.7% |
| 3-5 times a week | 3.7% |
| Every few weeks | 9.3% |
| 2-3 times a month | 5.6% |
| 3-5 times a month | 2.9% |
| Every few months | 29.1% |
| Never | 38.6% |

Smartphones' impact on the world has been profound. Over the last few years, we have noticed a distinct trend in the market where consumers become frustrated when their laptop functions in such distinctly opposite ways than their smartphone. Things like instant-on, always connected, all-day battery life are among the smartphone features consumers want on their laptops. **It is noteworthy that longer battery life remains the biggest pain point and most desired feature by the mass market.**

The influence the smartphone is having on consumers' laptop needs and desires will require new form factors, with new technologies, that focus on these specific features, rather than not a one-size-fits-all PC hardware strategy. .

**Looking at the features in your smartphone which features would do you wish you had on your PC/Mac? Select all that apply.**

| Feature | % |
|---|---|
| Instant on | 28.9% |
| Better camera for video calling | 12.8% |
| Longer battery life | 36.3% |
| Face authentication | 30.4% |
| Fingerprint authentication | 19.7% |
| Edge to Edge display | 14.7% |
| USB-C charger | 14.0% |
| OLED Display | 12.9% |
| Cellular connectivity | 25.2% |
| Better hardware design/look and feel | 15.6% |
| Many of the apps I use on my smartph... | 21.9% |
| None of the above | 18.9% |

Further looking into the features consumers want most in their next laptop, battery life again stands out as the biggest pain point in the market. This underscores the need for devices that are built with a focus on battery life and understanding that consumers are willing to make the performance trade-off in their devices for better battery life than they can get with their current computers.
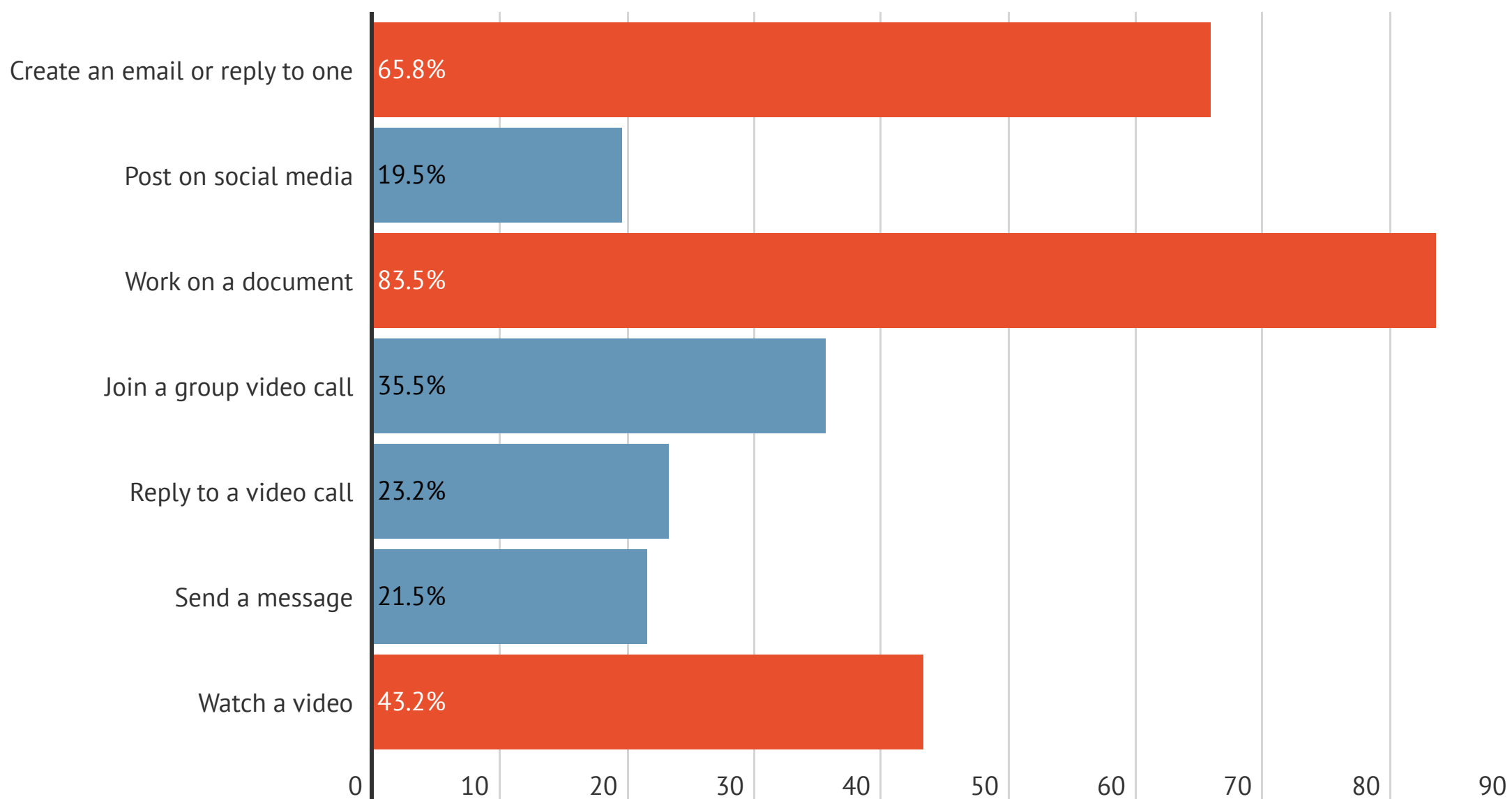
When we look at this data just by employees, or students, who indicate they move around frequently, **those wanting longer battery life jumps to 67%.** Also noteworthy here is the 23% of respondents saying they want connectivity in their next notebook. Emphasizing the size of the market's potential given previous data revealed on 6% currently have a connected laptop.

**Thinking about the most important features of the next notebook you buy, please pick the top three most important features.**

| Feature | % |
|---|---|
| Longer battery life | 59.27% |
| More memory | 39.78% |
| Brand | 29.56% |
| Larger hard drive storage | 27.73% |
| Higher resolution display | 24.56% |
| Cellular connectivity so I'm always connec... | 22.90% |
| Tablet like form factor like an iPad or Surf... | 18.94% |
| Bigger screen | 16.80% |
| I will likely buy a desktop not a notebook... | 11.17% |
| Other (please specify) | 10.94% |
| Good specs for PC gaming | 6.89% |

These are important technology trends that are influencing mobile computer and laptop design. But what about the types of applications that consumers want in instant-on, always-connected devices? In other words, if given the choice between their laptop and Smartphone, which tasks would consumers choose the laptop over their smartphone. We phrased the question this way because we know the smartphone has begun to absorb many of the common tasks of PCs, but we were curious which tasks consumers still prefer the PC. Below is how they answered.
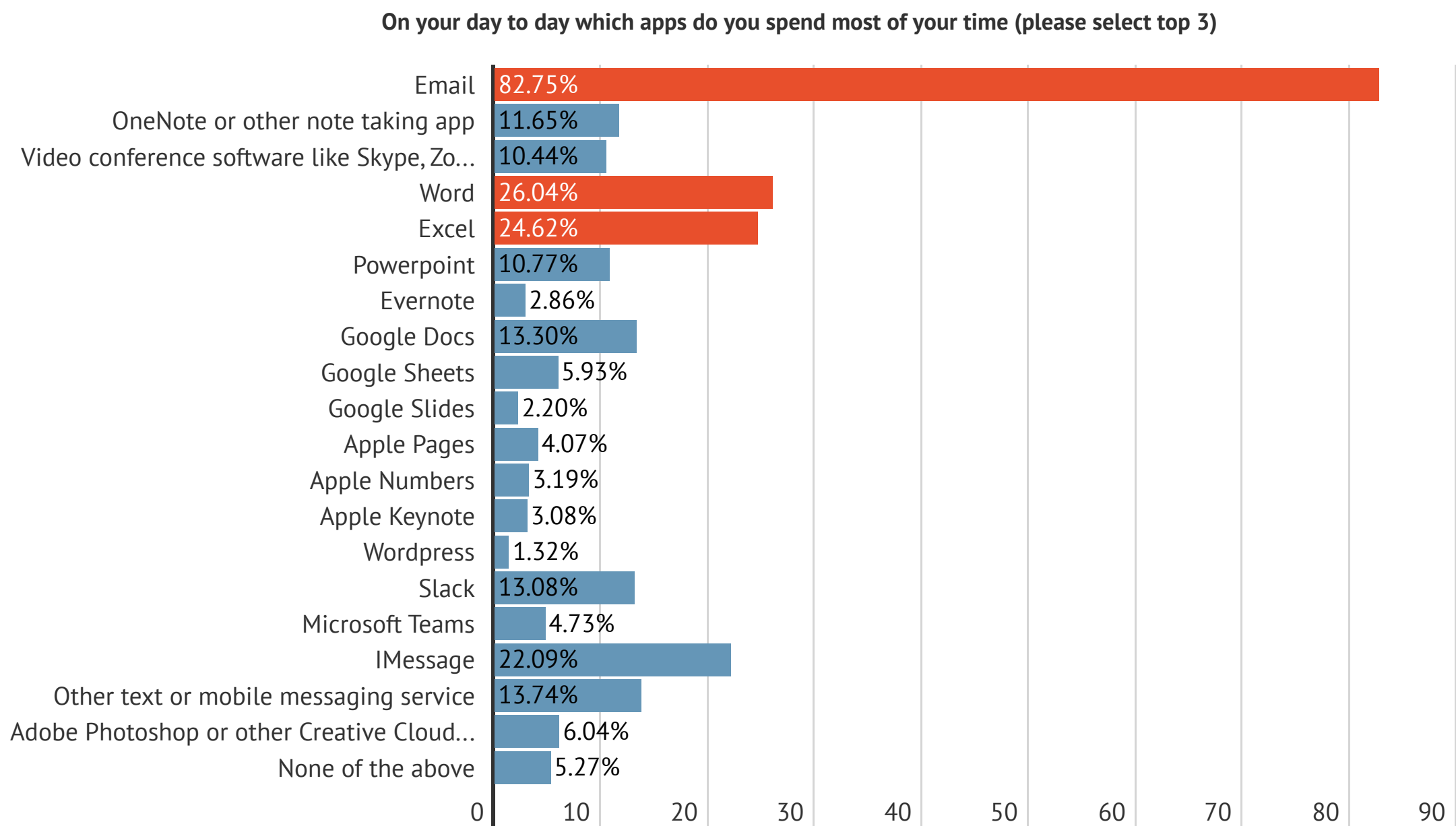
Note the PC was preferred for tasks that lend themselves to a better experience on a big screen, such as **work on a document, email, and watching video**. This is positive for big screen form factors because it demonstrates that a smartphone is not the only device people want to use.

**Both your smartphone and your Windows PC/Mac/Chromebook are lying on the desk in front of you. Which of the following tasks would you choose to do on your PC/Mac instead of your smartphone?**

| Task | Percentage |
|---|---|
| Create an email or reply to one | 65.8% |
| Post on social media | 19.5% |
| Work on a document | 83.5% |
| Join a group video call | 35.5% |
| Reply to a video call | 23.2% |
| Send a message | 21.5% |
| Watch a video | 43.2% |

In addition to those important device preferences, we wanted to understand the what applications consume the most time on a daily basis.
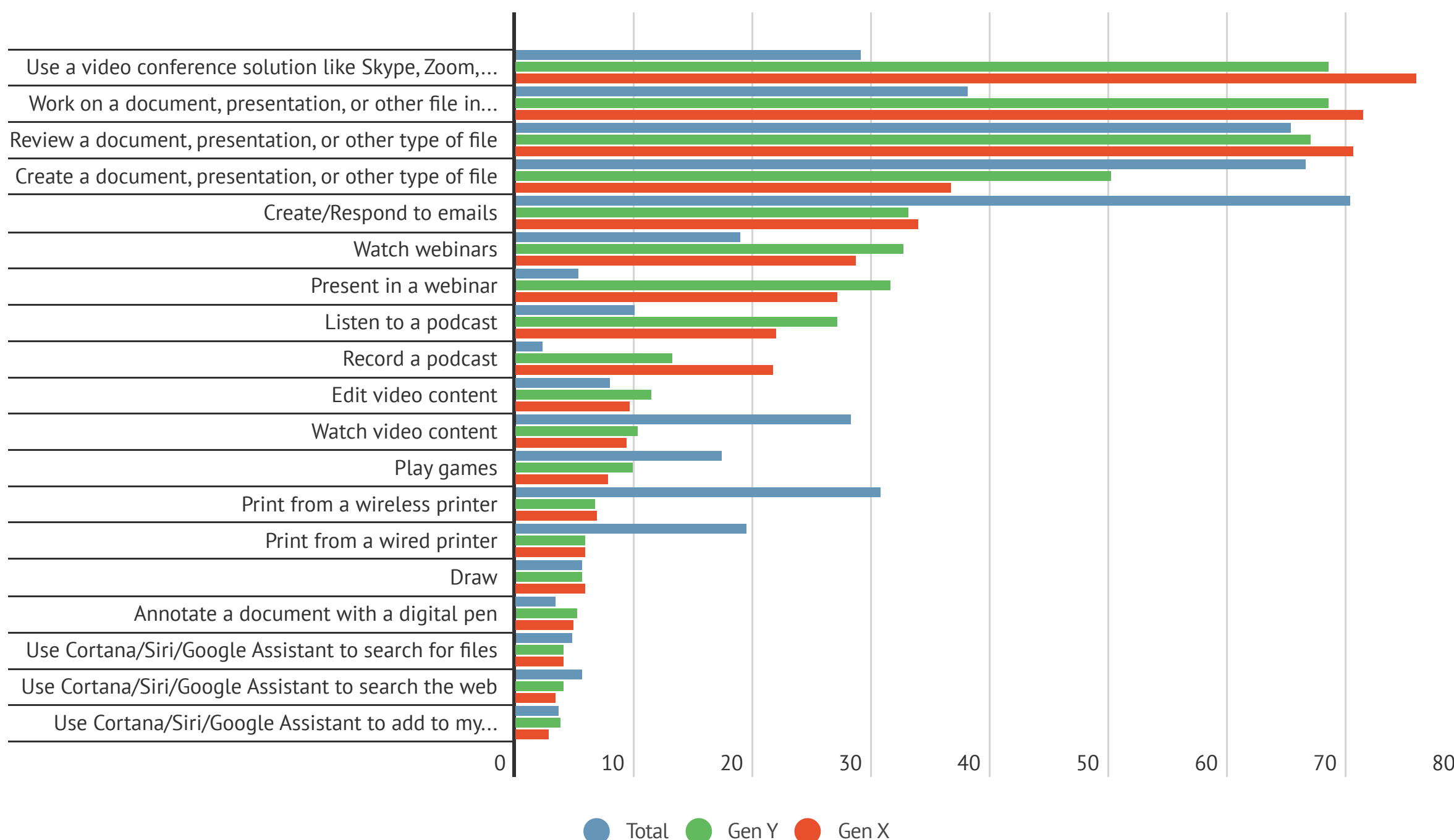
**Notice the most amount of time being spent in basic productivity and communication/collaboration software.** This highlights the fact most users don't need high-performance machines but simply a PC/Mac that is designed to fit their needs and their specific workflows.

**On your day to day which apps do you spend most of your time (please select top 3)**

| App | Percentage |
|-----|-----------|
| Email | 82.75% |
| OneNote or other note taking app | 11.65% |
| Video conference software like Skype, Zo... | 10.44% |
| Word | 26.04% |
| Excel | 24.62% |
| Powerpoint | 10.77% |
| Evernote | 2.86% |
| Google Docs | 13.30% |
| Google Sheets | 5.93% |
| Google Slides | 2.20% |
| Apple Pages | 4.07% |
| Apple Numbers | 3.19% |
| Apple Keynote | 3.08% |
| Wordpress | 1.32% |
| Slack | 13.08% |
| Microsoft Teams | 4.73% |
| IMessage | 22.09% |
| Other text or mobile messaging service | 13.74% |
| Adobe Photoshop or other Creative Cloud... | 6.04% |
| None of the above | 5.27% |

Specific to the PC/Mac form factor, the data doesn't look terribly different in terms of the categories in which people spend the most time.

**One important distinction in this chart is to look at how the younger workers use software.** A younger workforce demands hardware that is more optimized for productivity and collaboration, video conferencing specifically. Younger workers tend to move around more often and use tools which require connectivity. We think this demographic will demand features like long battery life and always-connected devices.

**Which of the below tasks do you do on a daily basis on your Windows PC/Mac/Chromebook? Select all that apply.**



Legend: ● Total  ● Gen Y  ● Gen X

Categories (top to bottom):
- Use a video conference solution like Skype, Zoom,...
- Work on a document, presentation, or other file in...
- Review a document, presentation, or other type of file
- Create a document, presentation, or other type of file
- Create/Respond to emails
- Watch webinars
- Present in a webinar
- Listen to a podcast
- Record a podcast
- Edit video content
- Watch video content
- Play games
- Print from a wireless printer
- Print from a wired printer
- Draw
- Annotate a document with a digital pen
- Use Cortana/Siri/Google Assistant to search for files
- Use Cortana/Siri/Google Assistant to search the web
- Use Cortana/Siri/Google Assistant to add to my...

## Conclusion

Change is afoot in the laptop computing segment, driven not only by technological innovation but by the features and functions that consumers have embraced on their mobile devices. Instant-on, all-day battery life and always-connected functionality that are common to smart phones are changing the nature of laptop computing designs.

As this evolves, consumers are using their laptop computers more often for the productivity and entertainment applications that they've found work best for them on their laptops. These two trends – device functionality and applications-usage trends – coming together inside laptop form factors is revitalizing and tried and true computing segment.

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