Student persistence and success are on the mind of every college and university leader—so any barrier that might get in a student’s way should be too. There are two primary types of bottlenecks that can slow a student’s time to degree and cause him or her to incur additional costs. Access bottlenecks are courses where demand exceeds capacity. When students are unable to register for a course, they may find themselves registering for unnecessary credits to maintain financial aid eligibility, or they may fall behind in a sequence. Completion bottlenecks are courses for which students are less likely to earn credit, making it more likely for them to have to repeat the course or even leave the institution completely. Academic Performance Solutions research has revealed that on average, a quarter of undergraduate courses are close to capacity, creating the potential for access bottlenecks, while 8% of undergraduate courses are completion bottlenecks.1 By heeding the warnings signs where bottlenecks are most likely to occur, leaders can alleviate them and support students on the road to success.

Gateway courses with a wide range of completion rates among sections

The average range in completion rates among multi-section courses is 24 percentage points, but some courses have a much wider range, indicating that students in sections of the same course have widely varied experiences.

1 SOLUTION
Track and Predict Changing Student Demand
Shifting demand patterns and the changing mix of credits that students bring with them mean enrollments are less constant across terms and years, and adjusting capacity becomes more difficult close to course start dates. Predict demand accurately and early to reduce mismatches between course offerings and enrollment.

Central Course Waitlists
To account for demand changes during the registration period, allow an unlimited number of students to wait-list themselves for each course, and open new sections when the waitlist reaches minimum section size.

21% of lower-division engineering courses are at or over 100% capacity

38 pts
is the average range of completion rates among sections for Intro to English and Calculus I courses2

SOLUTION
Build Coordination and Alignment Among Instructors
While in principle, students taking the same course should achieve the same learning outcomes, in practice, differences in teaching materials, styles, and assessment practices can leave students with vastly different levels of course material mastery. Establish clear learning outcomes across course sections to support a common standard for student achievement.

Department with increasing enrollment

Ten percent of undergraduate courses are already at or above 100% capacity, but some departments have not increased available seats to keep pace with increases in demand.

SOLUTION
Expand Capacity, and Intervene When Students Are off Track
In high-demand areas, students not earning credit for a course may put additional strain on capacity if they repeat it next term. Reassign resources to areas of greatest demand, expanding capacity and supporting students with strategies to complete the course.

Overflow Capacity During Off-Peak Summer or Winter Sessions
Create capacity for high-demand courses during summer and winter sessions, online course types, or accelerated, late-start format.

Less than 2% of undergraduate courses are both access and completion bottlenecks, but these courses tend to be concentrated in just a few departments, such as mathematics and finance, which already have relatively low completion rates.

Departments where low completion exacerabtes capacity constraints

A few departments with increasing enrollment and low completion rates have significant capacity constraints. These bottlenecks may be caused by a combination of factors, including low completion rates, capacity constraints in departments that offer gateway courses, and increasing enrollment in other departments. By addressing these bottlenecks, leaders can improve student success and reduce the financial burden on students and their families.

1. Access bottlenecks defined as courses at or above 95% capacity.
2. Completion bottlenecks defined as courses with 80% or less completion rate.
3. Percent of undergraduate courses.

10% of lower-division mathematics and statistics courses are both access and completion bottlenecks.