Your Guide to Creating a **Contactless Campus**

A step-by-step guide to implementing contactless commerce and credentials on campus.

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Introduction

Completing your contactless campus transition is closer than you think.

Colleges and universities around the world are facing a new challenge: resuming classes while managing the safety of everyone on campus during a global pandemic. Davidson College is tracking schools' reopening plans — which range from classes fully in person to fully online — on its College Crisis Initiative website. The variety of solutions under consideration allude to the complexity schools face in balancing social distancing with the new thinking, tools, and technologies required to safely conduct business.

The good news is the transition to contactless commerce and credentials is completely manageable for all schools and in many cases already under way. By breaking the process down into **three simple steps — enabling Near Field Communication (NFC) technology, adding mobile capabilities, and switching to cloud-based administration —** schools can identify the resources they already have and successfully develop a plan and budget to acquire those they still need.

Within each transitional step, this guide provides context and details that explain the new tools and technologies schools may encounter. It concludes with a helpful checklist to help schools identify specific processes they want to learn more about and tools they may want to implement.

As always, TouchNet's subject matter experts are available to recommend additional resources, answer questions, and help schools develop tailored plans to successfully implement contactless technologies on campus. Together we can continue to make higher education safer and smarter.

Higher Education Pandemic Transition Resources

The links below can help schools evaluate and track reopening trends worldwide.

The **Center for Disease Control and Prevention** (CDC) website includes a page devoted to pandemic-related guidance and tools to help schools keep employees and students safe.

The **College Crisis Initiative** (C2i), created by Davidson College is a searchable resource that tracks factors including size, location, peer networks, urbanicity, athletics, and other variables as they relate to school reopenings.

The **Chronicle of Higher Education** delivers C2i and other data in a variety of formats, including an at-a-glance comparison chart of schools by name and current reopening plan.

Step One —
Embrace NFC Technologies

Contactless **Payments**

NFC is a communications technology that enables frictionless or contactless EMV (Europay, MasterCard and Visa) payments. Such payments are made with both contact and contactless chip cards, or with mobile devices that emulate contactless chip cards. Worldwide, contactless payments have steadily increased since the early 2000s, including a sizable 40 percent increase in tap-to-pay and mobile pay during Q1 of 2020, which coincided with the arrival of the coronavirus pandemic.

Schools with updated point of sale (POS) terminals and equipment to accept EMV payments already have NFC in place; system administrators can reach out to TouchNet Customer Care to verify whether NFC is enabled.

Contactless **Access**

On the credentials side, NFC enables the technologies behind school IDs that provide permission-based access to classrooms, campus building, labs, residences, transportation, and more. While mobile access isn't yet as prevalent as its payment counterpart, ease of use and familiarity among student populations engender its adoption and usage when available.

In addition to the security advantages of moving away from traditional magstripe IDs, contactless IDs produce smart data every time they're used, giving schools greater visibility into student activity on campus. The value of those insights — paired with the improved student experience — will spark even more utilization of wireless technologies as they emerge.

NFC is also integral in operating physical locks, door readers, and access control for managing entire campuses from a single location. Credential systems that offer master security functionality enable schools to quickly open and close single buildings or entire campuses in emergencies. While pairing the right hardware and interface system requires planning and budgeting, TouchNet can share knowledge acquired by helping other schools as well as best practices and processes to help schools develop a phased approach to creating contactless campuses.

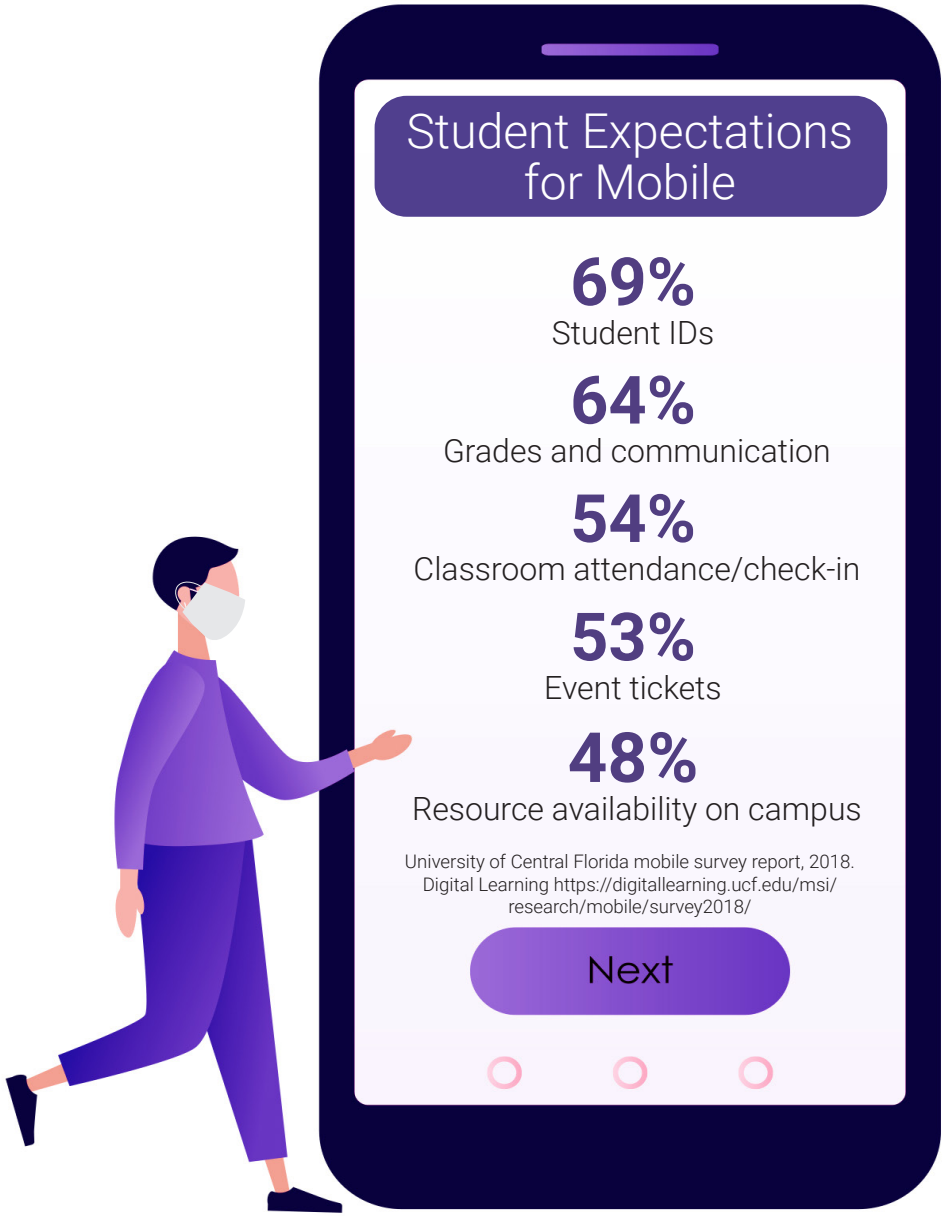
Emerging **Solutions**

TouchNet and its technology partners offer a variety of NFC-capable new apps and tools to complement schools' efforts to deliver a wide range of contactless services, including:

- **Biometric-Based Access**
  Access methods including fingerprints, retina scans, facial recognition, and/or voice recognition are in the works.
- **Virtual Queueing**
  A wide variety of tools are available to reduce foot traffic and limit in-person contact by enabling advanced check-in to the business office, library, dining halls, and other campus buildings.
- **Virtual Check-Ins**
  Check-ins for remote classes and tests and order-ahead apps for touchless in-person pick-up at bookstores, dining, health centers, and other campus services and activities.
- **Robot Delivery**
  These complete contactless transactions by executing deliveries via robots.
- **Campus Mailbox Readers**
  Customized and out-of-the-box versions of these readers facilitate contactless access and pick up.

Step Two –
Add Mobile Options

With NFC in place, schools can transition everything from campuswide payments, building access, and student IDs to mobile devices. Today's students are digital natives who expect the portability and on-demand aspects of mobile apps, and these solutions are inherently more secure thanks to their access to tokenization, the process that substitutes unique, randomly generated numbers for real account numbers.



Mobile **Payments**

While traditional physical payment methods such as cash, checks, and magstripe cards have been steadily declining in recent years, the popularity of new contactless methods has accelerated due to health and safety concerns.

Alternative Payment Methods (APMs)

Non-traditional payments via mobile apps from Alipay™ to Zelle™ were already growing in popularity prior to COVID-19. Flexibility, ease-of-use, and the ability to send and receive money without bank visits have boosted the use of APMs as safety-conscious consumers flock to contactless payments.

Students are also consumers, and their cultural preferences play a role in specific APM usage. By educating themselves about demographic and cultural preferences, schools can focus on the solutions that best accommodate their student body. By continuously observing payment trends, schools can be ready to add new methods as they spring up in the ever-evolving APM landscape.

Unlike some solutions whose relevance will wane once work and life resume at pre-coronavirus levels, APM adoption rates are unlikely to slow now that more people are comfortable with digital payment apps and used to the security and convenience they provide. Just as businesses that quickly converted to digital ordering and "by online, pick up in store" models will continue to fare better than those with only a brick-and-mortar presence, institutions that take intentional steps to broaden their APM acceptance capabilities will benefit long after social distancing requirements subside.

Digital Wallets

Technically an APM subset, digital wallet platforms use tokenization to protect data. Secure and cost-effective, tokenization also plays a role in PCI compliance by reducing PCI-DSS scope. The technology alone doesn't guarantee compliance, but schools that accept card payments need to store, process, and transmit data securely to be PCI compliant. Tokenization simplifies that process by reducing scope, which diminishes the risk of data breaches.

Easy to use and fund, wallet-based solutions are poised to overtake credit cards as our preferred payment method in the U.S. by 2021.

Mobile **Credentials**

NFC-enabled technology is newer in the student ID realm. But thanks to ease of use and the newfound emphasis on contactless experiences, the adoption rate of tap-and-go credentials for class check-ins, dorm access, paying at laundry facilities, redeeming meal plans, and other activities is likely to accelerate even more from both card and mobile devices. Even ID photos are easier with mobile technology since students can take a selfie that can be approved digitally by the card office. The frictionless aspect of these various transactions promote adoption and usage, which creates data, which in turn gives schools greater visibility into student activity on campus.

Contrary to common concerns, mobile IDs are actually more secure than physical cards. ID security is built into smartphones, since mobile credentials lie behind numerical lock codes or biometric security features such as face or fingerprint recognition. Mobile credentials can also work even when smartphones lose battery power if they're equipped with power reserve mode.

In addition, modern credential protocols are less susceptible to being hacked or duplicated, and many phones can be configured to prevent students from being locked out. Features like these should convince schools to investigate incorporating mobile technology into their overall credentialing and access approach.

Mobile **Access**

Swiping cards for building access has been around for decades. Thanks to NFC, students can now use their smartphones to utilize tap-and-go access. Adopting this technology requires new equipment and can take time to complete. These realities make planning and budgeting important factors for schools that want to upgrade their access hardware to mobile capabilities. Schools can facilitate the switch to contactless access by designating a campus advocate who understands the requirements and can clearly articulate the health and safety benefits that come with the technology.

Mobile **Technologies**

Combining functionality, service, and payments, mobile technologies merge to power a variety of functions, including:

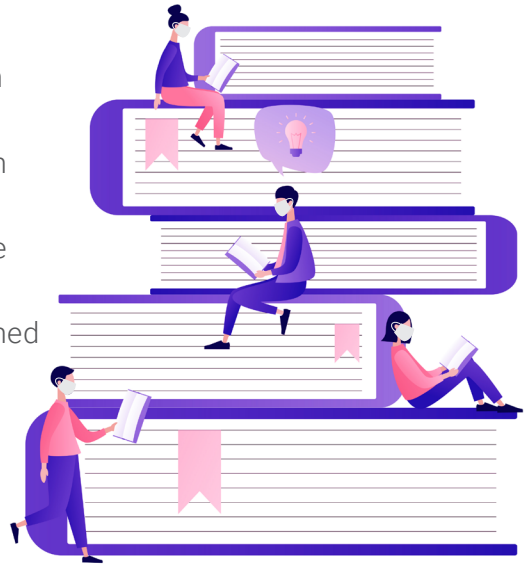
Order Ahead

For any campus entity that sells goods — restaurants, bookstores, clubs — order ahead solutions can enable can enable contactless transactions. For example, on-campus events can allow students to save a place in line via virtual queuing and enter the event with a ticket paid for online, making it the attendance equivalent to ordering ahead. With the ticket in their virtual wallet or available via a QR code received by email, students can have a completely contactless experience as they purchase, pay, and enter an event.

Contactless Dining

One big concern on campuses planning to resume classes is managing dining halls that typically see a lot of traffic throughout the day. Schools can acquire their own dining app or use a solution like TouchNet OneCard to tap into a variety of dining options:

- Even if dining halls were previously first come, first served, apps can introduce reservations to control capacity.
- For those who order ahead, dining apps can send texts when orders are ready for pick up to help maintain social distancing.
- Delivery options put school-based food service on equal footing with commercial restaurants while also helping to maintain social distancing.
- Apps can employ geotargeting to manage crowd control by redirecting nearby students to other eating options, or boost attendance with text inviting students to stop by for daily specials or to take advantage of fast service due to current low head counts.
- For schools that plan to stagger dining hall attendance, apps can help schools divide lists into manageable sections and alert each section with timed text reminders.



Contactless Refund Options

Just as NFC makes digital payments more secure, new faster, safer, digital options are emerging to distribute student refunds. Traditional refund methods such as paper checks are time consuming, costly, and labor intensive. ACH is confusing to students, most of whom are paid via direct deposit and rely on mobile apps, not checks, to do their banking.

- Unlike paper checks and ACH, new contactless methods such as Original Credit Transactions (OCT) and digital checks deliver refunds faster and at a fraction of the cost. For example, OCT transactions instantaneously push funds in real time to students' debit cards and typically cost $1 or less, compared to the average $6 for paper checks. Students are also familiar with OCT due to apps they use on a daily basis such as Venmo and Zelle, making this frictionless method a more user-friendly option for its intended audience.
- Another new refund method, digital checks eliminate the stamps, printing costs, and wait time associated with paper checks because they're distributed via email. A student can print the check and deposit it at the bank or via their banking app for a completely contactless experience.

With more than $121 billion dollars in refunds distributed to students annually, adopting these NACHA- and user-friendly refund methods that reduce overhead and put money in students' hands faster can benefit schools and students alike.

Beacon Signals

Another mobile solution with multiple campus uses is beacon technology. Using wireless low-energy wireless transmitters, beacons send signals to other nearby Bluetooth-enabled devices, including smartphones. Nearby smartphones pick up the beacon's signal and unique ID, then the beacon carries out its programmed function, enabling location-based tools and functionality.

- ### Class Check-ins
  Students' smartphones can interact with beacons to confirm attendance. By knowing which students attend class, schools also have an important piece of data required for contact tracing if an illness breaks out on campus.

- ### Event Attendance
  Similar to class check-ins, beacons can help schools monitor attendance and cap attendance at predetermined numbers, or provide attendance numbers to gauge the effectiveness of promotional marketing.

- ### Geofencing
  Because beacons can identify nearby students via their smartphones, those in proximity to the dining hall could receive a text with the daily special or an alert when a scheduled bus will arrive late. Geofencing could also have contact tracing implications at schools with multiple campuses or residence halls where the likelihood of illnesses are pinpointed to a specific location.

- ### Wayfinding
  A great tool for incoming freshmen or visitors, beacons can help people unfamiliar with campus find specific buildings or events and reduce the number of people who find themselves lost on campus.

Transit

- ### Transit
  Taking advantage of SMS technology, campus transit can alert students to schedule delays. In the social distancing era, such texts can also alert students to procedure changes, e.g. wait for the bus at a different location.

- ### Location Intelligence
  By enabling schools to identify where students are, mobile technologies can improve transit options by sending additional shuttles for large crowds or by directing students to a different stop when the number of passengers exceeds the maximum dictated by social distancing.

Step Three — Move to Cloud-Based Administration

TouchNet's web-based platform automatically lends itself to remote access. Many schools have already taken advantage of this flexibility to help them manage campus shutdowns, issue student refunds, help students who have to remain on campus access dining, and more.

Whether your institution plans to completely reopen campus or is moving forward with a hybrid solution of online and in-person classes, TouchNet's integrated solutions can help you provide great student experiences, data security and PCI compliance, and above all, a secure and safe environment where students can focus on learning.

Business Office

Business office cashiers taking payments over the phone have PCI implications due to the way data is handled. TouchNet's mobile payment platform enables administrators to see the same screen as students and walk them through accessing their account, entering their card number, and completing payments, all of which keeps data integrity intact.

PCI Compliance and Security

The built-in security of tokenization utilized by smartphones also offers compliance advantages, because no actual card information is stored on the phone. According to the Payment Card Industry Data Security Standard (PCI DSS), tokenization is one of the most effective ways to minimize the scope of your PCI compliance.

Mobile technology can also play a role in multifactor authentication, which provides an additional layer of security by requiring account holders to not only provide their account password but also verify their identity with a one-time code sent to their mobile device via SMS.

Credential and ID Administration

Previously we mentioned that smartphone selfies can make ID pictures a contactless experience on the students' end. From an administration perspective, mobile credentials can eliminate the expense of maintaining the equipment and supplies to generate physical IDs as well as the time involved to create them. Some schools are also relying on mobile technology to acquire government-issued documents for ID verification by accepting images of those electronically captured and disseminated documents taken and sent via smartphones .

Campus Access

Some credentialing systems, such as OneCard Master Security, give schools real-time information and remote access to lock down single buildings, individual campuses, or entire systems in emergency situations. Administrators retain control even in off-line situations, and door controllers automatically store lists of authorized persons who access rooms or buildings, time of entry, and denied access attempts.

Permission-based Groups, another OneCard feature, only allow students, faculty, staff, and registered guests assigned access to enter residence halls, classrooms, labs, and other secure areas using their OneCard contactless credential.

Campus Commerce

TouchNet's Marketplace solution allows administrative offices, campus clubs, departments, and merchants to conduct completely contactless business. Virtual storefronts allow shoppers to view products, compare prices, and check availability. Online payments are contactless and can be designated separately from academic expenses to avoid unexpected charges to student accounts. The administrative aspects of merchandise pick-up and delivery can also be managed to minimize contact and unnecessary foot traffic.

Data Management

Students create data every time they use their credentials to enter a building, use the gym, hop a bus to another campus, etc. That data can be used to create an accurate picture of which parts of campus are heavily trafficked, which resources are used, where additional transportation is needed, and more.

Using this data, schools can improve planning and budgeting because they have more accurate numbers than simple estimates produce. Smart data also takes the guesswork out of social distancing efforts, attendance trends, and other administrative responsibilities that depend on accurate numbers.

Partner Ecosystems

TouchNet Ready Partners program incorporates functionality from a full range of campus service providers that help manage printing, laundry, dining, housing, parking, transit, and more. Because the services are integrated and accessed through an app, they're easy to use and help students manage daily tasks so they can stay focused on learning. For schools, these contactless experiences enable them to conduct business while maximizing the health and safety of everyone on campus.

Step Four — Take Action

We hope this guide informs your institution's discussion about how to safely continue educating students on and off campus. By exploring the transition to mobile in easy steps, we hope we made it easier to plan and budget for changes that will best serve your students, faculty, and everyone who spends time on your campus.

To discuss any of the tools or technologies discussed in this guide, we've included a checklist to help you identify specific areas of interest. TouchNet subject matter experts are available to answer any questions you may have. Just complete our contact us form and a representative will be in touch to tell you more about items you've checked or other questions you may have about transitioning to a contactless campus.

Contactless Components At a Glance

Use this checklist to identify elements that are essential to your evolving contactless campus strategy.

- ☐ Embrace NFC
- ☐ Payment methods
- ☐ Student credential/ID
- ☐ Hardware assessment
- ☐ Virtual queuing & check-ins
- ☐ Delivery & pick-up options
- ☐ Mobile options
- ☐ Payments
- ☐ APMs
- ☐ Digital wallets
- ☐ Virtual credentials
- ☐ Access
- ☐ Tech/Apps
- ☐ Order ahead
- ☐ Contactless dining
- ☐ Contactless refunds
- ☐ OCT
- ☐ Digital checks
- ☐ Beacon signals
- ☐ Class check-ins
- ☐ Event attendance
- ☐ Geofencing
- ☐ Wayfinding
- ☐ Transit
- ☐ SMS alerts
- ☐ Location intelligence
- ☐ Cloud-based administration
- ☐ Business office
- ☐ Credentials and IDs
- ☐ Campus access & security
- ☐ Campus commerce reconciliation
- ☐ PCI compliance
- ☐ Data management
- ☐ Partner ecosystem

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