



**Industry: Education**  
University Cafeterias  
Dining Halls  
Campus Food Courts

## Eliminate Entry Congestion and Enforce Safety Protocol: University and College Cafeterias

Long lines at the entrances of university and college cafeterias are so expected that most students and administrators consider them a necessary and daily occurrence in their routine. Cashiers or reception staff typically must scan each student's ID card to ensure they have a meal plan and are allowed. The same cashier checking for valid student ID cards is also handling guests and the occasional cafeteria user who pays for their meal. With the arrival of COVID-19, those lines are even longer as various rules and regulations such as 'mask compliance,' 'proof of vaccination,' 'current body temperature,' and 'social distancing' were added to the entry protocol.

Notre Dame University in Indiana reported that, even before COVID, their cafeteria lineups were so long they had students standing outside in the middle of winter, waiting to get in. The staff had to set up portable heaters on cold days to keep students, staff, and guests from freezing.

### Challenges

Most significant challenges college dining facilities are facing:

- 1 Labor shortages
- 2 Preventing unauthorized access
- 3 Influx of people during peak hours
- 4 Monitoring capacity
- 5 Employee and student safety

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With labor availability down, food outlets on numerous campuses have been forced to curtail operating hours, limit menus and even shut down.”

- Food Management, [www.food-management.com/](http://www.food-management.com/)

**FOOD  
MANAGEMENT**

\* Staffing shortages plague university dining programs as fall terms begin, [full article](#).

## Automation: Initial Steps

Several institutions have addressed the manual student identity challenge in recent years by installing high-speed optical turnstiles equipped with ID card readers at the entry points. Others employed contactless biometric readers so students wouldn't have to present a card upon entry at all.



### UNIVERSITY OF MARYLAND

The University of Maryland was one of the first colleges to equip Fastlane® turnstiles with biometric readers. Their cafeteria entrance is dressed with four lanes of Smarter Security's® Fastlane Glassgate 150 turnstiles and integrated with Idemia's original version of the MorphoWave contactless fingerprint readers.

There is one cashier positioned promptly to the right to accept payment for occasional users and visitors. The contactless fingerprint readers eliminate the need for cards to be presented while simultaneously removing the possibility of card sharing between students. These four lanes effortlessly handle a throughput of up to 7,000 students per day without any queuing in line.

Another requirement this university had, was the ability to quickly and easily remove and reinstall the four lanes. The university uses its residence as a part-time hotel during the summer months, and the cafeteria is part of that service. Therefore, the turnstiles and fingerprint readers were mounted on Smarter Security floor protectors that were not permanently fixed to the floor for easy removal when needed. All the wiring runs go through the floor protectors and out the side underneath the cashier position, making it a breeze to remove and reinstall the lanes in less than a day.



University of Maryland Cafeteria



St. Thomas University Dining Hall



### ST. THOMAS UNIVERSITY

A more recent example of a university using biometric readers in conjunction with turnstiles is St. Thomas University. This university installed Fastlane Glassgate 150 turnstiles and paired them with the most recent version of Idemia MorphoWave Compact fingerprint readers which seamlessly integrate directly into the turnstile pedestal for a clean appearance. As the University of Maryland, St. Thomas also chose the floor protector option to ensure they had flexibility for future renovations.



### UNIVERSITY OF NOTRE DAME

The University of Notre Dame also installed Glassgate 150 turnstiles. In this case, they chose to mount the lanes directly to the floor and use their standard contactless student ID card readers for access control rather than fingerprints.

Notre Dame was so pleased with the results of their installation that they supported Smarter Security in developing a case study for reference for other colleges which might be interested. The Notre Dame project team made it clear that they chose their Fastlane turnstiles because of their historically high reliability, incredible 60-person-per-minute throughput, and their sleek design that blended seamlessly with the modern building aesthetic. Some of the resulting metrics that the university shared after the implementation are quite incredible.



“Entry throughput increased by a factor of 10, so much so that they had to rework their food preparation schedules behind the counters to accommodate the increased demand at peak times. The project ultimately paid for itself (ROI) in less than six months, and staff who had previously been checking ID cards were redeployed into other more meaningful and rewarding roles.”

## Additional Screening with Turnstiles

Depending on their location, facilities of all kinds have had to adapt in varying degrees to heightened control needs because of the COVID pandemic. Universities and colleges have been no exception.



### CARLETON UNIVERSITY

Carleton University automates their student residence's main cafeteria access with Fastlane Glassgate 150

turnstiles. In part, this was to take advantage of the highly positive experiences reported elsewhere. Additionally, they sought to minimize physical contact between the cashiers checking ID cards and students.

The Carleton team took the design requirement one step further by developing a maximum capacity threshold for the cafeteria. Any population count beyond that threshold would make it impossible for students to maintain safe social distancing while having their meals.

### Challenges:

- 1 Improve Access Flow into the cafeteria
- 2 Minimize Direct Contact between students and staff
- 3 Encourage and Support Social Distancing when possible

Smarter Security provided their field-proven Fastlane Glassgate 150 turnstiles to improve access flow functionality, with a single-lane throughput rate of up to 60 students per minute. The Glassgate 150s were configured to scan standard student ID cards using card readers mounted on the entry side of each lane, just like the Notre Dame installation. This configuration would allow students to scan their ID cards themselves at the readers on each turnstile lane, and gain access once the card was verified.

This approach removes the need for students to present their cards to the cashiers, maintains social distancing between students and cashiers, and leaves the cashiers free to handle payment transactions for visitors. The turnstiles are configured for “free-exit,” meaning that the barriers open in the exit direction as soon as a student steps into the lane from the cafeteria side and breaks the infrared sensor beams.

For the Population Management requirement, Smarter Security integrated an early version of SmarterLobby's Population Counting software into the design.



Carleton University Resident Dining facility

## Introducing SmarterLobby

The SmarterLobby software has multiple built-in applications, including population management. These applications continuously exchange information with Fastlane turnstiles. Standard Web or IoT connections to other systems and devices provide users with an expanded situational awareness of the area in real-time.

For population management, SmarterLobby receives input signals from each turnstile lane, for every person entering, and for every person leaving the space. The resultant population count is grouped into accurate totals for multiple predefined areas within a facility, if each of these spaces is fully enclosed by Fastlane turnstiles or Door Detectives. Door Detectives are mounted on regular internal entry doors and function similarly as a turnstile to count entry and exit traffic. There is one predefined space at Carleton, the student residence cafeteria, and it is fully enclosed by six lanes of turnstiles in three sets of two.

Once population reaches the preset threshold for the cafeteria, a ‘no-entry’ IP command is sent by the SmarterLobby software to all of the access control turnstiles. At that point, no more students can be admitted until the total count has been reduced by people leaving the space. The normally white lane indicator lights on the entry side of each lane, indicating they are ready for a card to be presented, are switched to red to advise students that they are temporarily closed to entry traffic. The indicator lights on the exit side remain Green, indicating that they remain in ‘free-exit’ mode.

In addition, SmarterLobby was configured to export real-time population count to the Carleton University servers, for subsequent publication on a student web page. With this,

students would know in advance what the current population level in the cafeteria was, and they could decide for themselves if it was a good time to go.

The university also used that exported data to display the real-time population count on monitors in the halls to inform students who were approaching the cafeteria, what the current population levels were.

### Additional Screening Automation

In response to local regional government regulations and guidelines, many universities or colleges are looking for more.

Some already have mandatory mask compliance rules for entry, others require the student's body temperature to be within a set range. And recently, some are implementing the need for proof of vaccination for entry into any part of the facility.

Whatever mix of entry qualifications that are required, SmarterLobby has multiple integrations already in place to provide them. World-class third-party devices that can provide all of the above listed capabilities have been fully integrated and tested, with the flexibility to add many more or adjust the integrations as necessary over time.



To learn how  
SmarterLobby and  
Fastlane Turnstiles  
can secure your  
campus or for a free  
consultation, call us at  
**1.800.943.0043**

## About Smarter Security

Smarter Security markets the world's most intelligent Entrance and Access Control solutions. Fastlane turnstiles, Door Detectives, SmarterLobby, and ReconaSense harness the power of neural network technology to provide unrivaled intelligence to pedestrian access control. We secure more than half of the Fortune 100, providing security solutions known globally for high reliability at a lower total cost of ownership. Visit [www.smartersecurity.com](http://www.smartersecurity.com).

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