

Home Office



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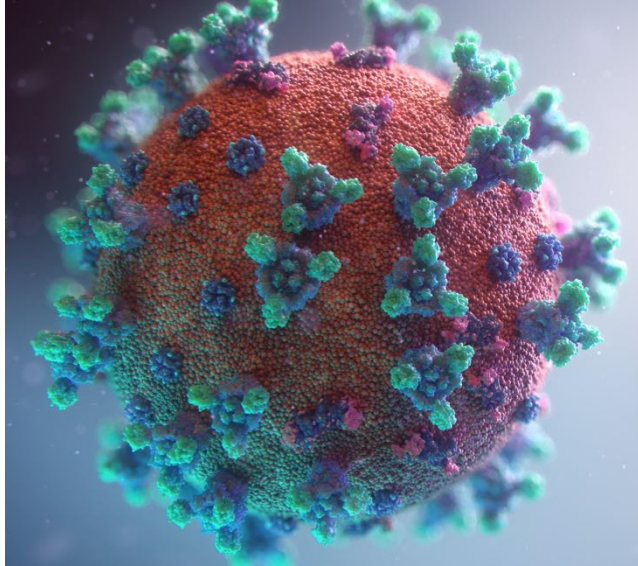
Introduction

For many Americans, home offices are the primary setting for work. Because we spend so much time in our home offices, it's important that those spaces are comfortable, ergonomic, and environmentally friendly. Distractions sometimes make the home a less desirable setting for work, but we can reduce work-flow interruptions with a few easy modifications to our home offices. Recent innovations in technology and design can also help us save quite a bit of money. Let's take a look!



Covid-19 Adaptations

As a result of the Covid-19 pandemic, remote work may be here to stay. It makes sense to begin thinking about how we might best arrange our physical spaces at home and use our digital tools to promote productivity and collaboration.



A plethora of online platforms and digital services have made it simple for teams to connect and share ideas. Digital white boards are an excellent place to emulate in-person strategy sessions, and they reduce a team's carbon footprint. Other remote work tools can maximize efficiency and minimize the impact that work has on our planet.

Besides finding effective digital tools, we can also see to our comfort and our continued health to ensure creativity and productivity. So think carefully about arranging your home office in a way that works for you, your family, and anyone who might be sharing that space.

Your office furniture can have a dramatic impact on your productivity. Finding the right chair is especially important. A bad chair can cause headaches and back pain, so be sure to select a chair optimized for your body type, especially if your work requires long periods at a desk. Variable-height desks that allow you to work while sitting or standing also improve your ability to work efficiently at home without damaging your health.

The line between work life and home life has blurred, and communication with colleagues can be tricky. Realize that folks may have unusual schedules, and try not to stress if you don't get an immediate response to an email or voicemail message. You might also clarify communication so that team members appreciate time-sensitive deadlines. Keeping detailed notes of online meetings and making them available to all can improve communication as well.

If family members are at home during a work meeting, you might want to make it clear to others in the meeting that there might be interruptions. Be patient with your family members and your coworkers. Remember that we're all in this together. If a coworker's child or pet does something distracting or inappropriate during an online meeting, share a good laugh and chalk it up to stress relief.

Online meetings are still work. Dress and act accordingly, even if you're muted and your camera is off. It is important to arrange your space prior to a meeting. Look at the space on the screen so you know what others will see. Give it the same thoughtfulness and considerations that you would in a shared office. Try to avoid meeting in a bedroom with a bed in view.



Human resources departments still have a responsibility to ensure a safe and healthy work environment for all. Digital communications with coworkers should be as professional as they are in an office setting.

Be patient because stress levels are high for everyone. If you're in a supervisory role, communicate with your team about what's working and what's not for each employee. Constantly seek feedback to maximize workflow and to promote a positive environment. If you're in a subordinate position, understand that leadership faces new obstacles as well.

Many companies are coming to understand that workers, urban centers, and the environment might be better served by reducing brick-and-mortar offices, which would reduce long commutes to increasingly expensive and crowded cities. Investing in smaller urban centers with adequate services and amenities could alleviate stressors and reduce overhead.

That said, there is value in meeting with people in a physical space. In-person workspaces promote collaboration, creativity, and a sense of belonging. Important non-verbal communication cues often go unnoticed in the digital space. Eye contact and head nodding show mutual understanding and add meaning to professional pursuits.

The more we all understand the perspectives of others, the more we improve both as employees and as members of a community. The stresses of overly competitive corporate structures sometimes hinder productivity. If we can concentrate on learning, sharing, and cooperating, we will be better able to adjust to ever-changing technology and to care for our environment.

Here are some links that provide additional tips and perspectives:

<https://flip.it/hV4eta>

<https://www.forbes.com/sites/mariamminor/2020/06/03/working-from-home-during-covid-19-time-to-fine-tune-your-home-office/?sh=19dd461b5d2e>

<https://www.mckinsey.com/business-functions/organization/our-insights/reimagining-the-office-and-work-life-after-covid-19#>

<https://www.computerworld.com/article/3545478/how-to-set-up-a-work-from-home-office-for-the-long-term.html>

<https://www.vonlanthengroup.com/en/7-tips-for-home-office-during-covid-19>

Here are some eco-friendly work-from-home product resources:

<https://www.treehugger.com/how-to-go-green-work-from-home-4857466>

<https://www.techrepublic.com/article/eco-friendly-home-office-essentials/>

<https://www.makeuseof.com/tag/eco-friendly-supplies-home-office/>

<https://www.sustainablebusinesstoolkit.com/working-from-home-sustainability/>

Telecommuting

Roughly 43% of employees worked remotely in some capacity last year, up from 39% in 2012.

<https://www.governing.com/topics/transportation-infrastructure/gov-telecommuting-impact-transportation.html>

That increase in telecommuting is a mixed blessing. While there are undeniable benefits to working from home, there are also environmental costs.

The Good

- Telecommuting promotes paperless document keeping, reducing the need to cut down trees.
- Telecommuting can decrease traffic and fossil fuel dependency, which reduces carbon emissions and pollution.
- A lack of a commute potentially decreases fuel or public transportation costs.
- Cutting the commute from a workday can also decrease daycare costs and increase quality time with the family.



<https://www.virtualvocations.com/blog/telecommuting-survival/8-environmental-benefits-of-remote-work/>

- Telecommuting can promote productivity in the workplace, depending on how you set up your work environment at home.

The Bad

- Studies show that telecommuting increases the average number of miles a household drives per day because telecommuters have to go out of their way for meetings and non-work trips, or they have more time to travel than non-telecommuters.

<https://link.springer.com/article/10.1007/s13762-014-0556-5>

- Working from home can increase energy expenses in your house (e.g., heating/cooling, water, and electronic use). Many office buildings use the same amount of energy whether people are in the office or at home. Some buildings, however, are energy efficient and have systems in place to reduce lighting and heating energy usage.

<https://www.thebalancecareers.com/what-is-telecommuting-2062113>

- Surprisingly, emails are also much less environmentally friendly than most people imagine. The following information comes from a BBC article:

[https://www.bbc.com/future/article/20200305-why-your-internet-habits-are-not-as-clean-as-you-think#:~:text=While%20many%20companies%20claim%20to,under%20200%20terawatt%20Hours%20\(TWh\)](https://www.bbc.com/future/article/20200305-why-your-internet-habits-are-not-as-clean-as-you-think#:~:text=While%20many%20companies%20claim%20to,under%20200%20terawatt%20Hours%20(TWh))

- Although the energy needed for a single internet search or email is small, approximately 4.1 billion people, or 53.6% of the global population, now use the internet. Those scraps of energy, and the associated greenhouse gases emitted with each online activity, can add up.
- According to some estimates, the carbon footprint of our gadgets, the internet, and the systems supporting them account for about 3.7% of global greenhouse emissions. It is similar to the amount produced by the airline industry globally, and these emissions are predicted to double by 2025.
- In the US, data centers are responsible for 2% of the country's electricity use, while globally they account for just under 200 terawatt Hours (TWh). According to the United Nation's International Telecommunications Union, however, this figure has flatlined in recent years, despite rising internet traffic and workloads, because of improved energy efficiency and the move to centralize data centers into giant facilities.
- In some parts of the world, data centers are still largely powered by burning fossil fuels, and it can be difficult for consumers to choose which data centers they want to use. Many of the major cloud providers, however, have pledged to cut their carbon emissions by storing photos and documents and running services off their servers where possible.
- As an individual, upgrading our equipment less often is one way of cutting the carbon footprint of our digital technology. The greenhouse gases emitted while manufacturing and transporting these devices can make

up a considerable portion of the lifetime emissions from a piece of technology. One study at the University of Edinburgh found that extending the time you use a computer and monitor from four to six years could avoid the equivalent of 190 kg of carbon emissions.

- The footprint of an email varies dramatically, from 0.3 g CO₂e for a spam email to 4 g (0.14 oz) CO₂e for a regular email and 50 g (1.7 oz) CO₂e for one with a photo or hefty attachment.
- Some people have estimated that their own emails generate 1.6 kg (3.5 lbs.) CO₂e in a single day. Researchers calculate that a typical business user creates 135 kg (298 lbs.) CO₂e from sending emails every year, the equivalent of driving 200 miles in a family car.
- If every adult in the UK sent one less “thank you” email, it could save 16,433 tons of carbon a year—the equivalent of taking 3,334 diesel cars off the road.
- According to estimates by antispam service Cleanfox, the average user receives 2,850 unwanted emails every year from subscriptions, which are responsible for 28.5 kg (63 lbs.) CO₂e.

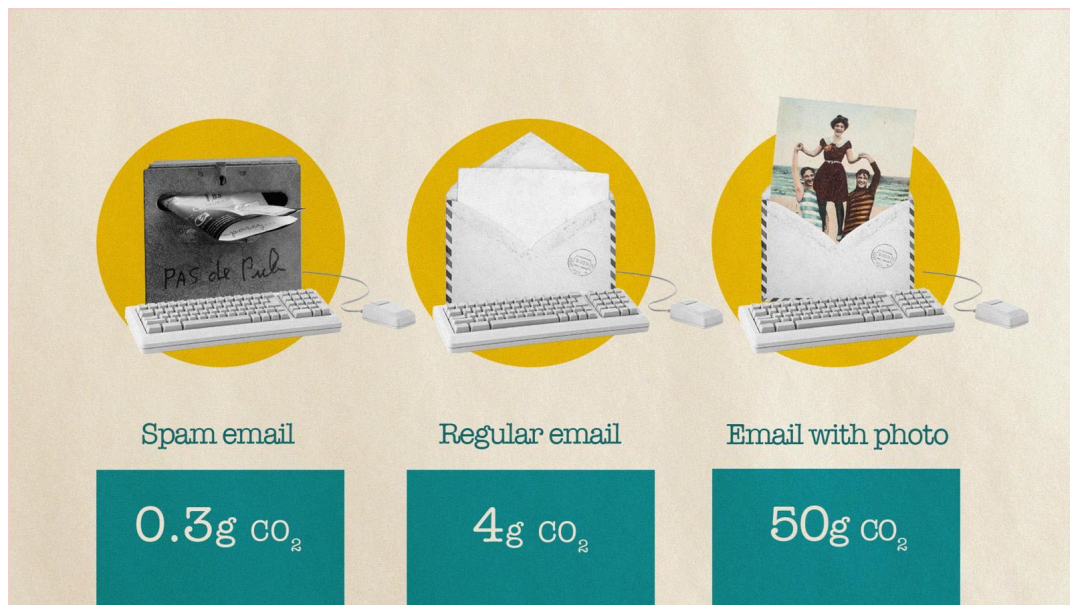


Image Credit: Getty Images/Javier Hirschfeld

Here's another interesting article about the environmental impact of text messaging:

<https://youmatter.world/en/whats-more-sustainable-an-sms-an-email-or-an-instant-message/>

Home Energy: Costs and Benefits

For many people who work from home, increased energy use during the workday translates into bigger utility bills, a greater strain on power grids, and an additional environmental impact. While you might be putting less CO₂ into the atmosphere during your daily commute, you could be creating even more greenhouse gases by heating/cooling and lighting your home during the day.

The good news is that there are many strategies to decrease your carbon footprint. Here are some of our favorites:

LED Light Bulbs

- LED light bulbs use 25% to 80% less energy than traditional incandescent bulbs . They also last around 20 times longer than traditional bulbs.
- A common 60-W light bulb can be replaced by a 35-W LED, saving around 40% of the energy.
- Fluorescent light bulb housings can also be replaced. Modern fluorescent ballasts increase energy efficiency by up to 30%.



<https://www.energy.gov/energysaver/save-electricity-and-fuel/lighting-choices-save-you-money/how-energy-efficient-light>

<https://www.energy.gov/energysaver/save-electricity-and-fuel/lighting-choices-save-you-money/replacing-lightbulbs-and>

Computer Energy

- Most people don't need to run a 600-W desktop. For basic web browsing, word processing, and spreadsheet management, a \$600 laptop is ideal, and it's cheaper than a desktop computer.

- Laptops are always more energy efficient than a full desktop. Their batteries are usually 30-W to 100-W, whereas full desktops can have power supplies greater than 1,000-W, and most of that power goes unused.
- Power supply and battery usage are directly affected by what the computer is doing at any given moment. To reduce power draw, shut down games or resource-heavy applications like Chrome and Adobe.
- Put your computer to sleep or turn it off when not in use. When in sleep mode, your (Windows) computer will still use about 10-W of power, around one-sixth to one-twelfth of the max power draw of most computers. Turning your computer off entirely will consume less energy, and startup for most modern systems is only 10 to 15 seconds.

<https://www.maketecheasier.com/reduce-pc-power-consumption/>

<https://smallbusiness.chron.com/laptop-vs-pc-power-consumption-79347.html>

Heating/ Air Conditioning:

- Active solar heating uses solar energy to heat water, which can be stored or immediately dispersed. Such systems can also be used to store energy for use by A/C systems.



<https://www.energy.gov/energysaver/home-heating-systems/active-solar-heating>

- Updating or upgrading your home's insulation can impact your climate control efficiency. Sealing air gaps and insulating roofs helps prevent energy leakages.

https://www.energy.gov/sites/prod/files/2017/10/f37/Energy_Saver_Guide-2017-en.pdf

- Using natural light, coupled with quality insulation, reduces the need for natural gas or electric heating.
- Most office windows can't open, which means that you have more passive solar and cooling options at home. You can also follow the sun by moving from area

to area at home, and fans and drafts are so much more energy efficient than air conditioning.

- Rather than heating a whole house, consider using space heaters to make a room comfortably warm.

<https://www.treehugger.com/green-architecture/how-heat-home-office-efficiently-wear-some-bloody-gloves.html>

- Radiant floor (a.k.a. in-floor) heating offers efficient heat dispersal and temperature maintenance. When the whole floor is heated, heat rises evenly, making for more balanced temperatures than in a room heated by vents in the ceiling.

<https://www.bobvila.com/articles/radiant-floorvs-forced-air-heating/>



Water

- Americans use an average of 88 gallons of water per day in the home. You can reduce your water usage by at least 20% by installing efficient fixtures and low-flow toilets.
- Letting your faucet run for five minutes while washing dishes can waste 10 gallons of water and uses enough energy to power a 60-W light bulb for 18 hours.
- Invest in WaterSense-labeled fixtures and appliances. Just replacing shower heads can reduce water bills by \$70 per year and save 2,700 gallons annually.

<https://www.epa.gov/watersense/statistics-and-facts>

Cooking

- Working at home means you are more likely to prepare your own meals. Eating from home is typically healthier, and it's around 20% cheaper than eating out. That's especially true if you reduce meat intake at home.
- Cooking at home also gives you and your family critical socializing time, which can reduce depression and other mental afflictions.



<https://sliceofkitchen.com/eating-out-vs-cooking-at-home-statistics/>

- Pressure cookers reduce cooking times, which lower energy costs.

<https://blueandgreentomorrow.com/environment/11-simple-eco-friendly-practices-can-adopt-home/>

Office Furniture and Supplies

- Using recycled/reclaimed office furniture and materials (e.g., using scrap planks as shelving) helps reduce waste. Thrift shops are a great place to find furniture that can be repurposed or refurbished.
- Traditional offices tend to use much more paper and single-use items like cups, water bottles, envelopes, and coffee filters. It's easier to go paperless while working from home (e.g., using your own glass).
- Turn recyclables into reusables. From old metal tools to wall hooks, from wine bottles to pendant lamps, many things can be repurposed to liven up your office space.
- Using scratch paper for notes is a form of recycling, and so is buying antiques.
- Knoll, a furniture manufacturer, uses 100% recycled plywood, FSC-certified veneers, and water-based adhesives.

<https://www.knoll.com/>

Other Green Solutions

- Using plants in your office space can reduce air pollutants in the room by up to 87%.

<https://www.focusboosterapp.com/blog/creating-an-environmentally-sustainable-home-office/>

- Electronics certified through the Electronic Product Environmental Assessment Tool (EPEAT) are made with less hazardous materials and are more energy efficient.

<https://www.fastcompany.com/1329816/home-business-101-10-steps-green-home-office>

- Green Field Paper Company makes beautiful, hemp-based stationery and other paper products, some of which can be planted to produce non-invasive wildflowers.

<https://www.hempoiltalk.com/hemp-toilet-paper/>

<https://www.greenfieldpaper.com/AWSCategories/p/11/Handmade-Plantable-Sheets>

<https://www.epa.gov/greeningepa/green-practices-epa>



Coping with Isolation

Social interactions are essential for maintaining mental health. Here are some ways to stay happy while reducing your carbon footprint at home:

- Discuss your work schedule with others to maintain stability and create accountability.
- Take breaks and scheduled social Zoom lunches with others.
- Establish buffer periods between work time and free time. Take 10 minutes away from your computer to walk and switch off your “work brain.”
- Check on friends and coworkers. It can be easy to become a shut-in when working from home, so interacting with peers, digitally or in person, is very important for mental health.

<https://www.nature.com/articles/d41586-020-01059-4>



Miscellaneous Resources

Here are some other great resources for anyone looking for ways to reduce your home office's carbon footprint:

<https://makespace.com/blog/posts/eco-friendly-home-office/>

<https://www.focusboosterapp.com/blog/creating-an-environmentally-sustainable-home-office/>

https://www.boredpanda.com/creative-reuse-upcycling-repurposing-ideas/?utm_source=greenbodylife&utm_medium=referral&utm_campaign=organic

<https://www.office.eco/blog/what-are-the-top-advantages-and-disadvantages-of-buying-new-or-refurbished-office-furniture>

<https://www.flexjobs.com/blog/post/eco-friendly-products-every-green-home-office-should-have/>

<https://gigaom.com/2010/07/30/green-tips-eco-friendly-office-furniture/>

<https://www.entrepreneur.com/article/327289>

<https://www.interface.com/US/en-US/about/mission>



Digital Cleanse

Most of us use technology throughout the day at work, then we come home and use it during the evenings and on weekends. The overuse of devices like phones, tablets, laptops, and televisions contributes to problems such as eye strain, back pain, poor circulation, and a host of other health concerns. More time on screens usually means less outdoor walking or hiking, which can reduce our ability to enjoy and value our natural world.



Some of the activities that we engage in on those screens are incredibly damaging to individuals and to communities at large. Social media offer many benefits to users, but they offer just as many drawbacks, if not more. We speak differently to people when we engage with them via social media than we do when we speak to them in person. Online sources of information always present themselves as factual, but they are often simply forms of propaganda meant to further an agenda. Our circles of friends and interests often limit our intellectual and emotional development because they simply parrot our beliefs back to us, lessening the need for introspection and deep thought. Although digital life can appear complex, it can be reductive and can promote unhappiness.

One effective way to cope with the overabundance of technology is to periodically abstain from screens. In other words, to preserve your mental health, consider a digital

cleanse. Sometimes a day away from your devices is all you need; other times you might need a full month. If possible, try to minimize your use of technology for a full 30 days. Studies show that a digital cleanse can offer significant benefits at home, at school, and at work.

A young person in our social circle, who had been taking piano lessons for several years, decided to take a 30-day digital cleanse. She had foresight enough to realize that she might feel bored or depressed during her cleanse, so she increased her practice time on the piano. In just a month, the girl progressed from playing simple tunes to difficult classical pieces for more advanced players. After a month, her piano teacher asked her parents when they had started paying a new piano teacher. She had improved so significantly during that month that he was convinced that someone else was instructing her.

Here's some food for thought if you're considering a digital cleanse:

https://en.wikipedia.org/wiki/Digital_detox

<https://www.yogiapproved.com/life/digital-cleanse-unplugged/>

<https://www.thelawofattraction.com/digital-detox-technology-cleanse/>

Tips for a Digital Cleanse (source: *Digital Minimalism* by Cal Newport)

Addiction: To give oneself repeatedly and compulsively, from the Latin addictus, "to award one to another as a slave."

Tech you can be addicted to:

- 24-hour news cycle
- eBay
- Etsy
- Instagram
- Netflix
- Notifications
- Online shopping
- Pinterest
- Porn
- Reddit
- TikTok

- Tinder
- Twitter
- Video games (Tetris, Candy Crush, Sudoku)
- YouTube

Questions for identifying addiction:

- What's the first thing you do when you wake up?
- What's the last thing you do before going to bed?
 - In the bathroom?
 - While you are eating?
 - When you are outside?

What makes it so addicting?

- Intermittent positive reinforcement
- Drive for social approval (e.g., social media likes and comments)

Access to the internet highlights a human tendency toward gluttony. The solution to the problem of “more” is usually less. Consider minimizing your exposure to addictive technologies to counteract unhealthy tendencies.



Digital Minimalism – “A philosophy of technology use in which you focus your online time on a small number of carefully selected and optimized activities that strongly support things you value, and then happily miss out on everything else.”

- Your time and attention are a precious resource that tech companies fight over (attention economy)
- Clutter is costly
- Intentionality is more satisfying

Digital Declutter / Cleanse

A 30-day cleanse from “optional / unnecessary / frivolous technologies” is meant to spark a permanent transformation.

Before you start your cleanse:

- Think about your values
 - Define tech rules:
 - Bans on optional tech
 - Operating procedures on critical tech (e.g., a ban on Netflix, except in a social setting)
 - Don't confuse “convenient” with “critical”
 - Set rules to eliminate compulsive checking of your critical tech (emails, messages, etc.)
 - Decide which apps/websites don't align with your values

During your cleanse:

Take time to discover or rediscover communities, people, projects, and activities that are meaningful to you. Then lose yourself in them.

After your cleanse:

Reintroduce tech with a screening process

- Does this tech align with one of my values?
- Is this tech the best way to support that value?
- Have a constrained operating procedure (e.g., it can't be on all the time)
- Low-quality, passive leisure—everything in moderation, including moderation

What can you do instead?

- Spend time in solitude, not subject to another's thoughts or input (e.g., walking or journaling)
- Engage in conversation-centric interaction
- Reconsider your relationship with leisure. And know that it's okay if your high-quality leisure is strenuous (e.g., gardening, sports)

Leisure Lessons

A digital cleanse will show you how much more free time you will have when you're not online. Here are some ways to use that extra leisure time:

- Prioritize demanding activities over passive consumption
- Craft—most people find materializing/constructing to be satisfying and proof of time well spent
- Socialization—immersive social interaction involves putting away phones so you can focus on distraction-free quality time (e.g., board games and sports). It shows respect and appreciation for the important people in your life



Acknowledgements

Thank you to all the photographers whose photos made us look so good:

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