CASE STUDY: **AMERICAN UNIVERSITY**

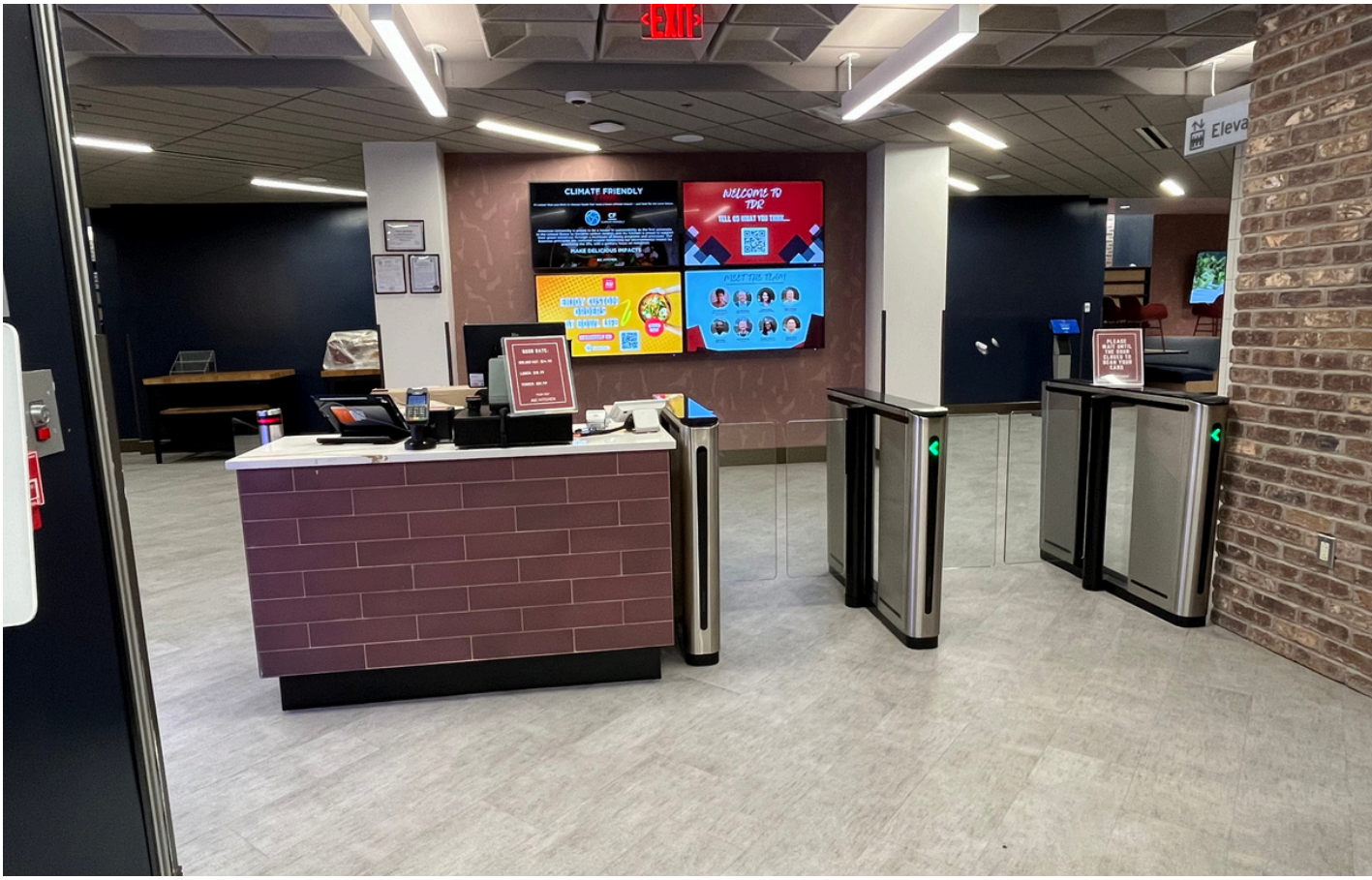
AMERICAN UNIVERSITY DEPLOYS BOON EDAM ENTRANCE SYSTEMS

FOR SAFER, SMOOTHER DINING HALL FLOW

American University (AU) is a major private research institution in Washington, D.C., serving about 13,000 students across its undergraduate, graduate, law, and online programs. With about 6,500 undergraduates currently enrolled and about 3,800 students living on campus, the university operates a high-volume residential dining program that plays a central role in daily campus life.

The Terrace Dining Room (TDR), located within the university's Mary Graydon Center, functions as AU's primary residential dining facility. Serving hundreds of students, faculty, staff, and guests each day, TDR is more than a dining hall—it is a campus crossroads where academic, residential, and social life intersect.

When AU initiated a full-scale renovation of the Terrace Dining Room—the first comprehensive overhaul in nearly 40 years—improving entry flow, safety, and operational efficiency was a top priority. To achieve those goals, AU partnered with Boon Edam, a global leader in physical security entrance products, to implement an intelligent, automated access solution featuring five Speedlane Compact optical turnstiles and one Winglock Swing Gate.



MANUAL ENTRY CREATED CONGESTION AND SAFETY RISKS

Before the renovation, access to the Terrace Dining Room was managed through two manual point-of-sale cashier stations arranged in an "S" configuration. Students lined up to present their AU OneCard for swiping by a cashier, while those same stations were also used for cash and credit card transactions. The physical environment magnified the problem. The Terrace Dining Room sits at a terrace level, partially below-grade, with stairs descending from the main floor of the student center on one side of a compact lobby and elevators entering from the opposite side. The entire entry zone measured only a few hundred square feet.

During peak meal periods, long queues would form up the stairs, spill into the first-floor elevator lobby, making it difficult for students attempting to exit within incoming entry lines. As one stakeholder explained, the former wall configuration caused people to pile up quickly, creating significant backups and forcing exiting traffic through incoming lines. Beyond slowing students down, the congestion also raised safety concerns.

Shift changes also made matters worse. When only one cashier was on duty, throughput dropped sharply. In addition, cashiers were required to constantly switch POS systems between board-mode for meal swipes and standard transaction mode for retail payments, which created slowdowns and errors.

MEAL PLAN CONTROL AND THE "ERROR RATE" PROBLEM

For most students, American University's dining program largely runs on prepaid meal plans. All plans include meal swipes, with each swipe acting as both an access control point and a key piece of operational data for the Terrace Dining Room. But when lines backed up, staff sometimes had to favor keeping students moving over capturing every swipe.

In those high-pressure moments, a few students were waved through without an official check-in. While this did not affect billing—since meals were already prepaid—it introduced what the university referred to as an "error rate" in its utilization data. That loss of real-time tracking impacted nearly every aspect of dining operations, including guest volume measurement, cost-per-plate analysis, production forecasting, labor scheduling, food waste mitigation, and meal plan compliance.

Without accurate insight into how many people were actually entering the dining hall, planning and operational decision-making were less accurate.

A FULL DIGITAL TRANSFORMATION OF DINING OPERATIONS

The Terrace Dining Room renovation was intended to be more than a cosmetic refresh; it marked a full digital transformation of AU's dining experience and the systems supporting it. The upgrade introduced kitchen display systems, self-service kiosks, mobile and advance ordering, and pickup lockers for efficient mobile order food retrieval. With these systems in place, AU fundamentally changed how students ordered, paid for, and received food.

The legacy cashier-based entry model no longer supported the university's vision for a modern, technology-driven dining experience. To make the most of its new ecosystem, AU needed an automated, secure, high-throughput entry solution that could remove bottlenecks while protecting the accuracy of its operational data.

SELECTING AN INTELLIGENT ACCESS PARTNER

From the earliest phases of the Terrace Dining Room renovation, access control was treated as a strategic design element rather than a simple hardware decision. American University collaborated across multiple departments, including its Office of Information Technology, Auxiliary Services Planning and Project Management, Facilities Management, and dining operator Chartwells Higher Education, along with the Atrium Campus, AU's Campus Card Systems Provider, integrations team.

After evaluating available solutions, AU selected Boon Edam's Speedlane Compact optical turnstiles for their small footprint, architectural compatibility, high throughput performance, advanced security features, and seamless systems-integration capabilities.

"This was a strategic effort to blend security, efficiency, and design," said Michael LoBasso, Associate Director of Business Services Technology at American University. "It was a true collaboration with Boon Edam, Chartwells, our campus partners, and Atrium Campus to create a dining experience that's secure, smart, and seamless."

SPEEDLANE TURNSTILES DELIVER HIGH-TRAFFIC PERFORMANCE

The final installation at the Terrace Dining Room includes five Speedlane Compact optical turnstiles and one Winglock Swing Gate. The configuration supports real-world traffic flow with two lanes dedicated to entry, three lanes dedicated to exit, and the Winglock Swing Gate providing ADA access, delivery accommodations, and support for large group movement.

Once physical installation and wiring were completed, the system was fully integrated with AU's campus card and Atrium meal plan system within one week. Each card tap sends a signal to Atrium for verification, and upon approval, a return signal instantly unlocks the gate. Students now tap and walk through in seconds, with real-time verification of meal plan eligibility and account status.

A HYBRID MODEL FOR FLEXIBLE PAYMENTS

While the majority of guests now enter through the automated lanes, American University retained one traditional cashier station for community members who pay via cash or credit card. This includes admissions tour groups and visiting organizations that often rely on corporate credit cards rather than individual student accounts. The result is a hybrid model that maintains operational flexibility without bringing congestion back. As one administrator shared, the long lines are gone, and traditional payment needs are still fully supported.

MEASURABLE RESULTS AND RETURN ON INVESTMENT

The automated entry system has fully eliminated the congestion issues that once defined the Terrace Dining Room experience. Continuous, high-speed throughput has eliminated stairwell backups and restored clear ingress and egress pathways, virtually eliminating the safety and compliance risks tied to blocked exits.

Since the installation of the Speedlane turnstiles, overall composite guest satisfaction at the Terrace Dining Room has increased by approximately 60 percent, with an additional 15 percent year-over-year improvement. As students continue to grow accustomed to the turnstiles, satisfaction continues to rise. The entrance experience—now the very first impression of the dining hall—sets a positive tone for every visit and reinforces the sense of efficiency and modernity that AU set out to achieve.

Every transaction, whether approved or denied, is now captured through the Atrium integration. Chartwells and AU leadership receive automated reports every 30 minutes, providing real-time insight into guest volume, peak demand windows, and meal utilization trends. This data allows for far more precise food production planning, staffing optimization, inventory control, and waste reduction, dramatically improving both financial and operational performance.

BOON EDAM SUPPORT AND LONG-TERM RELIABILITY

After more than a year in continuous operation, the Speedlane system has demonstrated consistent, dependable performance in day-to-day university use. Early troubleshooting underscored the importance of a strong technical partnership. In one instance, a system issue initially appeared to stem from the campus card software or the turnstile hardware but was ultimately traced to an interaction between the two. Boon Edam's technical team played a critical role in diagnosing and resolving the root cause.

As one administrator noted, the university did not initially "know what it did not know," and Boon Edam's understanding of how the system was supposed to function was instrumental in identifying the issue. Today, AU operates the system with confidence, supported by robust internal documentation and procedures developed through hands-on experience.

DESIGN, ACCESSIBILITY, AND SUSTAINABILITY

The Speedlane Compact turnstiles blend seamlessly into the updated look of the Terrace Dining Room, maintaining a clean, modern feel without drawing attention to the equipment itself. The Winglock Swing Gate provides full ADA accessibility and makes it easy to move carts, deliveries, and larger groups through the space during special events. With low energy use and a small physical footprint, the system also supports American University's long-term sustainability and facilities planning goals.

GAME-CHANGING TECHNOLOGY FOR CAMPUS DINING

What was once a daily source of congestion and frustration is now a highly efficient, data-driven, student-first entry experience. American University has achieved frictionless access for students, stronger meal plan integrity, enhanced safety and compliance, real-time operational visibility, and dramatically improved guest satisfaction—all through the strategic deployment of intelligent entrance technology.