

# DEMAND-BASED PROGRAM ANALYSIS

## Objective Methodology

The Demand-Based Programming (“DBP”) process utilizes a proprietary model to translate survey-measured demand for a variety of typical student union facilities into recommended space accommodations. The model’s space recommendations are based on certain assumptions of space allocated per user and average activity duration, and on survey-defined measures of prioritization.

The output of the model is not intended to be the final facility program, but rather another tool to be used to develop the final program, along with the rest of the market analysis and the input and judgment of the consulting team, students and other user groups, and University decision makers.

The input for the DBP process is obtained from Questions 115-136 in the “Possible Improvements” section of the student and faculty/staff survey. This question asked respondents to indicate how frequently and at what time of day they would typically use a variety of spaces that are or could be provided in UH’s University Center. Demand prioritization was examined separately for students and faculty/staff; the results for each stakeholder group are provided in the Appendix of this report. However, due to the lack of variance between the populations and the primacy of student demand as a factor in determining the programmatic priorities for any improvement project, only the student results are used in the analysis section of this report.

Spaces tested included computer lab, coffee house / entertainment venue, convenience store, copy / print center, 24-hour study lounge, dance / nightclub enter-

tainment venue, outdoors spaces, games / informal recreation space, informal / social gathering areas, sports bar / lounge, and small group study rooms. The response options for frequency of use for each space included “5 or more times per week,” “2 to 4 times per week,” “once per week,” “less than once per week,” and “never.” Time of day response options included “6 am - 8 am,” “8 am - 11 am,” “11 am - 1 pm,” “1 pm - 3 pm,” “3 pm - 6 pm,” “6 pm - 9 pm,” “9 pm - 12 am,” “12 am - 6 am” and “never.”

The various activity spaces tested with this analysis are those spaces that are programmed based on the number of potential users and the distribution of usage over the course of a typical day. Certain spaces cannot be analyzed using this type of information because their usage/patronage is not based on being open and available for campus-wide use but is instead based on scheduled usage by defined user groups.

The DBP model includes assumptions related to each space being tested, including assumptions for the amount of space allocated per user and the average amount of time each user will spend within the space during each use. These assumptions are summarized below for each of the activities tested:

Activity Table				
Number	Display Name	Space Type	Duration	Sq. Allocated Per User
1	24 Hour Study Lounge	Sq. Ft.	1.00	25.000
2	Coffee House / Performance Venue	Sq. Ft.	1.00	25.000
3	Computer Lab	Sq. Ft.	0.75	20.000
4	Convenience Store	Sq. Ft.	0.10	30.000
5	Copy / Print Center	Sq. Ft.	0.75	20.000
6	Dance / Night Club	Sq. Ft.	1.00	30.000
7	Games / Informal Recreation Space	Sq. Ft.	1.00	40.000
8	Informal Lounges / Social Gathering Areas	Sq. Ft.	0.50	25.000
9	Informal Outdoor Spaces	Sq. Ft.	0.50	25.000
10	Small Group Study Rooms	Sq. Ft.	1.00	30.000
11	Sports Bar / Lounge	Sq. Ft.	1.00	25.000

In addition to these space utilization assumptions, another global assumption incorporated in the DBP model is a demand discount factor applied to all survey responses to account for the overstatement of usage inherent in a survey process. This discount factor is based on B&D’s more than ten years’ experience with using this model and comparisons of projected versus actual facility utilization in built projects. For student union facilities, B&D has found that

space usage data should be discounted to 75% of the levels indicated on the survey. This discount factor is applied to the survey data from all sample populations prior to all calculations of space demand.

The DBP model uses survey data and the above assumptions to determine the amount of space required to meet the usage demand by the campus population during each of the tested time periods. To do this, the model calculates the number of people projected to be using the space at any given time during each of the different combinations of frequency and time-of-day options. This calculation is based on numerical factors called "activity frequency," "turnover factor," and "intensity factor."

The turnover factor is based on the average activity duration related to the space and the length of time for each of the tested time periods. The calculation is the reciprocal of the number of times the space can be "turned over" during the given time period, or the activity duration in hours, divided by the length of the tested time period in hours.

The intensity factor is the product of the activity frequency and turnover factor. For each combination of tested frequency and time, the model determines the total number of projected users by applying the actual percentage of survey response for that particular combination to the campus population. The total number of people who would be in that space at any given point in time during the tested time period, is determined for each of the different combinations of tested frequency and time by multiplying the total number of users by the intensity factor.

The "demand projection" for each combination of frequency and time is totaled by the model for each time period to determine the usage pattern of the space over the course of a typical day based on a projection of the number of people likely to be using the space at any given point in time during each time period. By applying the space allocation for each of the tested areas, the amount of space required to accommodate the number of people projected to be using the space during each time period can be determined.

The table below is taken directly from the DBP model and illustrates the calculation of usage projections and space allocations for one of the tested activity spaces among the off-campus student population.

**Demand-Based Program Analysis**

ACTIVITY: 1	24 HOUR STUDY LOUNGE		Activity Duration: 1 Hours			
Frequency	Period	Activity Frequency	Turnover Factor	Intensity Factor	Number of Users	Demand Projection
Daily	6 am - 8 am	0.71	0.50	0.36	346	123
Daily	8 am - 11 am	0.71	0.33	0.24	439	104
Daily	11 am - 1 pm	0.71	0.50	0.36	495	176
Daily	1 pm - 4 pm	0.71	0.33	0.24	907	215
Daily	4 pm - 6 pm	0.71	0.50	0.36	701	249
Daily	6 pm - 9 pm	0.71	0.33	0.24	748	177
Daily	9 pm - 12 am	0.71	0.33	0.24	1,374	325
Daily	12 am - 6 am	0.71	0.17	0.12	1,234	146
Daily	Never	0.71	0.00	0.00	0	0
2-4 Times/Week	6 am - 8 am	0.43	0.50	0.22	299	64
2-4 Times/Week	8 am - 11 am	0.43	0.33	0.14	505	72
2-4 Times/Week	11 am - 1 pm	0.43	0.50	0.22	720	155
2-4 Times/Week	1 pm - 4 pm	0.43	0.33	0.14	1,271	182
2-4 Times/Week	4 pm - 6 pm	0.43	0.50	0.22	766	165
2-4 Times/Week	6 pm - 9 pm	0.43	0.33	0.14	935	134
2-4 Times/Week	9 pm - 12 am	0.43	0.33	0.14	1,430	205
2-4 Times/Week	12 am - 6 am	0.43	0.17	0.07	626	45
2-4 Times/Week	Never	0.43	0.00	0.00	0	0
Once/Week	6 am - 8 am	0.14	0.50	0.07	75	5
Once/Week	8 am - 11 am	0.14	0.33	0.05	206	10
Once/Week	11 am - 1 pm	0.14	0.50	0.07	271	19
Once/Week	1 pm - 4 pm	0.14	0.33	0.05	701	33
Once/Week	4 pm - 6 pm	0.14	0.50	0.07	383	27
Once/Week	6 pm - 9 pm	0.14	0.33	0.05	514	24
Once/Week	9 pm - 12 am	0.14	0.33	0.05	664	31
Once/Week	12 am - 6 am	0.14	0.17	0.02	299	7
Once/Week	Never	0.14	0.00	0.00	0	0
Less than once a week	6 am - 8 am	0.03	0.50	0.02	224	3
Less than once a week	8 am - 11 am	0.03	0.33	0.01	336	3
Less than once a week	11 am - 1 pm	0.03	0.50	0.02	654	10
Less than once a week	1 pm - 4 pm	0.03	0.33	0.01	991	10
Less than once a week	4 pm - 6 pm	0.03	0.50	0.02	841	13
Less than once a week	6 pm - 9 pm	0.03	0.33	0.01	1,075	11
Less than once a week	9 pm - 12 am	0.03	0.33	0.01	1,112	11
Less than once a week	12 am - 6 am	0.03	0.17	0.01	477	2
Less than once a week	Never	0.03	0.00	0.00	0	0
Never	6 am - 8 am	0	0.50	0.00	0	0
Never	8 am - 11 am	0	0.33	0.00	0	0
Never	11 am - 1 pm	0	0.50	0.00	0	0
Never	1 pm - 4 pm	0	0.33	0.00	0	0
Never	4 pm - 6 pm	0	0.50	0.00	0	0
Never	6 pm - 9 pm	0	0.33	0.00	0	0
Never	9 pm - 12 am	0	0.33	0.00	0	0
Never	12 am - 6 am	0	0.17	0.00	0	0
Never	Never	0	0.00	0.00	0	0

**TOTAL NUMBER OF USERS PROJECTED PER PERIOD\*:**

6 am - 8 am	8 am - 11 am	11 am - 1 pm	1 pm - 4 pm	4 pm - 6 pm	6 pm - 9 pm	9 pm - 12 am	12 am - 6 am
147	142	270	330	340	259	429	150

**SPACE DEMAND NUMBER OF SQ. FT. \*\***

6 am - 8 am	8 am - 11 am	11 am - 1 pm	1 pm - 4 pm	4 pm - 6 pm	6 pm - 9 pm	9 pm - 12 am	12 am - 6 am
3,669	3,549	6,739	8,239	8,495	6,481	10,730	3,755

The final space recommendations of the Demand-Based Programming model are not simply a summation of the space demand as determined by the above calculations but are also dependent on a prioritization of the spaces based on the usage patterns indicated by the survey responses for the frequency of use of each space. Spaces that are used more frequently and/or by larger numbers of people are given a higher priority than less frequently used and less popular spaces. Higher priority spaces are accommodated at higher percentages of their peak space demand in the model's final recommendation.

The prioritization of space demand is based on two related demand calculations: "depth" and "breadth" of demand. The depth of demand for each tested space is determined by the percentage of respondents who indicated that they would use the space at least twice per week. Spaces with a high depth of demand are very important to potential users and the facility must accommodate as much space for these activities as possible. Activities with lower depth of demand are accommodated at lower levels in the final program recommendation. The breadth of demand for each space is based on the percentage of survey respondents who indicated that they would use the space at any frequency. The breadth of demand therefore gives equal weight to infrequent usage. Activities with a particularly high breadth of demand may require a higher prioritization than indicated by their depth of demand to account for a high number of infrequent users.

The Demand-Based Programming model assigns a priority (in this case, "first" through "third") to each activity space based on its depth and breadth of demand. The maximum amount of space required to satisfy the highest level of daily demand for each space is then

adjusted according to its priority level to form the final recommendation of the best combination of spaces to satisfy the market demand. First priority spaces are accommodated at 75% to 85% of peak demand, second priority spaces at 55% to 65% of peak demand, and third priority spaces at 40% to 50% of peak demand.

## Summary of Findings

The charts below illustrate the depth and breadth of demand for spaces tested on the survey.

Student Responses			
Activity		Depth	Breadth
1	Computer Lab	39.2%	62.6%
2	24 Hour Study Lounge	39.2%	66.2%
3	Coffee House / Performance Venue	23.0%	56.8%
4	Informal Outdoor Spaces	20.9%	59.9%
5	Small Group Study Rooms	20.1%	57.7%
6	Informal Lounges / Social Gathering Areas	18.5%	58.6%
7	Copy / Print Center	18.4%	56.5%
8	Convenience Store	17.4%	55.8%
9	Sports Bar / Lounge	17.4%	50.0%
10	Games / Informal Recreation Space	13.8%	53.1%
11	Dance / Night Club	9.1%	34.7%

The following were the square footage results from student demand for the determined spaces:

Activity	Priority Category	Peak Accommodation	Space Type	Peak Demand	Space Allocation Based on Prioritization of Demand
1 Computer Lab	first	75% to 85%	Sq. Ft.	8,549	6,400 to 7,300
2 24 Hour Study Lounge	first	75% to 85%	Sq. Ft.	10,730	8,000 to 9,100
3 Coffee House / Performance Venue	second	55% to 65%	Sq. Ft.	6,246	3,400 to 4,100
4 Informal Outdoor Spaces	second	55% to 65%	Sq. Ft.	4,752	2,600 to 3,100
5 Small Group Study Rooms	second	55% to 65%	Sq. Ft.	10,592	5,800 to 6,900
6 Informal Lounges / Social Gathering Areas	third	40% to 50%	Sq. Ft.	4,112	1,600 to 2,100
7 Copy / Print Center	third	40% to 50%	Sq. Ft.	4,273	1,700 to 2,100
8 Convenience Store	fourth	25% to 35%	Sq. Ft.	860	215 to 301
9 Sports Bar / Lounge	fourth	25% to 35%	Sq. Ft.	7,838	2,000 to 2,700
10 Games / Informal Recreation Space	fourth	25% to 35%	Sq. Ft.	8,718	2,200 to 3,100
11 Dance / Night Club	fourth	25% to 35%	Sq. Ft.	6,151	1,500 to 2,200

These quantities of spaces would accommodate total campus demand within the user-defined priorities for each space. However, the final program recommendations will take into account such factors as the cost of accommodating certain activity spaces, opportunities to share space through scheduling, providing multi-use space, qualitative, focus group, and interview data, and the consulting team's professional judgment. These factors may result in space program adjustments relative to the demand-based quantities in order to insure that the concept will fully realize the facility's mission as well as respond to campus demand.

Some space allocation concepts that can be drawn from the DBP results include:

- While the renovation of the Anderson Library has created popular study space, there is a clear need to provide a less formal venue with longer hours and access to a widely array of food / beverage.
- Dedicated venues for social activities - "sport bar" or "dance club" type spaces-are less desired than multi - functional spaces (not generic or "multipurpose") that can be daytime social / gathering / dining space and then "morph" into evening "hang-out / entertainment-style space with a range of food / beverage options.
- Outdoor space should be developed as intentional, rather than incidental, gathering / social programming space, and like the indoor lounge / gathering spaces, it should provide a variety of venues and configurations.

## Bookstore Programming

The following is a summary of CBC's preliminary recommendations for product lines to be carried in a new or renovated Bookstore facility. This list is based on input from the campus community along with CBC's industry knowledge. Column 1 represents the product lines/category; column 2 represents items currently carried in the existing Bookstore; and column 3 represents items to be carried in the new or renovated Bookstore facility. The Bookstore should experience sales growth in a variety of areas due to a new or renovated Bookstore facility. Product categories and potential growth categories are illustrated below:

Product Lines / Category	Existing Bookstore Facility	New Bookstore Facility
Backpacks	Yes The Bookstore utilizes self-standing spinner fixtures to display backpacks during non-Rush periods.	Yes Space allocation should be increased during Rush periods. The majority of backpack sales will take place during this time period. There could also be an opportunity to expand this category to include items that might be offered throughout the year, such as the Vera Bradley fashion tote line or lap-top bags.
Computer Hardware	No	Yes Assuming that establishing educational resale accounts (e.g., Apple, Dell, etc.) does not compete with a University computer sales program, computer hardware should be included in a "Technology Center" department. The current amount of space devoted to computer related supplies and electronics should be increased substantially in order to create a "Technology Center."
Computer Peripherals and Supplies	Yes There is currently a limited selection of computer supplies and electronics. The items are located in the supplies department and featured on column slat wall.	Yes A "Technology Center" should be developed to meet the growing student demand for personal technology products (i.e., computer supplies and peripherals).

Product Lines / Category	Existing Bookstore Facility	New Bookstore Facility
Computer Software	<p>Yes</p> <p>There is a limited selection of computer software. The selection features basic Microsoft products, Adobe, etc. The software display is not in close proximity to the other related computer supplies available in the Bookstore.</p>	<p>Yes</p> <p>A computer software department should be developed to determine the sales potential of popular software programs within the educational discount sales program. This should be part of the "Technology Center."</p>
Convenience Products (beverages, health and beauty aids, snacks, candy, etc.)	<p>No</p> <p>The Bookstore does not currently offer snacks or beverages.</p>	<p>Yes</p> <p>Space should be allocated for a Convenience Department within the Bookstore. Dedicating space for a Convenience Department should increase customer traffic and create additional sales for the Bookstore. The additional sales will be incremental to the University and will not impact the existing sales of the on-campus Convenience Stores.</p>
Custom Publishing	<p>Yes</p> <p>This consists primarily of faculty notes that are sold at the Bookstore. The production and copyright permission (when necessary) of custom publications is provided by a Barnes &amp; Noble approved vendor.</p>	<p>Yes</p> <p>Custom published course materials and faculty notes will remain in the textbook department; however, they do not have any special space requirements.</p>
Digital Photo Processing	<p>No</p>	<p>Yes</p> <p>There is an opportunity to introduce digital photo processing both via in-store sales and possibly Web site sales.</p>
Dorm Supplies	<p>Yes</p> <p>The Bookstore maintains a limited selection (8 linear feet) of basic dorm supplies.</p>	<p>Yes</p> <p>Dorm supplies should be offered on a seasonal basis, with a particular emphasis during the Fall back-to-school period. Dorm supplies should include basic functional supplies as well as an emphasis on dorm décor. Demand for dorm supplies should increase with the opening of additional dorms located near the University Center.</p>
DVD's	<p>Yes</p> <p>The Bookstore offers a limited selection of DVD's in the general book department.</p>	<p>Yes</p> <p>There is an opportunity to expand DVD's.</p>

Product Lines / Category	Existing Bookstore Facility	New Bookstore Facility
Electronics	<p>Yes</p> <p>There is a basic selection of electronics (i.e., everyday low-price calculators, course related scientific calculators, batteries, etc.).</p>	<p>Yes</p> <p>The electronics category should be expanded and included as part of the Bookstore's Technology Department. Additional product lines could include digital cameras, iPods, iPod accessories, etc.</p>
Emblematic Clothing	<p>Yes</p> <p>Imprint sales for calendar year '07 were \$526,604, which represents 5.1% of total sales. This includes imprinted and non-imprinted clothing. There is approximately 2,450 square feet allocated to the "Cougar Shop." The clothing categories (i.e., adult, women's, and children's) are clearly defined and the department was sufficiently stocked during CBC's site visits.</p>	<p>Yes</p> <p>The emblematic clothing department should be expanded in an expanded Bookstore facility. This will assist with increasing sales and assist with marketing and branding the University of Houston.</p>
Emblematic Gifts	<p>Yes</p> <p>There is currently an appropriate selection of emblematic gift items featured in the Bookstore. Gifts are effectively displayed and cross-merchandised in the "Cougar Shop."</p>	<p>Yes</p> <p>The emblematic gift department should be expanded in an expanded Bookstore facility. This will assist with increasing sales and assist with marketing and branding the University of Houston.</p>
Greeting Cards	<p>Yes</p> <p>Greeting card sales for calendar year '07 were \$10,602, which represents 0.1% of total sales. The Bookstore offers Recycled greeting cards as its primary line and a limited selection of the Hallmark and Sunrise lines. 32 linear feet and 4 spinner racks are allocated to greeting cards. Many of the Recycled greeting cards appear to be aged (inventory control tag dates of March - June 2007) and slow selling.</p>	<p>Yes</p> <p>The new Bookstore facility should carry greeting cards.</p>

Product Lines / Category	Existing Bookstore Facility	New Bookstore Facility
Health and Beauty Aids	<p>Yes The Bookstore currently offers a very limited selection of health and beauty aid products.</p>	<p>Yes There is an opportunity to maintain a selection of personal care products including the Burt's Bees line. Health and beauty aids should be included as part of the Convenience Department.</p>
Magazines	<p>Yes The Bookstore maintains 12 linear feet of an appropriate selection of magazines. In addition, there are point-of-purchase magazine units (approximately 15 titles) located at the main checkout.</p>	<p>Yes The Bookstore should continue with a magazine category. An appropriate magazine assortment generates customer traffic.</p>
Music (CD's, iTunes cards, etc.)	<p>Yes The Bookstore offers a limited assortment of new release and bestseller CD Music in the general book department.</p>	<p>Yes Music should continue to be carried in the Bookstore.</p>
School Supplies	<p>Yes Calendar year '07 supplies sales were \$361,421, which represents 3.5% of total sales. The current plan-o-gram of supplies is approximately 110 linear feet (approximately 336 square feet). In addition, the Bookstore utilizes "flex" space to merchandise bulk quantities of high demand products (e.g., binders, filler paper, notebooks, etc.) during the major Rush periods.</p>	<p>Yes The current amount of space allocated to school supplies is adequate to support future sales growth. Updated fixtures combined with an effective school supply merchandise plan-o-gram in the new Bookstore facility would improve department layout.</p>
Technology Department		<p>Yes The new Bookstore facility should include a comprehensive Technology Department that includes computer hardware, computer software, computer supplies, computer peripherals, electronics, etc.</p>



Product Lines / Category	Existing Bookstore Facility	New Bookstore Facility
Textbooks / Course Materials	<p>Yes</p> <p>The Calendar year '07 textbook sales figure was \$8,606,152 (at the Main Bookstore) and represents 84% of total Bookstore sales. For the Fall '07 semester, the Bookstore stocked approximately 3,000 course required and optional titles. The current space allocated to the textbook department is approximately 5,375 square feet. A large amount of textbook overstock is currently maintained in non-selling areas at the beginning of each major semester.</p>	<p>Yes</p> <p>Textbooks and course materials will remain the core business of the Bookstore. The space allocated to the textbook department should be expanded so that the need to have overstock staged in non-selling areas is eliminated. The space allocated to the textbook department will need to accommodate the growing needs of the textbook / course materials department including continuing to offer a textbook reservation and online textbook ordering program, offering digital textbooks, etc.</p>
Trade / Reference / General Books	<p>Yes</p> <p>Calendar year '07 trade book sales were \$165,788, which represents 1.6% of total sales. The allocated space for trade and reference books is approximately 1,665 square feet. The Bookstore currently maintains an appropriate assortment of academic trade categories (e.g., Literature, Ethnic Studies, Religion, World History, etc.). However, the space allocated to reference books and materials is approximately 22 linear feet. This space also includes a customer service/work station that is approximately 100 square feet and a seating area of approximately 120 square feet.</p>	<p>Yes</p> <p>The space allocated to the general book department should be expanded in the new Bookstore facility.</p>

### Comments:

1. The current challenges in the university bookstore industry, combined with the retail climate and the intense local competition surrounding the University will require Bookstore Management to develop a Bookstore program in the new Bookstore facility that offers innovative products and services that appeal to the UH campus community (i.e. students, staff, faculty, alumni, prospective students, visitors, etc.). The Bookstore has an opportunity to create its niche through marketing to its campus customer base and, potentially, to the local community who may be attending events on campus and visiting the University Welcome Center. Students, staff, faculty, alumni, prospective students, parents, visitors, etc., will continue to be the primary target market for the Bookstore.
2. In summary, based on discussions with the Bookstore Staff, interviews with the campus community, and CBC's review of historical sales data by department, there are opportunities to increase sales through a concentrated focus on the expansion of key product lines. Key merchandise categories and product lines include the following:
  - Technology Center. The creation of a Technology Department that will feature computer supplies, peripherals, and, possibly, computer hardware will provide additional sales opportunities for the Bookstore.
  - Convenience Department. There will be an opportunity to provide convenience products that will be incremental sales for the University.
  - Dorm Products and Room Décor. This category could be expanded to include not only basic products but also additional room décor items.
  - Emblematic Clothing and Gifts. Sales growth in clothing and gifts will be due to additional space along with effective merchandising and marketing.
  - General Books/Reference Books. There will be an opportunity to expand the selection of general and course supplementary reference books.

(Note: Textbooks and course materials will remain the core business of the UH Bookstore.)

In addition to the products and services listed in this Section, there is an opportunity to generate incremental revenue in the following areas:

- Web Site Sales. The development of a strong Web based sales program would generate additional sales in the emblematic categories (clothing, gifts, etc.). Target groups could include parents, faculty, alumni, fans, and visitors.
- The Houston, Texas Community. There may be opportunities for the Bookstore to lend support to community events, and invite the local community to visit the Bookstore. In addition, supporting campus events and supporting the Welcome Center will provide additional sales opportunities for the Bookstore.

### Bookstore Design Issues

CBC has reviewed the University of Houston Bookstore's existing space and has outlined a variety of issues that should be evaluated and discussed prior to developing the design for a new Bookstore facility. A summary of the issues is as follows:

Issues	Comments
<p>1. Location of the Bookstore in the University Center</p>	<p>Existing Space:</p> <ul style="list-style-type: none"> <li>The Bookstore's retail space is currently located on the upper level of the University Center, in close proximity to major dining areas.</li> <li>The Bookstore's office space is located along the perimeter of the sales floor level and on the lower receiving/shipping and storage level. Offices on the sales floor level include the Bookstore Manager's office and a Textbook Manager's office area that includes Textbook Staff offices/workstations. The lower level includes a cash/accounting office, an employee break room, and a large area for shipping/receiving and storage.</li> <li>Multiple storage room locations (main shipping and receiving area and a perimeter stockroom behind the textbook and school supplies department). The Bookstore's current space offers an excessive amount of space for the storage of excess quantities of general (non-textbook) merchandise.</li> <li>The Bookstore's loading dock access is from the sales floor located on the upper level. Large freight shipments are transported to the lower level for processing via a freight elevator or moved to the textbook sales floor for processing. Note: The width of the single doorway leading to the sales floor from the loading dock does not allow for pallets to be taken to the sales floor. Cartons are removed from the pallets and taken to the sales floor by hand trucks.</li> <li>The Bookstore is responsible for providing space for a Post Office, which is located in space contiguous to the Bookstore's retail sales floor. This space is approximately 50 square feet. The operating hours of the Post Office are as follows: Monday - Friday - 8:00 a.m. - 11:00 a.m., 11:30 a.m. - 2:00 p.m., and 2:30 p.m. - 4:00 p.m.</li> </ul> <p>New Space:</p> <ul style="list-style-type: none"> <li>The location of the Bookstore should be in close proximity to other primary services in the University Center and the University Welcome Center. There are two options available for the location of the Bookstore: <ul style="list-style-type: none"> <li>The existing location in the University Center</li> <li>A separate stand-alone facility in close proximity to the University Center</li> </ul> </li> <li>If the Bookstore remains in its existing location, it will be necessary to expand and reconfigure the current space.</li> <li>If the Bookstore is relocated as a separate stand-alone facility in close proximity to the University Center, it will be necessary to ensure that some retail food destinations are in close proximity to the Bookstore.</li> </ul>

Issues	Comments
	<ul style="list-style-type: none"> <li>• The Bookstore should have significant exterior visibility, which should include signage and exterior display windows.</li> <li>• The Bookstore should include a Convenience Department.</li> <li>• The optimal Bookstore design would provide for the retail space to occupy the prime space of the Bookstore facility, with offices and the necessary workstations positioned in secondary space. Designing the Bookstore facility so that all retail space is cohesive with effective departmental adjacencies would allow customers to shop in a professional retail environment. In addition, the allocation of retail to office and storage space would need to be increased to include more emphasis on retail space.</li> <li>• The ideal design for the shipping/receiving space would be to have the shipping/receiving and storage spaces adjacent and fully accessible to the textbook retail space.</li> </ul>

2. Square Footage

Existing Space:

- The existing space is a total of 24,925 square feet, consisting of the following:  
 Retail Space - 14,783 sq. ft. (includes the Post Office)  
 Office Space - 1,163 sq. ft.  
 Shipping/Receiving/Storage - 8,624 sq. ft.  
 Other Space - 355 square feet
- Retail space represents 59% of total space.
- The existing Bookstore space does not adequately serve the textbook and course materials needs of the University of Houston Students. The inadequate space allocation (approximately 5,375 square feet) includes the Textbook Manager's office and the Textbook Staff offices/workstations (approximately 256 square feet). The practice of maintaining textbook overstock in non-selling storage areas increases handling costs.

New Space:

- The amount of total space devoted to the new Bookstore facility should be in the 37,000 - 43,000 square feet range, which should be sufficient to serve the long-term needs of the University. The allocation of retail to office and storage space should be significantly modified. Retail space in the existing facility represents approximately 59% of total space. The new facility should be designed so that retail space represents more than 78% of total space. The total recommended square footage (37,000 - 43,000 square feet) includes retail space, office space, storage space, shipping/receiving space, etc. See "Recommended Square Footage," which follows, for the detailed breakout of space.

Issues	Comments
<p>3. Bookstore Traffic Flow During Rush and Non-Rush Periods</p>	<p>Existing Space:</p> <ul style="list-style-type: none"> <li>The customer service counter runs along the left side of the Bookstore's entrance, and is approximately 24 feet long. Five POS terminals at the customer service counter are in place during non-Rush periods. For the major Rush periods, an additional 18 temporary POS terminals extend across the entranceway of the Bookstore.</li> <li>During the major Rush periods, fixtures and merchandise displays utilized in the Cougar Shop are eliminated or relocated to accommodate the checkout lines leading to the 23 POS terminals in use.</li> <li>During non-Rush periods, checkout areas are currently designed so that flex space is available for seasonal and promotional merchandise.</li> </ul> <p>New Space:</p> <ul style="list-style-type: none"> <li>During Rush periods, checkout areas may need to be expanded and designed to accommodate heavy traffic flow into and out of the Bookstore without interfering with customer browsing and the effective presentation of merchandise and visual display. This includes the back-to-school periods as well as major events such as home sporting events, alumni weekends, parent's weekends, etc.</li> <li>Additional POS terminals/checkouts (beyond the 23 that are currently used) may be needed during Rush to minimize checkout lines, minimize congestion, improve customer service, and to accommodate enrollment growth.</li> </ul>
<p>4. Loading Dock Location</p>	<p>Existing Space:</p> <ul style="list-style-type: none"> <li>The Bookstore's loading dock access is from the main sales floor level with a single door leading to the sales floor. A freight elevator that is accessible directly from the loading dock is used to transport shipments to the lower level shipping/receiving storage area for processing.</li> </ul> <p>New Space:</p> <ul style="list-style-type: none"> <li>If the Bookstore remains in the current location, the current loading dock access to and from the sales floor and the shipping/receiving area will continue to be challenging.</li> <li>If the Bookstore is relocated to a separate stand-alone facility, the ideal loading dock would include a secure loading dock area that is adjacent to the Bookstore's shipping/receiving space, which in turn would be in close proximity to the textbook department. The Bookstore's loading dock and driveway space should be designed to accommodate all common carriers (i.e., UPS, common carriers, FedEx, etc.) that deliver freight to the Bookstore.</li> </ul>

Issues	Comments
5. Miscellaneous Space Requirements	<p>Existing Space:</p> <ul style="list-style-type: none"><li>Textbook Reservations. The Bookstore processed approximately 2,800 Web site textbook reservations during the Fall '07 semester. Although the current space has accommodated the textbook reservation program, there are some issues with respect to the efficiency of the order distribution. Prepaid textbook reservations are staged on shelves in the perimeter stockroom area immediately adjacent to the Web desk/pickup area (approximately 140 square feet). Although the proximity of the perimeter stockroom to the customer pickup counter is efficient, the available perimeter stockroom space is not adequate to support a significant increase of textbook reservations (i.e., if the program expands to 4,000 - 5,000 orders).</li></ul> <p>New Space:</p> <ul style="list-style-type: none"><li>A new Bookstore facility (whether in the existing location or in a new location) should allow for the allocation of expanded and flexible staging space for textbook reservation distribution at the beginning of each major semester. Flex space should be included in the design of the new Bookstore.</li></ul>
6. Shipping / Receiving Space	<p>Existing Space:</p> <ul style="list-style-type: none"><li>The Bookstore's main shipping/receiving area is comprised of a large stockroom. In addition, a separate clothing stockroom, cash accounting room, and employee break room are adjacent and accessible from the shipping/receiving and main storage area. The current space is excessive and includes functional processing space and workspace necessary to maintain the computerized receiving system, pricing, segregation of shipments, etc. During the major Rush periods, this space is also utilized for the processing of refunds during peak refund days. In addition, it is also utilized for the end-of-semester buyback periods. The relocation of buyback and refunds to a segregated area on or near the main sales floor would provide for buyback and refund customers to conveniently shop the Bookstore.</li></ul> <p>New Space:</p> <ul style="list-style-type: none"><li>The shipping/receiving space in the Bookstore's new or modified location should continue to be consolidated space so that all shipping and receiving space is in one location, ideally in close proximity to the textbook department and the loading dock area.</li><li>The shipping/receiving space should also include functional processing space and workspace necessary to maintain the computerized receiving system, pricing, segregation of shipments, etc. The shipping/receiving space should be designed to avoid the use of the sales floor for processing shipments.</li></ul>

Issues	Comments
7. Storage Space Requirements	<p>Existing Space:</p> <ul style="list-style-type: none"><li>• The shipping/receiving area includes a large storage area and is primarily utilized for the storage of emblematic clothing, gifts, bulk school supplies, and graduation regalia (caps &amp; gowns). Based on the storage needs of the Bookstore, this space is excessive. In addition, there is a perimeter stockroom area that adjoins the retail sales floor.</li></ul> <p>New Space:</p> <ul style="list-style-type: none"><li>• The ideal design for storage space would be to have the shipping/receiving and all storage space in one location, adjacent to the textbook retail space. However, it is feasible (although not preferable) to have the storage space remain on the lower level.</li><li>• The new Bookstore facility design will not require an increase in storage space. Additional retail space would result in a reduction to the amount of retail overstock kept in the stockroom.</li></ul>
8. Office Space Requirements	<p>Existing Space:</p> <ul style="list-style-type: none"><li>• The Bookstore's current amount of office space is adequate.</li><li>• The Bookstore's office space is located primarily along the perimeter of the Bookstore's retail sales floor level and on the lower receiving/shipping and storage level. Offices on the retail sales floor level include the Bookstore Manager's office (approximately 120 square feet) and a Textbook Manager's office area that includes Textbook Staff offices/workstations (approximately 256 square feet). The Textbook Staff and Management offices are located on the back perimeter of the Bookstore, central to the textbook department. The lower level includes a cash/accounting office, an employee break room, and a large area for shipping/receiving and storage.</li></ul> <p>New Space:</p> <ul style="list-style-type: none"><li>• Proposed total square footage for office and workstation/kiosk space should be in the 5% range (or less) of total space.</li><li>• Offices should be as follows:<ul style="list-style-type: none"><li>- Manager's Office</li><li>- Accounting Office</li><li>- Cash Office</li><li>- Textbook Office</li><li>- Break Room</li></ul></li><li>• Additional floor workstations/kiosks are listed in #9, next page.</li></ul>

Issues	Comments
<p>9. Sales Floor Office / Other Space Requirements</p>	<p>Existing Space:</p> <ul style="list-style-type: none"> <li>The Bookstore has a textbook customer service counter (which is part of the textbook staff office space) located at the far end of the Bookstore through the textbook department. There is no overhead signage identifying this area as a textbook customer service. There is a Web office/workstation located near the Cougar Shop and a general book department customer service/workstation.</li> </ul> <p>New Space:</p> <ul style="list-style-type: none"> <li>The new Bookstore facility should include the following floor workstations/kiosks:                             <ul style="list-style-type: none"> <li>Textbook information counter</li> <li>General book/merchandise (i.e., clothing, gifts, supplies, trade/reference books, etc.) workstation/kiosk</li> <li>Customer service/main checkout counter in the front of the Bookstore.</li> </ul> </li> <li>These spaces should be designed so that they do not impede the retail flow of the textbook or general merchandise departments. These spaces should be designed so that workstations can be easily maintained and are visually appealing.</li> </ul>
<p>10. Customer Service Functions</p>	<p>Existing Space:</p> <ul style="list-style-type: none"> <li>Refunds. The Bookstore processes refunds during the major Rush periods on the lower level in the stockroom area. Customers enter and exit through a lower level exterior entrance. Non-Rush refunds occur at the Customer Service counter located in the front of the Bookstore.</li> <li>Buyback. The Bookstore conducts the major end-of-semester buyback on the lower level in the stockroom area. Non-Rush daily buyback occurs at the Customer Service counter located in the front of the Bookstore. In addition, the Bookstore conducts end-of-semester buyback at five remote locations.</li> <li>Textbook reservation pickups. Prepaid textbook reservation pick-ups occur at the sales floor Web office/workstation.</li> </ul> <p>New Space:</p> <ul style="list-style-type: none"> <li>The main checkout counter in the new Bookstore facility should include customer service functions such as customer questions, inquiries, refunds/exchanges, daily buyback, etc.</li> <li>The customer service area in the new Bookstore should include enough flex space so that line queuing at the beginning of each semester is more efficient, reducing the need to relocate or eliminate general merchandise displays.</li> <li>The Bookstore should be designed so that the end-of-semester buyback is conducted in a convenient area that does not impede customer entry/exit. This could be located at the textbook information desk, provided adequate security is in place. The buyback space should continue to accommodate multiple buyback computer terminals to reduce the customer wait time during peak buyback periods.</li> </ul>



## Bookstore Recommended Square Footage

There are several factors that should be considered when determining the appropriate amount of square footage for a university bookstore, including the following:

### 1. Industry Square Footage Data and Recommendations:

- Industry square footage actual data includes the following:
  - The Fiscal '07 Industry Average selling space square feet per FTE student figure was 1.0 for bookstores with sales volumes between \$10-\$14 million.
  - The Fiscal '07 Industry Average selling space square feet per FTE student figure was 1.0 for bookstores serving colleges/universities with enrollments between 10,000 - 20,000.
- Industry standard square footage recommended requirements are as follows:
  - NACS recommends 1.5-2 square feet per FTE student for universities with enrollments over 10,000.

### 2. Existing Conditions Regarding Square Footage:

- The Bookstore's selling space square feet per FTE student for Fiscal '07 was 0.5. The "Square Feet Per FTE Student Trend" has been below the Industry Average for the past five years, indicating that the current amount of space is inadequate to support future sales growth.

3. Enrollment Growth: The University's FTE enrollment has increased 1.7% since Fiscal '03. FTE Enrollment for Fiscal '07 was 27,421. The design of the new Bookstore should take into account any future enrollment levels that will be significantly higher than the current level. Enrollments are targeted to reach 36,794 by 2010 and 42,692 by 2020.

4. Campus Input: Based on input received from the campus community and the Bookstore Staff along with CBC's industry knowledge, key requirements that should be included in the Bookstore Program and design for a new facility are as follows:

- The UH Bookstore should be highly visible and should assist with branding and marketing the University of Houston.
- The preferred location of the Bookstore is in a high-traffic location in or within close proximity to the University Center. This would either be in the existing location, with the requirement of expanding and reconfiguring this space, or as a separate stand-alone facility that provides convenient access from the University Center.
- The location and design of the Bookstore should be in close proximity and complimentary to other services in the University Center, creating synergy and excitement within the building.
- The Bookstore should include a Convenience Department that would offer snacks, candy, beverages, and health and beauty aids.
- Although it would be ideal to have all space (retail, office, shipping/receiving/storage) located on one level, it is feasible to locate storage space on the level below the Bookstore.
- The Bookstore should have exterior visibility, which should include signage and display windows.
- The retail space should be designed to allow for improved traffic flow and clearly defined departments.
- Checkout configurations are needed for Rush and non-Rush periods; therefore, flex space will be important in the checkout area of the Bookstore during the time period when Rush checkouts are not needed.
- The design should encourage traffic flow into each distinct area of the Bookstore (i.e. general books, emblematic clothing and gifts, school supplies, etc.).
- The textbook department should be configured to facilitate an efficient and convenient shopping environment for textbooks and course materials that does not occupy excessive or primary retail space. This includes designing the textbook department so that the need to have textbook overstock in non-selling areas during Rush is eliminated.
- Retail space should be increased and the ratio of retail space to total space should also be increased. This would allow for the expansion of the textbook department, the emblematic clothing department, and the emblematic gift department. Additional space would also allow for the development of a technology department, a convenience department, and a dorm supplies department.
- The Bookstore should continue to feature a general book department that encourages browsing. This might include an expanded

- reference/study aids department and a seating area that would result in greater interest in the general book department, while enhancing the academic image of the Bookstore.
- The current retail climate in the university bookstore market will require Bookstore Management to develop a Bookstore Program in the new facility that offers innovative products and services that appeal to the UH campus community (i.e. students, staff, faculty, alumni, prospective students, visitors, etc.). In addition, there could be an opportunity to appeal to the local community (i.e. visitors attending campus events and visiting the Welcome Center). However, students, staff, faculty, alumni, prospective students, parents, visitors, etc., will continue to be the primary target market for the Bookstore.
5. Taking the above requirements into account, it is CBC's opinion that the University should allocate between 37,000-43,000 square feet of total space for the Bookstore. This would allow the Bookstore to properly serve the campus community. This recommendation is based on the following assumptions:
- Other student services (i.e., dining, coffee shop, etc.) offered in the University Center will be located in close proximity to the Bookstore, which will assist with creating retail excitement.
  - The expansion of key merchandise product lines that will be offered in the new Bookstore facility/program. Specific recommendations regarding departmental square footage will need to be determined based upon final programming decisions.
  - The Bookstore will compete vigorously to increase its textbook/course materials market share and will continue to be the primary distribution channel for textbooks and course materials. (i.e., The Bookstore will be the primary distribution channel for course materials, whether a faculty member is using a traditional textbook or a technology-based learning tool.)
  - Distribution space will be needed on a temporary basis (two 3-week periods per year) as part of the Bookstore facility to accommodate growth in the textbook reservation program.
  - The Bookstore space will be designed to support the University's enrollment projections.

EXISTING SPACE	SQUARE FOOTAGE	PROPOSED SPACE	LOW RANGE SQUARE FOOTAGE	HIGH RANGE SQUARE FOOTAGE
Retail	14,783	Retail (including customer service, checkouts, and floor offices / kiosks)	29,000	34,000
Office	1,163	Office	1,200	1,400
Receiving / Storage	8,624	Receiving / Storage	6,400	7,000
Other	355		400	600
<b>Total Space</b>	<b>24,925</b>	<b>Total Space</b>	<b>37,000</b>	<b>43,000</b>

6. The preliminary square footage recommendations for the new Bookstore facility are as follows:

Allocating 37,000-43,000 square feet to the Bookstore will support future enrollment growth and be sufficient to provide the desired products and services to the University of Houston campus community.

## Food Service

The market research, demand analysis and program assessment indicate that there are opportunities to improve the dining program at the University of Houston.

### Market Research

Themes that emerged during the Focus Group sessions included requests for the following:

- More / different food options
  - Healthier food options
  - More ethnic foods, including Mediterranean
  - Less fried / fast food
- More dining options during the non-academic year
- Better customer service
- Cleaner dining facilities
- More convenient operating hours especially for
  - Weekends
  - Late night
  - During Finals week

Survey results indicated there are several attributes that are important influencers when members of the campus community consider purchasing a meal or food on campus. Based on a scale of 1 to 10, where 10 always influence their decision to make a purchase, the top five influencers are:

- Freshly prepared quality food
- Pricing that is fair / provides a good value
- Service systems that allows the customer to order, receive and pay for food quickly
- Convenient operating hours
- A location that is within walking distance at meal time

There are slight variations between students and faculty / staff members as illustrated in the charts that follow.

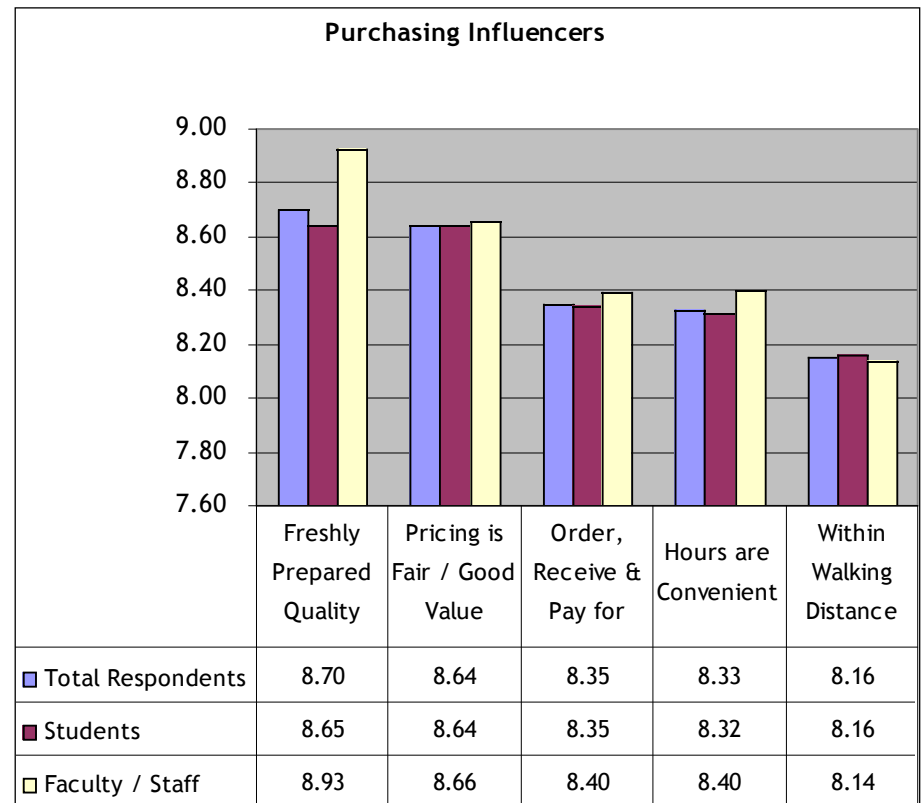


Chart 1: Top Five Influencers for Purchasing Food on Campus

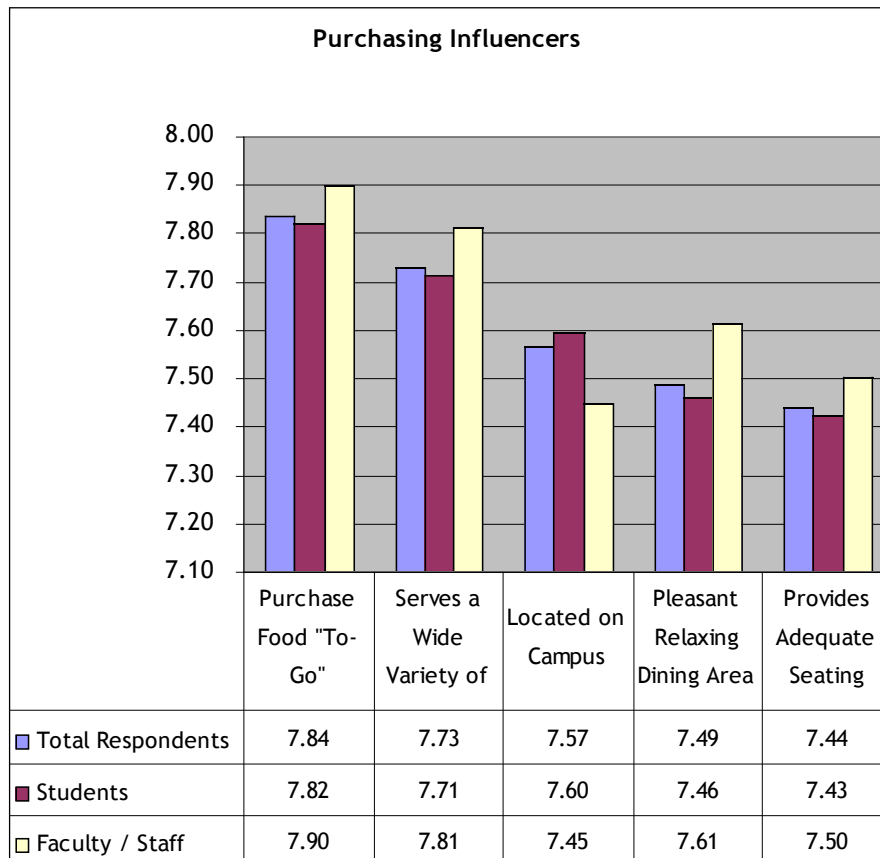


Chart 2: Next Five Influencers For Purchasing Food On Campus

When survey participants were asked what type of venue they would frequent the most in a University Center, the top five responses were as follows:

STUDENTS

1. Food Court
2. Quick Service Restaurant
3. Pub
4. Café / Bistro
5. Coffeehouse

FACULTY / STAFF

1. Food Court
2. Café / Bistro
3. Quick Service Rest.
4. Coffeehouse
5. Pub

**Capture Rate**

59.6% of the Survey Respondents indicated that they Brown Bag for a meal, of which 73.5% typically do this activity for their lunch meal. 53.6% indicated they purchase a meal off campus, of which 43.3% typically do this for lunch. An analysis of the peak day transaction for the ARAMARK venues suggests that they served 6,412 customers between the hours of 11:00am and 2:00pm on a peak day, during the Fall Semester 2007 as depicted in Table 1 below. It was also noted that the busiest day for the University Center is typically a Wednesday, and a Thursday for the UC Satellite.

The UC Satellite is capturing 39.3% of ARAMARK's lunch customers, while the University Center is serving 36.4% of the customers. This suggests that the UC Satellite is serving 7.9% more customers than the University Center during lunch. This is interesting in that when one analyzes the survey results, it indicates that the majority of the respondents tend to be closer to the UC Satellite right before lunch, as illustrated in the map below. Thus, one might expect that the capture rate would be higher at the UC Satellite.

Peak Day Count	Lunch	Percent
UC Satellite Food Court	1,747	27.2%
UC Satellite Other	776	12.1%
Univ. Center Food Court	1,022	15.9%
Univ. Center - Other ARAMARK	1,313	20.5%
Other Retail	772	12.0%
Residential	782	12.2%
<b>Total ARAMARK Venues</b>	<b>6,412</b>	<b>100.0%</b>

Table 1: Peak Day Lunch Counts During the 2007 Fall Semester at ARAMARK Dining Venues

Additional analysis indicates that during the Fall Semester the number of students scheduled for class around the lunch hour is approximately as follows:

- Between 11:00am and 12 Noon on Monday (6,118) and Wednesday (5,952)
- Between 12 Noon and 1:00pm on Monday (4,269) and Wednesday (4,031)
- Between 10:00am and 11:30am on Tuesday (10,919) and Thursday (10,947)
- Between 11:30am and 1:00pm on Tuesday (10,295) on Thursday (9,427)

If one assumes that 1,373 faculty and 3,436 staff members are also on campus, the total minimum potential market on campus is 10,771 on a Wednesday and 15,756 on a Thursday. This is a conservative estimate if one assumes that the 4,124 campus residents are scheduled for class and that the second hour of classes contains the same individuals. If none of the residential students has classes during this period and all of the students in class during the second time slot are different from the first scheduled class, then the market increases to potentially 18,926 on a Wednesday and 29,307 on a Thursday. Thus, it is not clear if ARAMARK's market capture rate is as low as 21.9% or as high as 59.5%. The market capture rate for the University as a whole also needs to take into consideration the tenant operations in the Welcome Center / Parking Garage. Unfortunately, customer counts for these locations were not available.

It is also interesting to note that only 782 customers elect to eat in one of the two residential units for lunch, which represents 31% of the meal plan participants. At dinner, 877 customers elect to dine in one of the residential dining units, which is 34.8% of the

meal plan participants. This participation rate is extremely low, and is probably indicative that the residential dining program is not meeting the needs and expectations of the residential population. A more in-depth analysis of the University's capture rate is scheduled to occur during the 2008 Fall Semester.

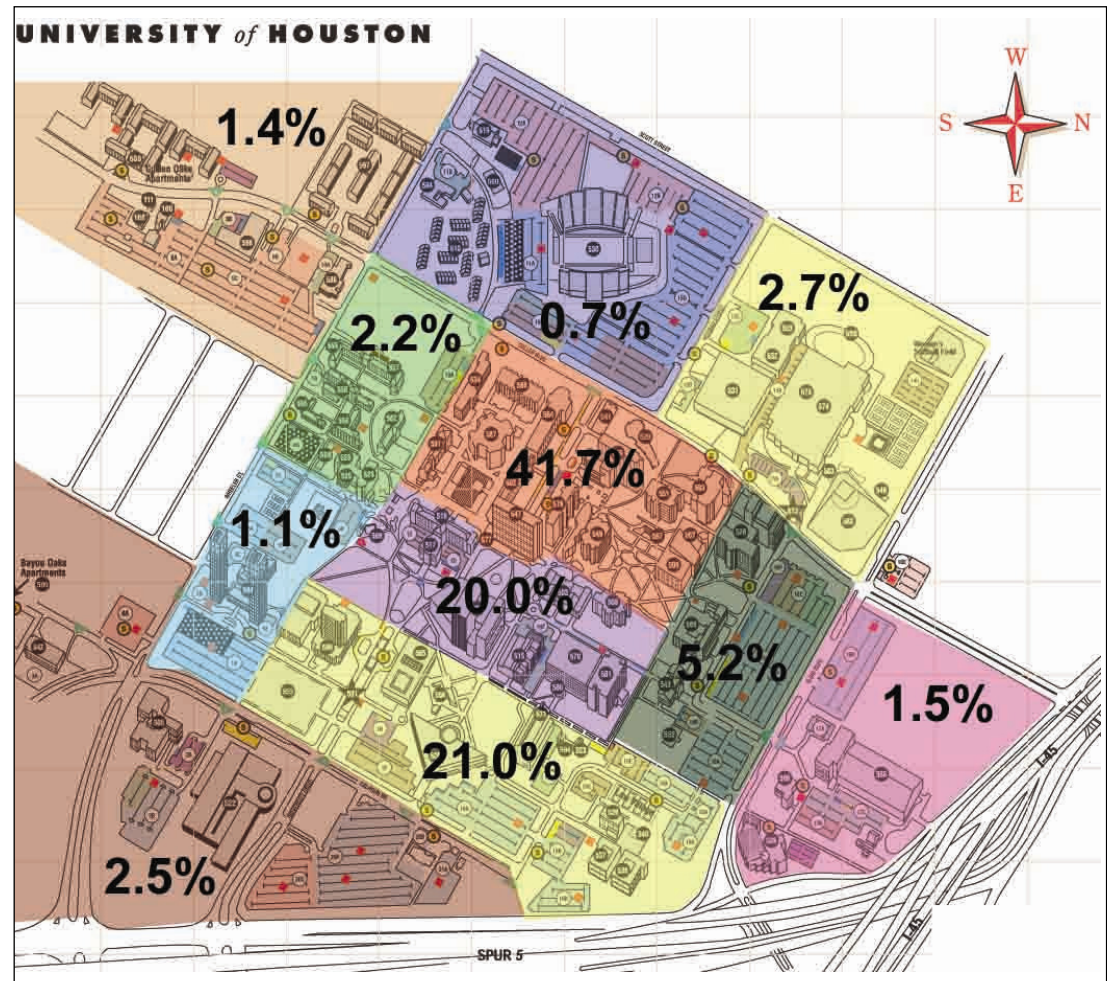
### Demand Analysis

A demand analysis was conducted on the existing customer patterns, as well as one for future needs based on the current operating model and incorporating a few tenants into the mix. The first step of the demand analysis was to assess the current space allocation, which indicated that the University Center Dining operations have excess space but unfortunately, the space is not allocated for efficient service. As depicted in Table 2 that follows, the analysis indicates that in the University Center:

- The serving areas for the retail dining venues are too small;
- Catering does not have enough storage capacity;
- Wendy's does not have enough seating;
- The production kitchen is too large;
- ARAMARK no longer needs a dedicated space for a Bakery; and
- Chili's and the Food Court have too much dining space.

On an observational note, one might not think that the Food Court had too much dining space, which suggests that students are currently using the dining areas for lounge space between their classes and activities.

A demand analysis of the existing UC Satellite dining operations suggests that this operation does not have enough space to provide the program efficiently



Map 1: Where Survey Respondents are Right Before Lunch

**Demand-Based Program Analysis**

University of Houston	Retail Dining Demand Analysis								
SPACE REQUIREMENTS:	UC - C-Store	UC - Java City	UC - Wendy's	UC - Food Court	UC - Chili's Too	Total UC Retail	Catering	Bakery	Total Including Catering & Bakery
<i>Number of Seats Required</i>	0	25	120	235	100	480			
Dining	-	500	1,924	3,760	2,000	8,184			8,184
Serving	950	150	450	2,396	750	4,696			4,696
Dishwash / Pot Wash		50	150	470	250	920	842		1,762
Kitchen				799	500	1,299	673		1,972
Storage	425	80	534	799	300	2,138	3,198		5,336
Support	80		120	3,845	566	4,611	1,872		6,482
<b>Total Space Requirements</b>	<b>1,455</b>	<b>780</b>	<b>3,178</b>	<b>12,068</b>	<b>4,366</b>	<b>21,848</b>	<b>6,584</b>	<b>0</b>	<b>28,432</b>
EXISTING SPACE:	UC - C-Store	UC - Java City	UC - Wendy's	UC - Food Court	UC - Chili's Too	Total UC Retail	Catering	Bakery	Total Including Catering & Bakery
<i>Number of Seats Available</i>	0	16	24	444	236	720			
Dining		187	525	8,019	5,000	13,731			13,731
Serving	464	331	276	1,912	672	3,655			3,655
Dishwash			220	1,058	150	1,428			1,428
Kitchen				3,408	906	4,314		1,060	5,374
Storage	253		283	1,650	506	2,692	664		3,356
Support			49	1,778	202	2,029	1,469		3,498
<b>Total Existing Space</b>	<b>717</b>	<b>518</b>	<b>1,353</b>	<b>17,825</b>	<b>7,436</b>	<b>27,849</b>	<b>2,133</b>	<b>1,060</b>	<b>31,042</b>
DIFFERENCE:	UC - C-Store	UC - Java City	UC - Wendy's	UC - Food Court	UC - Chili's Too	Total UC Retail	Catering	Bakery	Total Including Catering & Bakery
<i>Number of Seats</i>	0	(9)	(96)	209	136	240			
Dining	0	(313)	(1,399)	4,259	3,000	5,547	0	0	5,547
Serving	(486)	181	(174)	(484)	(78)	(1,041)	0	0	(1,041)
Dishwash	0	(50)	70	588	(100)	508	(842)	0	(334)
Kitchen	0	0	0	2,609	406	3,015	(673)	1,060	3,402
Storage	(172)	(80)	(251)	851	206	554	(2,534)	0	(1,980)
Support	(80)	0	(71)	(2,067)	(364)	(2,582)	(403)	0	(2,984)
<b>Total Space Excess (Deficit)</b>	<b>(738)</b>	<b>(262)</b>	<b>(1,825)</b>	<b>5,757</b>	<b>3,070</b>	<b>6,001</b>	<b>(4,451)</b>	<b>1,060</b>	<b>2,610</b>

Table 2: Space Allocation Required for Existing Dining Venues in the University Center



either. Table 3 that follows indicates that in an ideal situation there is not enough space allocated for seating, storage and support functions at the UC Satellite.

Based on the consulting team's planning experience for university centers at other campuses and our understanding of the University of Houston's objectives and concerns for the existing dining program, a future demand analysis for the University Center was conducted that incorporated the following planning assumptions:

### Demand Analysis Planning Assumptions

1. Little or no change will occur in the UC Satellite operations; therefore the program analysis needs to focus on the dining venues that will be located in the University Center.
2. Customers will occupy or reserve a seat during lunch for 30 minutes at the University Center food venues, except Chili's Too, which is estimated to be 60 minutes.
3. The seating efficiency will be 80% at each dining venue, for example, a table for four with three guests at the table would generate a 75% seating efficiency, except at Chili's Too, which will have a 75% seating efficiency.
4. The take-out factors will be as follows:
  - a) 100.0% at the Convenience Store
  - b) 85.0% at Java City or some future coffee concept
  - c) 35% at Wendy's
  - d) 20.0% at the Food Court venues and at a future tenant venue
5. A Food Court concept will exist in the future and will be operated by one vendor; additional venues outside of the Food Court area may be leased to individual tenants.
6. Menu items will be served on disposables, except at the Food Court or Chili's Too, where menu items will be offered on durable ware.
7. Venues are stand-alone entities and do not share any support services with the other dining venues, with the exception of employee lockers rooms, janitor closet, cart wash, recycling and trash.
8. Office requirements are per the Proposed Building Program.
9. After the renovations, 20% more customers will patronize the coffee concept.
10. A new concept will be available that serves 467 customers at lunch, which represents a 20.0% increase over the existing number of customers served at all of the University Center during lunch

**Demand-Based Program Analysis**

University of Houston		Retail Dining Demand Analysis										
SPACE REQUIREMENTS:	UCS C-Store	UCS - Smoothie King	UCS - Starbucks	UCS - Kimson	UCS - Pizza Hut	UCS - Grille Works	UCS - Cranberry Farms	UCS - Chick-fil-a	UCS - Montague Deli	UCS - Taco Bell	Subtotal UCS Food Court	Total UCS Retail
Dining		174	282	1,328	992	576	624	1,536	768	800	6,624	7,080
Serving	1,100	150	400	300	400	300	150	300	200	450	2,100	3,750
Dishwash / Pot Wash		50	50								200	300
Kitchen				279	212	114	135	353	171	180	1,444	1,444
Storage	500	100	154	279	212	114	135	353	171	180	1,444	2,198
Support											2,070	2,070
<b>Total Space Requirements</b>	<b>1,600</b>	<b>474</b>	<b>886</b>	<b>2,187</b>	<b>1,816</b>	<b>1,105</b>	<b>1,044</b>	<b>2,541</b>	<b>1,309</b>	<b>1,610</b>	<b>13,882</b>	<b>16,841</b>
EXISTING SPACE:	UCS C-Store	UCS - Smoothie King	UCS - Starbucks	UCS - Kimson	UCS - Pizza Hut	UCS - Grille Works	UCS - Cranberry Farms	UCS - Chick-fil-a	UCS - Montague Deli	UCS - Taco Bell	Subtotal UCS Food Court	Total UCS Retail
Dining			276								6,217	6,493
Serving	624	394	294	299	359	146	146	272	360	493	2,240	3,552
Dishwash											-	-
Kitchen										360	1,432	1,432
Storage	249										584	833
Support											403	403
<b>Total Existing Space</b>	<b>873</b>	<b>394</b>	<b>570</b>	<b>299</b>	<b>359</b>	<b>146</b>	<b>146</b>	<b>272</b>	<b>360</b>	<b>853</b>	<b>10,876</b>	<b>12,713</b>
DIFFERENCE:	UCS C-Store	UCS - Smoothie King	UCS - Starbucks	UCS - Kimson	UCS - Pizza Hut	UCS - Grille Works	UCS - Cranberry Farms	UCS - Chick-fil-a	UCS - Montague Deli	UCS - Taco Bell	Subtotal UCS Food Court	Total UCS Retail
Dining	0	(174)	(6)	(1,328)	(992)	(576)	(624)	(1,536)	(768)	(800)	(407)	(587)
Serving	(476)	244	(106)	(1)	(41)	(154)	(4)	(28)	160	43	140	(198)
Dishwash	0	(50)	(50)	0	0	0	0	0	0	0	(200)	(300)
Kitchen	0	0	0	(279)	(212)	(114)	(135)	(353)	(171)	180	(12)	(12)
Storage	(251)	(100)	(154)	(279)	(212)	(114)	(135)	(353)	(171)	(180)	(860)	(1,365)
Support	0	0	0	0	0	0	0	0	0	0	(1,667)	(1,667)
<b>Total Space Excess (Deficit)</b>	<b>(727)</b>	<b>(80)</b>	<b>(316)</b>	<b>(1,888)</b>	<b>(1,457)</b>	<b>(959)</b>	<b>(898)</b>	<b>(2,269)</b>	<b>(949)</b>	<b>(757)</b>	<b>(3,006)</b>	<b>(4,128)</b>

Table 3: Space Allocation Required for Existing Dining Venues in the UC Satellite

11. The University Center will feature a 1,000 seat ballroom in the future
12. A Bakery does not exist in the future
13. The University's Framework plan calls for mixed use facilities that will incorporate other dining and retail operations

Although the University Center does not have any existing Food Service tenants, incorporating some food service tenants into the mix is a practice the consulting team sees occurring at other universities. This typically creates "healthy" competition in that one vendor does not become complacent. Rather the vendors will proactively develop an understanding of what the needs and expectations are of their customers and then market to them accordingly to capture their share of the revenue dollars.

It should also be noted that the 20% increase in customers is not expected to accommodate future enrollment. The 20% growth referred to in the planning assumptions above is a result of the anticipated growth for the existing enrollment after the dining operations in the University Center are renovated. The footprint of the building does not allow future enrollment growth to be accommodated at this time.

The space program that is depicted in Table 4 that follows provides an opportunity for the University Center to have up to four tenants. Specific recommendations regarding the dining venues that should be offered in the University Center will be identified during the 2008 Fall Semester, when a survey regarding specific features of the dining program is conducted.

Table 4 indicates that approximately 3,600 additional net square feet will be required for the University Center Dining Venues. This additional space along with the renovation / reallocation of the existing spaces provides an opportunity for the following to occur in the future:

- The serving area for the Food Court will have approximately 25% more space than the existing one.
- Additional space is provided for a Coffee venue so that it can provide a coffeehouse atmosphere.
- Additional seating is provided for Wendy's along with storage and support spaces. This venue could become a tenant in the future.
- The amount of space for Chili's Too decreases - sizing it for the anticipated demand.
- An additional concept, potentially a tenant, with 100 dining seats is available.
- The Convenience Store is provided more retail space.
- The space allocation for Catering should accommodate a future 1,000 seat ballroom.
- Kitchen area is reduced.

### Program Analysis

The University does not have a clear articulated vision and mission for its campus-dining program. This became evident when the University's Framework plan was shared the University Center planning committee and no one could identify how many dining venues would be included in the future "mixed use" facilities as residential beds are added, or what the implications might be for the existing dining operations on campus. As dining venues are added, operating expenses will increase. If new customers do not patronize the venues to generate incremental revenues or if existing customers just migrate to these other venues, then profit margins are likely to diminish to a point where the Food Service Contractor will not be able to support some of the existing programs and services expected by the University. In addition, the Food Service Contractor may not be able to operate the dining program on a profit and loss basis, which is not desirable.

It is not clear if a market analysis was conducted when the University leased out the tenant spaces in the Welcome Center / Parking Garage. On most University campuses, and especially in University Centers, all potential retail spaces are considered "prime real estate." Thus, maximizing the sales per square foot will not only result in customer satisfaction, but typically results in improved compensation to the University. An example of a space that appears to have insufficient sales for its allocated space is the Java City concept in the University Center.

At some point, the University needs to assess each operation for revenue potential, how well the venue is meeting customers' expectations, what the existing capture rate percentage is, and determine if there is any

**Demand-Based Program Analysis**

University of Houston		Retail Dining Demand Analysis								
SPACE REQUIREMENTS:	UC - C-Store	UC - Java City	UC - Wendy's	UC - Food Court	UCS - Chili's Too	Future Concept #1	Total UC Retail	Catering	Bakery	Total UC w/ Catering & Bakery
<i>Number of Seats</i>	0	25	120	235	100	100	580			
Dining	-	500	1,924	3,760	2,000	1,600	9,784			9,784
Serving	950	150	450	2,397	750	450	5,147			5,147
Dishwash / Pot Wash		50	150	470	250	150	1,070	1,500		2,570
Kitchen				799	500	300	1,599	1,200		2,799
Storage	425	80	534	799	300	300	2,438	4,800		7,238
Support	120	120	120	3,845	566	140	4,911	2,230		7,141
<b>Total Space Requirements</b>	<b>1,495</b>	<b>900</b>	<b>3,178</b>	<b>12,070</b>	<b>4,366</b>	<b>2,940</b>	<b>24,950</b>	<b>9,730</b>	<b>0</b>	<b>34,680</b>
EXISTING SPACE:	UC - C-Store	UC - Java City	UC - Wendy's	UC - Food Court	UCS - Chili's Too	Future Concept #1	Total UC Retail	Catering	Bakery	Total UC w/ Catering & Bakery
<i>Number of Seats Available</i>	0	16	24	444	236	0	720			
Dining	-	187	525	8,019	5,000	-	13,731	-	-	13,731
Serving	464	331	276	1,912	672	-	3,655	-	-	3,655
Dishwash	-	-	220	1,058	150	-	1,428	-	-	1,428
Kitchen	-	-	-	3,408	906	-	4,314	-	1,060	5,374
Storage	253	-	283	1,650	506	-	2,692	664	-	3,356
Support	-	-	49	1,778	202	-	2,029	1,469	-	3,498
<b>Total Existing Space</b>	<b>717</b>	<b>518</b>	<b>1,353</b>	<b>17,825</b>	<b>7,436</b>	<b>-</b>	<b>27,849</b>	<b>2,133</b>	<b>1,060</b>	<b>31,042</b>
DIFFERENCE:	UC - C-Store	UC - Java City	UC - Wendy's	UC - Food Court	UCS - Chili's Too	Future Concept #1	Total UC Retail	Catering	Bakery	Total UC w/ Catering & Bakery
<i>Number of Seats</i>	0	(9)	(96)	209	136	(100)	140			
Dining	0	(313)	(1,399)	4,259	3,000	(1,600)	3,947	0	0	3,947
Serving	(486)	181	(174)	(485)	(78)	(450)	(1,492)	0	0	(1,492)
Dishwash	0	(50)	70	588	(100)	(150)	358	(1,500)	0	(1,142)
Kitchen	0	0	0	2,609	406	(300)	2,715	(1,200)	1,060	2,575
Storage	(172)	(80)	(251)	851	206	(300)	254	(4,136)	0	(3,882)
Support	(120)	(120)	(71)	(2,067)	(364)	(140)	(2,882)	(761)	0	(3,643)
<b>Total Space Excess (Deficit)</b>	<b>(778)</b>	<b>(382)</b>	<b>(1,825)</b>	<b>5,755</b>	<b>3,070</b>	<b>(2,940)</b>	<b>2,899</b>	<b>(7,597)</b>	<b>1,060</b>	<b>(3,638)</b>

Table 4: Space Allocation Required for Future Dining Venues in the University Center

capacity for future dining venues. This will be particularly important as the University constructs additional beds on campus, and communicates a vision of where these students will purchase their meals. Currently, the data analysis suggests that residential students are dining more frequently at the campus convenience stores, University Center, and UC Satellite operations than in the residential dining venues. If this trend continues, it is anticipated that the convenience stores, University Center and UC Satellite operations will not be able to accommodate future demand.

It is also important that ARAMARK have one person that they can be accountable to and can help them prioritize their resources. This person needs to be in position that can fairly evaluate the needs of the University, the retail dining program, as well as those for the Residential Life program, especially since the existing meal plans are portable between the University Centers, other campus retail dining units and the residential dining venues. Not surprising, each of these services may have different needs or requirements. It is also critical that the campus dining venues complement each other, support the mission of the overall campus life experience, and meet the expectations of all members of the campus community. When one part of the program is not performing to expectations, i.e. the residential dining program, then this can create undo demand or challenges on the retail dining operations.

That said, there are opportunities to improve the campus dining program. Some of the steps recommended to accomplish this include:

1. Evaluate all campus retail dining operations for profitability.
2. Assess the existing dining venues in the University Centers for revenue per square foot, in addition to profitability.
3. Identify potential areas for replacing concepts and evaluate the pros and cons of leasing to a tenant versus having the campus food service provider operating the venue.
4. Renovate the dining venues so that they meet the needs and expectations of the customer better, and can be configured to be more efficient for the food service operator.
5. Conduct quantitative market research when replacing concepts or brands on campus to understand frequency of use and spending patterns.
6. Implement changes to the residential dining program so that meal plan participation increases to greater than 50% at a minimum.
7. Develop an understanding for future housing, including the type of housing and the implications for dining.
8. Hold the Food Service Contractor accountable for services and expectations outlined in the Contract.
9. Develop and implement a campus-wide Dining Services Master Plan.