Courtyard Study Lounge
Scheduling Automation

2016 Larry L. Sautter Award Submission

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Solution Location: http://www.studentcenter.uci.edu/study-spaces/courtyard-study-lounge-rooms/
The Problem
Online, 24/7 access is an expectation for most consumers. Providing this type of access to UCI students for booking study space was a natural progression. The Courtyard Study Lounge (CSL) Scheduling Automation program was initiated to allow students to access our centralized study space in the Student Center anytime and anywhere they have access to the Internet. Before the new program, students could only book space when the building was open. CSL has 13 study rooms open seven days a week with extended hours during finals week. Existing processes had restrictions including how far in advance you could book and frequency of reservations. Without resources for contracting outside vendors or consultants, a solution to this problem would have to be accomplished in-house.

The Solution
Automation has improved the overall customer experience. In the first 107 days after launching, overall website pageviews increased 225% compared to the same period the previous year from 41,470 to 134,764. Moreover, the new Courtyard Study Lounge pages account for nearly half (48%) of all website traffic. These analytics validate the material aim of developing a website more relevant to contemporary student life.

The analytics also support anecdotal evidence gathered via an online survey suggesting students prefer the new online reservation system for its convenience and would like to be able to book meeting space, conference center rooms, and other study spaces on campus in a similar manner.

Campus staff is similarly interested:

“This Student Center could make booking meeting rooms more accessible to students (similar to online reservations for Courtyard Study Lounge).”

Formerly, student staff manually sent email confirmations for each reservation. The unintended consequence being typos and incorrect contact information resulting in failed communications. The new process relies on students’ UCI accounts that ensure confirmations are emailed to current email addresses without fail and on time. Moreover, students receive an optional text-message reminder 15 minutes prior to every scheduled reservation and another message prior to the end of their reservation, thus reducing no shows and allowing for increased efficiencies.
Customer Service

The key indication of success was measured by improved operational efficiency and an annual cost savings of $60,000 (6000 staff hours) for SCES in addition to increased usability and accessibility for student convenience. However, more importantly, it increased student satisfaction and and room utilization.

<table>
<thead>
<tr>
<th>The Former System</th>
<th>The New System</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-person or telephone reservations were available</td>
<td>Reservations are now made anytime, anywhere</td>
</tr>
<tr>
<td>during hours of operation only</td>
<td>students have access to the Internet</td>
</tr>
<tr>
<td>A maximum seven-day advance reservations for current</td>
<td>Reservations are now available for an entire</td>
</tr>
<tr>
<td>week was possible</td>
<td>academic quarter including finals</td>
</tr>
<tr>
<td>Students were restricted to one, three-hour reservation</td>
<td>Students can now book multiple, six-hour reservations</td>
</tr>
<tr>
<td>per day</td>
<td>per day</td>
</tr>
<tr>
<td>Students could not track their usage</td>
<td>Students can now track their usage</td>
</tr>
<tr>
<td>An attendant managed multiple room keys</td>
<td>Keys are no longer required</td>
</tr>
<tr>
<td>Students could not use rooms without checking in and</td>
<td>Students can now access unreserved space on a first-</td>
</tr>
<tr>
<td>creating a reservation</td>
<td>come, first served basis</td>
</tr>
<tr>
<td>The check-in desk was always staffed during hours of</td>
<td>Check-in staff has been eliminated</td>
</tr>
<tr>
<td>operation</td>
<td></td>
</tr>
<tr>
<td>Staffing the reservation desk was difficult during</td>
<td>Eliminating the need for staffing, CSL now opens</td>
</tr>
<tr>
<td>extended hours</td>
<td>earlier on the weekend, adding 39 hours of bookable</td>
</tr>
<tr>
<td></td>
<td>time each week</td>
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Unlike the former in-person check-in process requiring attendants to do periodic headcounts of users, the new automated system allows for reliable and validated summary and detail data used for establishing usage trends and comparisons:

- Reservation dates
- Number of unique users
- Number of reservations
- Number of cancellations
- Percent utilization rate
- Total hours used
- Average duration of use
- Average days of advance reservations

Students adopted the system immediately. In the first full academic quarter of use there were 1,753 unique users, 4,453 reservations, and a 67% utilization rate with reservations booked on average approximately six and a half days in advance. Annually, this will affect over 15,000 students who use the study rooms and further analysis allows for growth use patterns.

Collaboration and Pilot

In-house marketing team conducted a pre-launch focus group of 20 students. Feedback resulted in useful alterations for an optimal end-user experience. Based on student feedback, many modifications were made, including user interface and overall experience. Online feedback form provides opportunities for continuous improvement. In collaboration with IT, management, and operations, the marketing department provided copy and design for all student-facing components of the program.
Housekeeping examined their workflow and operations to re-tool key work processes in order to transition and maintain the new keyless, hands-free operation. Special arrangements were made to keep rooms safe, clean, and fully operational with a VIP phone line and closed-loop complaint management system for immediate technical support and for assessing future upgrades. This cross-collaborative effort consisted of from management, IT, operations, and marketing professionals.
Deploying the New System

- The timeframe for deployment spanned three months from concept to completion
- The innovative spark and hands-on development began September 2015 of the first fiscal quarter with full deployment anticipated for December 2015 of the second fiscal quarter
- Pre-launch focus group completed in November
- Product testing conducted early November
- Pilot period and continuous modifications based on student feedback in November
- Soft launch released late November
- Official go-live date was December 1
- Five-month observation period to modify system based on continuous customer feedback

The Technology

The driving technology was to have a system that supported responsive design – particularly to support any mobile phone. The site was built in ASP for rapid application development that would allow the API to grow incrementally while testing, uncovering, and eliminating design flaws under an accelerated deployment process and while the technology is not new, the small screen size influenced many decisions on what would and would not work – how does a user select from 208 possible slots in a day to book to how does a user check their reservations or available hours quickly. These user interface discussions consume much of our development time and many different variations were developed and tested. To further advance our service offerings in this new digital world, a texting option was added both to remind students of their upcoming reservations and allow them to cancel in the event that they were not going to use the room. We adapted the technology and were able to streamline our processes to the new way our customers are doing business and interacting with us, saving our customers and our department time and money.