

Transform the
ON-CAMPUS EXPERIENCE

TECHNOLOGY • PRODUCTS • IDEAS

An Essential Guide to Improve
Campus-Wide Queue Management,
Safety, and Crowd Control

INTRODUCTION

Colleges and universities compete to attract and retain best-fit students by providing the programs, faculty, and amenities that students are looking for. At the same time, rising costs and increasingly complex security threats require campuses to maximize operational efficiencies and better ensure campus safety.

Whether you're looking to establish a good first impression with prospective students, create a welcoming environment for visitors, or your aim is to retain good students throughout the educational tenure, details matter. The experience matters. How can you create a positive campus experience with processes and solutions that enhance safety, control, efficiency, and student satisfaction? This guide aims to provide some answers.

We created this guide for campus leaders, managers, operators, and safety professionals to shine a light on some of the 'behind the scenes' details of the campus experience. Managing queues, controlling crowds, enhancing safety, and maintaining facilities are all things students don't want to think about. But when these elements of the campus life are poorly-managed, the outcomes of long wait times, unruly crowds, unsafe situations, and unkept facilities lead to dissatisfaction, negative word of mouth, and even dangerous environments.

It's not just students who benefit from the strategies presented in this guide. Visitors, benefactors, faculty, and staff alike will benefit from a campus that is more orderly, efficient, safe, and easier to navigate.

In this guide you'll discover:



INSIGHTS

Key ways to impact the student experience across the college or university environment.



INFORMATION

How to better manage queues, crowds, facilities, and overall university operations.



SOLUTIONS

Strategies to optimize student satisfaction, safety, and operational efficiency.



8 WAYS TO TRANSFORM THE UNIVERSITY CAMPUS EXPERIENCE

In our experience working with higher education and organizations across a wide spectrum of industries, some truths prevail about what it takes to deliver safe, organized, and controlled environments. Transforming the campus environment takes the right combination of technology, products, and ideas that give students a better experience and empower staff to become more efficient in their service delivery. Colleges and universities who succeed with the details of providing a great experience can win the preference of students, faculty, staff, visitors, and benefactors alike.

Here are 8 truths that can help transform your college or university campus environment.



1. Optimize service efficiency and reduce wait times for students.



Students and campus visitors are no strangers to waiting in line. Queues are prevalent in places like health centers, financial aid offices, bookstores, and football games. But when you're thinking about the campus experience, it's important to consider research that shows individuals who find the waiting time "unacceptable" have a significantly lower mood and perceive the service as being of lower quality.¹

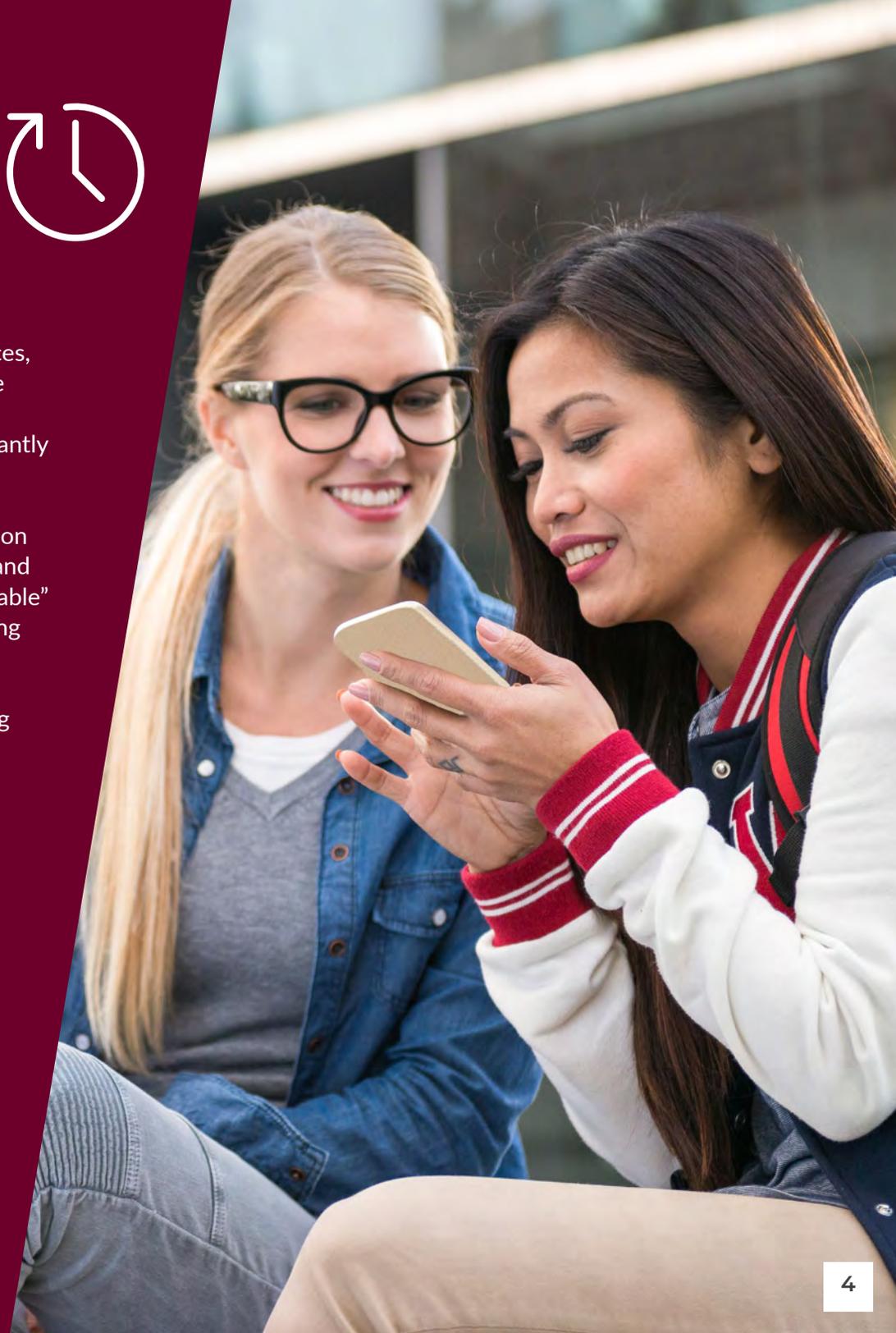
This relationship between unacceptable wait times and dissatisfaction is something you can influence when you have the right strategies and solutions in place. Keep in mind that what constitutes an "unacceptable" wait time is driven by reality and perception. It's both about how long the wait feels and how long it actually is.

As a manager, you can help control *perceived* wait times by following some core tenets of queuing², including keeping individuals entertained, empowering individuals to pre-book their place in line ahead of arrival, and even replacing a physical waiting line with a virtual one where students can wait in a more relaxed environment for their turn to be served.

In terms of managing *actual* wait times, more and more businesses and campus services are turning to technology to both predict when lines will become too long and to alert managers in real time when unexpected fluctuations occur so staffing can be adjusted accordingly.

¹ Jean-Charles Chebat, Pierre Filiatrault, (1993) "The Impact of Waiting in Line on Consumers", *International Journal of Bank Marketing*, Vol. 11 Issue: 2, pp.35-40, <https://doi.org>

² Lavi Industries, (2013) "6 Tenets of Queuing [Infographic]", <https://www.lavi.com/en/resources-detail/6-queuing-infographic>



CONSIDER THESE SOLUTIONS



 TECHNOLOGY

Electronic Queuing

In a waiting line, electronic “call forward” queuing systems can help increase the throughput of waiting students and decrease average wait times by spreading the workload more evenly across service staff, and minimizing confusion about where to find an open service point.

Systems use digital signage and station lights to streamline the way customers are called forward. Audio and visual messaging, triggered through wireless remotes at each service point, instantly alert the next customer in line. Auto-controlled station lights then guide customers to the next available service station.

Consider installing electronic queuing systems in the bookstore checkout line or stadium store to optimize efficiency in those often crowded lines.

[Explore Electronic Queuing >](#)



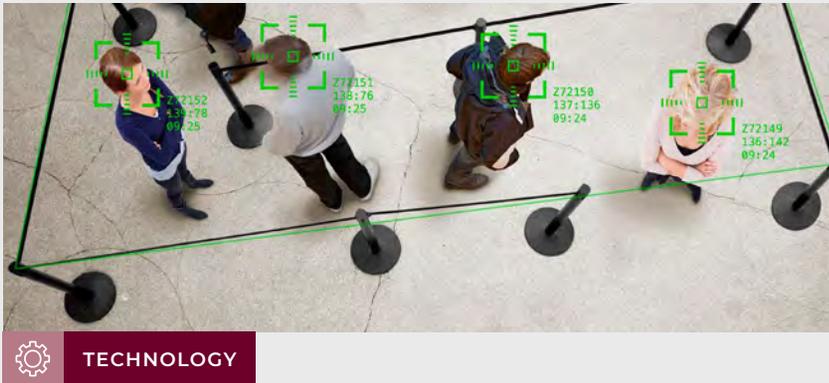
 TECHNOLOGY

Automated Electronic Queuing

Automated electronic queuing takes electronic queuing a step further by automating the process of hailing the next customer. Instead of the staff member pressing a button on a remote control, the next student/customer is called forward as soon as a station opens up. This process is all done using sensors that monitor activity at each service point or a point of sale (POS) system which signals when a transaction is complete and ready for the next customer. In other words, the line keeps moving automatically.

Automated electronic queuing systems are particularly useful in a self-serve environment such as bank ATMs, a self-service library checkout kiosk, or a self checkout line at a bookstore.

[Explore Automated Electronic Queuing >](#)



Footfall Analytics

Whether building a good first impression among prospective students who are narrowing down their university options or providing current students with a consistently great service experience, a necessary first step to meeting demand is having the right data at your fingertips. Knowing what to expect, when, and where, and having the ability to anticipate demand for services across campus ultimately drives your staffing allocations to meet those demands.

This can be easier said than done. Seasonal ebbs and flows may be easy to predict—for example, you know the beginning of a new year or new semester will bring an influx of students to the registrar's office—but there may be other surges in student demand that are more difficult to predict without the right historical and predictive data in place.

With footfall analytics, you can accurately measure, monitor, and predict wait times in structured and unstructured queues. This is achieved with state of the art sensors that monitor and track activity and transform this data into powerful analytics. As a result, you can assess how many students are in a queue at any given time and receive real-time alerts when wait times or service rates exceed preset thresholds. Plus, use historical data to optimize service delivery by predicting traffic trends for a specific department or service area.

Real-time and historical data can be used by universities to:

- ✓ Keep wait times in check with real-time alerts and predictive analytics
- ✓ Assess how many customers are in a queue at any given time and receive real-time alerts when wait times or service rates exceed preset thresholds
- ✓ Monitor safety and compliance by watching student counts and wait times within designated areas and queues
- ✓ Optimize staffing and directing students to create efficiencies and balance loads across the entire system
- ✓ Use historical data to optimize service delivery by predicting traffic trends for a specific department or service area.

Qtrac iQ can be extremely useful in environments such as the bookstore, registrar's office, health center, and other locations where service efficiency is vital.

[Explore Qtrac iQ Footfall Analytics Solutions >](#)



Virtual Queuing

Today, more and more organizations, including higher education institutions, are turning to virtual queuing to handle what would otherwise be a long line-up of waiting students. Virtual queuing disperses waiting crowds, makes wait time more pleasant, cuts perceived wait times, and lets students arrive when you are ready to serve them. Students can join the virtual queue using a kiosk or their mobile device. They can also opt-in to receive updates on their place in line and estimated wait times, and even engage in two-way communication to track their wait or request more time if necessary.

Consider virtual queuing to facilitate in-store pick up at the bookstore, optimize student service at the financial aid and registrar's offices, and to reduce the stress of waiting for service at the health center.

[Explore Lavi Industries' Qtrac VR Virtual Queuing Solution >](#)

WHERE YOU'LL FIND THESE SOLUTIONS:



Health Centers



Registrar



Financial Aid Offices



Performing Arts



Bookstores



Athletics



Student Services



Library



Food Services



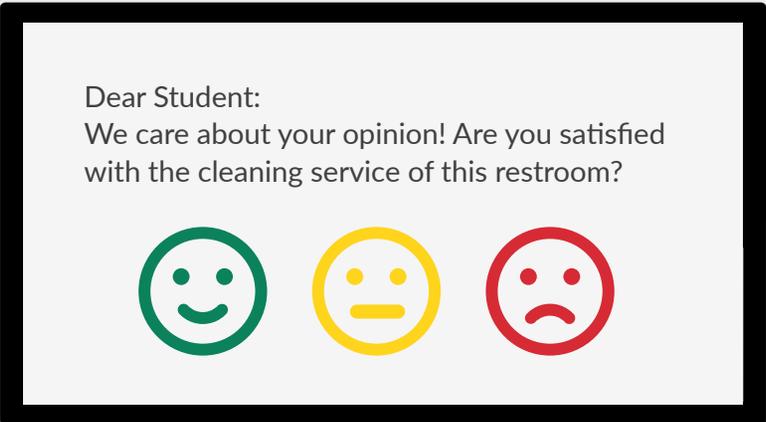
2. Optimize facility maintenance and address problematic conditions before they impact student satisfaction.

The cleanliness of a building, campus, or any other facility is often judged by the cleanliness of its restrooms, shared cooking areas, and other common gathering spots. While not the most enjoyable part of a facility manager's job, maintaining these areas can pay dividends when it comes to student ("customer") satisfaction. A 2011 survey from Cintas Corp. revealed that 94 percent of U.S. adults would avoid a business in the future if they encountered dirty restrooms. And companies with unclean facilities were found to experience a 39% decline in customer satisfaction. Combine this with a growing imperative to conserve environmental and financial resources, and the case for smart facility maintenance becomes clear.

Providing clean facilities is ideal from a public health standpoint and it can help maintain satisfaction among students, staff, and visitors. A maintenance routine based on actual usage and real-time user feedback can allow universities to keep campus facilities in good condition—from restrooms to meeting rooms—and save on costs by allowing just the right level of resources to the job.



CONSIDER THIS SOLUTION



 TECHNOLOGY

Intelligent Facility Maintenance

An intelligent facility maintenance solution can provide the insight you need to optimize your maintenance routine and take immediate action to address problems. An ideal solution will combine people counting, real-time feedback, and staff check-ins to provide you with the information needed to maintain a cleaner facility.

With the right solution, you'll be able to:

- ✓ Conserve resources by providing the right amount of attention
- ✓ Optimize staff schedules
- ✓ Respond quickly when conditions require attention

[Discover Intelligent Facility Maintenance from Lavi Industries >](#)

WHERE YOU'LL FIND THESE SOLUTIONS:



Health Centers



Facilities & Maintenance



Bookstores



Athletics

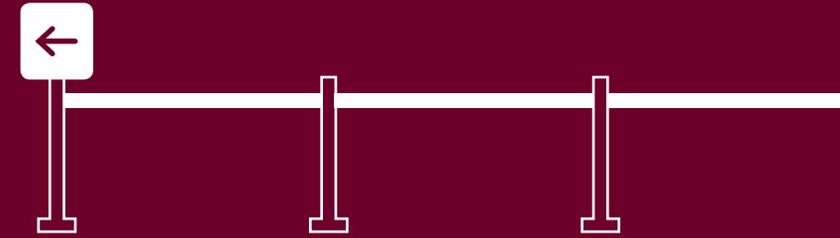


Classrooms & Faculty Buildings



Library

3. Manage the flow of students and visitors throughout campus queues.



Waiting lines are commonplace across a campus environment. Students must wait in line for all sorts of things, from purchasing tickets for the big basketball game to meeting a financial aid counselor to being seen by the campus nurse. Each of these queues needs to be managed in order to keep a smooth flow of people both waiting in the actual line and those just wanting to navigate past a queuing area.

To form queues that are well structured, organized, and clear, you need to cover the basics of queue set-up. These basics include providing a clear and visible entrance to each queue; an organized and structured pathway through the queue; and a designated point to stop and wait to be served at the end of the queue.



CONSIDER THESE SOLUTIONS



Rigid Rail & Rigid Rail Signage

Aluminum rigid rail barriers present a sleek, modern solution for crowd control and queuing, while providing a built-in opportunity for branding, marketing, and wayfinding. The rigid structure of the rails afford a more secure barrier against crowds and provide added structure and permanence to queues and access control barriers.

[Explore Rigid Rail Solutions from Lavi >](#)



Retractable Belt Stanchions

Retractable belt stanchions are ideal for waiting lines, crowd control, and access barriers. In addition to being easy to set up, retractable belt stanchions allow for the ultimate flexibility in queue configuration—allowing you to quickly extend the length of a busy a waiting line, or open a shortcut through an empty queue to accommodate changing foot traffic.

[Explore Lavi Industries' Stanchion Solutions >](#)

WHERE YOU'LL FIND THESE SOLUTIONS:



Health Centers



Registrar



Facilities & Maintenance



Bookstores



Performing Arts



Food Services



Student Services



Athletics



Library

4. Enable instant access control to address safety or security situations as they arise.

In campus environments, the unexpected is always to be expected. Facility managers, safety professionals, and managers across campus need to have at-the-ready solutions to block, redirect, or establish the flow of “people traffic” in case of an emergency, spill, or sudden influx of people. Rapid deployment solutions that feature right-size retractable belts, stanchions, and easy-to-transport, easy-to-store products can help your staff establish or maintain control and safety in swift fashion.



CONSIDER THESE SOLUTIONS



Wall-Mounted Retractable Belt Barriers

Aisles, hallways, corridors, and doorways can turn to closures and barriers at a moment's notice with wall-mounted retractable belts. Using a wall receptacle, retractable belts slide right into place to quickly close off areas for safety or crowd control purposes—and best of all, they're always there when you need them.

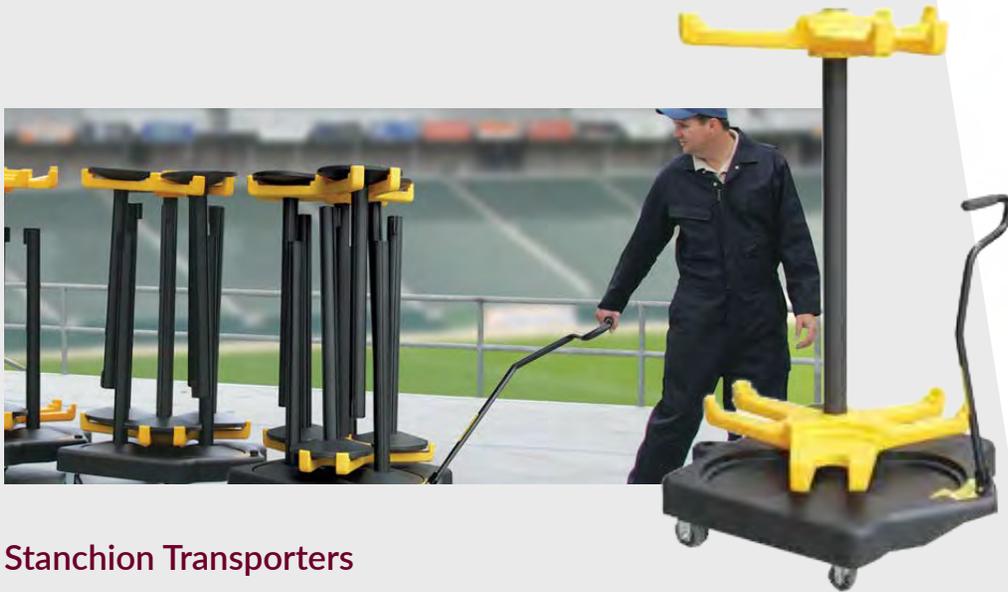
[Explore Wall Mounted Safety Barriers >](#)



Extra Long Belted Stanchions

Extra-large areas require more significant solutions, still with the same rapid set-up and tear-down capabilities. Long retractable belt safety barriers allow you to safely close off or redirect traffic in large areas in just minutes. These extra-long retractable belt barriers are perfect for closing off access to the stadium floor during halftime, or limiting access to the quad during special events. Look for portable, long-belt stanchions with up to 65 feet of coverage or dual belt barricades that cover up to 130 linear feet.

[Explore JetTrac Portable Stanchions and Barriers >](#)



Stanchion Transporters

Portable stanchions are a foundational element of crowd control. Easy to configure and re-configure, stanchions allow for a highly responsive and flexible approach to crowd control. Transport carts, specifically designed for portable stanchions, further enhance their value by offering convenient storage and rapid deployment capabilities in an easy-to-move, quick-to-assemble solution.

[Explore Stanchion Transport Solutions >](#)

WHERE YOU'LL FIND THESE SOLUTIONS:



Health Center



Facilities & Maintenance



Bookstore



Food Services



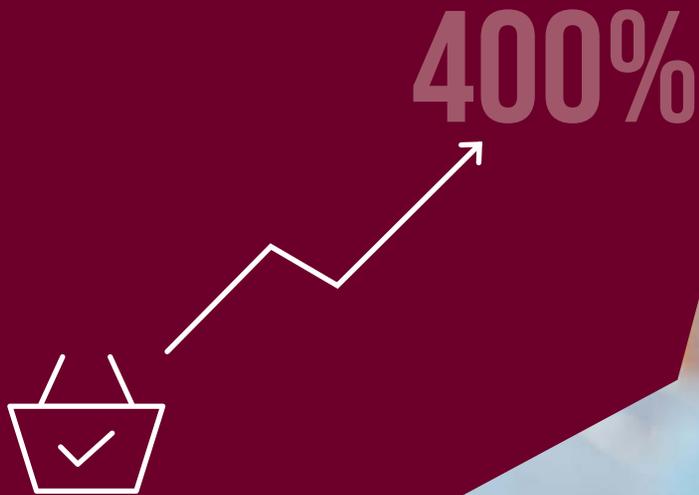
Athletics



Library

5. Optimize retail-oriented queues to maximize impulse sales.

Outsiders don't often associate college campuses with the retail industry, but administrators and managers are well aware of the many places around campus that serve as retail venues—from the bookstore to the cafeteria to the athletic venues. When revenue generation is on your list of goals, turn to a strategy that has proven to increase impulse buying up to 400%.



CONSIDER THESE SOLUTIONS

In-Queue Merchandising Fixtures

A waiting line comprised of stanchions, shelves, baskets, signage, and other accessories will not only help boost revenue, it can also effectively keep students occupied while they wait. This makes overall wait time feel shorter and more enjoyable.

Choose a merchandising system that features:

- ✓ Quick and easy installation
- ✓ A clear way for students to determine where the line is formed
- ✓ The ability to bring merchandising into an existing queue or to create a versatile standalone merchandising unit
- ✓ An appropriate size that allows for both queuing and merchandising within the confines of your space
- ✓ Integrated signage that can be used to provide information, directions, or promotions within the queue

[Discover NeXtrac® Merchandising >](#)





Portable Gondolas

A portable gondola allows you to put your merchandise where your customers are. Lockable wheels keep merchandise in place, yet unlock for instant mobility if needed. Use as a stand-alone display, make runs with 2 or more units, or seamlessly integrate into your checkout queue.

[Explore NexTrac® Portable Gondolas >](#)

WHERE YOU'LL FIND THESE SOLUTIONS:



Bookstore



Performing Arts



Food Services



Athletics

6. Quickly and easily deploy crowd control solutions to large outdoor areas.

Whether an emergency in the quad, an influx of vehicle traffic to a crowded parking garage, or crowds rushing to access the football field after winning a big game, quick and easy deployment is critical. Even more critical is that the solutions you deploy can cover the large outdoor areas where these needs arise.

Such solutions should work for both proactive and reactive crowd control since sometimes you may need to respond to an unexpected situation, while in other cases you may be able to better anticipate the need for outdoor equipment.



CONSIDER THESE SOLUTIONS



Outdoor retractable belt stanchions

Outdoor retractable belt stanchions made with weatherproof material make for an effective way to create queues, manage the flow of crowds, and block or limit access to spaces in all types of weather. Lightweight and durable plastic stanchions are made to withstand the wear and tear of being used outside, and can typically be collapsed for easy storage.

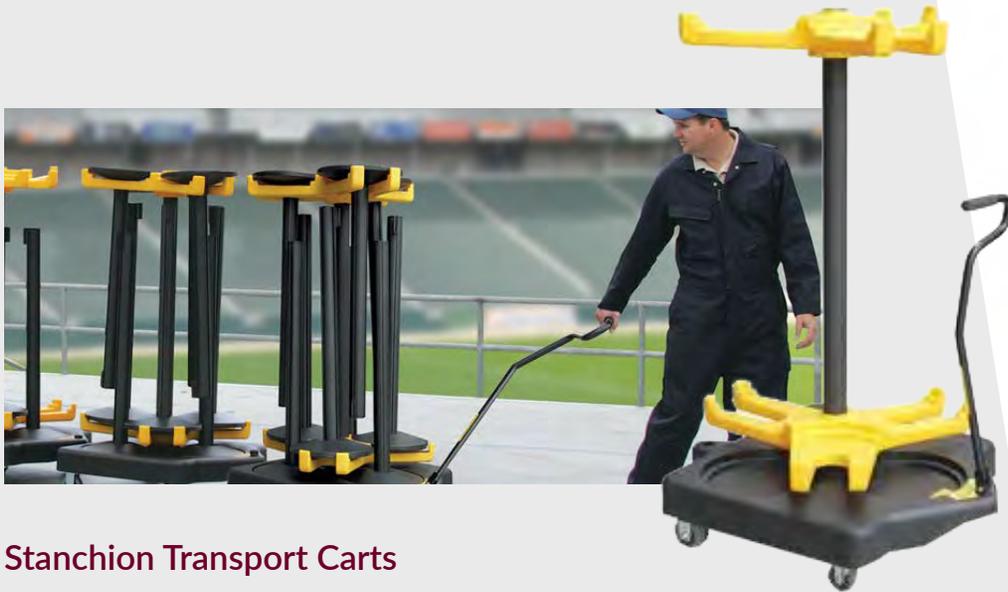
[Explore Outdoor Queue Management Solutions >](#)



Extra Long Retractable Belt Barriers

Easily and quickly block off large areas with extra long retractable belt portable barriers. Systems can allow just one or two people to cordon off huge areas in just minutes. Single units contain one or two belt canisters which can cover up to 130 linear feet, instantly! Barrier Shuttle Carts allow the transport and storage of multiple units.

[Explore JetTrac Portable Retractable Belt Barriers >](#)



Stanchion Transport Carts

When you need to quickly deploy many stanchions, look to stanchion transport carts. These carts double as a storage and transport unit, allowing you to easily move large numbers of stanchions at one time.

[Explore Lavi Industries' Shuttletrac Solutions >](#)

WHERE YOU'LL FIND THESE SOLUTIONS:



Facilities & Maintenance



Athletics



Parking Lots

7 • Direct and inform students to help facilitate the flow of foot traffic and avoid confusion.



University campuses are a lot like airports when it comes to the complexity of finding one's way from building to building and room to room within a city-like atmosphere. A survey by JD Power among frequent flyers at three major New York airports showed that wayfinding issues play the most significant role in customer satisfaction. One can imagine how a finding like this can apply to students, benefactors, and other visitors on campus. And it turns out, students are clued into the benefits of good wayfinding.

Signage was cited as a top feature that students want from campus libraries to help students find their way around.

Wayfinding solutions can be implemented across campus to eliminate confusion and facilitate the flow of foot traffic. Signage of all types can help guide students, staff, and visitors around your campus without unnecessary stress.



CONSIDER THESE SOLUTIONS



Standalone Signage

Standalone signage systems offer flexibility and portability to place signage exactly where needed to ensure maximum visibility and usefulness.

[Explore Directrac Solutions >](#)

Banner Signs

Banner signage captures attention from a distance and can be used to facilitate customer flow, queue management, and wayfinding by calling attention to entrances, exits, service points, or other important points along the student journey.

[Explore Lavi Industries' Banner Signs >](#)



Stanchion Signage

Signage placed atop retractable-belt stanchions offers the dual impact of guiding student and visitor traffic in and around queues and communicating important information. As a standalone-option traditional post sign stands offer versatility and a classic look.

Explore:

[Stanchion Signs >](#)

[Traditional Post Sign Stands >](#)



WHERE YOU'LL FIND THESE SOLUTIONS:



Athletics



Health care



Registrar



Facilities & Maintenance



Bookstore



Performing Arts



Food Services



Student Services



Library

8. Block off or limit access to restricted areas.

Access control is an essential component of campus security, crowd control, and general safety. Solutions to limit or block access can be beneficial across a wide range of use cases, including preventing access to the player's bench during a game or limiting unauthorized access at a media event.

When it comes to crowd control, ideal access control solutions will provide:

- ✓ A physical barrier to clearly delineate off-limits areas
- ✓ A sturdy build to withstand heavy use
- ✓ A design that clearly communicates a message in a way that is appropriate for its intended purpose



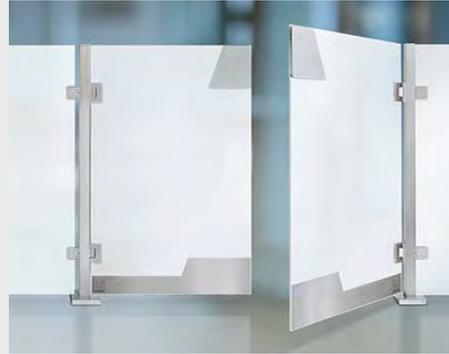
CONSIDER THESE SOLUTIONS



Post and Panel Barriers

Built with hinged panels, post and panel barriers provide extreme flexibility in creating permanent or temporary crowd control barriers.

[Explore Post & Panel Barriers from Lavi Industries >](#)



Curtain Walls and Gates

Architectural curtain walls offer a semi-structural architectural partition with access control for a barrier that is aesthetically pleasing, durable, and customizable.

Look for:

- ✓ Magnetic base for easy installation
- ✓ Locking gates for more secure access control

[Discover Modular Curtain Walls and Gates >](#)

WHERE YOU'LL FIND THESE SOLUTIONS:



Facilities & Maintenance



Athletics



CONCLUSION

College and university campuses are like cities within cities, formed by a myriad of interconnected facilities, programs, and services. The impression your campus makes on students, faculty, staff, benefactors, and other visitors is shaped by the quality of the experiences they have as they navigate through campus. Your ability to shape those experiences can make the difference in attracting the best-fit students, gaining the preference of donors, impressing visitors, and retaining faculty and staff.

When it comes to managing queues, controlling crowds, improving safety, and maintaining facilities, what is not readily apparent is arguably as important as what is; the work that happens behind the curtain plays an instrumental role in creating a memorable university experience. Engineered to help improve satisfaction, increase efficiency, and boost security and safety, the eight strategies presented in this guide can help set your campus apart.



Let's plan your approach.

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