

# RETHINK THE CART

Applying CDC COVID-19  
Consideration to Classroom  
Device Charging & Deployment



# About PowerGistics



**The Smart Alternative to the Laptop Cart  
for Chromebooks, laptops, iPads & tablets**

An IT Director knew there had to be a better classroom charging solution than the bulky messy laptop carts, but when he researched, he found nothing else on the market.

He brought his concept for an alternative to the charging cart to a local metal manufacturer in Columbus, WI in 2012. Together they collaborated to create PowerGistics Towers. Since then, PowerGistics Towers have been adopted in thousands of schools across the US, Canada, & UK. While PowerGistics' design is student centered, it also saves hours of teacher instructional time & IT staff time, making everyone's life easier.



[@PowerGistics](#)



[@PowerGistics](#)



[@PowerGistics](#)

# Table of contents

Introduction

Chapter 1: The Do's & Don'ts of Classroom Device Deployment

Chapter 2: CDC Consideration relevant to classroom devices

Chapter 3: Limit shared laptops, Chromebooks & iPads

Chapter 4: Maximize social distancing during deployment

Chapter 5: Disinfect with EPA registered products

Chapter 6: Plan for in-person, remote, & hybrid learning

Chapter 7: Since we're on the topic of rethinking carts

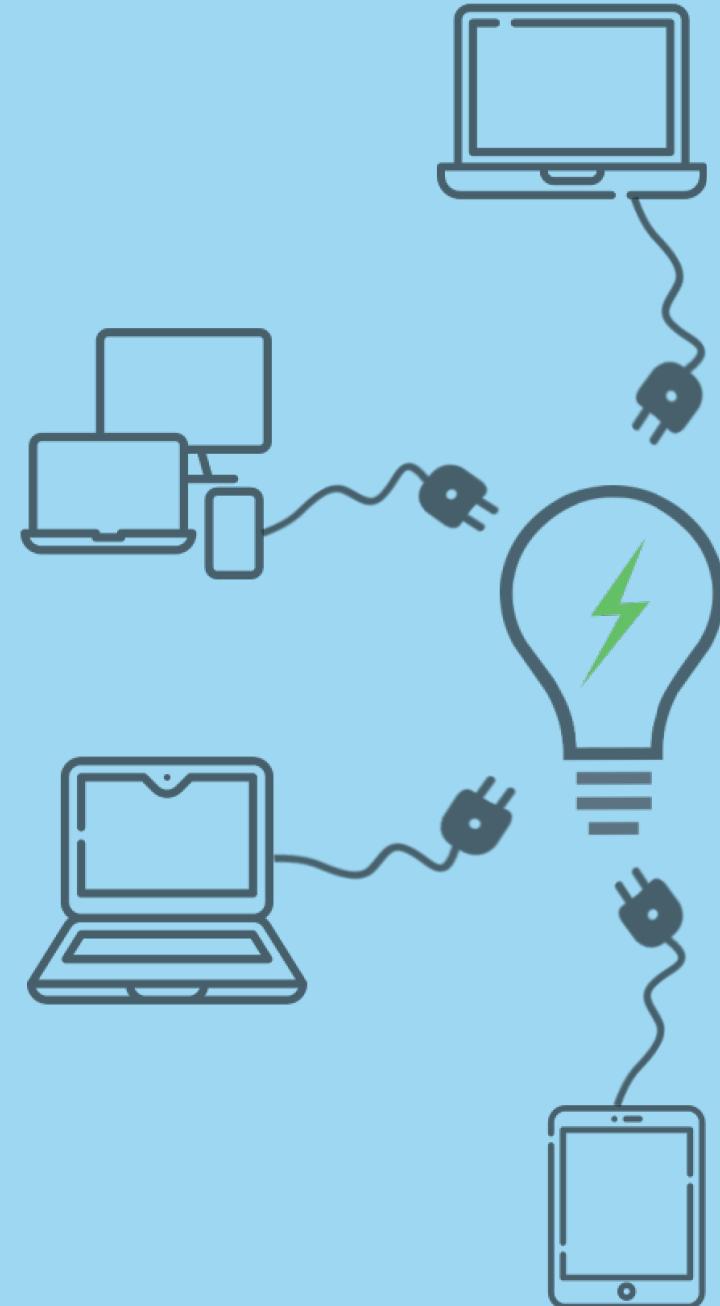
Conclusion

# Introduction

**Returning to in-class instruction during COVID-19 challenges educators to rethink all processes in the classroom.**

Traditional charging carts were an innovation when laptops first began to travel between classrooms to support student learning in the early 2000s. They were never designed to save space or permanently live in the classroom, yet they are now fairly ubiquitous in crowded classrooms as many schools reach 1:1.

Rethinking how classroom devices are charged, retrieved, and returned has never been more relevant with this invisible threat from COVID-19. To ensure the electronic devices that enable modern learning are as safe as possible, we need to innovate the classroom process for device deployment. How many people touch a device during the deployment process? How long does deployment take? How easy is it for students to social distance when they retrieve and return a device? How are shared devices cleaned between uses? This guide will explore all these questions and more.



# The Do's & Don'ts for Safe Classroom Device Deployment

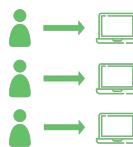
## DO



Plan social distance strategies during device deployment



Separate charging stations in the classroom when possible to avoid crowding



Individually assign students their own device and shelf/slot/bay



Consider the teacher's risk if they touch the devices



Disinfect devices & carts between different groups of students use

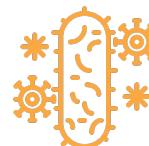
## DON'T



Don't permit students to crowd around laptop carts.



Don't send groups to retrieve their devices all at once.



Don't share charging carts between student cohorts without disinfecting first



Don't forget to consider the teacher's risk if they touch the devices

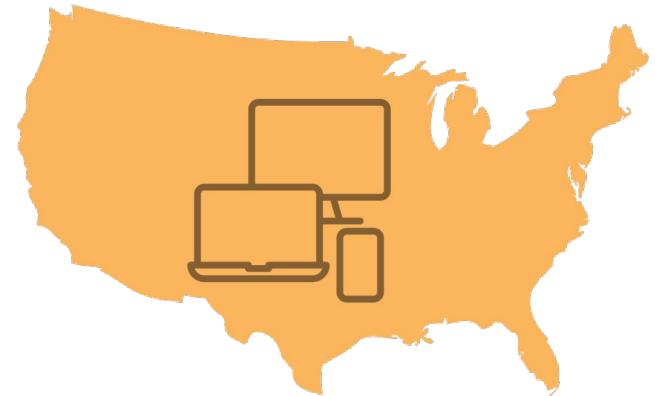


Don't underestimate the extra time a safer deployment takes with big carts

# CDC Consideration relevant to classroom devices

## Operating schools during COVID-19: CDC's Considerations

- Avoid sharing electronic devices, toys, books, and other games or learning aids. When shared objects are used, they should be cleaned between use. <sup>4</sup> - Maintaining Healthy Environments
- Cohort students to the extent practicable- dividing students and teachers into distinct groups that stay together throughout an entire school day. Limit mixing between groups such that there is minimal or no interaction between cohorts.<sup>4</sup>
- Communicate, educate, and reinforce appropriate hygiene and social distancing<sup>4</sup> practices in ways that are developmentally appropriate for students, teachers, and staff.<sup>5</sup>
- Appropriately disinfect objects and surfaces that are frequently touched by multiple people (including shared devices).<sup>3</sup> Refer to the [EPA list of registered disinfectants](#) effective against SARS-CoV-2.
- Repurpose unused or underutilized school (or community) spaces to increase classroom space and facilitate social distancing, including outside spaces, where feasible.<sup>5</sup>
- Provide disposable disinfecting wipes and other cleaning materials and conduct targeted and more frequent cleaning of frequently touched surfaces (e.g., keyboards, desks, etc.)<sup>6</sup>
- Prioritize efforts to return all students to in-person instruction. A phased-in approach or hybrid mode combining in-person instruction and remote/distance learning may be necessary at various times.<sup>2</sup>



Sources accessed 9/16/2020:

- 1.<https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/schools.html>
- 2.<https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/reopening-schools.html>
- 3.<https://www.cdc.gov/coronavirus/2019-ncov/community/reopen-guidance.html>
- 4.<https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social-distancing.html>
- 5.<https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/prepare-safe-return.html>
- 6.<https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/k-12-staff.html>
- 7.<https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/schools.html>

# Limit shared laptops, Chromebooks, & iPads

Avoid sharing electronic devices, toys, books, and other games or learning aids. When shared objects are used, they should be cleaned between use.<sup>1</sup>

Cohort students to the extent practicable- dividing students and teachers into distinct groups that stay together throughout an entire school day. Limit mixing between groups such that there is minimal or no interaction between cohorts.<sup>1</sup>

For schools that are 1:1 with in-classroom charging for electronic devices, the simplest way to implement this preventative measure is to assign each student their own device, with an assigned charging slot/shelf/bay. Ensure that the shelf is easily identifiable with very student-friendly cable management, so that students of all ages and abilities will have no trouble unplugging and plugging in the device to ensure it's charged.

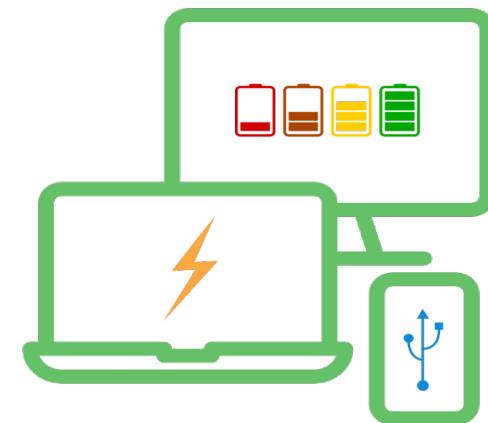
For schools that still need to share classroom sets of devices between students, assign the same device and charging shelf to a limited number of students who may use that device each day. Disinfect devices after each use with an [EPA registered disinfectant](#).

Avoid any model that allows the first come, first served approach - letting students just grab any device that's charged in a cart. Also avoid any model that has the teacher distributing and retrieving classroom devices.

Use a 100% student managed charging solution in the classroom when possible, limiting or even eliminating the need for teachers to touch the devices or charging station during device deployment.

Source accessed 9/16/2020:

1. <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/schools.html>



# Maximize social distancing during deployment

Communicate, educate, and reinforce appropriate hygiene and social distancing<sup>4</sup> practices in ways that are developmentally appropriate for students, teachers, and staff.<sup>5</sup>

Repurpose unused or underutilized school (or community) spaces to increase classroom space and facilitate social distancing, including outside spaces, where feasible.<sup>5</sup>

A common complaint about traditional laptop carts is how students crowd around them to retrieve and return their devices, creating a traffic jam in the classroom and wasting a lot of time. Sometimes students will just pile up their devices on top of the cart when they're in a hurry, leaving it to the teacher to individually return and plug in student devices. A disorganized cable management system in a cart makes it even more difficult to return devices quickly, with students often grabbing any cable, not the cable that's supposed to be designated for their device slot.

For classroom sets of devices, an organized system to prevent this kind of student traffic jam is essential, especially while we need to maximize social distancing. Design a deployment system and practice with students so it's understood by everyone. Consider housing your classroom devices in two separate charging stations in the classroom to split the herd. Consider solutions with different colored shelves that make it easy to deploy smaller groups of students.

Teachers will not be able to social distance when passing out devices, so consider a 100% student managed system where students can easily retrieve and return devices to their designated location easily.

If possible, switch to a charging solution with a small footprint that has the option for wall mounting & mobile in one solution, preventing crowding in the classroom and offering extra versatility.

Sources accessed 9/16/2020:

4.<https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social-distancing.html>

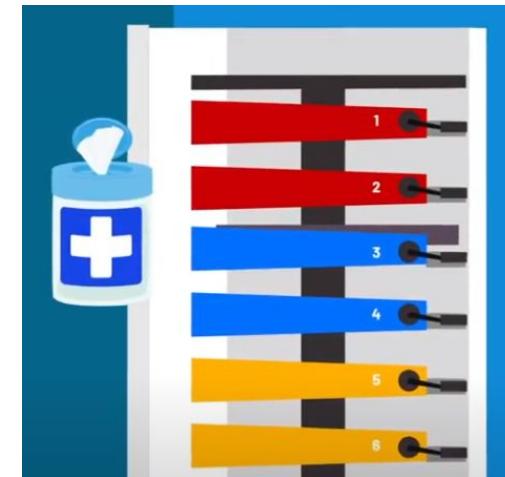
5.<https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/prepare-safe-return.html>



# Disinfect with EPA registered products

Appropriately disinfect objects and surfaces that are frequently touched by multiple people (including shared devices).<sup>3</sup> Refer to the [EPA list of registered disinfectants](#) effective against SARS-CoV-2.

Provide disposable disinfecting wipes and other cleaning materials and conduct targeted and more frequent cleaning of frequently touched surfaces (e.g., keyboards, desks, etc.).<sup>6</sup>



Shared devices will need to be disinfected between each use, especially when these devices are shared by students outside of a fixed cohort. Even individually assigned devices will need to be included in a regular cleaning schedule, though not as often as devices shared between students. Consider a charging solution that takes further steps to prevent the spread of germs, such as a silver-ion antimicrobial paint finish.

Students should not be the responsible parties for cleaning their own devices due to concerns about exposure to chemicals in disinfectants. Having a dedicated schedule for cleaning devices, along with a dedicated cleaning product attached to the charging solution is ideal.

Some schools across the county are implementing electrostatic sprayer technology to disinfect devices and other high touch items and surfaces. With a charging solution that offers an open design, these devices can be sprayed down while still securely locked. Please note that the [EPA](#) has expedited their review for adding instructions for registered antimicrobial products in conjunction with electrostatic spray technology.

Sources accessed 9/16/2020:

- 3:<https://www.cdc.gov/coronavirus/2019-ncov/community/reopen-guidance.html>
- 6:<https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/k-12-staff.html>

# Plan for in-person, remote, & hybrid learning

Prioritize efforts to return all students to in-person instruction. A phased-in approach or hybrid mode combining in-person instruction and remote/distance learning may be necessary at various times. <sup>2</sup>

Modified or hybrid schedules should prioritize children most at risk for missing school (students with special education needs...and others for whom distance learning will be most challenging).<sup>2</sup>



In-classroom charging models are often preferred by IT staff because it's cheaper. There is more control with preventing lost, stolen, and damaged devices. Classroom devices are an expensive investment for any school district, and there are many reasons why the take home model is costly. Some repairs are covered under warranty while some aren't. Power brick cables are never covered under warranty. In addition to lost, stolen, or damaged devices from at-home charging, consider what happens when the student forgets to bring their device to school at all, or forgets to bring it in charged - a classwide interruption and lost instructional time.

While it may be preferred to keep devices in the classrooms, especially for the younger kids, COVID-19 has affected this considerably. For now, the best solution for an in-person or hybrid model would be to have two sets of charging cables - one cable to have wired in the classroom charging station, and one for students to bring home for planned or sudden remote learning days. Better yet, choose an in-class charging solution that includes its own set of cables, saving your school that extra cost.

Source accessed 9/16/2020:

- 2.<https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/reopening-schools.html>
- 7.<https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/schools.html>

# Since we're on the topic of rethinking carts

## General complaints about carts from IT staff

- Wiring and rewiring classroom carts wastes time every summer, sometimes more often
- Power bricks end up disappearing
- Cables end up damaged because students tug and stretch them to fit
- Cable management is confusing for students and some devices end up not plugged in (i.e., not charged for class)
- Power bricks fall behind the shelf
- Power bricks don't fit in designated location
- Carts are big, heavy, and awkward
- Packing in so many devices vertically leads to devices overheating
- Students use one hand to drop the devices into the vertical slots, increasing drop & spine damage
- Metal doors obstruct wireless updating
- Inventory management for thousands of devices is difficult with carts since slots aren't assigned
- More than 20 devices in one cart causes circuit overloads unless there is a "smart" cycle
- "Smart" cycle charging "solutions" often cause their own set of headaches, leaving sections of the cart uncharged when a setting is wrong



## Complaints about carts from Teachers

- Carts are huge, there is no room for them in crowded classrooms
- Student's don't manage carts responsibly, making teachers the device managers
- Students don't plug in the devices correctly, ending up with devices not charged, cutting into instructional time
- The whole class of students crowd around the cart at retrieval/return times
- Carts waste teacher's time
- Carts are often an eyesore in the classroom

# Conclusion

**Deploying classroom devices business as usual with typical cart systems in the classroom is not going to work during COVID-19. It's time to innovate.**

Taking a deep look at how your current setup for classroom devices are deployed, charged, and managed in light of our public health crisis is one more step toward a safe classroom for students, teachers, and their families. Asking the right questions and utilizing thoughtful and creative solutions will create innovation in your classroom. Applying that innovation to the daily activity of student device deployment and charging in the classroom will create a smooth process that earns back lost instructional time while keeping students safe.

If you haven't guessed already, PowerGistics Charging Towers are that innovation - designed with the students, teachers, and IT staff in mind. The Towers weren't designed with a global pandemic in mind, but since it was designed thoughtfully, it already maximizes social distancing and helps prevent the spread of classroom germs. Designed by an IT director with cable organization and saving time and space in mind, PowerGistics Towers truly eliminate all the hassles of the traditional laptop charging cart.



# Contact PowerGistics



**The Smart Alternative to the Laptop Cart  
for Chromebooks, laptops, iPads & tablets**



## Meet Christine Nelson, your K-12 Engagement Manager

Hello! My role here at PowerGistics in Columbus, Wisconsin is to support school leaders before, during, and after their PowerGistics purchase. I'm happy to get you in touch with a school reference, discuss how other schools use PowerGistics, and share best practices for a successful implementation. Contact me today for a phone visit, I'm excited to learn about your school's technology goals!



[christine.n@powergistics.com](mailto:christine.n@powergistics.com)



608.729.7486



[@PowerGistics](https://twitter.com/@PowerGistics)