

Baltimore Convention Center Expansion Study Update



**Presented to:
Maryland Stadium Authority**

Presented by:



**Final Report
July 2018**



July 2018

Mr. Al Tyler, Assistant Vice President – Capital Projects
Maryland Stadium Authority
Capital Projects Development Group
The Warehouse at Camden Yards - South Warehouse
351 West Camden St., Ste. 300
Baltimore, MD 21201

Dear Mr. Tyler:

Crossroads Consulting Services, LLC has completed its market and economic analysis update for the Maryland Stadium Authority related to the proposed renovation/expansion of the Baltimore Convention Center. This report summarizes our research and analysis. The majority of market research was conducted prior to January 2018.

In accordance with the terms of our engagement letter, the accompanying report is restricted to internal use by the Maryland Stadium Authority and may not be relied upon by any third party for any purpose including financing. Notwithstanding these limitations, it is understood that this document may be subject to public information laws and, as such, can be made available to the public upon request.

Although you have authorized reports to be sent electronically for your convenience, only the final hard copy report should be viewed as our work product.

We have enjoyed serving you on this engagement and look forward to the opportunity to provide you with continued service in the future.

Sincerely,

Crossroads Consulting Services, LLC

TABLE OF CONTENTS

1.	Introduction	1
2.	Local Market Conditions	4
3.	Historical BCC Operations	11
4.	Key Industry Trends	23
5.	Recommended Program	32
6.	Competitive Facility Analysis	35
7.	Economic Analysis	44
8.	Limiting Conditions and Assumptions	54

INTRODUCTION

Project Background

Established by the State General Assembly in 1986, the Maryland Stadium Authority's (MSA) mission is to plan, finance, build and manage sports and entertainment facilities in Maryland; provide enjoyment, enrichment, education, and business opportunities for citizens; and develop partnerships with local governments, universities, private enterprise and the community. The Baltimore Convention Center (BCC) is owned and operated by the City of Baltimore (City) and is one of the projects with which MSA is involved.

Located in downtown Baltimore, the BCC was originally constructed in 1979 and expanded in 1997 to its current size. The BCC has been recognized as one of the country's leading convention centers. The facility has over 1.2 million gross square feet (SF) of total space including:

Exhibit Space: 300,000 total SF divisible into seven separate halls

Ballroom Space: 36,700 total SF divisible into four sections

Meeting Space: 70,500 SF including 50 meeting rooms that can accommodate between 85 and 1,600 people

In addition, the facility offers other features including prefunction space, an outdoor terrace and covered pavilion, and access to the Skywalk, Inner Harbor and hotels via the mezzanine level. The 757-room, City-owned Hilton Baltimore hotel opened in 2008 and is connected to the BCC. Additionally, the BCC is conveniently located within walking distance to the Sheraton Inner Harbor and Marriott hotels, among others. In aggregate, Baltimore offers approximately 10,700 hotel rooms. The BCC is also accessible via the City's light-rail with a stop located across the street.

Crossroads Consulting Services, LLC (Crossroads Consulting) completed a market and economic analysis for expansion of the BCC dated February 2012. At the time, the Greater Baltimore Committee (GBC) revealed plans for a proposed new arena, a 500-room hotel, and an expanded BCC. A significant aspect of the proposal was that a local businessman would form a partnership to privately fund construction of the new hotel and arena. The possible private sector investment was contingent on public sector financing of the BCC expansion.

Among other things, the report recommended a preliminary building program that increased the exhibit hall by 200,000 SF, ballroom space by 50,000 SF to 60,000 SF, and meeting room space by 40,000 SF to 45,000 SF. The report noted that this combination of space should allow the BCC to host both larger events that cannot currently be accommodated as well as more simultaneous events.

The 2012 study indicated that any expansion should seek to maximize flexibility, contiguous exhibit space, and functionality among spaces to enhance the BCC's long-term marketability and competitive position in the convention and meetings business.

Purpose of the Study

As part of its long-term planning efforts, the MSA retained Crossroads Consulting to update specific components of the previous study to reflect changes in local market conditions, BCC operations, key industry trends, and the competitive landscape. Our research did not include a survey of existing, past, lost, and potential users (e.g., event promoters, meeting planners, etc.). One of the primary objectives of this study update is to assist the MSA and the City in assessing whether the proposed expansion program previously recommended still appears reasonable and supportable by market demand. In addition, this report provides an updated estimate of utilization and economic and fiscal impacts for a renovated/expanded BCC.

The conclusions outlined in this report are only one factor that the MSA and the City should consider in their strategic planning efforts related to the potential expansion of the BCC under different development scenarios. The research and analysis contained in this report is intended to allow the MSA and the City to draw their own informed conclusions regarding the viability associated with renovation/expansion of the BCC.

Work Plan

Specific research tasks conducted for this analysis included, but were not limited to, the following:

- Conducted interviews and/or work sessions with a variety of stakeholders including, but not limited to, representatives from the MSA, BCC, Visit Baltimore, area business/community groups, and other stakeholders.
- Profiled select market attributes.
- Analyzed historical event activity and financial operations for the existing BCC as well as client feedback and lost business reports.
- Analyzed key industry trends that may impact future operations of an expanded BCC.
- Analyzed building program elements at competitive facilities as well select destination attributes.
- Estimated the potential economic/fiscal impacts in terms of spending, employment, earnings, and tax revenues associated with an expanded BCC.

The remainder of this report summarizes our research and analysis.

TABLE OF CONTENTS

1. Introduction	1
2. Local Market Conditions	4
3. Historical BCC Operations	11
4. Key Industry Trends	23
5. Recommended Program	32
6. Competitive Facility Analysis	35
7. Economic Analysis	44
8. Limiting Conditions and Assumptions	54

LOCAL MARKET CONDITIONS

Local market conditions such as demographic/economic attributes, the vibrancy of the area immediately surrounding a facility, and overall destination appeal to both event planners/promoters and attendees can all impact a facility’s overall competitiveness within the broader marketplace. This section profiles select market characteristics including demographic/economic statistics, area employment, accessibility, the hotel market, attractions, and tourism statistics.

Demographic/Economic Statistics

Population serves as a base from which events at the BCC can draw attendance and other forms of support. Profiled demographic/economic statistics for the local, State, and national markets is based on data supplied by Claritas, a Nielsen company that provides current and projected U.S. demographics based on U.S. Census figures. The Baltimore-Towson Metropolitan Statistical Area (Baltimore MSA) consists of Baltimore City and the following six surrounding counties in Maryland: Anne Arundel, Baltimore, Carroll, Harford, Howard, and Queen Anne's.

In 2017, the population in the City and the Baltimore MSA was estimated to be approximately 621,200 and 2.8 million, respectively. As such, the Baltimore MSA provides an incremental population of approximately 2.2 million. Population within these two market areas is projected to increase by 1.1% and 3.1%, respectively, from 2017 to 2022. These projected growth rates are lower than those for the State (3.6%) and the U.S. (3.8%) during the same period. In 2017, the median age in the City was 35.4 years old which was younger than that for the Baltimore MSA, the State, and the U.S. Income offers a broad measurement of spending potential for a specific population because it indicates the general ability of individuals or households to purchase a variety of goods and services. The 2017 median household income was \$44,800 in the City and \$73,500 in the Baltimore MSA which was relatively consistent with that for the State.

Summary of Key Demographic/Economic Characteristics				
Category	Geographic Area			
	City of Baltimore	Baltimore MSA	State of Maryland	U.S.
Population				
2000 Population	651,200	2,553,000	5,296,500	281,421,900
2010 Population	621,000	2,710,500	5,773,600	308,745,500
2017 Population	621,200	2,818,300	6,064,200	325,139,300
2022 Projection	628,100	2,906,100	6,282,800	337,393,100
Growth Rate (2000-2010)	-4.6%	6.2%	9.0%	9.7%
Growth Rate (2010-2017)	0.0%	4.0%	5.0%	5.3%
Projected Growth Rate (2017-2022)	1.1%	3.1%	3.6%	3.8%
Median Age	35.4	38.8	38.8	38.2
2017 Median Household Income	\$44,800	\$73,500	\$76,300	\$57,500
2017 Average Household Income	\$65,000	\$99,000	\$103,200	\$80,900

Source: Claritas.

Area Employment

The distribution of an area’s employment by industry is a consideration when targeting certain events at convention centers. For instance, a large services sector can be a positive indicator for the number of corporate events being held in the area. The services sector usually has significant financial resources to host activities such as conferences, seminars, banquets, receptions, and other special events. In addition, employers may be members of professional/trade associations and can be instrumental in attracting conventions/tradeshows to Baltimore.

Baltimore is the historic, business, education, and cultural center of Maryland. Over the years, the City has become less dependent on traditional manufacturing industries. Employment data shown in the following table indicates that the City’s workforce is primarily concentrated in education/health services, government, professional/business services and trade/transportation/utilities.

Employment by Industry				
Industry	Baltimore MSA		City of Baltimore	
	Total Jobs	% of Total	Total Jobs	% of Total
Education & Health Services	282,400	20%	125,000	33%
Trade, Transportation & Utilities	253,100	18%	43,800	12%
Government	230,400	16%	72,900	19%
Professional & Business Services	230,000	16%	51,400	14%
Leisure & Hospitality	130,100	9%	27,400	7%
Financial Activities	81,800	6%	19,800	5%
Mining, Logging & Construction	78,000	6%	11,900	3%
Manufacturing	55,500	4%	10,700	3%
Other Services	50,000	4%	12,100	3%
Information	17,200	1%	4,400	1%
Total	1,408,500	100%	379,400	100%

Note: Sorted in descending order by total jobs in the Baltimore MSA as of December 2017.

Source: U.S. Bureau of Labor Statistics.

In December 2017, the non-seasonally adjusted unemployment rate in the City was 5.8% which was higher than that for Baltimore County (3.9%), the Baltimore MSA (3.9%), the State of Maryland (3.8%), and the U.S. (3.9%) during the same month.

As shown in the following table, the City’s largest private sector employers include Johns Hopkins University, Johns Hopkins Hospital and Health System, the University of Maryland Medical System and the University System of Maryland which further demonstrates importance of health care and education related services to the local economy. As a point of reference, there are approximately 69,300 government employees in the City.

City of Baltimore's Largest Private Sector Employers		
Employer	Employees	Industry
Johns Hopkins University	25,800	Education
Johns Hopkins Hospital and Health System	18,500	Health Care
University of Maryland Medical System	11,450	Health Care
University System of Maryland	9,010	Education
MedStar Health	6,175	Health Care
LifeBridge Health	5,315	Health Care
Mercy Health Services	4,030	Health Care
St. Agnes HealthCare	3,265	Health Care
Exelon/Constellation Energy/BGE	2,950	Utilities
Kennedy Krieger Institute	2,600	Health Care

Note: Sorted in descending order by number of employees.

Source: City of Baltimore 2017 Comprehensive Annual Financial Report.

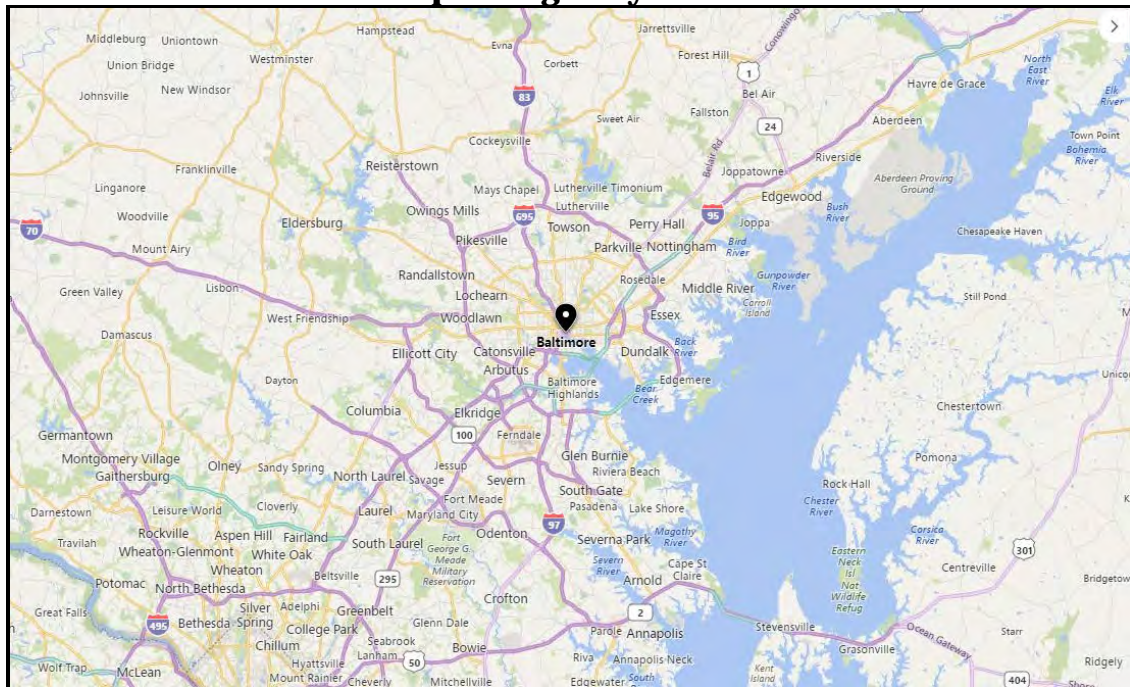
Accessibility

The method that event promoters/producers use to select venues to host their event is partially based on ease of access to a market for attendees. As such, the location and accessibility of a facility relative to the population base can impact its marketability for certain types of events.

Highway Access

Baltimore is in central Maryland along the west coast of the Chesapeake Bay. It is accessible via interstate to several major Northeast and Mid-Atlantic cities including Washington, D.C., Philadelphia, New York, and Richmond. As shown in the following map, multiple interstates serve Baltimore including I-95, I-97, I-70, I-695, and I-83.

Map of Highway Access



Source: Google maps.

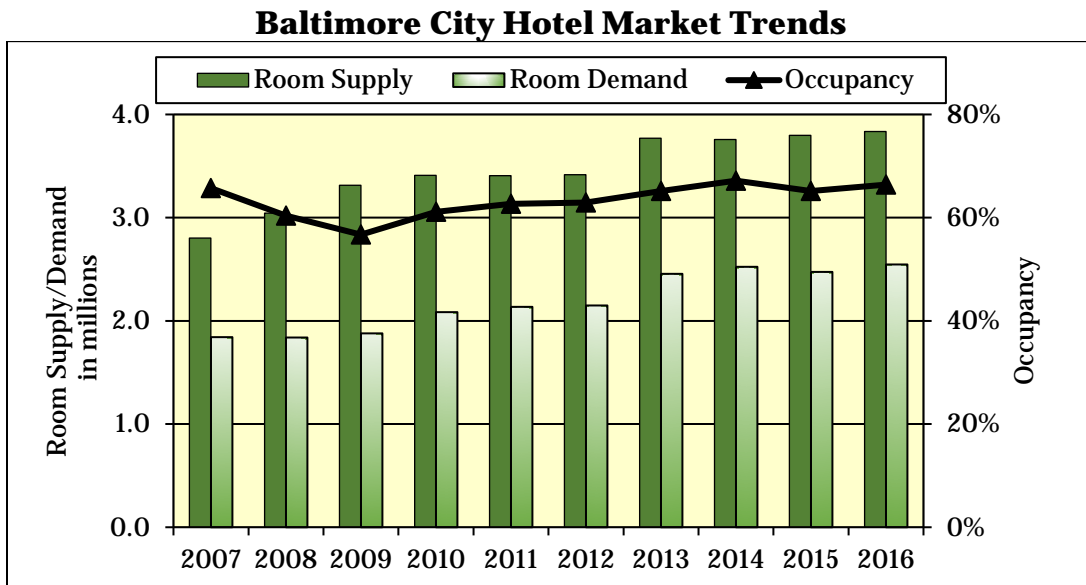
Air access can be an important factor in terms of attracting regional and national conventions and meetings business. Baltimore is primarily serviced by the Baltimore/Washington International Thurgood Marshall Airport (BWI) which is located approximately 15 miles from the BCC. In 2016, BWI had approximately 12.3 million passenger enplanements at BWI which was a 5.1% increase over the prior year. The Federal Aviation Administration (FAA) defines passenger enplanements as domestic, territorial, and international passengers who board an aircraft in scheduled and non-scheduled service of aircraft. BWI was ranked as the 22nd busiest airport in the U.S. in 2016.

Hotel Market

The diversity and supply of hotel rooms proximate to the BCC can play a role in attracting certain events that draw overnight attendees such as conventions/meetings. Baltimore offers 5,300 hotel rooms in the Inner Harbor area and 10,800 citywide per Visit Baltimore. Most BCC-related out-of-town attendees stay in the Inner Harbor area given its proximity to the facility. This section profiles the Baltimore City hotel market and the Inner Harbor hotel sub-market.

Baltimore City Hotel Market

The following graph shows trends in the room supply, demand, and occupancy at Baltimore City hotels. The Baltimore City hotel market increased in supply by 12.2% from 2012 through 2016. Hotel demand increased by 18.5% during that same period. Occupancy at Baltimore City hotels steadily increased from 2009 through 2014 before experiencing a slight decline in 2015 then rebounding again in 2016. Occupancy averaged 65.4% from 2012 through 2016.

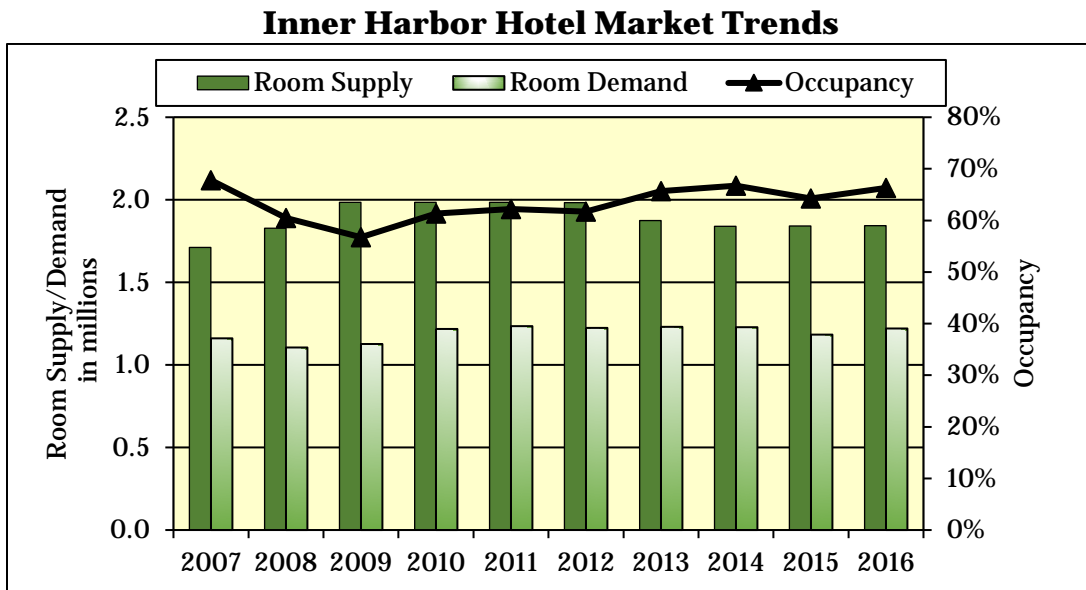


Source: Visit Baltimore.

During the profiled period, the average daily rate (ADR) for the Baltimore City market peaked at \$160.56 in 2007. It experienced several years of decline as a direct result of the U.S. Great Recession which took place from December 2007 to June 2009. In the past five years, ADR has begun to recover and reached its highest rate of \$147.09 in 2016 for this period.

Baltimore Inner Harbor Hotel Sub-Market

The following graph illustrates the trends in Inner Harbor hotel supply, demand and resulting occupancy. Although the supply of rooms decreased by 5.5% from 2012 through 2013, the room demand has remained relatively constant over the past five years (2012 through 2016) resulting in an increase in occupancy over this same period. Overall, hotel occupancy rates have steadily increased since the economic downturn in 2009 with an average occupancy rate of 65% over the past five years.



Source: Visit Baltimore.

The ADR increased by 9.0% in aggregate from 2012 through 2016 increasing each year over this timeframe. The smallest increase in ADR occurred in 2015 which correlates with the 3.7% decrease in room demand and only a slight increase in room supply of 0.1% during that year. Despite relatively similar supply levels the following year in 2016, room demand and ADR increased by 3.2% and 1.9%, respectively.

Changes in Hotel Supply

According to Visit Baltimore, there have been four hotel renovations/conversions in the Baltimore City area since 2015. They include the Hyatt Place Baltimore/Inner Harbor (208 rooms), Hotel Indigo (162 rooms) which was the former Mount Vernon Hotel, Hotel RL (130 rooms) that now occupies the Keyser Building and The Ivy House with only 18 rooms but providing over 4,000 SF of meeting space.

Within downtown's one-mile radius area, three new properties opened in 2017. The Delta Hotels Baltimore Inner Harbor (Marriott) Hotel opened in early 2017 offering 150 rooms and 3,325 SF of meeting space. The 42-room La Quinta Inn & Suites Baltimore Downtown began accepting bookings as of March 31, 2017 and the Sagamore Pendry Hotel, which is just outside the one-mile radius of downtown, opened in March 2017 with 128 rooms and 4,565 SF of meeting space. The Staybridge Suites opened in summer 2017 with 101 rooms. An additional 151-room Hilton Garden Inn at 25 S. Calvert Street is slated to open in 2018. As of 2018, downtown Baltimore will have renovated/added over 1,000 hotel rooms to support tourism and convention activity in the area.

Attractions

The availability of cultural, recreational, retail, and entertainment options is another factor that event planners/producers consider when selecting a destination for their event and is important for timeframes when attendees are not at event-related functions. The variety of attractions is also an important consideration for attendees when deciding whether to bring additional family/friends and how long to stay. The BCC's location in downtown Baltimore and proximity to the Inner Harbor and amenities such as the National Aquarium, World Trade Center Baltimore, Harborplace, and the Gallery continue to be an attractive attribute to convention/meeting planners.

Tourism Statistics

The tourism industry is an important economic driver to the local and State economy. Visitor spending supplements local resident spending at area businesses and increases tax revenues to both local and State governments. Per Visit Baltimore's Annual Report and Business Plan for FY 2017-18, 25.9 million domestic person trips were made to Baltimore in 2016. The number of visitors to Baltimore increased every year from 2012 to 2016. Of the 25.9 domestic visitors in 2016, 41% were overnight trips and of those 18% were business travelers.

The next section profiles historical BCC operations.

TABLE OF CONTENTS

1. Introduction	1
2. Local Market Conditions	4
3. Historical BCC Operations	11
4. Key Industry Trends	23
5. Recommended Program	32
6. Competitive Facility Analysis	35
7. Economic Analysis	44
8. Limiting Conditions and Assumptions	54

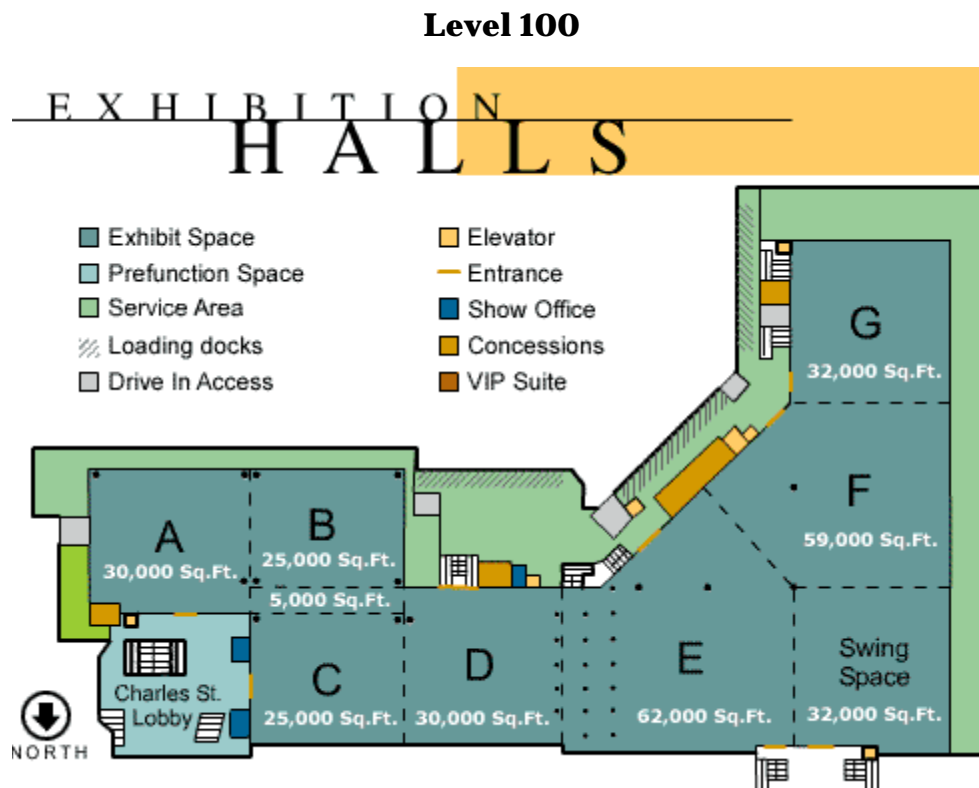
HISTORICAL BCC OPERATIONS

This section provides an overview of BCC operations in terms of building program, utilization trends, seasonality, customer surveys, lost business, and historical financial operations.

Building Program

As mentioned previously, the BCC currently offers 300,000 total SF of exhibit space divisible into seven separate halls, 70,500 SF of meeting space including 50 meeting rooms that can accommodate between 85 and 1,600 people and 36,700 SF of ballroom space divisible into four sections.

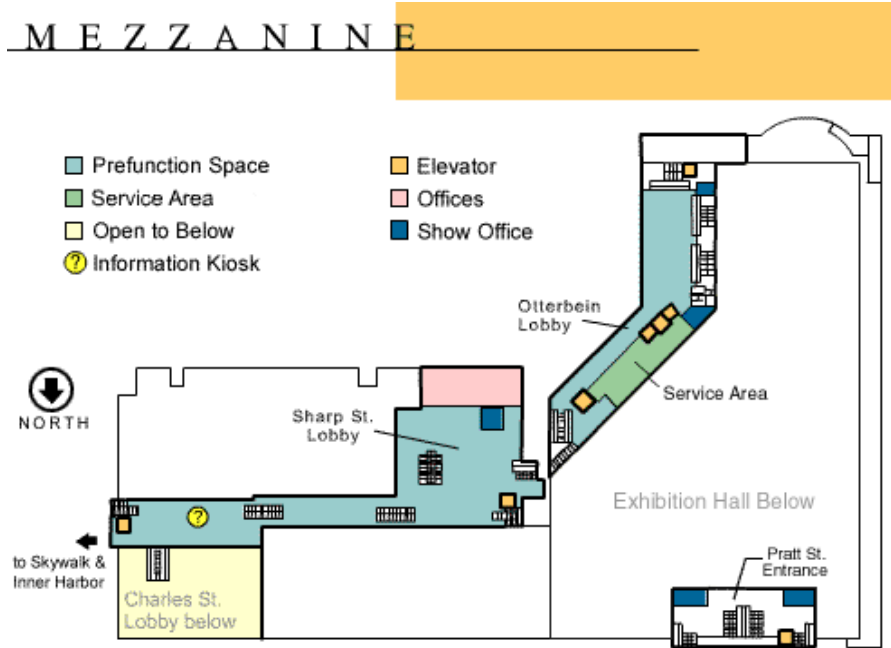
Floor plans for each level follow.



Level 100 includes all of the BCC's exhibit space (Halls A -G) as well as swing space which allows for greater flexibility for adjacent Halls E and F.

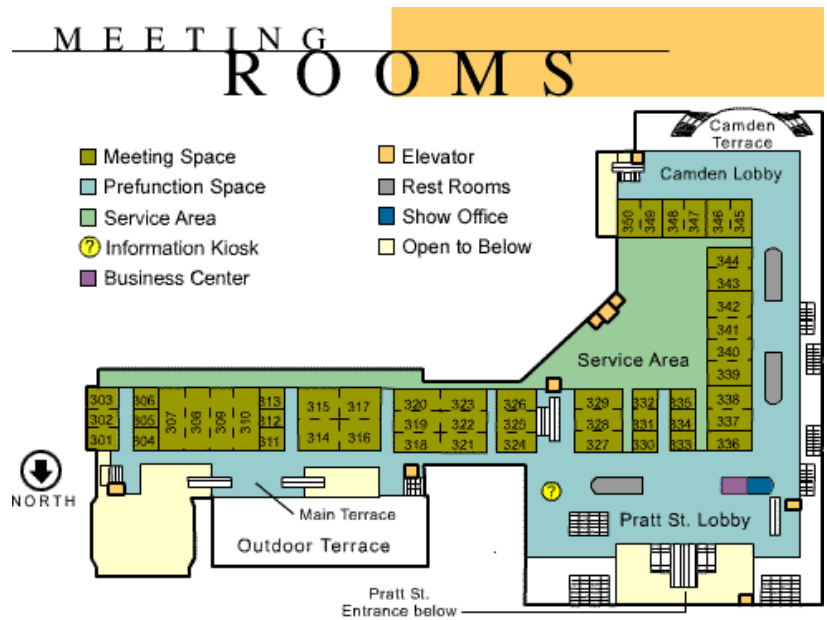
The 200 Level includes the Otterbein and Sharp Street Lobbies, the Pratt Street Entrance and Convention Center Offices as well as prefunction space.

Level 200

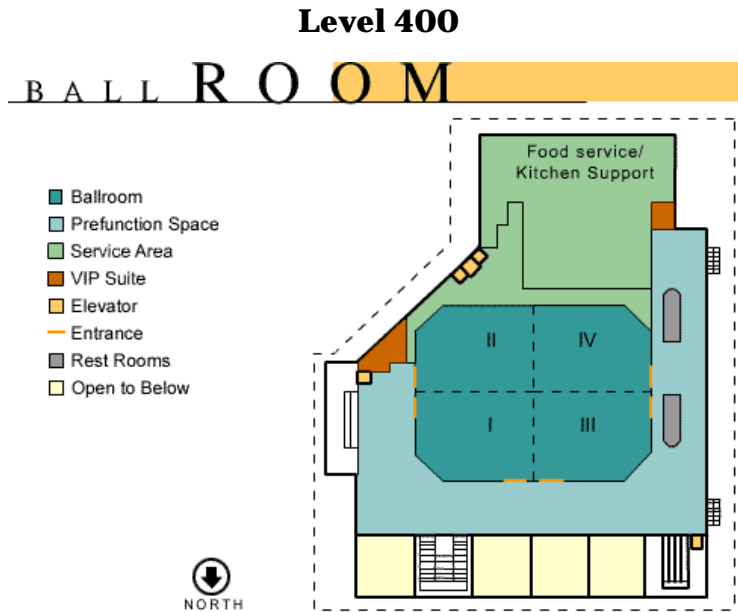


The meetings rooms are located on Level 300 and can be used in conjunction with the outdoor terrace and covered pavilion for various activities.

Level 300



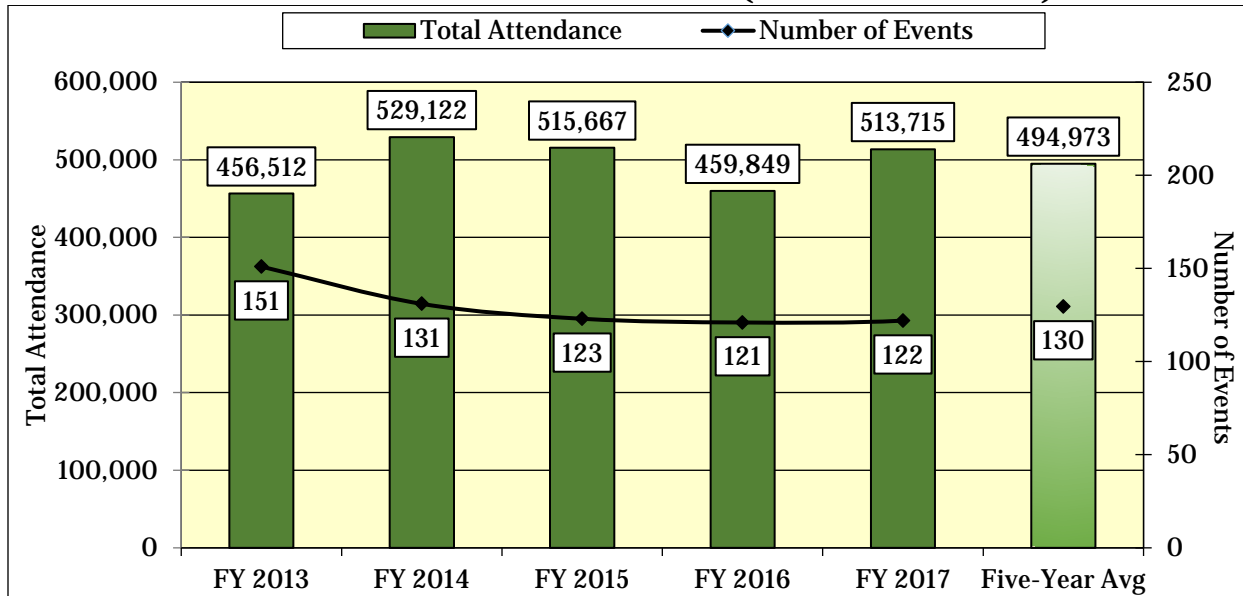
Level 400 has the only ballroom space at the BCC which totals 36,672 SF and is divisible into four sections.



Utilization Trends

This section analyzes BCC event activity for FY 2013 through FY 2017. The following graph illustrates the number of events and total attendance at the BCC for the last five fiscal years. The BCC averaged 130 events and 494,973 in total attendance during the profiled period.

Historical Utilization at the BCC (FY 2013 - FY 2017)



Note: Graph above excludes Grand Prix event that was held in FY 2013 and FY 2014.
 Source: BCC management.

The Grand Prix of Baltimore was a one-day event that was held in FY 2013 and FY 2014. This event is excluded from the analysis because it significantly skews the total attendance at the BCC as the average attendance for this one-day event was estimated to be over 137,000.

Utilization by Event Type

The following tables summarize BCC activity by event type for FY 2013 through FY 2017. During the profiled five-year period, conventions/tradeshows accounted for the highest portion of total attendance and event days at the BCC. Convention/tradeshows typically attract a high percentage of overnight attendees that produce significant economic impact. In FY 2017, 52% of total attendance and 60% of event days were attributable to convention/tradeshow activity. Over the profiled five-year period, approximately 56% of total attendance and 57% of event days were attributable to convention/tradeshow activity.

Detailed Summary of Historical BCC Utilization							
FY 2013							
Event Type	Number of Events	Event Days	Move-In/Out Days	Total Usage Days	Total Attendance	Attendee Days	Average Attendance Per Event
Conventions/Tradeshows	49	230	76	306	222,211	654,637	4,535
Meetings	71	145	43	188	59,281	78,546	835
Food Functions	6	6	6	12	6,485	6,485	1,081
Public Events	15	62	21	83	136,005	136,005	9,067
Sporting Events	7	21	12	33	27,350	50,938	3,907
Other	3	17	3	20	5,180	5,180	1,727
Total	151	481	161	642	456,512	931,791	

FY 2014							
Event Type	Number of Events	Event Days	Move-In/Out Days	Total Usage Days	Total Attendance	Attendee Days	Average Attendance Per Event
Conventions/Tradeshows	51	219	99	318	309,621	927,556	6,071
Meetings	46	97	22	119	30,962	41,187	673
Food Functions	9	12	7	19	9,772	9,772	1,086
Public Events	11	29	17	46	127,721	127,721	11,611
Sporting Events	10	33	13	46	48,879	66,942	4,888
Other	4	8	3	11	2,167	2,167	542
Total	131	398	161	559	529,122	1,004,466	

FY 2015							
Event Type	Number of Events	Event Days	Move-In/Out Days	Total Usage Days	Total Attendance	Attendee Days	Average Attendance Per Event
Conventions/Tradeshows	56	264	110	374	306,042	927,977	5,465
Meetings	33	71	21	92	22,102	28,202	670
Food Functions	9	10	15	25	10,657	10,657	1,184
Public Events	15	36	23	59	150,563	150,563	10,038
Sporting Events	6	14	5	19	18,677	35,677	3,113
Other	4	6	2	8	7,626	7,626	1,907
Total	123	401	176	577	515,667	1,160,702	

Detailed Summary of Historical BCC Utilization (cont'd)							
FY 2016							
Event Type	Number of Events	Event Days	Move-In/Out Days	Total Usage Days	Total Attendance	Attendee Days	Average Attendance Per Event
Conventions/Tradeshows	46	222	102	324	292,322	894,397	6,355
Meetings	37	72	20	92	44,934	89,869	1,214
Food Functions	6	9	8	17	4,470	4,470	745
Public Events	16	40	20	60	89,488	89,488	5,593
Sporting Events	7	19	7	26	22,735	67,913	3,248
Other	9	16	8	24	5,900	5,900	656
Total	121	378	165	543	459,849	1,160,702	

FY 2017							
Event Type	Number of Events	Event Days	Move-In/Out Days	Total Usage Days	Total Attendance	Attendee Days	Average Attendance Per Event
Conventions/Tradeshows	47	234	76	310	265,126	795,378	5,641
Meetings	33	63	10	73	13,095	19,643	397
Food Functions	5	7	5	12	3,604	3,604	721
Public Events	21	50	27	77	170,517	170,517	8,120
Sporting Events	10	28	8	36	47,300	94,600	4,730
Other	6	10	3	13	14,073	14,073	2,346
Total	122	392	129	521	513,715	1,097,815	

Five-Year Average							
Event Type	Number of Events	Event Days	Move-In/Out Days	Total Usage Days	Total Attendance	Attendee Days	Average Attendance Per Event
Conventions/Tradeshows	50	234	93	326	279,064	839,989	5,581
Meetings	44	90	23	113	34,075	51,489	774
Food Functions	7	9	8	17	6,998	6,998	1,000
Public Events	16	43	22	65	134,859	134,859	8,429
Sporting Events	8	23	9	32	32,988	63,214	4,124
Other	5	11	4	15	6,989	6,989	1,398
Total	130	410	159	568	494,973	1,103,538	

Note: The above data excludes the Grand Prix event which was hosted in FY 2013 and FY 2014.

Sources: BCC; Visit Baltimore.

Conventions/tradeshows involve associations, professional groups and membership organizations meeting to exchange information or make business-to-business sales. Meetings include corporate meetings and training seminars to exchange information, obtain training and other similar functions. Food functions include banquets, receptions, parties, weddings, ceremonies, corporate awards and social functions. Public events are public, ticketed events to market and sell goods and services to consumers. Sporting events are youth or amateur sporting competitions, tournaments or championships. Other includes a variety of event activity such as community events, exams and talent competitions.

The number of conventions/tradeshows held each of the past five years has ranged from a low of 46 in FY 2016 and a high of 56 in FY 2015. The BCC averaged 50 conventions/tradeshows resulting in 234 event days per year during the profiled period. During the profiled period, conventions/tradeshows averaged approximately 4.7 event days.

Total attendance at conventions/tradeshows reached a five-year high of approximately 309,600 in FY 2014 which represented 59% of the total attendance for that year. Conventions/tradeshows continue to be the greatest contributor to attracting people to the BCC.

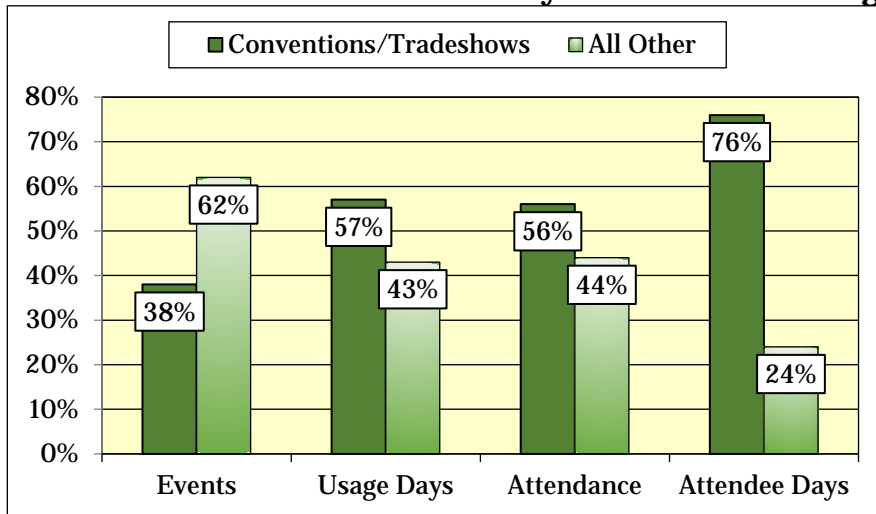
The number of meetings held at the BCC has decreased significantly during the profiled period. In FY 2013, the BCC hosted 71 meetings; however, the five-year average was 44 meetings per year. These events are typically local in nature and decreased usage by this event class is reflective of the facility’s booking priority to host events that maximize economic impact.

Public events, which include events such as the Baltimore Wedding Experience and Baltimore Summer Antique Show, were the second most attended event type at the BCC during the profiled period. On average, the BCC hosted 16 public events that drew an average of approximately 8,400 people during the profiled five-year period. These types of events are typically held in exhibit halls and are more likely to attract day trippers who do not generally spend a significant amount of money outside the facility.

An attendee day is defined as total attendance multiplied by the event length. For example, a three-day convention with 200 attendees equates to 600 attendee days, meaning the same attendees return to the event each of the three days. The event types that averaged the most attendee days over the profiled five-year period were conventions/tradeshows (76%) and public events (12%), respectively.

On average, conventions/tradeshows combined averaged approximately 38% of total events, 57% of total usage days, 56% of total attendance, and 76% of total attendee days annually during the profiled five-year period.

Distribution of BCC Event Activity – Five-Year Average

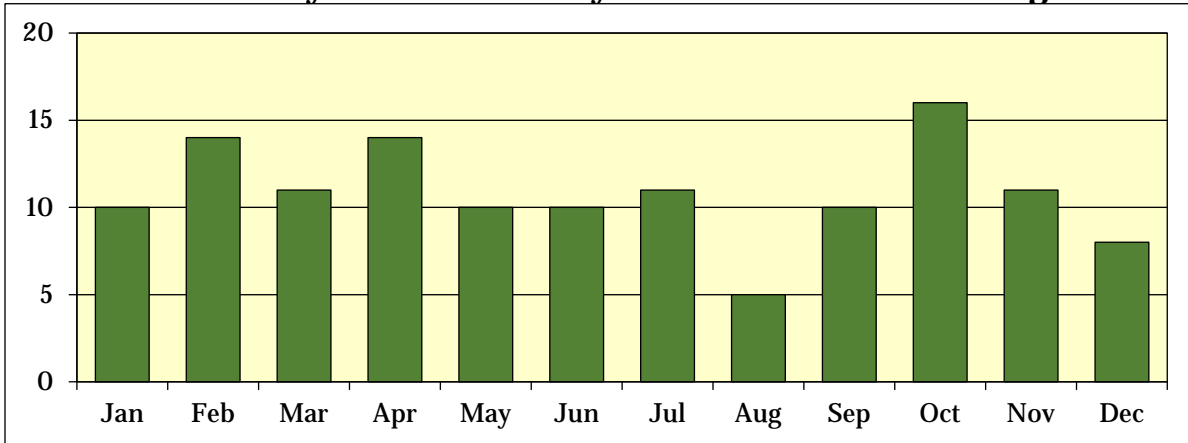


Source: BCC management.

Seasonality

The seasonality of usage at convention centers generally fluctuates significantly from year to year. The BCC holds the most events in the month of October and has experienced a relatively steady amount of activity the remainder of the year except for August and December.

Seasonality of BCC Events by Month – Five-Year Average

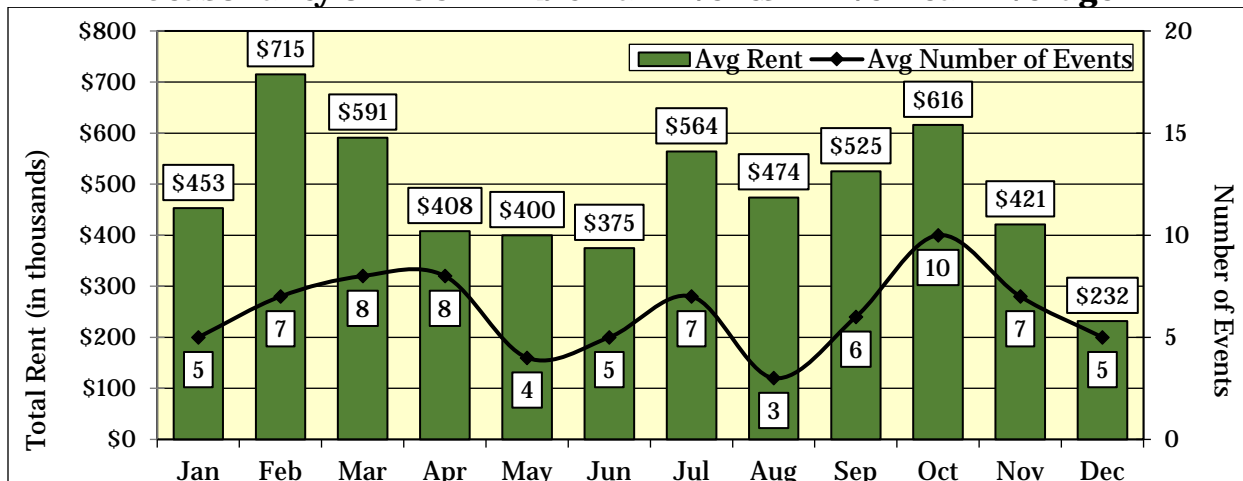


Note: Grand Prix has been excluded from the analysis.

Source: BCC management.

The following graph illustrates the seasonality of events requiring exhibit space. As shown, events which utilize exhibit space such as conventions/tradeshows peak in fall and spring. Public shows occur more frequently in the winter months and account for much of the total rent collections from January through March. Events that provide a greater economic impact to the City may receive rental discounts. This booking policy allows the BCC to attract events that will bring ancillary revenues from attendees spending on hotel, entertainment, restaurants, etc.

Seasonality of BCC Exhibit Hall Events – Five-Year Average



Note: Data represents the average total rent collected in that month and the average number of events held in exhibit halls at the BCC from FY 2013 through FY 2017.

Source: BCC management.

Occupancy

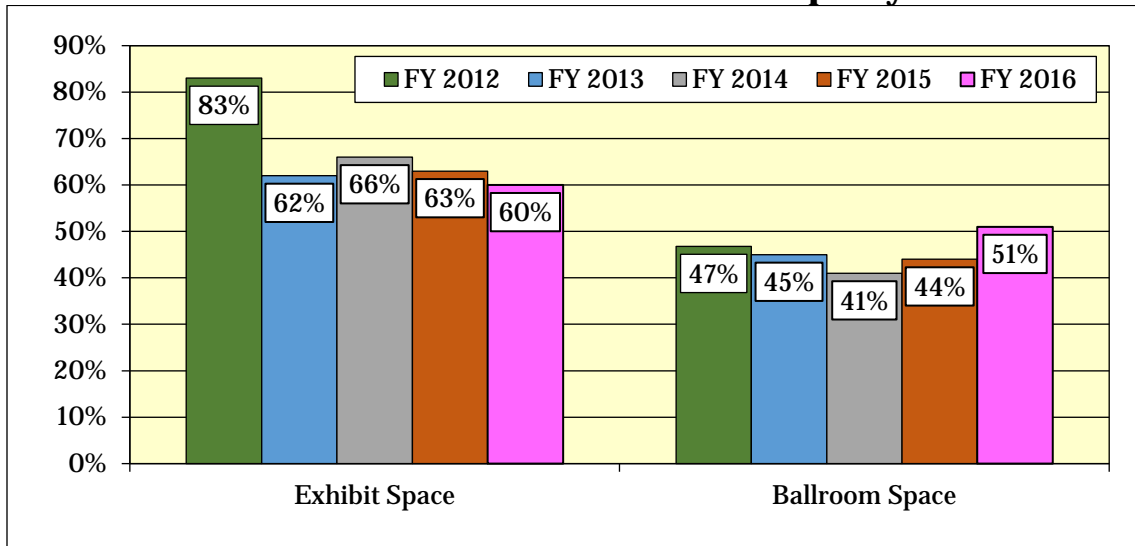
It is also important to assess convention center use in terms of square footage occupancy as this is a measurement of the degree to which usage of the facility has reached its maximum capacity. There are several methods of calculating convention center occupancy. Some facilities utilize a measurement of total days used divided by the days available, others only account for event days. For purposes of this analysis, occupied square foot days include both event days and move in/out days. Occupancy is calculated based on the following formula:

$$\text{Occupancy} = \text{Total occupied square foot days} / \text{Total available square foot days in a year}$$

A convention center’s practical maximum exhibit hall occupancy rate is generally considered to be approximately 70% according to industry standards. Occupancy levels at or above 60% generally indicate that a facility is beginning to approach full capacity. Occupancy levels less than 50% typically indicate that the facility has available dates to attract additional business. These industry guidelines reflect that occupancy levels at convention centers are impacted by the total number of days that a facility can realistically be sold and/or occupied. For instance, events often require move in/out days which can hinder a facility’s ability to immediately accommodate another incoming event. Furthermore, occupancy is impacted by the number of days that are required for building maintenance and upkeep because the facility cannot be sold during this time.

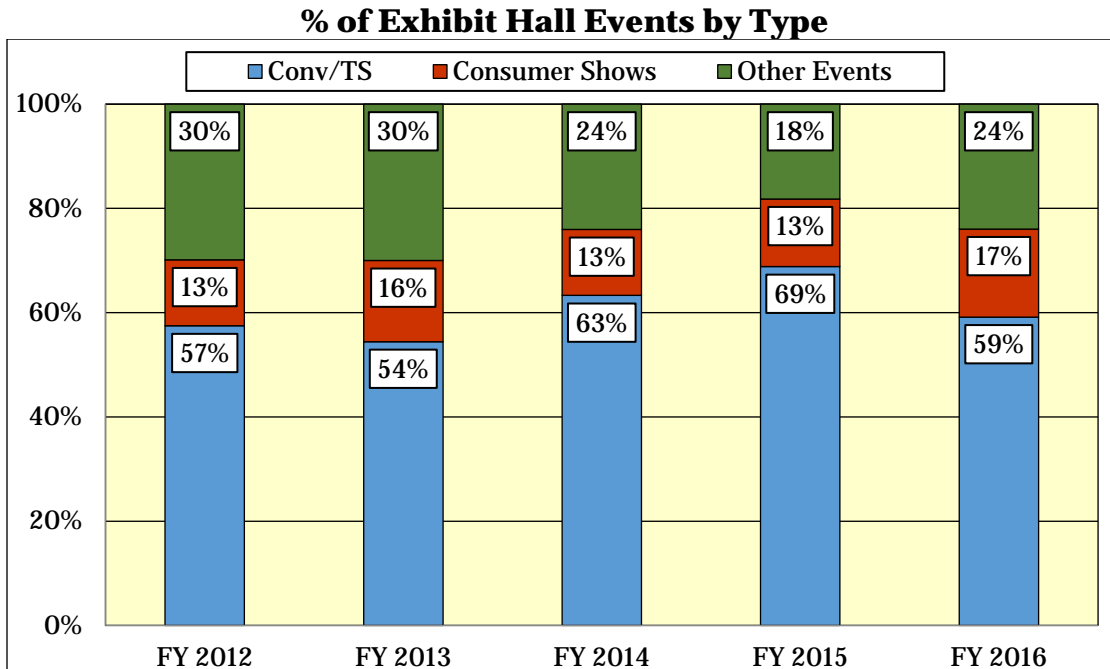
The following graph illustrates occupancy rates of the BCC exhibit space and ballroom space for FY 2012 through FY 2016 (data for FY 2017 was not available at the time of this report). During the profiled period, exhibit hall occupancy at the BCC peaked at 83% in FY 2012 and has remained at or above 60% in recent years. Ballroom occupancy ranged from 47% to 51% during the profiled period.

BCC Exhibit Hall & Ballroom Occupancy



Note: Occupancy data was not available for FY 2017.
 Source: BCC management.

As shown in the graph below, conventions/tradeshows consistently accounted for the highest percentage of exhibit hall events from FY 2012 through FY 2016. The percentage of exhibit hall usage by consumer shows has remained relatively consistent over the profiled period. The percentage of other events using the exhibit hall fluctuated during the profiled period from 30% in FY 2012 and FY 2013 to 18% in FY 2015. Other events include banquets, meetings, graduations, sporting events, social events, concerts, etc.



Note: Data was not available for FY 2017.
 Source: BCC management.

Past Client Experience

In FY 2016 - FY 2017, 21 BCC clients responded to a survey rating their experience while hosting an event at the BCC. Clients could rate 19 different categories related to their experience as excellent, good, fair, poor or N/A. There was an overwhelming satisfaction with both the 'Customer Service-Sales & Service Personnel' category and the 'Customer Service-Security & Wait Staff' category. By contrast, the two categories that received the lowest ratings (fair/poor) were 'Way Finding Signage' and 'Internet Quality-Exhibit Halls'. Approximately 29% of the survey respondents indicated that these areas could be improved upon. Based on these results, it appears there is qualified staff in place at both the BCC and Visit Baltimore that are meeting and exceeding clients' service needs. However, there appear to be some attributes of the BCC that should be addressed in any future renovation/expansion project.

Lost Business

Visit Baltimore tracks and maintains a database of lost business that chose not to book their event in the City for various reasons. In reviewing the data provided by Visit Baltimore related to events specifically interested in the BCC, the most frequent reason an event was not booked at the facility was availability which encompasses lack of date availability at the BCC, inadequate space at the BCC, and hotel availability (e.g., preferred hotel package, number of hotel rooms, preferred dates, etc.). In aggregate, the lack of availability accounted for approximately 1.9 million lost hotel room nights for the profiled five-year period, approximately 1.5 million (or 79%) of which were attributable to lack of date availability or inadequate space at the BCC. Availability can be positively influenced by increasing the amount and type of space at the BCC and increasing hotel supply. By contrast, geographic rotation is an uncontrollable factor that would not be influenced by additional square footage at the facility. Although the third most popular reason given for lost business was geographic rotation, this reason only accounted for 11% of the total hotel rooms lost from FY 2012 to FY 2016. The “Other” category includes reasons such as not meeting the booking policy for either BCC or Visit Baltimore, board decision, perception of the city/attractiveness compared to a larger city, politics of the group, choosing another date, etc.

Summary of BCC Lost Business (FY 2012-FY 2016)				
Reason for Lost Business	Events		Hotel Rooms	
	Number	%	Number	%
Availability	359	47%	1,901,482	51%
Other	145	19%	554,484	15%
Geographic Rotation	68	9%	392,310	11%
Product	48	6%	248,128	7%
Perception	25	3%	201,713	5%
Cancellation	42	6%	196,344	5%
Price	53	7%	178,682	5%
Selected Another City	15	2%	43,676	1%
Unrest	3	0%	12,552	0%
Total	758	100%	3,729,371	100%

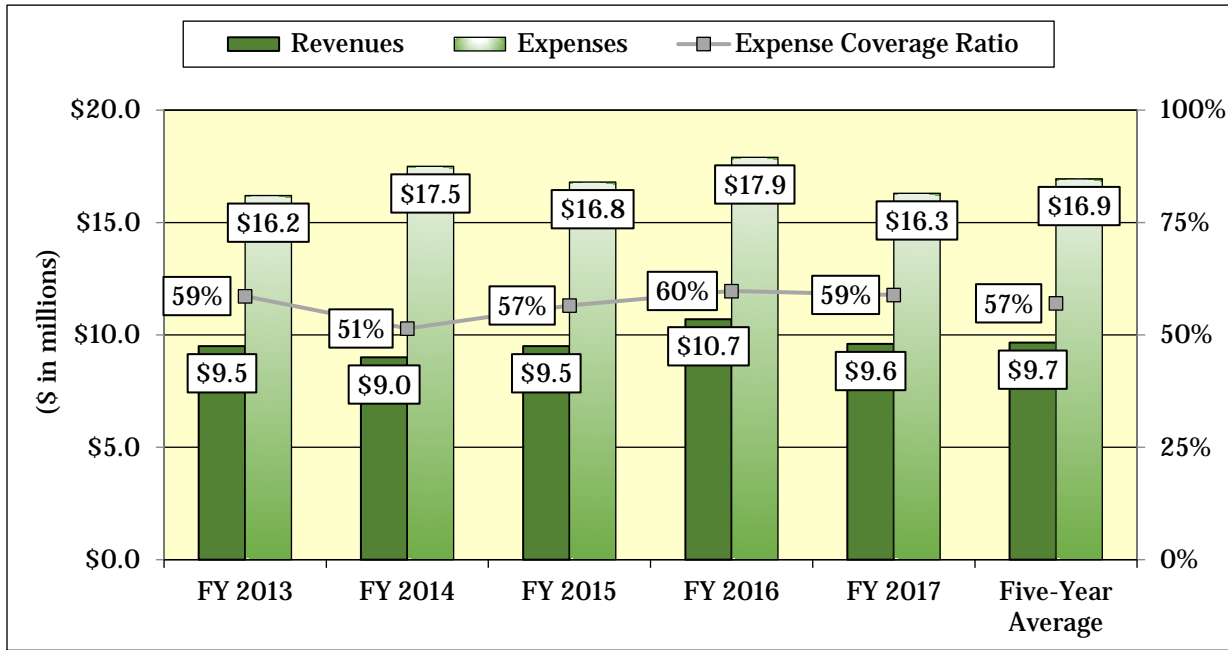
Note: Sorted in descending order by total number of hotel rooms requested.

Source: Visit Baltimore.

Financial Operations

Over the profiled period, the operating loss at BCC has ranged from approximately \$6.7 million in FY 2013 and FY 2017 to \$8.5 million in FY 2014 and averaged approximately \$7.2 million. Operating revenues have averaged \$9.7 million and expenses have averaged approximately \$16.9 million over the profiled five-year period. With respect to financial performance, many similar convention centers realize an operating deficit.

Historical Revenues and Expenses at the BCC (FY 2013 - FY 2017)



Note: Expense coverage ratio = operating revenues/operating expenses.
 Source: BCC management.

Historically, the BCC’s debt service and ongoing operating deficit have been jointly funded by the City and the MSA. As shown in the table above, the expense coverage ratio averaged 57% from FY 2013 to FY 2017. As a point of reference, the debt service on bonds was paid off as of December 15, 2014.

TABLE OF CONTENTS

1. Introduction	1
2. Local Market Conditions	4
3. Historical BCC Operations	11
4. Key Industry Trends	23
5. Recommended Program	32
6. Competitive Facility Analysis	35
7. Economic Analysis	44
8. Limiting Conditions and Assumptions	54

KEY INDUSTRY TRENDS

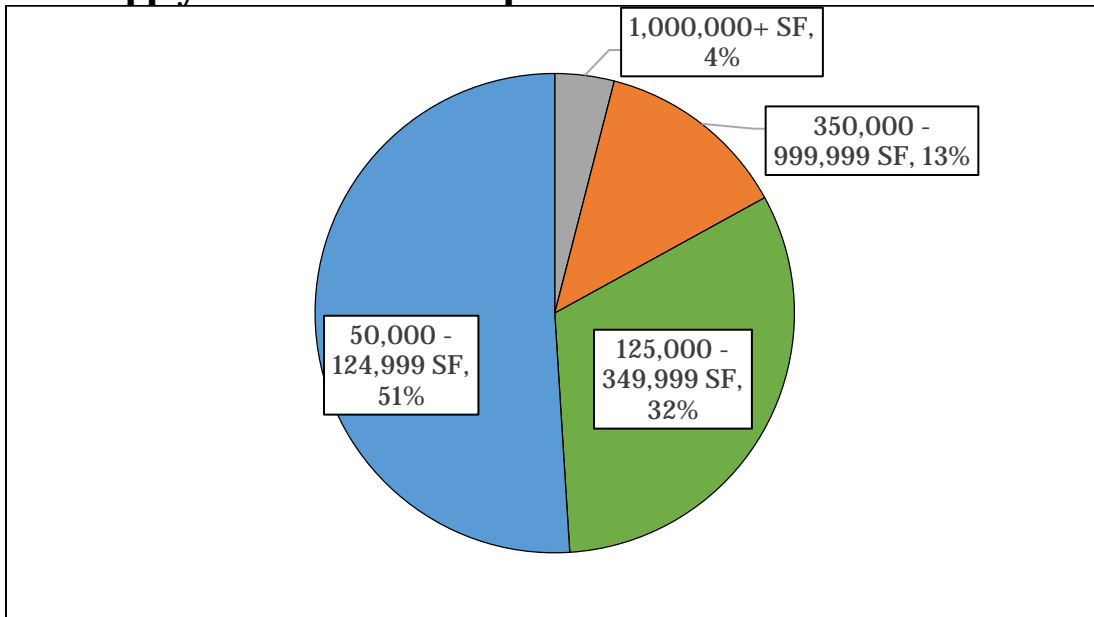
The BCC’s success is somewhat dependent on the attributes of the industry. There is no one source that measures the strength and performance of the convention and meetings industry. The breadth of facility types and geographic locations coupled with the variety of event types and sizes makes the ability to succinctly account for the entire industry’s current or future position difficult. However, the research performed for this study considered data from the leading and most comprehensive sources available including, but not limited to, the Center for Exhibition Industry Research (CEIR), Professional Convention Management Association (PCMA), Meetings & Conventions, Access Intelligence, Standard & Poor’s (S&P), and *Trade Show Executive*.

Supply

The U.S. convention/meetings market has experienced significant growth in the supply of space over the past two decades. Numerous facilities can accommodate meeting planners’ needs strictly in terms of the amount of space required.

The pie chart below shows the supply of exhibit facilities with a minimum of 50,000 SF of prime exhibit space within the U.S. based on information from *Trade Show Executive*. From a supply perspective, 17% of convention centers in the U.S. offer at least 350,000 SF of exhibit space and 32% offer between 125,000 and 349,999 SF of exhibit space.

Supply of Prime Exhibit Space at U.S. Convention Centers



Note: Only includes convention centers with a minimum of 50,000 SF of space.
 Source: *Trade Show Executive*.

While supply growth has slowed, new space has recently been developed and/or is being contemplated. For instance, convention centers in Anaheim, Columbus, Detroit, Miami, Orlando, San Antonio, and San Francisco have recently completed or are currently undergoing renovation/expansion. In addition, the Boston Convention & Exhibition Center, Los Angeles Convention Center, and San Diego Convention Center are contemplating renovation/expansion.

Demand

While the supply of exhibition and meeting space has experienced significant growth over the past decade, demand has been less aggressive. Overall economic conditions have led to a larger gap between the supply of and demand for space. The result has been a buyer's market in recent years with larger convention centers vying for more moderately sized events and hotels aggressively marketing their function space. Thus, convention centers such as the BCC have had to compete on overall price and value. Meeting planners are comparing destinations based on their facility rental and hotel room rates as well as other financial concessions to attract their business.

CEIR's latest census report, which was released in 2015, provides information about exhibitions that took place in 2014. It catalogued approximately 9,400 business-to-business exhibitions in the U.S. in 14 industry sectors. These events comprised 332 million net SF, 42.3 million attendees and 1.3 million exhibitors.

The following table summarizes industry data provided by the CEIR 2017 Index Report which tracks annual changes in several industry metrics: net SF used for exhibitions; total number of exhibitors and attendees; and industry revenues.

Year-On-Year Percent Change of the Metrics and CEIR Index														CAGR,
Metric	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017p	2018p	2019p	2000-2016
Net SF	2.6	-2.1	-10.3	-1.6	2.3	1.1	1.2	2.2	3.2	1.8	2.4	2.7	2.9	0.2
Exhibitors	1.5	-2.7	-10.8	-0.8	2.3	0.5	0.8	1.6	1.9	1.2	2.0	2.4	2.4	-0.7
Attendees	3.6	-3.3	-6.8	3.5	2.2	2.1	1.2	1.6	2.6	0.0	2.0	2.3	2.4	0.2
Real Revenues ¹	5.1	-3.7	-11.8	-5.7	2.5	2.2	1.8	2.6	5.5	1.8	3.0	3.6	4.0	0.1
Total	3.2	-2.9	-9.9	-1.2	2.3	1.5	1.2	2.0	3.3	1.2	2.4	2.8	3.0	0.0

Notes: ¹Inflation adjusted revenues, adjusted for CPI for all urban consumers.

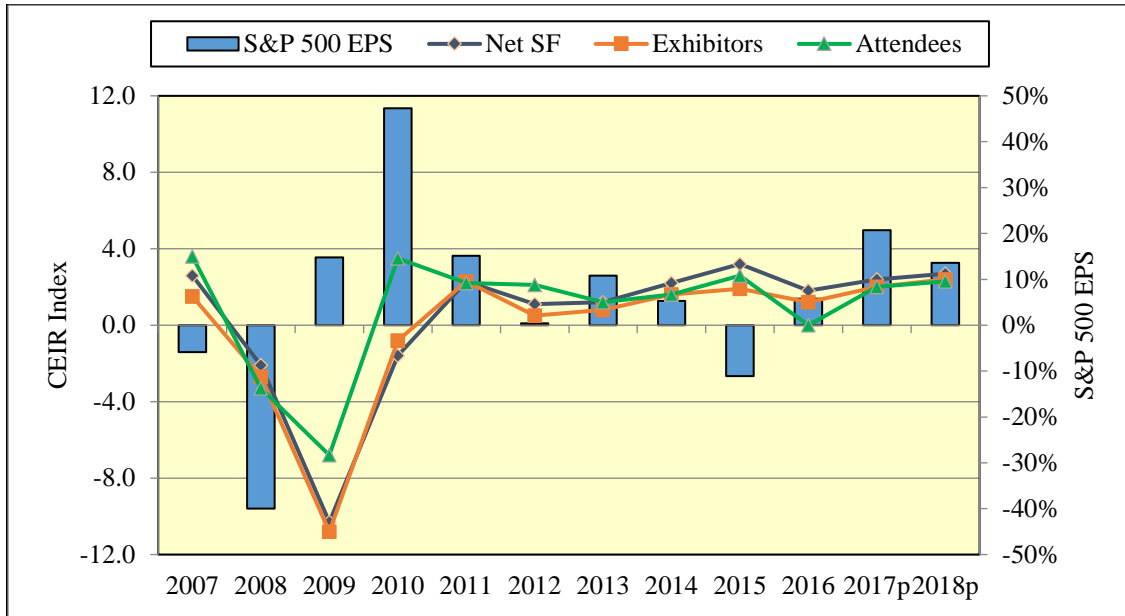
p = Projected.

Source: CEIR 2017 Index Report.

In 2016, the total index increased by 1.2%, which was 2.1 points lower than the increase in 2015. All metrics increased in 2016, except for attendees which remained stagnant. The highest metrics in 2016 were net SF and real revenues. Despite attendance staying stagnant in 2016, the number of attendees has trended upward since the end of the recent recession and at 33.2 million, slightly exceeded the previous decade high in 2015. In addition, this metric is projected to increase each of the next three years. The strengthening job market helped attendee numbers and, as a leading indicator of the exhibition industry, bodes well for business in the coming years.

Convention/meeting/exhibition industry trends generally mirror broader U.S. economic trends. The following graph illustrates annual changes for key industry measures alongside the S&P 500 earnings-per-share (EPS) which further illustrates the relationship between the convention industry and overall economic conditions.

Annual Changes to Convention Demand and S&P 500 EPS



Note: p denotes projected.
Sources: CEIR; Standard & Poors.

Negative S&P EPS precedes periods of decreases in the number of exhibitors and similarly, periods of positive economic and industry growth, as measured by EPS, is followed by a growth in the convention and meeting industry with a substantive lag period. Of note, S&P earnings began to experience growth in 2009 whereas the convention and meetings industry lagged 12 to 18 months behind the broader economy as many conventions/meetings are planned years in advance. As measured by S&P earnings, overall economic conditions increased in 2016 and are projected to increase in 2017. Along with the S&P projected earnings increase, the convention industry conditions are also projected to increase in 2017.

In addition, CEIR tracks the exhibition industry by sector. As shown in the following table, the medical and healthcare industry represents the most exhibition events which, despite the overall economic conditions, managed to sustain a minor increase during the profiled period. This is a positive indicator for the BCC given the prominence of medical and healthcare entities in the Baltimore area. Other sectors experiencing average annual growth between 2000 and 2016 include the machinery and finished business outputs; government sector; sporting goods, travel and amusement; transportation; discretionary consumer goods and services; raw materials and science; and communications and information technology.

Although many industry sectors experienced a positive growth rate between 2000 and 2016, the overall exhibition industry was flat during this time. In 2016, the two leading industries included 1) food and 2) building, construction, home and repair sectors, which increased by 5.8% and 5.2%, respectively.

CEIR Industry Wide Growth by Sector			
Sector	% of Exhibitions	2016 Growth Rate	CAGR 2000-2016
Machinery and Finished Business Outputs	1.8%	-4.5%	3.3%
Government	5.1%	4.6%	1.6%
Sports Goods, Travel and Amusement	5.1%	2.5%	1.6%
Medical and Health Care	21.1%	2.5%	0.7%
Transportation	4.6%	3.4%	0.5%
Discretionary Consumer Goods and Services	4.3%	4.3%	0.4%
Raw Materials and Science	9.2%	-7.3%	0.3%
Communications and Information Technology	11.1%	2.3%	0.1%
Building, Construction, Home and Repair	3.4%	5.2%	0.0%
Food	4.0%	5.8%	-0.3%
Consumer Goods and Retail Trade	4.6%	0.8%	-1.1%
Financial, Legal and Real Estate	7.4%	2.8%	-1.3%
Business Services	9.1%	0.4%	-1.4%
Education	9.2%	-1.1%	-1.5%
Overall Exhibition Industry	100.0%	1.2%	0.0%

Note: Sorted in descending order by CAGR 2000-2016 growth.
Source: CEIR.

CEIR also projects future changes given broader economic and segment-specific factors. Economic and job growth should continue to drive expansion in the exhibition industry. As shown in the following table, building, construction, home and repair; communications and information technology; transportation; and food are projected to experience the greatest growth over the next several years. CEIR projects the current positive momentum should sustain continued industry growth through 2019.

CEIR Index Projections by Sector				
Sector	2017p	2018p	2019p	Average
Building, Construction, Home and Repair	4.4%	4.4%	3.9%	4.2%
Communications and Information Technology	3.3%	4.1%	4.2%	3.9%
Transportation	3.1%	3.8%	4.1%	3.7%
Food	3.7%	3.5%	3.8%	3.7%
Machinery and Finished Business Outputs	2.9%	3.6%	3.8%	3.4%
Financial, Legal and Real Estate	2.9%	3.5%	3.8%	3.4%
Discretionary Consumer Goods and Services	2.8%	3.0%	3.5%	3.1%
Sports Goods, Travel and Amusement	2.9%	3.3%	3.0%	3.1%
Medical and Health Care	2.1%	2.6%	2.8%	2.5%
Business Services	1.3%	2.0%	2.2%	1.8%
Raw Materials and Science	1.5%	1.9%	2.1%	1.8%
Consumer Goods and Retail Trade	1.6%	1.7%	2.0%	1.8%
Government	1.7%	1.5%	1.5%	1.6%
Education	0.3%	0.8%	0.9%	0.7%
Overall Exhibition Industry	2.4%	2.8%	3.0%	2.7%

Notes: Sorted in descending order by average projected growth.
p denotes projected.

Source: CEIR.

Breadth of Potential Convention/Meeting Market

To better understand the future potential demand for convention/meetings at the BCC, it is helpful to understand the macro level population of events. Several sources were used to assess potential demand including primary and secondary research. It is important to note that there is not one single industry source that can provide a measure of the universe of demand. As such, several sources are presented to show the order of magnitude of demand that exists in the broader market as well as the BCC's potential to grow its current share. The various sources do not represent mutually exclusive demand potential.

Based on data from Access Intelligence, there are approximately 4,300 events that require up to 300,000 SF of exhibit space and 530 events that require between 300,000 SF and 500,000 SF of exhibit space.

Gross SF Used by Convention & Exhibit Market - Industry Wide		
Exhibit Space Gross SF	Share	Number of Events
Under 100,000	53%	2,808
100,001 - 200,000	20%	1,060
200,001 - 300,000	8%	424
300,001 - 400,000	7%	371
400,001 - 500,000	3%	159
Over 500,000	9%	477
Total	100%	5,299

Source: Access Intelligence.

Of those, there are approximately 2,400 events that require up to 300,000 SF of exhibit space and 300 that require between 300,000 and 500,000 SF of exhibit space that meet in the region (defined as the Northeast and Mid-Atlantic) either exclusively or on a rotational basis

Gross SF Used by Convention & Exhibit Market - Rotate Nationally or Held in the Region		
Exhibit Space Gross SF	Share	Number of Events
Under 100,000	52%	1,546
100,001 - 200,000	20%	602
200,001 - 300,000	8%	233
300,001 - 400,000	7%	195
400,001 - 500,000	4%	118
Over 500,000	9%	256
Total	100%	2,950

Note: Region is defined as the "Northeast" and "Mid-Atlantic".

Source: Access Intelligence.

Per Association Executives, there are approximately 1,670 professional and trade associations headquartered in Maryland and the surrounding region including Washington D.C., Virginia, Pennsylvania, New Jersey, and Delaware. These groups represent a target market within the State and region for annual conventions, tradeshow, and other regional meetings.

Meeting Venue Selection Criteria

A survey by the American Society of Association Executives (ASAE) indicated that its members placed a high level of importance on availability/size of the meeting facility, quality of service, overall affordability, membership appeal and availability of hotel rooms when selecting a convention center to host their event.

Programmatic Trends

Access Intelligence conducted a survey of leading convention center managers in North America and around the world in 2016 and 2017. The following programmatic trends are based on the results of that survey.

- In North America, pre-function spaces are considered the top venue area in need of investment and enhancement.

Convention Center Facilities in North America - Areas and Services Considered in Most Need of Investment	
Facility Space	Response %
Pre-function spaces	77%
Meeting rooms	54%
Technology infrastructure or services	54%
Ballroom(s)	46%
Exhibit halls	38%
Signage	31%
Client-facing food service areas and restaurants	31%
Other concession areas and store-fronts	23%
Outdoor, outside areas	15%
Loading dock and related areas	15%
Venue connections and links to transportation, such as shuttle bus and taxi areas	15%

Source: Access Intelligence & International Association of Congress Centres.

- Changes to event formats and client requirements are prompting a re-assessment of facilities and services. Some key themes include:
 - More technology usage and bandwidth requirements.
 - Different education and meeting room formats.
 - More informal and casual meeting spaces.
 - Flexibility in terms of space usage and faster room change-overs.
 - More use of pre-function space.
 - Focus on attendee networking.
- One-half of North American convention centers have added a new revenue stream in the last year including: signage (usually digital with advertising); AV services and equipment; vendor contracts/commissions; enhanced food and beverage; events produced by the center and partnerships with event producers; sponsored, branded spaces; retail and office space rent; parking; naming rights including specific areas of the center; and other event services.

- Approximately 60% of North American convention centers have added a new innovation or meaningful new operational, marketing or business management idea in the past year including CRM and booking systems and IT upgrades.
- Ninety-four percent (94%) of U.S. venue managers say innovation is either extremely or very important to their organizations.
- As shown in the following table, the main innovation area at convention center facilities in North America is telecommunications and technology services.

Convention Center Facilities in North America - Areas of Innovation and New Ideas Focus	
Innovation Area	Response %
Telecommunications and technology services	83%
Client, attendee and exhibitor on-site/in-venue experience	50%
Food and beverage services	50%
Marketing and communications	50%
Strategic partnerships	50%
Parking areas functionality and experience	50%
Other concession areas and store-fronts	50%

Source: Access Intelligence & International Association of Congress Centres.

- Top event producer clients want most services and venue capabilities to be better, faster, and lower cost. Examples of ways top event producer clients are changing according to center managers include more discount requests and contract concessions, more price and contract term negotiation, more inclusive package rates and options, and more individual solutions and requirements, among others.

Other programmatic trends include, but are not limited to the following:

- Campus-style districts around convention facilities are now a major consideration for development encompassing hotels, dining and entertainment within walking distance. A well-defined campus allows attendees to move between the meeting facility and local eateries, entertainment, and hotels more easily and makes a destination more attractive to event planners. Surrounding neighborhoods are also becoming energized to create a welcoming environment filled with nightlife and other diversions for attendees. Markets such as Anaheim, Chicago, Las Vegas and San Diego are integrating their convention centers into a campus-style setting. For instance, Chicago is constructing the McCormick Place Entertainment District which will connect to McCormick Place West via a pedestrian bridge. As part of its expansion project, the Las Vegas Convention Center is planning to extend its entire campus into a new Global Business District that seeks to link the convention complex with downtown and the Strip.

- In addition, new hotel projects are being constructed in a manner that embraces the trend toward campus-style facilities that include lodging, dining and entertainment all within easy walking distance to convention centers. This development strategy seeks to foster more indoor –outdoor opportunities for users of convention centers.
- To appeal to broader facility audiences, convention centers are constructing or re-purposing existing space into multi-purpose, flex space that can be used as exhibit, meeting, or ballroom space to provide more flexibility and accommodate different types of clients and events.
- Light-filled, comfortable, and adaptable common and pre-function spaces are popular and allow event attendees to gather and enjoy down time with access to seating, fresh air, green space, and often food and beverage amenities such as coffee shops or cafes within the facility.
- Convention centers of all sizes are enhancing their technology infrastructure to provide more bandwidth and faster Wi-Fi as demand for connectivity among event organizers and attendees continues to increase. Specialized video boards and digital display areas as well as outdoor video boards are also becoming more common at convention centers.
- Convention centers are developing strong portable concession programs that embrace local cuisine and the farm to table movement and can be customized to appeal to client needs and attendee demographics. Recent trends in convention center foodservice indicate that clients and attendees desire a local food experience which includes products sourced from the surrounding market. This can be accomplished by strategic purchasing of local products for traditional banquet service and by utilizing local vendors with a well-designed portable kiosk program for walk-up concession sales.
- Sustainability efforts are still an important aspect of many renovation and expansion plans evidenced by the increasing number of LEED-certified centers. Convention centers in Atlantic City, Chicago, Houston, Nashville, New York, Philadelphia, and Salt Lake City have or are planning to implement efforts to conserve energy such as installing LED lighting, building green roofs and/or utilizing solar power.
- Venues are responding by hiring executive chefs from the restaurant sector and turning meal breaks into gastronomic experiences that reflect the authenticity of the destination and become a talking point amongst attendees. They are also bringing the chefs out of the kitchen for more interaction with the attendees.
- Safety concerns are the top trend for 2017 according to Events MB. Meeting planners and attendees need to feel safe at the venue as well as in the city.

TABLE OF CONTENTS

1. Introduction	1
2. Local Market Conditions	4
3. Historical BCC Operations	11
4. Key Industry Trends	23
5. Recommended Program	32
6. Competitive Facility Analysis	35
7. Economic Analysis	44
8. Limiting Conditions and Assumptions	54

RECOMMENDED PROGRAM

Based on the updated market research including select demographic/economic characteristics, historical utilization of the BCC, key industry trends and other research conducted as part of this analysis, it appears that the building program elements recommended in the 2012 report are still warranted from a market demand perspective. These recommendations include a total of 500,000 SF of exhibit hall, at least 400,000 SF of which is contiguous, 86,700 to 96,700 SF of ballroom space, and 125,000 to 130,000 SF of meeting space. Some of this meeting and ballroom space could be designed as flex-space that can be used as either type of space.

Summary of Preliminary Building Program Recommendations						
Component	Existing BCC	Expanded BCC			Incremental New Space	
Exhibit Hall (SF)	300,000	500,000	-	500,000	200,000	- 200,000
Ballroom Space (SF)	36,700	86,700	-	96,700	50,000	- 60,000
Meeting Space (SF)	70,500	125,000	-	130,000	54,500	- 59,500
Total Function Space (SF)	407,200	711,700	-	726,700	304,500	- 319,500
Ratio of Meeting/Ballroom Space to Exhibit Space	36%	42%	-	45%		

Any expansion project should seek to repurpose/modernize existing space, address any operational deficiencies, incorporate trends in recent convention center construction such as offering multi-purpose flex space, providing outdoor areas, striving for sustainability, maximizing technology and creating a campus-style setting that connects other amenities like hotels and attractions. In addition, it is ideal for exhibit space to be contiguous and column-free.

Space should be designed to host simultaneous events effectively and efficiently that require the ability to exhibit, meet and eat independently as well as accommodate larger groups that require the entire facility.

Maximizing flexibility and functionality, improving operational efficiencies, as well as merging the existing asset and any new construction into one unified facility will be important aspects of design.

The recommended building program would better position the BCC to attract larger events, expand the market penetration rate of conventions/tradeshows, and better accommodate simultaneous events, all of which will increase the BCC's marketability in a high competitive environment and yield greater economic and fiscal impacts.

One potential land use planning concept under consideration is to co-locate the BCC, a new hotel and a new arena on the same site location. If renovation/expansion of the BCC is pursued in conjunction with a new hotel and/or a new arena, it will be important that design and construction be completed in a manner that seeks to optimize programmatic, operational, and functional synergies among components.

From a sales perspective, the BCC and a new hotel will interact on a regular basis, particularly to accommodate convention/tradeshow business. In addition, there may be events that require using meeting/ballroom and/or other space at the new hotel in conjunction with space at the BCC.

Combining the BCC and a new arena would be unique in the marketplace. However, from a programming perspective, opportunities to jointly program the BCC and a new arena would be relatively limited due to challenges associated with date availability, different booking policies/scheduling priorities, and financial considerations for each entity. Having said that, an event at the BCC may utilize a new arena for a general session or special entertainment event or a concert at a new arena may use the BCC to host activities such as a “meet and greet” or other hospitality functions. In addition, the BCC and a new arena as well as surrounding hotels would be in a better competitive position to bid on premiere events such as NCAA tournaments/championships or Citywide initiatives.

Currently, the BCC is owned and operated by the City and Royal Farms Arena is owned by the City and operated by SMG. It is likely that a new hotel would be privately owned and operated. With any development project, it will be important that attendees at each facility have their own sense of place. Further, management at each facility must be able to achieve operating autonomy through design as well as formalized policies and procedures related to factors such as:

- Separate and distinct entrances which limit co-mingling of attendees at each of the respective facilities.
- Pedestrian flow including ingress/egress of customers/attendees/event personnel as well as the general public.
- Sound barriers that effectively prevent noise bleed between the respective facilities.
- Digital signage/wayfinding systems that clearly identify and distinguish each facility.
- Adequate loading docks, freight elevators and service corridors, particularly when facilities are used simultaneously.
- Proper dedicated security both inside and outside of the facility during multiple events.
- Outdoor plaza space for cueing and sponsorship activation, particularly for a new arena.
- Parking requirements for multiple events.
- Individualized storage areas.
- Separate and distinct mechanical systems to meet the needs of each facility and its event producers including HVAC controls and fire suppression systems.

TABLE OF CONTENTS

1. Introduction	1
2. Local Market Conditions	4
3. Historical BCC Operations	11
4. Key Industry Trends	23
5. Recommended Program	32
6. Competitive Facility Analysis	35
7. Economic Analysis	44
8. Limiting Conditions and Assumptions	54

COMPETITIVE FACILITY ANALYSIS

It is important to understand the competitive environment within which the BCC operates. This section compares various physical characteristics of convention centers that typically compete with Baltimore for larger regional and national conventions, tradeshows, and meetings as well as destination attributes of those markets. This analysis will assist the MSA and the City in assessing both the BCC's and Baltimore's position relative to other competitive markets as they explore the need for expanded space.

This section profiles the following competitive convention centers:

- Boston Convention & Exhibition Center (BCEC)
- Charlotte Convention Center
- David L. Lawrence Convention Center in Pittsburgh
- Gaylord Resort and Convention Center at National Harbor
- Music City Center in Nashville
- Pennsylvania Convention Center in Philadelphia
- Walter E. Washington Convention Center in Washington, D.C.

Crossroads Consulting obtained and analyzed building program attributes, destination characteristics and operating data for the profiled set based on interviews with management, industry resources, published reports, and our internal database. The data shown in this report is based on available information for each of the profiled facilities.

Facility Analysis

The pages that follow summarize the owner and operator as well as building program elements of the profiled set of competitive facilities.

Owner and Operator

The table that follows summarizes the owner and operator for the profiled facilities. Most of the profiled facilities are owned by an authority or are municipally owned. In addition, several profiled facilities are managed by an authority or operated by a third-party management company. The Gaylord Resort & Convention Center is privately owned and operated.

Profiled Set - Owner/Operator		
Facility	Owner	Operator
Baltimore Convention Center	City of Baltimore	City of Baltimore
Boston Convention & Exhibition Center	Massachusetts Convention Center Authority	Massachusetts Convention Center Authority
Charlotte Convention Center	City of Charlotte	Charlotte Regional Visitors Authority
David L. Lawrence Convention Center	Sports & Entertainment Authority of Pittsburgh and Allegheny County	SMG
Gaylord Resort & Convention Center	Ryman Hospitality Properties, Inc	Marriott International, Inc.
Music City Center	Convention Center Authority of Metro Nashville and Davidson County	Convention Center Authority of Metro Nashville and Davidson County
Pennsylvania Convention Center	Commonwealth of Pennsylvania	SMG
Walter E. Washington Convention Center	Events DC	Events DC

Note: Sorted alphabetically by facility.

Sources: Individual facilities; secondary research.

Building Program

As previously mentioned, one of the primary objectives of this study update is to assist the MSA and the City in assessing whether the proposed expansion program previously recommended still appears reasonable and supported by market demand. This section provides context as to how the BCC compares to its competitors in the amount and type of facility space. As such, the table below compares key building program elements for the existing and an expanded BCC to the profiled competitive facilities.

Profiled Set - Building Program Overview						
Facility	Exhibit Hall SF	Ballroom SF	Meeting Room SF	Total Function SF	Ratio of Ballroom / Meeting SF to Exhibit SF	Divisible Meeting Rooms
Pennsylvania Convention Center	679,000	121,900	148,200	949,100	40%	79
Walter E. Washington Convention Center	703,000	52,000	150,000	905,000	29%	77
EXPANDED Baltimore Convention Center	500,000	91,700	127,500	719,200	44%	TBD
Boston Convention & Exhibition Center	516,000	40,000	150,700	706,700	37%	80
Music City Center	353,100	75,400	82,100	510,600	45%	57
David L. Lawrence Convention Center	313,100	33,100	76,900	423,100	35%	53
Baltimore Convention Center	300,000	36,700	70,500	407,200	36%	50
Gaylord National Resort & Convention Center	178,800	120,900	83,400	383,100	114%	89
Charlotte Convention Center	280,000	35,000	57,200	372,200	33%	46
Average (Excluding BCC)	431,900	68,300	106,900	607,100	41%	69
Median (Excluding BCC)	353,100	52,000	83,400	510,600	37%	77

Notes: Sorted in descending order by total function square feet (SF).

Pre-function, concourse, lobby and theater/auditorium spaces are excluded from all facilities.

All square footage is rounded to the nearest hundred.

TBD denotes to be determined.

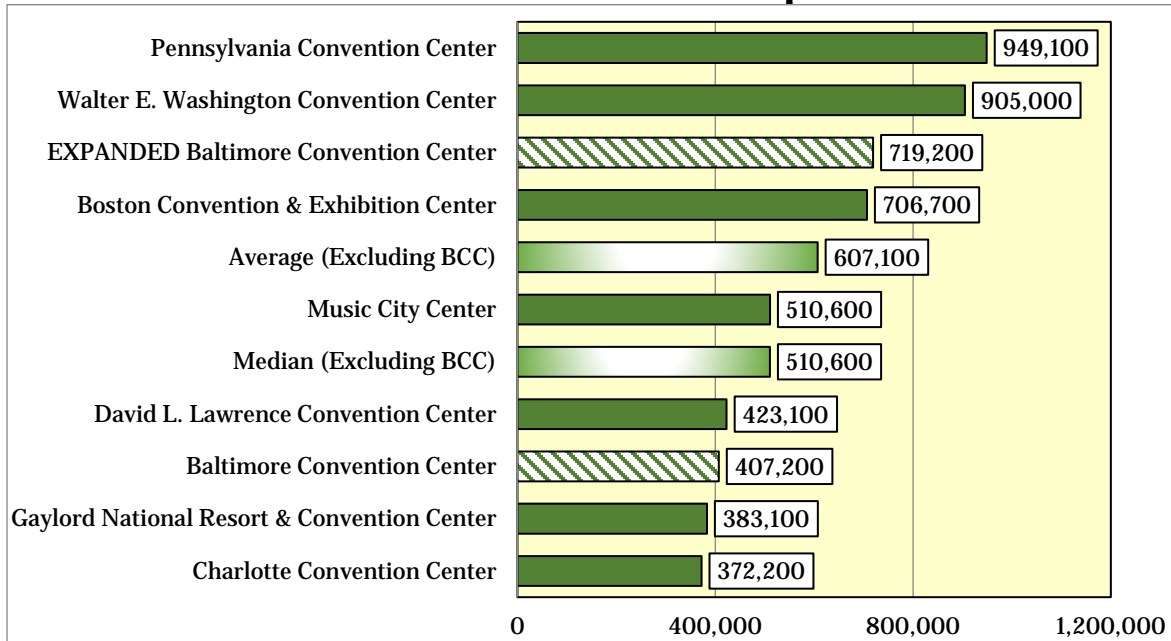
Expanded BCC space shown in the midpoint of the recommended range of total SF.

Sources: Management at individual facilities; secondary research.

The average amount of function space is skewed by large convention facilities in Philadelphia and Washington, D.C. As such, BCC currently falls below the average in terms of total function space and it ranks 6th among the profiled set in this category. An expanded BCC would rank 3rd in total function space among the profiled set.

The BCEC has plans to expand from 516,000 SF to 850,000 SF of exhibit space and add 100,000 SF of meeting space. As noted earlier, the BCEC also converted green space to event space to test options for future expansion utility.

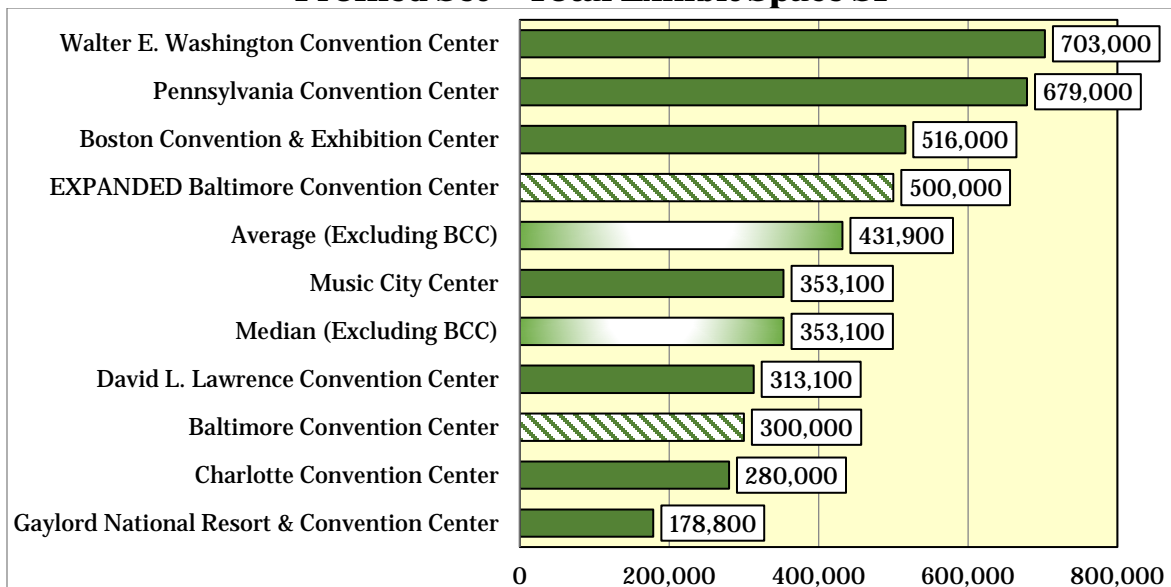
Profiled Set – Total Function Space SF



Notes: Total function space equals the sum of the exhibit, meeting, and ballroom space.
 Prefunction, concourses and lobby spaces are excluded from all centers.
 Sources: Management at individual facilities; secondary research.

The BCC currently ranks 6th among the profiled set in terms of total exhibit space. Both the Walter E. Washington Convention Center and the Pennsylvania Convention Center have more than double the amount of exhibit space as the BCC. The proposed expansion would place Baltimore 4th among the profiled competitive set in terms of exhibit space.

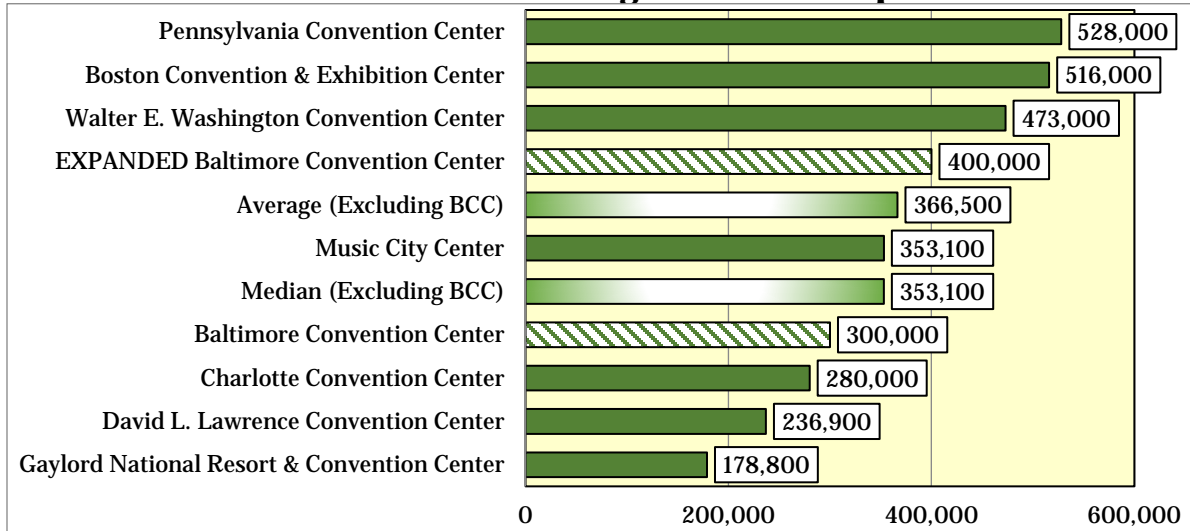
Profiled Set – Total Exhibit Space SF



Note: Pre-function, concourses and lobby spaces are excluded from all centers.
 Sources: Management at individual facilities; secondary research.

In addition, the maximum amount of contiguous exhibit space at the BCC (300,000 SF) is below the average of the profiled set (366,500 SF). Contiguous exhibit space is an important consideration with meeting planners and the BCC ranks 5th among its competitive set. Ideally, any expansion of the BCC should maximize the amount of contiguous space and include a minimum of 400,000 SF of contiguous exhibit space.

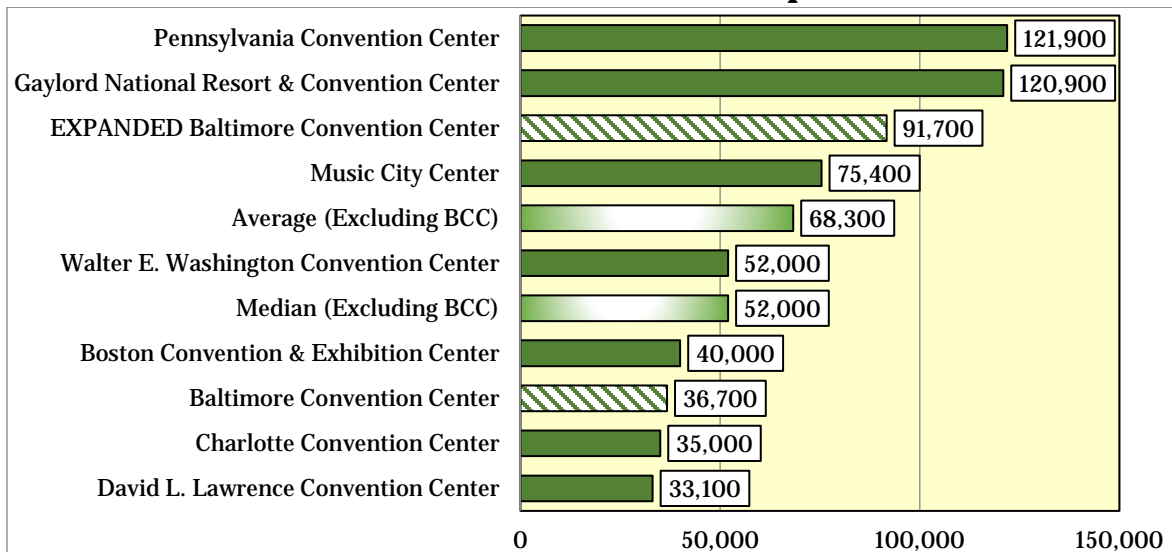
Profiled Set – Total Contiguous Exhibit Space SF



Note: Pre-function, concourses and lobby spaces are excluded from all centers.
Sources: Management at individual facilities; secondary research.

The BCC ranks 6th in terms of the total amount of ballroom space. The BCC offers 46% less ballroom space than the average for the profiled facilities. As such, any renovation/expansion of the BCC should increase the amount of ballroom space.

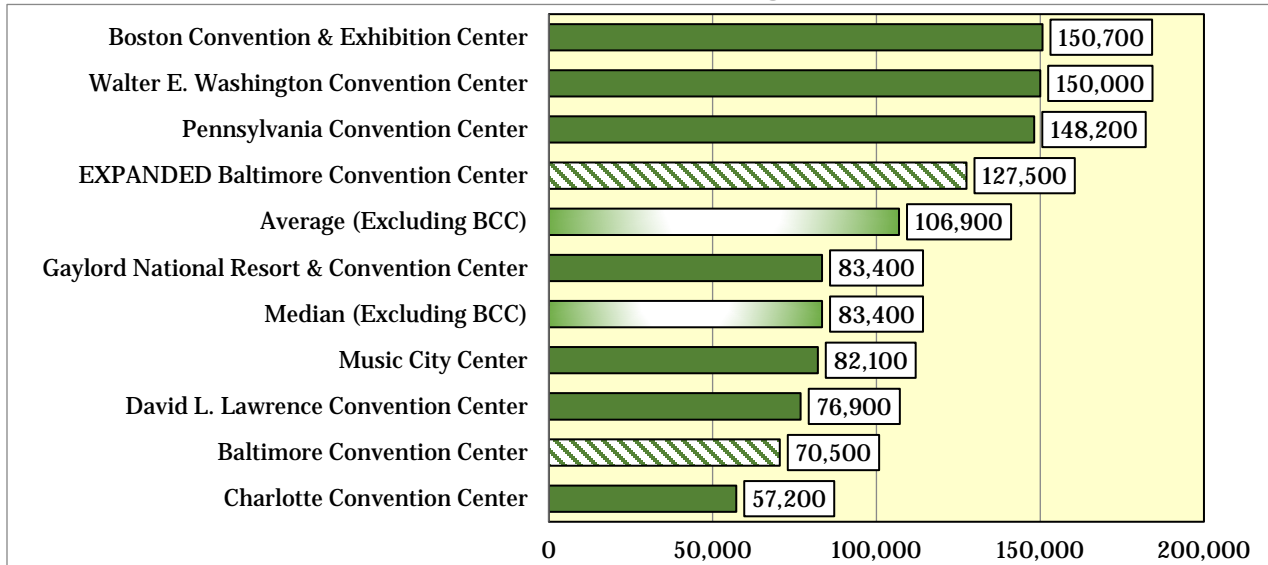
Profiled Set – Total Ballroom Space SF



Note: Pre-function, concourses and lobby spaces are excluded from all centers.
Sources: Management at individual facilities; secondary research.

The total meeting space at the BCC ranks 7th out of eight profiled centers and is 34% less than the average of the profiled set. Adding flexible meeting space should be pursued in any renovation/expansion of the BCC.

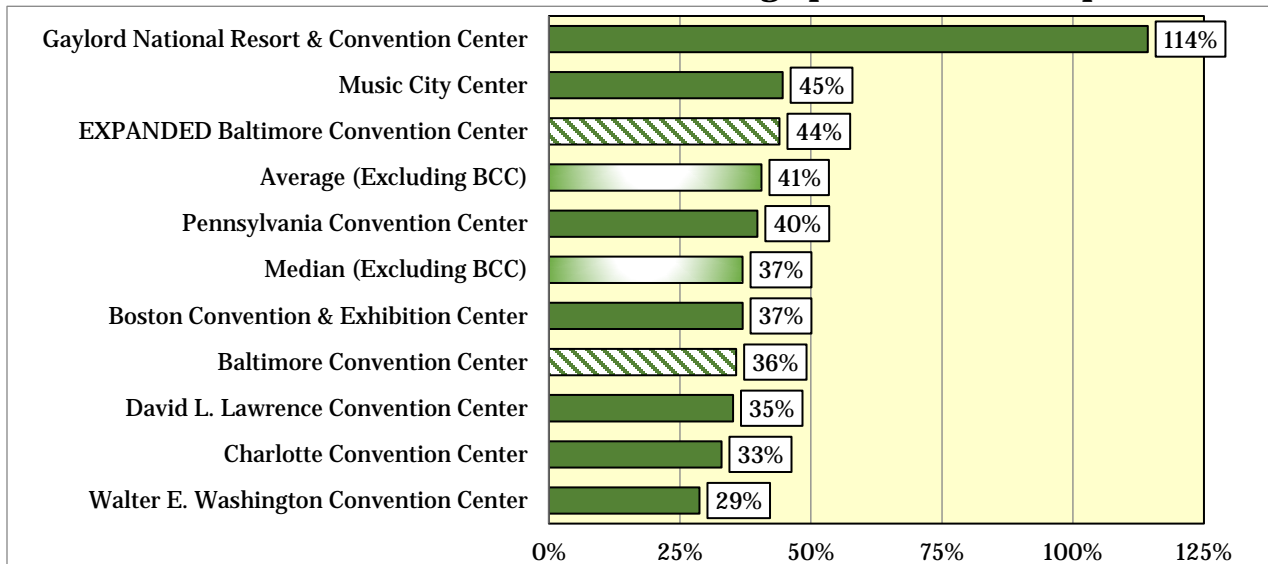
Profiled Set – Total Meeting Space SF



Note: Pre-function, concourses and lobby spaces are excluded from all centers.
Sources: Management at individual facilities; secondary research.

The BCC offers the 5th highest ratio of ballroom/meeting space to exhibit space (36%) among the profiled set, providing functional space that is highly sought by major associations and citywide conventions. A renovated/expanded BCC should strive to offer a ratio of ballroom/meeting space to exhibit space of between 40% and 45%.

Profiled Set – Ratio of Ballroom/Meeting Space to Exhibit Space



Note: Pre-function, concourses and lobby spaces are excluded from all centers.
Sources: Management at individual facilities; secondary research.

Destination Attributes

Meeting planners are increasingly booking venues with better overall destination packages (i.e., accessibility, proximate hotel rooms, nearby entertainment/restaurants, safe/secure surroundings, etc.) to support their events. In addition, the resulting buyer's market has planners considering the overall price of hosting their event in a city including facility, lodging, food and transportation costs. Meeting planners use factors such as hotel supply proximate to the convention center; travel costs for lodging, meals, and rental cars; and air accessibility to gauge the relative competitiveness of destinations under consideration to host their events.

Per Diem Spending

Business Travel News publishes an annual corporate travel index ranking 100 U.S. cities in terms of various travel-related costs including lodging, car rental and food. Total per diems are compiled by adding the average hotel, car and food cost per diems. Costs external to the convention center are becoming more important to meeting planners as they assess the overall cost of meeting in various destinations. Typically, corporate hotel room rates are higher than the overall ADR in a city.

When compared to facilities within the profiled set, Baltimore is below the average of the group in total per diem costs, placing it competitively within the profiled set, responding to the importance placed on external costs to show organizers' assessments of convention destinations.

Profiled Set - Per Diem Spending (2017)				
Location	Hotel	Car	Food	Total
Boston, MA	\$338	\$53	\$120	\$511
Washington, D.C.	\$320	\$43	\$99	\$462
Philadelphia, PA	\$226	\$47	\$102	\$375
Nashville, TN	\$211	\$41	\$106	\$358
Baltimore, MD	\$198	\$50	\$108	\$356
Charlotte, NC	\$192	\$46	\$97	\$335
Pittsburgh, PA	\$177	\$48	\$97	\$322
Average (Excluding Baltimore)	\$244	\$46	\$104	\$394
Median (Excluding Baltimore)	\$219	\$47	\$101	\$367

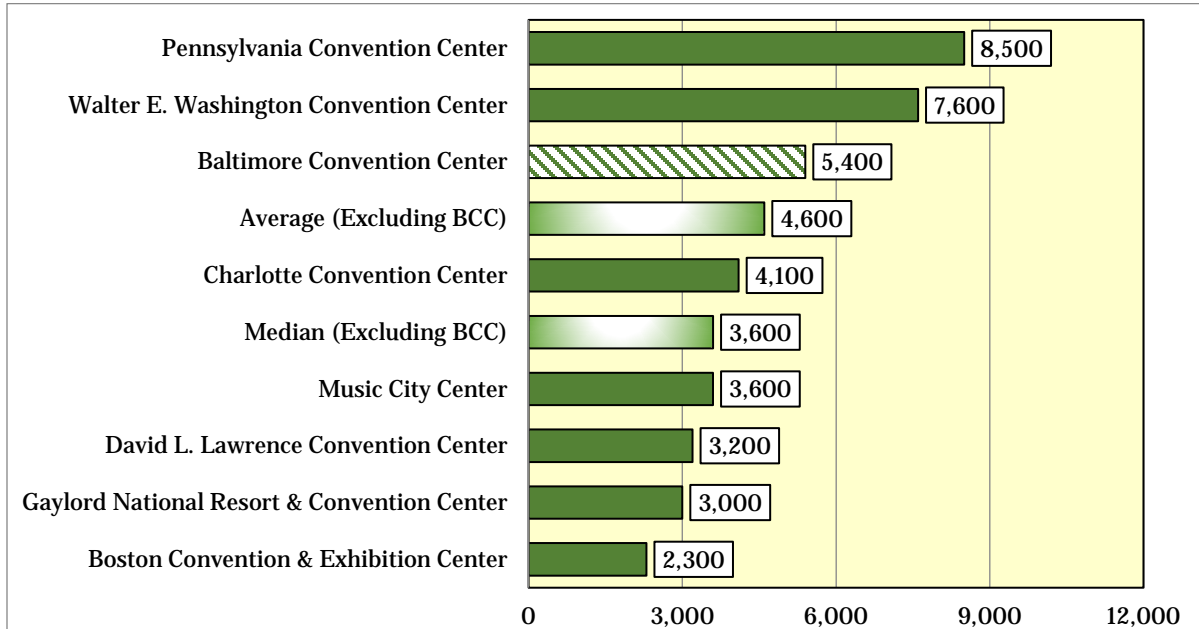
Notes: Sorted in descending order by total spending.
 Gaylord National Resort and Convention Center's per diem spending is considered the same as Washington, D.C.

Source: Business Travel News.

Hotel Supply

The BCC has approximately 5,400 rooms within a ½ mile which ranks 3rd among the profiled set. This serves as a competitive advantage for the BCC as most meeting planners prefer for amenities to be near the host venue.

Profiled Set – Hotels Rooms Within ½ Mile of Convention Center

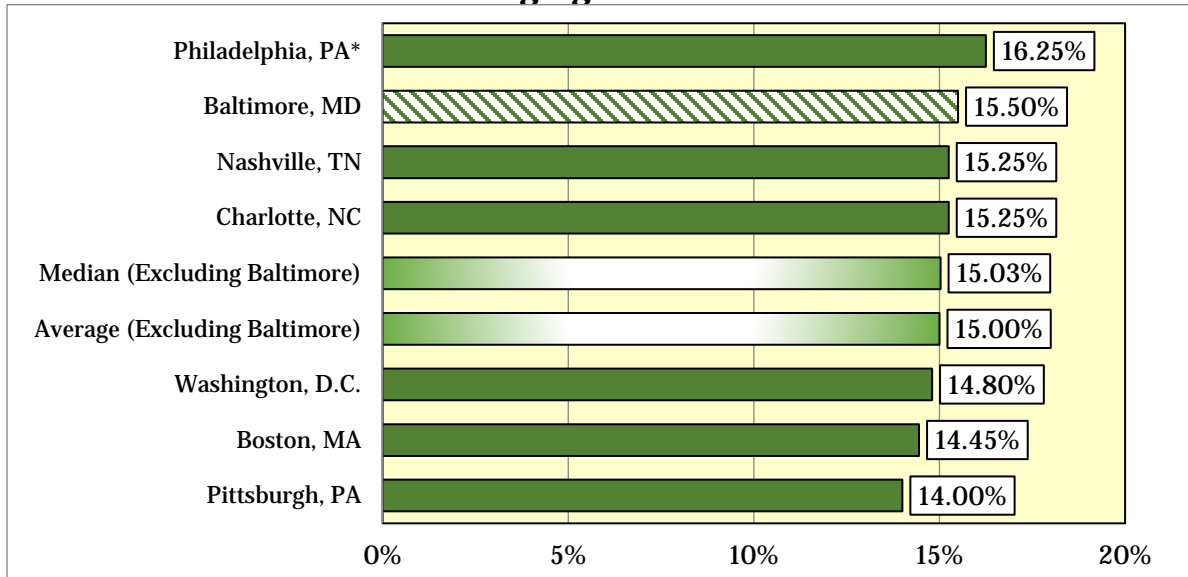


Sources: Individual facilities; individual DMOs; secondary research.

Lodging Tax Rates on Hotels

Overall affordability is important to many meeting planners when choosing a location to host their events. Taxes applied to hotel rooms include state/local sales tax and lodging taxes as well as special district taxes. The total lodging tax rates on hotels in Baltimore is 15.5% which ranks the 2nd highest among the profiled set. Total lodging tax on hotel rooms ranges from a high of 16.25% in Philadelphia to a low of 14.0% in Pittsburgh. Higher tax rates can negatively impact meeting planners' decision-making process, particularly in a buyer's market.

Profiled Set – Lodging Tax Rates on Hotels



Notes: Total tax rates include state, county, city, and special districts taxes levied on lodging facilities.

* Philadelphia rate includes 0.75% assessment for hospitality investment.

Nashville also charges an additional \$2.50 per night hotel excise tax.

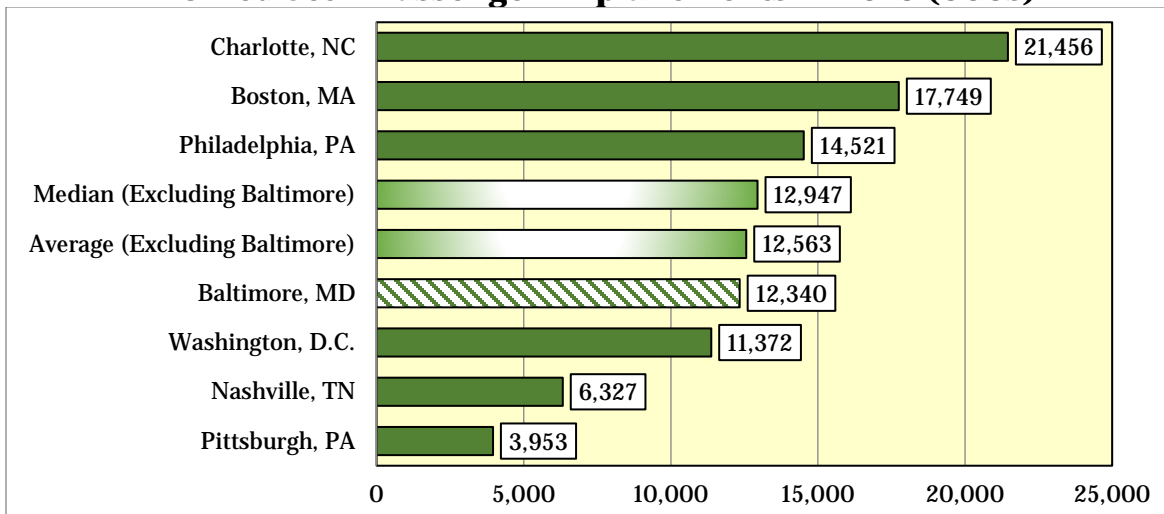
Some rates may vary depending on exact location within the city.

Sources: Individual DMOs; secondary research.

Air Accessibility

As mentioned previously, Baltimore is primarily served by BWI, which had approximately 12.3 million enplanements in CY 2016. Enplanements are used as a measure of the ease with which out-of-town delegates can get to a city. Meeting planners consider accessibility a determining factor when weighing multiple destinations. Charlotte and Philadelphia are U.S. hubs for major airlines which contribute to their significantly higher number of enplanements.

Profiled Set – Passenger Enplanements in 2016 (000s)



Note: Figures represent passenger enplanements for the most proximate major airport.

Source: Federal Aviation Administration.

TABLE OF CONTENTS

1. Introduction	1
2. Local Market Conditions	4
3. Historical BCC Operations	11
4. Key Industry Trends	23
5. Recommended Program	32
6. Competitive Facility Analysis	35
7. Economic Analysis	44
8. Limiting Conditions and Assumptions	54

ECONOMIC ANALYSIS

With respect to financial performance, many similar convention centers realize an operating deficit. However, one of the primary reasons for developing these types of facilities is the economic activity that they can generate in terms of spending, employment, earnings, as well as tax revenues to local and state governments. These facilities typically attract events that draw patrons from outside the immediate market area who spend money on hotels, restaurants and other related services. In many instances, the economic activity can outweigh the operating costs. Consequently, when evaluating the merits of these types of projects, it is important to consider all aspects of the costs and benefits including operating requirements, debt service and economic/fiscal impacts.

General Assumptions

Based on input from the client group, the following assumptions were used to develop estimates of event activity, financial operations, and economic/fiscal impacts for an expanded BCC.

- The building program previously outlined in this report is constructed and offers the required infrastructure and amenities to support an expanded BCC.
- The existing Sheraton Inner Harbor Hotel will be replaced with a new convention quality hotel with a minimum of 500 rooms built adjacent to the BCC.
- The facility continues to be managed by professional, experienced staff.
- An aggressive marketing approach is taken by Visit Baltimore and management at BCC, particularly in attracting convention/tradeshaw business, corporate meetings and sporting events/competitions.
- A high level of quality customer service continues to be provided.
- No other similar, competitive/comparable facilities are built or expanded in the region.
- Tax rates continue at their current rates.
- No major economic fluctuations or acts of nature occur that could adversely impact the project.

It should be noted that these assumptions are preliminary in nature and will continue to be refined as decisions related to the building program, broader development plan, and other operating characteristics continue to evolve.

In addition, the number of events and attendance, event mix, origin of attendees, facility financial operations, industry trends, economic conditions, direct spending categories used, per person spending amounts, distribution of spending, multipliers, and specific taxes quantified are all variables that influence the economic and fiscal impact estimates.

Usage/Event Activity Assumptions

The economic/fiscal impact analysis is based on several factors including a hypothetical estimate of utilization that was developed based on historical utilization at the BCC, research previously summarized in this report as well as other factors.

Event activity at expanded facilities typically experiences a “ramp up” period to a stabilized level of activity which occurs for several reasons. For instance, some groups that book their event years in advance may not want to risk that a facility’s construction is delayed and not completed in time for their event. In addition, some groups may choose to let management “fine tune” its operations before meeting in the expanded facility.

In addition, it is important to recognize that event activity at convention centers is typically dependent on several factors and is rarely consistent. The estimated range of utilization shown in the following table represents a stabilized year of operations.

Comparison of Usage/Event Activity						
Category	Historical Three-Year Average	Expanded BCC (Stabilized Year)			Incremental New (Stabilized Year)	
Events						
Conventions/Tradeshows	50	60	-	65	10	- 15
Meetings	34	50	-	55	16	- 21
Food Functions	7	14	-	16	7	- 9
Public Events	17	18	-	19	1	- 2
Sporting Events	8	12	-	14	4	- 6
Other	6	10	-	12	4	- 6
Total	122	164	-	181	42	- 59
% Change From Historical Three-Year Average					34%	- 48%
Event Days						
Conventions/Tradeshows	240	288	-	312	48	- 72
Meetings	69	100	-	110	31	- 41
Food Functions	9	18	-	21	9	- 12
Public Events	42	45	-	48	3	- 6
Sporting Events	20	30	-	35	10	- 15
Other	11	18	-	22	7	- 11
Total	391	499	-	548	108	- 157
% Change From Historical Three-Year Average					28%	- 40%
Total Attendance						
Conventions/Tradeshows	287,800	360,000	-	390,000	72,200	- 102,200
Meetings	26,700	42,500	-	46,750	15,800	- 20,050
Food Functions	6,200	14,000	-	16,000	7,800	- 9,800
Public Events	136,900	153,000	-	161,500	16,100	- 24,600
Sporting Events	29,600	48,000	-	56,000	18,400	- 26,400
Other	9,200	11,000	-	13,200	1,800	- 4,000
Total	496,400	628,500	-	683,450	132,100	- 187,050
% Change From Historical Three-Year Average					27%	- 38%

Consistent with MSA’s vision for serving as a catalyst for improving quality of life, creating a climate where industry can flourish and contributing to the local communities where projects are located, the BCC is a unique business entity that generates significant economic activity to downtown Baltimore and the State.

The primary purpose of this analysis is to estimate the economic and fiscal impacts associated with a stabilized year of operations at an expanded BCC to the local and State economies. Economic impacts are estimated in terms of spending, jobs, and earnings which create fiscal impacts reflected as changes in tax revenues.

Methodology – Economic Impact Analysis

Regional input-output models are typically used by economists as a tool to understand the flow of goods and services among regions and measure the complex interactions among them given an initial spending estimate.

Direct Spending

Estimating direct spending is the first step in calculating economic impact. Direct spending represents the initial change in spending that occurs as a direct result of operations at an expanded BCC. This spending occurs both inside and outside of the BCC. Direct spending related to operations at an expanded BCC is generated from attendees, sponsoring organizations/event producers, exhibitors as well as from facility operations.

Indirect/Induced Impacts

The economic activity generated by BCC operations affects more than just the facility itself. In preparation for new spending in the economy, several other economic sectors are impacted and jobs are created. Indirect effects reflect the re-spending of the initial or direct expenditures or the business-to-business transactions required to satisfy the direct effect. Induced effects reflect changes in local spending on goods and services that result from income changes in the directly and indirectly affected industry sectors. The model generates estimates of these impacts through a series of relationships using local-level average wages, prices and transportation data, taking into account commute patterns and the relative interdependence of the economy on outside regions for goods and services.

Multiplier Effect

In an effort to quantify the inputs needed to produce the total output, economists have developed multiplier models. The estimation of multipliers relies on input-output models, a technique for quantifying interactions between firms, industries and social institutions within a local economy. This analysis uses IMPLAN software and databases which are developed under exclusive rights by the Minnesota IMPLAN Group, Inc. IMPLAN, which stands for Impact Analysis for Planning, is a computer software package that consists of procedures for estimating local input-output models and associated databases. The IMPLAN software package allows the estimation of the multiplier effects of changes in final demand for one industry on all other industries within a defined economic area. Its proprietary methodology includes a matrix of production and distribution data among all counties in the U.S. As such, the advantages of this model are that it is sensitive to both location and type of spending and can provide indirect and induced spending, employment and earnings information by specific industry category while taking into account the leakages associated with the purchase of certain goods and services outside the economy under consideration.

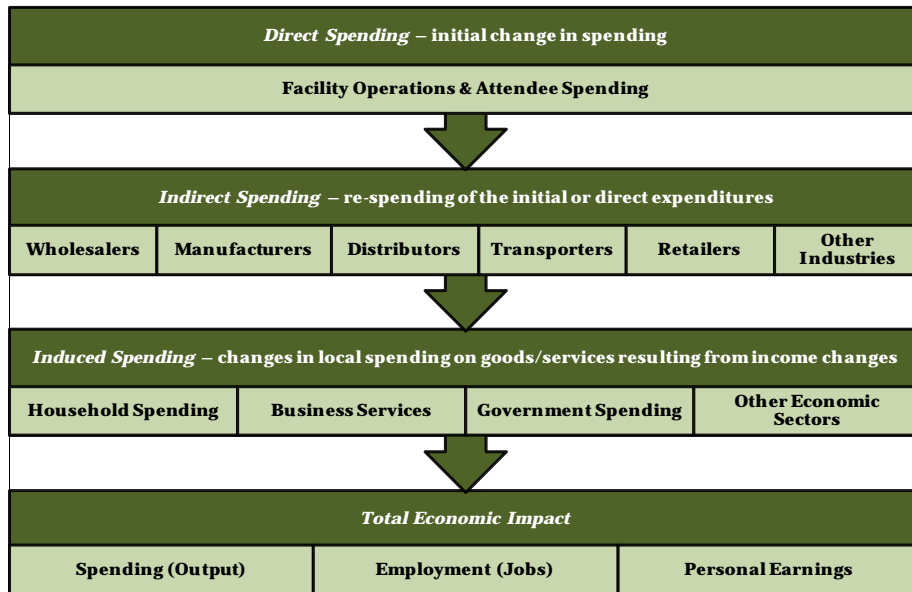
Once the direct spending amounts are assigned to a logical category, the IMPLAN model estimates the economic multiplier effects for each type of direct spending attracted to or retained in the local area and the State resulting from BCC operations. The multipliers used in this analysis reflect IMPLAN’s latest available economic data for transactions.

Total Economic Impact

The calculated multiplier effect is then added to the direct impact to quantify the total economic impact in terms of spending, employment and earnings which are defined as follows:

- *Spending (output)* represents the total direct and indirect/induced spending effects generated by an expanded BCC during a stabilized year of operations. This calculation measures the total dollar change in spending (output) that occurs in the local economy for each dollar of output delivered to final demand.
- *Employment (jobs)* represents the number of full and part-time jobs supported by an expanded BCC during a stabilized year of operations. The employment multiplier measures the total change in the number of jobs supported in the local economy for each additional \$1.0 million of output delivered to final demand.
- *Personal earnings* represent the wages and salaries earned by employees of businesses associated with or impacted by an expanded BCC during a stabilized year of operations. In other words, the multiplier measures the total dollar change in earnings of households employed by the affected industries for each additional dollar of output delivered to final demand.

The following graphic illustrates the multiplier effects for calculating total economic impact.



Methodology - Fiscal Impact Analysis

The estimated spending generated by an expanded BCC during a stabilized year of operations creates tax revenues for the City and the State. Experience in other markets suggests that while a significant portion of the direct spending likely occurs near the facility, additional spending occurs in other areas within the State, particularly spending on items such as business services and everyday living expense of residents. Major tax sources impacted by facility operations were identified and taxable amounts to apply to each respective tax rate were estimated. Although other taxes, such as property taxes, may also be positively impacted by operations of an expanded BCC, this analysis estimates revenues generated from admissions and amusement tax, hotel/motel tax, local personal income tax and parking tax at the City level and sales and use tax, income tax and motor vehicle tax at the State level.

Estimate of Total Annual Economic Impacts from On-Going Operations

The table below summarizes the estimated total economic impacts generated from an expanded BCC during a stabilized year of operations in terms of direct, indirect/induced, and total spending, jobs, and earnings and is followed by a discussion of each component. As a point of reference, these estimated amounts represent a 28% to 39% increase over the estimated historical three-year average economic impacts generated from BCC operations.

Comparison of Estimated Annual Economic Impacts Generated From BCC Operations					
City of Baltimore					
Category	Historical Three-Year Average	Expanded BCC (Stabilized Year)		Incremental New (Stabilized Year)	
Spending					
Direct Spending	\$362,700,000	\$462,900,000	- \$502,900,000	\$100,200,000	- \$140,200,000
Indirect/Induced Spending	166,900,000	212,500,000	- 231,000,000	45,600,000	- 64,100,000
Total Output	<u>\$529,600,000</u>	<u>\$675,400,000</u>	- <u>\$733,900,000</u>	<u>\$145,800,000</u>	- <u>\$204,300,000</u>
Total Jobs	4,500	5,800	- 6,300	1,300	- 1,800
Total Earnings	\$219,600,000	\$279,800,000	- \$304,000,000	\$60,200,000	- \$84,400,000
State of Maryland					
Category	Historical Three-Year Average	Expanded BCC (Stabilized Year)		Incremental New (Stabilized Year)	
Spending					
Direct Spending	\$379,500,000	\$483,900,000	- \$525,800,000	\$104,400,000	- \$146,300,000
Indirect/Induced Spending	285,800,000	363,900,000	- 395,300,000	78,100,000	- 109,500,000
Total Output	<u>\$665,300,000</u>	<u>\$847,800,000</u>	- <u>\$921,100,000</u>	<u>\$182,500,000</u>	- <u>\$255,800,000</u>
Total Jobs	6,000	7,600	- 8,300	1,600	- 2,300
Total Earnings	\$248,600,000	\$316,400,000	- \$343,800,000	\$67,800,000	- \$95,200,000

Notes: Earnings represent the wages and salaries earned by employees of businesses associated with or impacted by the facility. State amounts include City amounts.

Direct Spending

As mentioned previously, the first step in calculating economic impact is estimating the direct spending. The benefits generated at the City and State levels result from the impact of direct spending both by attendees and activities that support events held at the BCC.

With the increasing number of attendees booking hotels through various online hotel services rather than directly through their event producer or the host city Destination marketing organization (DMO), hotel room nights are often under reported. DMOs and convention centers are continually improving their data tracking and methods for capturing the number of room nights generated by convention center activity. Visit Baltimore and BCC management continually work together to refine estimates that accurately reflect the number and type of attendees and their related spending. Direct spending assumptions used in this report were based on data provided by Visit Baltimore, BCC management and other secondary sources.

Attendee Spending – Estimated utilization at an expanded BCC was used to calculate attendee spending. Daily spending amounts were assigned to high impact attendees who were estimated to stay overnight in a hotel and low impact attendees who likely originate from the area.

Sponsoring Organization/Event Producer & Exhibitor Spending Outside the Facility– Sponsoring organizations/event producers have substantial investments in the events that they host. These organizations purchase goods and services from either the BCC or from outside sources. In addition, exhibitors often spend money outside of the facility to entertain existing and potential clients. Spending on items such as facility rental and facility services is included in the facility revenue amounts.

Expanded BCC Operations – This category refers to operating revenues generated by an expanded BCC from sources such as rental income, food service, event services (e.g., electrical fees/utility commissions, phone commissions, audio/visual fees) and other miscellaneous income.

Summary of Direct Spending Inputs – Based on this information, the direct spending related to attendees, sponsoring organizations/event producers, exhibitors, and facility operations at an expanded BCC is estimated to range from \$483.9 million to \$525.8 million annually at the State level, of which \$462.9 million to \$502.9 million is estimated to occur in the City.

Indirect/Induced Spending

The IMPLAN model is used to generate the indirect and induced impacts spawned from the estimated economic activities within the City and the State. The indirect impacts represent inter-industry trade from business to business. Likewise, the induced impacts represent the economic activity spurred by the household trade that occurs when employees make consumer purchases with their incomes. According to the IMPLAN model, indirect and induced spending spurred by ongoing operations of an expanded BCC is estimated to range from \$363.9 million to \$395.3 million annually at the State level, of which \$212.5 million to \$231.0 million is estimated to occur in the City.

Total Output

Outputs from the IMPLAN model indicate that total (i.e., direct, indirect, and induced) output from activity at an expanded BCC is estimated to range from \$847.8 million to \$921.1 million at the State level, of which \$675.4 million to \$733.9 million is estimated to occur in the City.

Total Jobs

Based on the IMPLAN model, which calculates the number of jobs per \$1.0 million in direct spending, the economic activity associated with the ongoing operations of an expanded BCC is estimated to generate between 7,600 and 8,300 total jobs at the State level, of which 5,800 to 6,300 total jobs are estimated to occur at the City level. These jobs are created in many sectors of the economy, which both directly and indirectly support the increased level of business activity in the area on an annual basis.

Total Earnings

Outputs from the IMPLAN model indicate that annual earnings generated from an expanded BCC are estimated to range from \$316.4 million to \$343.8 million at the State level, of which \$279.8 million and \$304.0 million is estimated to occur in the City.

Estimate of Total Annual Fiscal Impacts (Tax Revenues) from On-Going Operations

The total annual tax revenues related to ongoing operations of an expanded BCC are estimated to range from \$22.4 million to \$24.4 million at the City level and \$46.0 million to \$50.0 million at the State level. Approximately 67% of estimated tax revenues occur at the State level primarily driven by sales and use tax. The estimated change to total tax revenues represents an increase of 28% to 39% over the estimated historical three-year average generated from BCC operations.

Comparison of Estimated Annual Fiscal Impacts Generated From BCC Operations						
Entity	Historical Three-Year Average	Expanded BCC (Stabilized Year)			Incremental New Stabilized Year	
City of Baltimore	\$17,400,000	\$22,400,000	-	\$24,400,000	\$5,000,000	- \$7,000,000
State of Maryland	\$36,000,000	\$46,000,000	-	\$50,000,000	\$10,000,000	- \$14,000,000
GRAND TOTAL	\$53,400,000	\$68,400,000	-	\$74,400,000	\$15,000,000	- \$21,000,000

The following provides a description of the taxes estimated in this analysis.

City of Baltimore Taxes

Hotel/Motel Tax – The City of Baltimore levies a hotel/motel tax of 9.5% on all gross amounts of money paid to the owners or operators of hotels in the City by transient guests or tenants for renting, using, or occupying a room or rooms in those hotels for sleeping accommodations. The hotel/motel tax does not include State sales tax.

Local Personal Income Tax – The City of Baltimore imposes a local personal income tax of 3.2% which is calculated as a percentage of taxable income. For purposes of this analysis and based on information provided by the Comptroller of Maryland, an effective tax rate was calculated. Because local income tax is based on where you live, not where you work, only a portion of the personal income taxes generated by operations of an expanded BCC occur in the City of Baltimore.

Parking Tax – The parking tax is a local tax collected by the State Comptroller’s Office for local municipalities based on the gross amount paid for occupying a parking space. The parking tax rate is currently 20% in the City of Baltimore.

Admissions and Amusement Tax - The admissions and amusement tax is a local tax collected by the Comptroller’s Office for Maryland’s counties and Baltimore City, incorporated cities and towns, and the MSA. The tax is imposed on the gross receipts from admissions, the use or rental of recreational or sports equipment and the sale of merchandise, refreshments or services at a nightclub or similar place where entertainment is provided. Admissions and amusement tax rates are set by local officials and vary by locality and by activity with a few exceptions and special situations. The City of Baltimore applies a 5% tax on movies on the historic register and single-screen movie theatres and a 10% tax on the admission or amusement cost for all other activities such as movies, athletic events, concerts, and golf. If the gross receipts from the activity is also subject to the sales and use tax, the admissions and amusement tax is limited to 5%.

State of Maryland Taxes

Sales and Use Tax – The State of Maryland collects 6% sales and use tax from sales and leases of tangible personal property and services throughout the State and a 9% tax on alcoholic beverages. For purposes of this analysis, the 6% tax rate is applied to estimated taxable spending at the State level generated from operations of an expanded BCC which represents a conservative estimate relative to the sale of alcoholic beverages.

Personal Income Tax – The State of Maryland imposes a personal income tax assessed against personal income earned in the State. The State income tax is a graduated rate ranging from 2.0% to 5.75% of taxable income. Non-residents are subject to a special nonresident tax rate of 1.75% in addition to the State income tax rate. For purposes of this analysis and based on information provided by the Comptroller of Maryland, an effective tax rate was calculated and applied to a portion of total earnings at the State level.

Corporate Income Tax – A corporate income tax of 8.25% of corporate federal taxable income adjusted by State modifications is also levied by the State of Maryland on corporations. For purposes of this analysis and based on information provided by the Comptroller of Maryland, an effective tax rate was calculated and applied to a portion of total output at the State level.

Motor Vehicle Rental Tax – The State imposes an 11.5% tax on short-term passenger car and recreational vehicle rentals.

Construction Impacts

Although not quantified in this analysis, construction costs associated with the expansion of the BCC would provide additional economic and fiscal impacts to the local and State economies during the construction period. These benefits would include the creation of jobs which produce earnings for area residents, as well as increased tax revenue from the purchase of materials and supplies.

Potential Impact of Remaining Status Quo

Although the economic and fiscal impact analysis compares the historical three-year average for BCC operations to an estimate for an expanded BCC, market research including feedback from stakeholders, previous surveys conducted with existing, past, lost and potential user groups, lost business reports, and changes to the competitive landscape suggests that remaining status quo will likely result in a decline in event activity over time, particularly convention and tradeshow activity. Lack of availability (which includes both date and space options at the BCC and preferred dates and number of rooms at hotels) was ranked as the primary reason for lost business that was tracked by Visit Baltimore from FY 2012 to FY 2016. This one reason was estimated to account for approximately 1.9 million lost hotel room nights.

Competitive cities continue to improve their product offering in terms of the amount and type of space at the convention center as well as the overall destination package including the hotel product and other supporting infrastructure like restaurants, retail and entertainment outlets. Convention centers are continually striving to differentiate themselves from their competitors and adapt to changing needs of users. Industry trends and input from meeting planners support the need for hybrid, flex space that can be utilized for multiple purposes and event types which is reflective in the building program recommendations.

TABLE OF CONTENTS

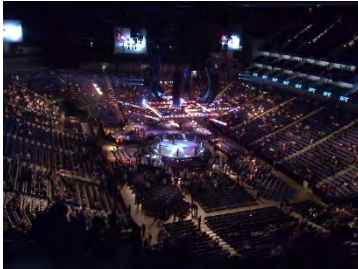
1. Introduction	1
2. Local Market Conditions	4
3. Historical BCC Operations	11
4. Key Industry Trends	23
5. Recommended Program	32
6. Competitive Facility Analysis	35
7. Economic Analysis	44
8. Limiting Conditions and Assumptions	54

LIMITING CONDITIONS AND ASSUMPTIONS

This analysis is subject to our contractual terms, as well as the following limiting conditions and assumptions:

- This analysis has been prepared for the Maryland Stadium Authority (Client) for its internal decision-making purposes associated with the proposed expansion of the Baltimore Convention Center (BCC) and should not be used for any other purposes without the prior written consent of Crossroads Consulting Services, LLC.
- This report should only be used for its intended purpose by the entities to whom it is addressed. Reproduction or publication by other parties are strictly prohibited.
- The findings and assumptions contained in the report reflect analysis of primary and secondary sources. We have utilized sources that are deemed to be accurate but cannot guarantee their accuracy. No information provided to us by others was audited or verified and was assumed to be correct.
- Although the analysis includes findings and recommendations, all decisions relating to the implementation of such findings and recommendations shall be the Client's responsibility.
- Estimates and analysis regarding an expanded BCC, are based on trends and assumptions and, therefore, there will usually be differences between the projected and actual results because events and circumstances frequently do not occur as expected, and those differences may be material.
- This analysis does not constitute an audit, a projection of financial performance, or an opinion of value or appraisal in accordance with generally accepted audit standards. As such, we do not express an opinion or any other form of assurance. Any estimates or ranges of value were prepared to depict current and potential future market conditions.
- Although this analysis utilizes various mathematical calculations, the final estimates are subjective and may be influenced by our experience and other factors not explicitly stated in this report.
- We have no obligation, unless subsequently engaged, to update this report or revise this analysis as presented due to events or circumstances occurring after the date of this report.
- The quality of ownership and management of an expanded BCC has a direct impact on its economic performance. This analysis assumes responsible and competent ownership and management. Any departure from this assumption may have a significant impact on the findings in this report.
- Multiple external factors influence current and anticipated market conditions. Although we have not knowingly withheld any pertinent facts, we do not guarantee that we have knowledge of all factors which might influence the operating potential of an expanded BCC. Due to quick changes in the external factors, actual results may vary significantly from estimates presented in this report.
- The analysis performed was limited in nature and, as such, Crossroads Consulting Services, LLC does not express an opinion or any other form of assurance on the information presented in this report. As with all estimates of this type, we cannot guarantee the results nor is any warranty intended that they can be achieved.
- The analysis is intended to be read and used in its entirety. Separation of any portion from the main body of the report is prohibited and negates the analysis.
- In accordance with the terms of our engagement letter, the accompanying report is restricted to internal use by the Client and may not be relied upon by any party for any purpose including any matter pertaining to financing.

Market and Economic Analysis Update for a Proposed New Arena in Baltimore



Presented to:
Maryland Stadium Authority

Presented by:



Final Report
July 2018



July 2018

Mr. Al Tyler, Assistant Vice President, Capital Projects
Maryland Stadium Authority
The Warehouse at Camden Yards - South Warehouse
351 West Camden St., Ste. 300
Baltimore, MD 21201

Dear Mr. Tyler:

Crossroads Consulting Services, LLC has completed its market and economic analysis update for the Maryland Stadium Authority related to a proposed new arena in downtown Baltimore. This report summarizes our research and analysis. The majority of market research was completed prior to January 2018.

In accordance with the terms of our engagement letter, the accompanying report is restricted to internal use by the Maryland Stadium Authority and may not be relied upon by any party for any purpose including financing. Notwithstanding these limitations, it is understood that this document may be subject to public information laws and, as such, can be made available to the public upon request.

Although you have authorized reports to be sent electronically for your convenience, only the final hard copy report should be viewed as our work product.

We have enjoyed serving you on this engagement and look forward to the opportunity to provide you with continued service in the future.

Sincerely,

Crossroads Consulting Services, LLC

TABLE OF CONTENTS

1.	Introduction	1
2.	Market Analysis Update	4
3.	Economic Analysis Update	24
4.	Limiting Conditions and Assumptions	32

INTRODUCTION

Project Background

Located in downtown Baltimore, Royal Farms Arena is the City's largest indoor sports and entertainment facility. The arena is owned by the City of Baltimore (City) and operated by SMG, a private management company specializing in the operation of public assembly facilities. Since opening in 1962, the facility has previously been named the Baltimore Civic Center, Baltimore Arena and 1st Mariner Arena. In 2014, Royal Farms, a Baltimore-based convenience store chain, entered into a five-year naming rights agreement for the arena that includes an option to renew at the end of the contract.

The facility currently has 11,179 permanent seats on three levels in a horseshoe configuration. The capacity for concerts is approximately 13,500 and varies for other events such as sporting events and family shows based on the configuration. The seating capacity can also be scaled down to approximately 5,000 with a curtaining system. There are currently no box suites or club seating areas. Although not controlled by facility management, there is an adjacent 850-car parking garage.

Since its opening, the arena has hosted multiple sports and entertainment events. In recent years, the Royal Farms Arena hosted several sports tenants including the Major Arena Soccer League (MASL) Baltimore Blast, American Indoor Football (AIF) Baltimore Mariners and the Legends Football League (LFL) Baltimore Charm. In 2017, the Baltimore Brigade of the Arena Football League (AFL) played its first season at Royal Farms Arena and is currently the only tenant sports team. Additional activity includes national and international touring concerts, comedy acts, various circuses, WWE and UFC Pay-Per-View events, high school and college commencement ceremonies, sporting games/tournaments, and family shows including the Harlem Globetrotters, Disney on Ice, Cirque du Soleil, and Marvel Universe Live as well as monster truck and arenacross events. According to *Billboard Magazine*, Royal Farms Arena ranked #1 in the category of top grossing venues for North America with seating capacities of 10,001-15,000 in 2015, 2011 and 2009 and #2 in 2014, 2012 and 2010.

Over the years, several market and economic studies have been conducted related to the potential development of a new arena in downtown Baltimore under multiple development scenarios at different site locations. Based on Royal Farms Arena's age and lack of modern patron amenities in conjunction with the supply of facilities in the region and competitiveness of the entertainment industry, market research consistently indicated support for a new arena to maximize event programming and better meet the long-term sports and entertainment needs of the community.

Based on the scale and potential development costs, a new arena will likely require some type of public/private partnership similar to the concept that was proposed in 2011 which sought to integrate a new arena and a new hotel with an expanded Baltimore Convention Center (BCC). A significant aspect of the proposal was that a local businessman would form a partnership to privately fund construction of the new hotel and arena. The possible private sector investment was contingent on public sector financing of the BCC expansion.

Purpose of the Study

Given this backdrop, the Maryland Stadium Authority (MSA) retained Crossroads Consulting Services, LLC (Crossroads Consulting) to update specific components of the previous market and economic analysis that was completed by KPMG LLP in 2007 and the limited market assessment that was included in the BCC Expansion Study dated 2012 to reflect changes in market conditions, Royal Farms Arena operations, key industry trends, and the competitive landscape. One of the objectives of this study update is to comment on the overall viability of a new arena from a market perspective including preliminary building program recommendations. In addition, this report provides an updated estimate of the economic and fiscal impacts that could be generated from a new arena. This update is non-site specific other than the assumption that the facility would be in downtown Baltimore. The conclusions outlined in this limited market and economic assessment are only one factor that the MSA and the City should consider in their strategic planning efforts. The research and analysis contained in this report is intended to allow the MSA and the City to draw their own informed conclusions regarding the viability associated with future development of a new arena. Further, it is important to note that the scope of this study effort did not focus on assessing the opportunities and challenges associated with potentially renovating/modernizing the existing Royal Farms Arena.

Work Plan

Research tasks completed as part of this study effort included:

- Conducted interviews and/or work sessions with stakeholders to obtain their perspectives on the benefits, challenges and opportunities associated with the proposed new arena.
- Analyzed select market attributes.
- Analyzed historical operating data for Royal Farms Arena including event activity and financial operations.
- Reviewed the supply of competitive facilities in the area in terms of ownership, management, building program and market focus.
- Obtained feedback from a limited number of potential users of the proposed new arena including, but not limited to: sporting events, concert promoters, family show promoters, and special event producers.
- Analyzed data on competitive/comparable facilities in terms of program, event activity and financial operations.
- Summarized observations related to market potential, building program, and the impact to event activity and financial operations compared to the existing Royal Farms Arena.
- Estimated the economic impacts in terms of spending, employment, and earnings as well as tax revenues associated with on-going operations of the proposed new arena.

The remainder of this report summarizes the key findings from our research and analysis.

TABLE OF CONTENTS

1. Introduction	1
2. Market Analysis Update	4
3. Economic Analysis Update	24
4. Limiting Conditions and Assumptions	32

MARKET ANALYSIS UPDATE

This section of the report consists of the following:

- Local Market Conditions
- Historical Operations of Royal Farms Arena
- Competitive Supply of Area Facilities
- Key Industry Trends
- Potential Demand Generators
- Overall Summary

Local Market Conditions

Because general market conditions impact the operation of arenas, this section of the report profiles select market characteristics including demographic/economic statistics, area employment, and accessibility.

Demographic/Economic Statistics

When assessing the merits of the proposed new arena, it is important to understand the market in which it would operate. Factors such as demographic/economic conditions, the vibrancy of the area immediately surrounding a facility, and overall destination appeal to both event planners/promoters and attendees can all impact a facility's overall competitiveness within the broader marketplace.

Like the event base at Royal Farms Arena, activity at the proposed new arena is anticipated to include concerts, family shows, entertainment acts, sporting events, special events and community/civic events. Depending on the scope and nature of the event, the proposed new arena could draw both area residents and out-of-town attendees. Local, civic based events tend to draw from a relatively close geographic area while larger events/shows draw from a broader radius defined here as the secondary market. Special events can attract patrons from an even larger market area.

When choosing a location, event planners/promoters typically consider several characteristics of a destination important to the success of their event. The importance event planners/promoters place on each of these factors differs depending on the type of event. For instance, local events may place more importance on the accessibility of the venue to attendees from the surrounding communities. Event planners/promoters for entertainment events may place more emphasis on factors such as population, age distribution and income characteristics when selecting markets to host their events.

For purposes of this analysis, the primary and secondary markets are defined as a 30-mile radius and a 60-mile radius from Royal Farms Arena, respectively. The following map illustrates both the primary and secondary markets. As a point of reference, the secondary market includes Washington, D.C.

Map of the Primary and Secondary Markets



Source: Claritas.

The following summarizes key demographic statistics for the local, regional, State, and national markets based on data supplied by Claritas, a Nielsen company that provides current and projected U.S. demographics based on U.S. Census figures.

Population

Population serves as a base from which events at the proposed new arena could draw attendance and other forms of support. In 2017, the population of the primary and secondary markets was estimated to be 3.63 million and 9.86 million, respectively. As such, the secondary market provides an incremental population of approximately 6.23 million. Population within the primary and secondary markets is projected to increase by 3.5% and 4.3%, respectively between 2017 and 2022. As a point of reference, the projected growth rate for the State is 3.6% and the U.S. is 3.8% during the same period.

Age Distribution

Analysis by age group is useful since certain events are targeted toward consumers who fall within specific age categories. More than 40% of the primary and secondary markets are within the ages of 25 and 54, a demographic that typically has disposable income to spend on sports and entertainment events. The median age in both the primary (38.2 years old) and secondary (37.9 years old) markets is generally consistent with that for the State (38.8 years old) and the U.S. (38.2 years old).

Income

Income offers a broad measurement of spending potential for a specific population because it indicates the general ability of individuals or households to purchase a variety of goods and services including admission to spectator events (e.g., concerts, sporting events, family shows, etc.). In 2017, the median household income was \$74,400 in the primary market and \$82,100 in the secondary market. The median income in the secondary market was higher than for the State (\$76,300) and the U.S. (\$57,500) while the primary market was consistent with that for the State. Approximately 37% of the households in the primary market and 41% in the secondary market had income levels of at least \$100,000 compared to 37% in the State and 26% in the U.S.

Summary

For comparative purposes, the table that follows summarizes key demographic/economic characteristics for the primary and secondary markets as well as for the State of Maryland and the U.S.

Summary of Key Demographic/Economic Characteristics				
Category	Geographic Area			
	30-Mile Radius	60-Mile Radius	State of Maryland	U.S.
Population				
2000 Population	3,252,900	8,243,200	5,296,500	281,421,900
2010 Population	3,471,400	9,207,200	5,773,600	308,745,500
2017 Population	3,634,200	9,863,800	6,064,200	325,139,300
2022 Projection	3,760,600	10,289,300	6,282,800	337,393,100
Growth Rate (2000-2010)	6.7%	11.7%	9.0%	9.7%
Growth Rate (2010-2017)	4.7%	7.1%	5.0%	5.3%
Projected Growth Rate (2017-2022)	3.5%	4.3%	3.6%	3.8%
Age Distribution				
Under 18 Years Old	22%	23%	22%	23%
18 - 24 Years Old	10%	9%	9%	10%
25 - 34 Years Old	14%	14%	14%	13%
35 - 44 Years Old	13%	14%	13%	13%
45 - 54 Years Old	14%	14%	14%	13%
55+ Years Old	28%	27%	28%	29%
Median Age	38.2	37.9	38.8	38.2
Household Income Distribution				
Less than \$25,000	16%	14%	15%	22%
\$25,000 to \$49,999	18%	16%	18%	23%
\$50,000 to \$74,999	17%	16%	17%	17%
\$75,000 to \$99,999	13%	13%	13%	12%
\$100,000 to \$149,999	18%	19%	18%	14%
\$150,000 or more	19%	22%	19%	12%
2017 Median Household Income	\$74,400	\$82,100	\$76,300	\$57,500
2017 Average Household Income	\$100,000	\$112,700	\$103,200	\$80,900

Source: Claritas.

Area Employment

A broad workforce distribution helps lessen a community’s dependency on support from any single industry segment. Employment diversification helps a local economy withstand economic downturns due to dependency upon one industry; should one industry fail, there are others upon which the local economy can rely.

In addition, the composition of an area’s employment by industry is a consideration when targeting various events and/or seeking advertising and sponsorship opportunities for the proposed new arena.

In December 2017, the Baltimore-Columbia-Towson Metro Area (Baltimore Metro Area) had approximately 1.4 million employees distributed in multiple industries. Employment data shown in the following table indicates that the area’s workforce is primarily concentrated in education/health services, trade/transportation/utilities, government and professional/business services.

Employment by Industry in the Baltimore Metro Area		
Industry	Total Jobs	% of Total
Education & Health Services	282,400	20%
Trade, Transportation & Utilities	253,100	18%
Government	230,400	16%
Professional & Business Services	230,000	16%
Leisure & Hospitality	130,100	9%
Financial Activities	81,800	6%
Mining, Logging & Construction	78,000	6%
Manufacturing	55,500	4%
Other Services	50,000	4%
Information	17,200	1%
Total	1,408,500	100%

Note: Sorted in descending order by total jobs as of December 2017.

Source: U.S. Bureau of Labor Statistics.

In addition, the number of large firms in the area can play an important role in securing facility sponsorship and selling premium seating at the proposed new arena. In general, large companies are more likely to purchase these packages or enter into sponsorship agreements. As shown in the following table, there are approximately 2,000 firms with more than 500 employees in the Baltimore Metro Area.

Summary of Enterprises by Employment Size in the Metro Area				
Employment Size	Number of Firms	Number of Establishments	Number of Employees	Total Annual Payroll (\$000's)
0-100	50,295	51,507	389,701	\$17,839,132
100-499	1,549	3,059	162,357	\$8,612,883
500+	1,999	11,923	587,522	\$35,035,360
Total	53,843	66,489	1,139,580	\$61,487,375

Source: U.S. Census Bureau.

The table below illustrates the City’s largest private sector employers which include Johns Hopkins University, Johns Hopkins Hospital and Health System and the University of Maryland Medical System. As a point of reference, these 10 companies combine to account for approximately 26% of total employment in the City. Although there are no Fortune 500 companies based in Baltimore, several Fortune 1000 companies such as Under Armour, Laureate Education, T. Rowe Price, and Legg Mason are based in Baltimore. In addition, several Fortune 500 companies including Lockheed Martin, Marriott International, Discovery Communications and Host Hotels & Resorts are based in the State of Maryland.

City of Baltimore's Largest Private Sector Employers		
Employer	Employees	Industry
Johns Hopkins University	25,800	Education
Johns Hopkins Hospital and Health System	18,500	Health Care
University of Maryland Medical System	11,450	Health Care
University System of Maryland	9,010	Education
MedStar Health	6,175	Health Care
LifeBridge Health	5,315	Health Care
Mercy Health Services	4,030	Health Care
St. Agnes HealthCare	3,265	Health Care
Exelon/Constellation Energy/BGE	2,950	Utilities
Kennedy Krieger Institute	2,600	Health Care

Note: Sorted in descending order by number of employees.

Source: City of Baltimore 2017 Comprehensive Annual Financial Report.

In December 2017, the non-seasonally adjusted unemployment rate in the City was 5.8% which was higher than that for Baltimore County (3.9%), the Baltimore Metro Area (3.9%), the State of Maryland (3.8%), and the U.S. (3.9%) during the same month.

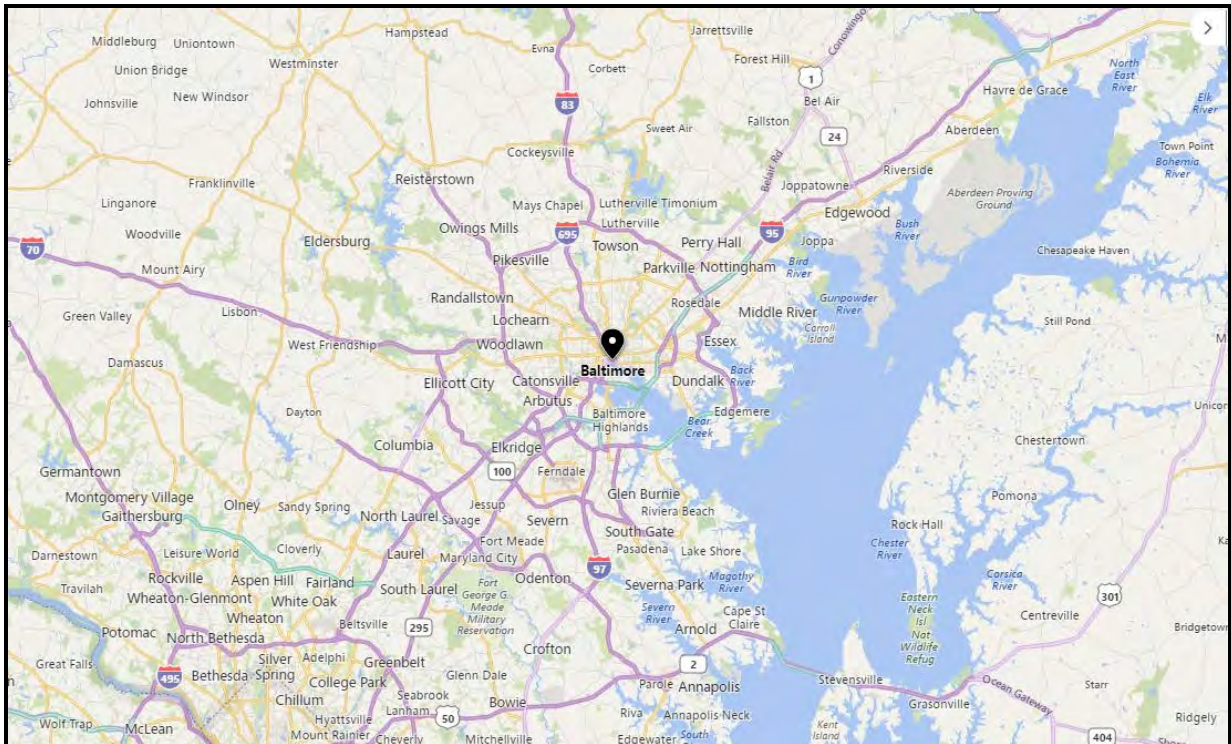
Accessibility

Accessibility, particularly via highway, is typically an important factor to the overall success of arenas. The method that event promoters/producers use to select venues to host their event is partially based on ease of access to a market for attendees. In addition, the location and accessibility of a facility relative to the population base can impact its marketability for certain types of events.

Highway Access

Baltimore is in central Maryland along the west coast of the Chesapeake Bay. It is accessible via interstate to several major Northeast and Mid-Atlantic cities including Washington, D.C., Philadelphia, New York, and Richmond. As shown in the following map, multiple interstates serve Baltimore including I-95, I-97, I-70, I-695, and I-83.

Map of Highway Access



Source: Google maps.

Alternate Transportation

There are additional transportation alternatives available for patrons trying to access downtown Baltimore including:

- Baltimore Metro Subway
- Light Rail
- MARC Train
- MTA Bus Service

In Summer 2017, the Maryland Transit Administration (MTA) began a program called BaltimoreLink. The purpose of this new transit program is to improve public transportation within the City and throughout the greater Baltimore region. BaltimoreLink is expected to improve service quality and reliability, maximize access to high-frequency transit, strengthen connections between MTA bus and rail routes and align the transportation network with existing and emerging job centers.

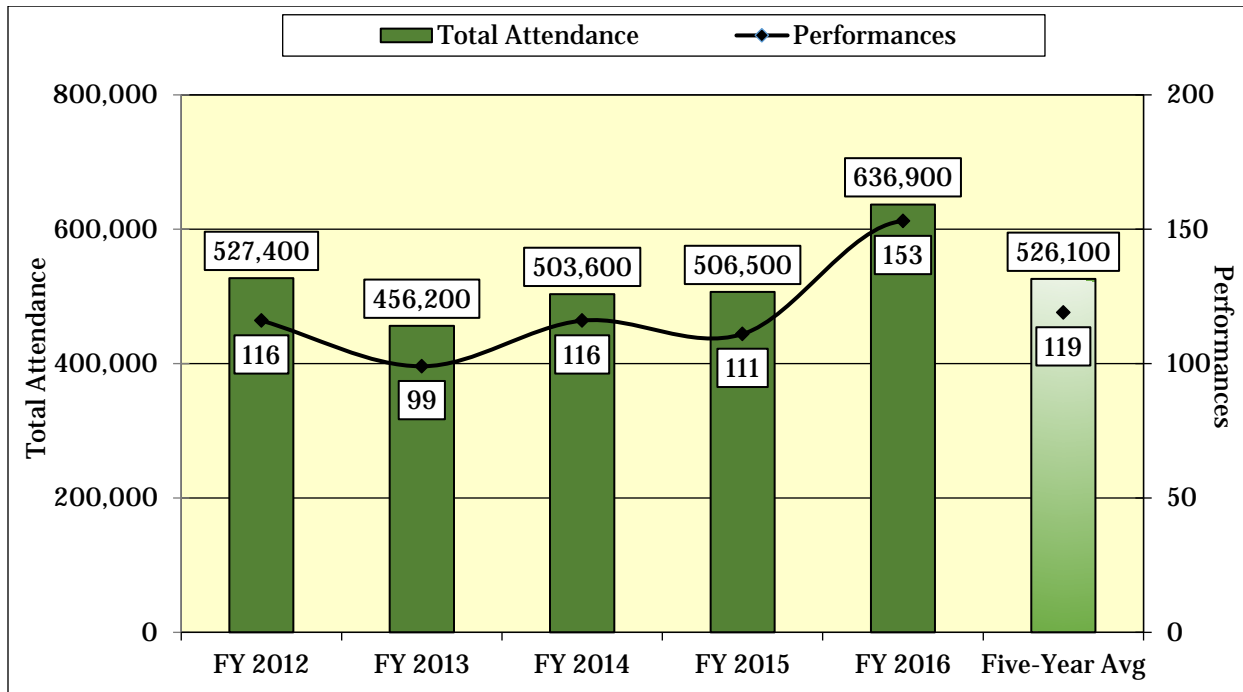
Air Access

Proximate, convenient air access can be advantageous in accommodating the needs of event promoters/producers, performers, participants, and VIPs that require fly-in service. In terms of commercial air access, Baltimore is primarily serviced by the Baltimore/Washington International Thurgood Marshall Airport (BWI). In 2016, there were approximately 12.3 million passenger enplanements at this airport, a 5.1% increase over the prior year. The Federal Aviation Administration (FAA) defines passenger enplanements as domestic, territorial, and international passengers who board an aircraft in scheduled and non-scheduled service of aircraft. BWI was ranked as the 22nd busiest airport in the U.S. in 2016.

Historical Operations of Royal Farms Arena

The following graph illustrates the number of performances and total attendance at Royal Farms Arena for Fiscal Years (FY) 2012 through 2016. As shown, FY 2016 had the highest number of performances and total attendance during the profiled period which was primarily attributable to more concerts, assemblies, and other events. Royal Farms Arena averaged approximately 119 performances and 526,100 attendees annually from FY 2012 through FY 2016.

Historical Utilization at Royal Farms Arena



Note: Attendance data is reflective of turnstile totals and is rounded.

Source: Facility management.

The arena hosted three tenant teams during the profiled period including the Baltimore Blast, Baltimore Mariners, and Baltimore Charm. The Mariners, an indoor football team with the American Indoor Football (AIF) league, played one season at Royal Farms Arena in which they won the league championship but folded after the season. The Charm, an indoor women's football team, played in the Legends Football League (LFL) starting in 2010 and suspended operations in 2015. The organization has discussed resuming operations but likely will not return to Baltimore. The Baltimore Blast, an indoor soccer team affiliated with the Major Arena Soccer League (MASL) were previously the only active tenant at Royal Farms Arena; however, in the summer of 2017 the team announced it would be moving to SECU arena on the campus of Towson University. During the profiled period, the Blast averaged approximately 42,600 attendees per season, or 8% of total attendance at Royal Farms Arena. The Baltimore Brigade of the Arena Football League (AFL) began play in 2017. The franchise is owned by Monumental Sports & Entertainment which also owns the AFL Washington Valor, the National Basketball Association (NBA) Washington Wizards, the National Hockey League (NHL) Washington Capitals, and the Women's National Basketball Association (WNBA) Washington Mystics.

Royal Farms Arena has hosted a variety of national and international touring concert artists including Brad Paisley, Chris Tomlin, John Mayer, Kanye West, Demi Lovato, Prince, Stevie Wonder, Rihanna, Maroon 5, and Mary J Blige. Comedy acts have included Jeff Dunham, Top Shelf Comedy, Katt Williams, Comedy Get Down, Martin Lawrence, Amy Schumer, and Bill Burr. Additional major event activity includes WWE and UFC Pay-Per-View events, commencement ceremonies, sporting events/tournaments, and family shows including the Harlem Globetrotters, Disney on Ice, Cirque du Soleil, and Marvel Universe Live as well as monster truck and arenacross events.

There is no outstanding debt service on Royal Farms Arena. In recent years, the City has reinvested the facility's operating profits in various capital improvements such as roof repair and replacement, lighting retrofit, outside LED boards, chiller repairs, transformer repair and replacement, expansion joint repairs, a new scoreboard, new floor chairs, spotlights, and a new point of sale system to address deferred maintenance items, increase the facility's overall functionality and enhance its marketability to event promoters and patrons.

Competitive Supply of Area Facilities

The degree to which existing facilities adequately meet the needs of the market is an important aspect to consider when evaluating the potential market opportunities for a proposed new arena. Factors such as size, program elements, configuration, age, market focus, and date availability impact how competitive or complementary area facilities may be to the proposed new arena.

The following table provides a summary of arenas and amphitheaters in the area that host sports and entertainment events and compete for the consumer's discretionary dollar. This list is not meant to be an all-inclusive inventory of facilities. For instance, there are multiple stadiums, theatres, clubs, and non-traditional venues with different seating capacities throughout the region that also host sports and entertainment events but are not profiled because they would not likely compete with the proposed new arena on a regular basis.

The capacity of the profiled area facilities ranges from 4,400 at Pier Six Pavilion to 23,200 at Jiffy Lube Live. The profiled venues have various ownership types and operating structures.

Competitive Supply of Area Facilities			
Facility	Location	Capacity	Primary Users
Jiffy Lube Live	Bristow, VA	23,200	Concerts, Special Events
Capital One Arena	Washington, D.C.	20,500	NBA, NHL, WNBA, AFL, NCAA, Concerts, Family Shows
Merriweather Post Pavilion*	Columbia, MD	19,300	Concerts, Special Events
Xfinity Center	College Park, MD	18,000	NCAA, Sporting Events, Graduations, Concerts
Virginia Beach Arena**	Virginia Beach, VA	18,000	Concerts, Sporting Events, Special Events
Fort DuPont Summer Theatre	Washington, D.C.	15,000	Concerts, Special Events
John Paul Jones Arena	Charlottesville, VA	14,200	NCAA, Concerts, Family Shows, Exhibit/Trade Shows, Community Events
Hampton Coliseum	Hampton, VA	13,800	Concerts, Family Shows
Scope Arena	Norfolk, VA	13,000	ECHL, Concerts, Family Shows
Richmond Coliseum	Richmond, VA	13,000	APF, Concerts, Family Shows, Special Events, Conventions
EagleBank Arena	Fairfax, VA	10,200	NCAA, Concerts, Family Shows
Ted Constant Convocation Center	Norfolk, VA	9,100	NCAA, Concerts, Family Shows
Filene Center At Wolf Trap	Vienna, VA	7,000	Concerts, Special Events
The Anthem	Washington, D.C.	6,000	Concerts, Special Events
UMBC Events Center**	Baltimore, MD	6,000	NCAA, Graduations, Concerts
SECU Arena	Towson, MD	5,200	NCAA, MASL, Concerts, Family Shows, Graduations
Pier Six Pavilion	Baltimore, MD	4,400	Concerts, Special Events
New Entertainment and Sports Arena**	Washington, D.C.	4,200	WNBA, NBA G-League, Family Shows, Concerts, Special Events

Notes: Facilities are sorted in descending order by capacity (which is rounded).

* Facility also features the new Chrysalis Amphitheater.

** Facility is under construction and scheduled to open in September 2018.

Sources: Pollstar; secondary research.

The competitive supply of area facilities has changed in the last decade and is anticipated to continue to grow. There are two new arenas in the planning or development stages; one in Washington D.C. and the other in Virginia Beach. In addition, there have been discussions to renovate or replace the Richmond Coliseum.

While the region offers a variety of competitive facilities, Royal Farms Arena's primary competitor is Capital One Arena (formerly the Verizon Center). Located in Washington, D.C., approximately 40 miles from Royal Farms Arena, this facility offers 20,500 seats and more than 100 suites. Capital One Arena hosts approximately 220 events a year including concerts, family shows and special events. There are currently five tenant sports teams: NHL's Washington Capitals, NBA's Washington Wizards, WNBA's Washington Mystics, AFL's Washington Valor, and Georgetown University's men's basketball program. In 2016, Capital One Arena hosted 29 concerts and touring acts including Drake, Adele, Paul McCartney, Bruce Springsteen, and Justin Bieber. The arena also hosted a variety of family shows in 2016 including WWE, the Harlem Globetrotters, Disney on Ice and the Ringling Bros. and Barnum & Bailey Circus (which ceased operations in 2017). Due to this high level of event activity, there can be limited date availability at the arena which provides opportunities for other area facilities.

Key Industry Trends

The proposed new arena's success is somewhat dependent on the attributes of the overall sports and entertainment industry. Arenas host a variety of event activity, but one of the most important event types to the success of an arena is live entertainment. As such, the following summarizes key trends in the live entertainment industry.

- The concert and event promotion industry consists of music events, theatrical performances (e.g., plays, musicals and operas), and specific sporting events (e.g., boxing, wrestling, and rodeos).
- The success of a promoter depends on the willingness of consumers to pay for and attend live events. Through economic fluctuations, Americans have continued to patronize live entertainment events. This has helped maintain generally stable industry revenue growth at a projected annualized rate of 6.0% to \$32.0 billion over the previous five years according to *IBISWorld*, a leading publisher of business intelligence, specializing in industry research and procurement research.
- According to *IBISWorld*, the general outlook for the industry appears positive. The growing popularity of live musical performances and musical festivals should support continued growth, including a projected revenue increase of 1.8% in 2018. Over the five years to 2023, industry revenue is forecast to climb an annualized 1.7% to \$34.9 billion.
- *IBISWorld* reports that despite the industry's steady growth, there has been some concern that the increasing number of music festivals may be creating market saturation. The increasing number of multi-day festivals in recent years can attract multiple headliner artists which decreases their availability for other area shows due to radius clauses.
- In addition, steady growth in the theater and club-level event segment and increasing per-head ancillary spending have benefited the industry during the past five years. Music theaters (which typically have a capacity of 1,000 to 6,500 people) and clubs (less than 1,000-person capacity) have become increasingly popular. On average, events held at these venues are considerably more affordable to attend than their arena and amphitheater counterparts, making them attractive to consumers who find attending larger events too expensive. Additionally, more theater and club-level acts are successfully touring, with the internet helping the public discover new music and artists.
- Per *IBISWorld*, live music concerts at clubs, music theaters, arenas, and amphitheaters, as well as local and regional music festivals generated approximately 69.4% of the industry revenue. These events have been the fastest growing and most profitable events over the last five years.
- The dynamics of the industry are more advantageous to the act given the extensive supply of nationwide venues in which to perform.
- Many live events target consumers ages 25 to 54 as they tend to spend more discretionary income on live events than other demographic age groups. Both the primary and secondary markets have more than 40% of the population in this age group which is generally consistent with the national average.

- Areas of the country with a high number of corporate headquarters, high employment rates, and high average salaries are desirable features for a market to attract event ticket buyers for all levels of seating, particularly for the increasingly important premium packages and for sponsorship sales.
- Consolidation of the live music industry has impacted the operations of live entertainment venues throughout the country, especially with respect to the concert market. Live Nation and AEG Live (AEG), a subsidiary of Anschutz Entertainment Group, are the dominant promoters in the U.S. Per *IBISWorld*, Live Nation is estimated to hold a 24.6% market share compared to AEG which is estimated to hold a 9.0% market share.
- Technology is playing an increasingly important role in the music industry as a mechanism to increase revenue generation for artists and promoters, enhance the fan experience, and provide opportunities to activate sponsorship initiatives.
- Per *Pollstar*, a trade publication covering the worldwide concert industry that obtains information primarily from the agents, managers and promoters who are producing concerts and other entertainment acts, the total number of tickets sold, gross ticket sales and average ticket prices related to the Top 100 North American Concert Tours have been increasing over the last several years.

Potential Demand Generators

One of the objectives of this study update is to assess the impact to potential market opportunities from construction and operations of the proposed new arena. This is particularly important since the region offers multiple arenas, amphitheaters and other event facilities that can host various sports/entertainment activities making it a highly competitive market from a supply perspective.

Previous research indicates that a new arena would allow downtown Baltimore to retain, grow and further diversify its market share relative to sporting events, entertainment events, and local community/civic events. As part of this market analysis update, input was obtained from event promoters/producers representing concerts, family shows, sporting events, and special events to: 1) gain their perspective regarding strengths and challenges of hosting events at the existing Royal Farms Arena and in the Baltimore market; 2) gauge their interest in hosting events at the proposed new arena; and 3) understand their building program requirements, event attributes and destination requirements.

Sporting Events

As previously mentioned, Royal Farms Arena currently hosts the Baltimore Brigade AFL team. Over the years, the facility has hosted multiple professional sports tenants. Tenant users represent a solid base for the facility that can provide steady and contractually obligated income. Tenant sports teams and their respective leagues typically have requirements regarding the facility (e.g., capacity) and the market (e.g., geographic location, market size) in which they play.

Previous studies have evaluated the potential for major league professional sports teams such as an NBA or NHL team to play at a new arena in Baltimore. However, research, including feedback from league officials, has consistently indicated that it is very unlikely Baltimore would be able to attract an NBA or NHL team for several reasons including the presence of established NBA and NHL teams in Washington, D.C. as well as other market limitations. As such, it is assumed that a new arena in Baltimore would not host an NBA or NHL tenant team which is reflected in size and scope of the building program recommendations. However, a new facility could potentially host exhibition events and/or individual regular season NBA and NHL games on occasion.

Based on various factors such as geographic/regional location, market size, and the current building program under consideration, a new arena in downtown Baltimore would be able to accommodate several minor league professional sports such as hockey, basketball, and indoor soccer. Although minor league sports tenants can generally provide a guaranteed number of event dates to a facility, this event activity does not always translate into positive financial performance for a facility. As part of their lease agreement, most minor league teams request weekend or other prime dates to play their games at the facility to positively influence attendance and financial performance. Holding quality dates for a minor league team which does not operate successfully can be a risk for the facility. For instance, in the case where the minor league team is not financially successful, date availability may not allow a facility to host a more profitable event such as a concert. Attendance and the contractual agreement between the facility and the team also influences this impact to the facility.

Over the past decade, several leagues and teams have organized and failed for various reasons. For instance, the American Indoor Football League folded after the 2016 season. Another example of shifts in the minor league sports industry is the ECHL's Alaska Aces team which sold and relocated to Portland, Maine where it will begin playing in the 2018-19 season. As such, there is always a possibility that a team might move or cease operations at any time. Discussions with league and team representatives indicated some of the reasons that minor league teams fail include, but are not limited to, lack of operator experience, poor initial capitalization, poorly executed business models and absentee ownership. As such, the overall stability of a league and a team's ownership and management approach are important considerations when considering/selecting tenant sports franchises to play at an arena.

Activities such as competitions/tournaments for sports such as basketball, ice hockey, figure skating, volleyball, gymnastics, cheerleading, martial arts, wrestling, etc. represent another potential market opportunity for the proposed new arena. These sporting events can occur at all levels including scholastic, collegiate, amateur, and professional. Examples include National Collegiate Athletic Association (NCAA) games, tournaments and conference championships, Olympic qualifiers, boxing matches, and extreme sports. While these events provide additional programming, they are the least predictable and can sometimes be labor and marketing intensive. Despite the unpredictability of these events, they should be pursued as they can represent revenue generating opportunities and are often high impact events to the broader community.

One example of a rotational event that a new arena in Baltimore may be able to attract is NCAA sports tournaments. The NCAA is a non-profit, member-led governing body for collegiate athletics in the U.S. that is comprised of 1,123 colleges and universities and 98 voting athletic conferences and organizes 90 championship events annually. The proposed new arena could have the opportunity to bid on championships for basketball, ice hockey, volleyball, and wrestling. These championships are awarded on a rotational basis with a market rarely holding more than two or three events in a 10-year span.

There are minimum seating capacities required for a facility to host most of the NCAA Division I Championships which vary by round and by sport. However, the NCAA may give preference to a facility with a larger sellable arena capacity than the required minimum. For instance, although the minimum seating requirement for NCAA Division I Men’s Basketball is 10,000 for the First/Second Rounds and the Regionals, a facility offering a minimum of 17,000 sellable seats is better positioned in the competitive bidding process. In recent years, the Men’s Final Four Basketball Championship has been held at large dome stadiums.

As a point of reference and as shown in the table below, the average attendance per session (day) for the NCAA Men’s Basketball Tournament for 2012 through 2017 was 16,300 for the First/Second Rounds and 21,900 for the Regionals. Attendance at the Regionals is somewhat skewed because both AT&T (formerly Cowboys) Stadium and Lucas Oil Stadium were utilized in 2013, Lucas Oil Stadium was used again in 2014, and NRG (formerly Reliant) Stadium was used in 2015. Each of these facilities can hold a significantly higher number of patrons than a traditional arena.

NCAA Division I Men's Basketball Championships						
Average Tournament Attendance Per Session						
Round	2013	2014	2015	2016	2017	Average
Second/Third Rounds	16,800	15,600	16,800	15,600	16,600	16,300
Regionals	27,900	22,700	21,100	19,500	18,100	21,900

Note: First round is held in Dayton prior to the Second/Third Rounds.

Source: NCAA.

Most championships also require an adjacent indoor location for Fan Fest activities, ideally within one-half mile of the championship arena. Fan Fest activities generally require anywhere between 10,000 square feet and 100,000 square feet depending on the championship.

The NCAA recently invited member schools and cities to bid on championships through 2022. The NCAA selected more than 600 host sites for preliminary rounds and finals of predetermined championships in Divisions I, II and III to be held from 2017-18 through 2021-22. The next opportunity for bidding on NCAA championship events will begin with the 2022-23 season. Between 2013 and 2022, Capital One Arena (formerly Verizon Center) hosted the Men’s Basketball Regionals in 2013 and is scheduled to host them again in 2019 for a total of two NCAA Men’s Basketball events in a 10-year span.

A new, modern arena located proximate to the BCC combined with the destination attributes of downtown Baltimore, a strong facility management team with a proven track record hosting major events and support of established marketing entities such as Visit Baltimore and Maryland Sports should provide a strong package for consideration of championships for multiple sports including NCAA Men's Basketball. Having said that, these events may only occur once every five to seven years. In addition, Baltimore and Washington, D.C. would likely both be vying for these events which may decrease the frequency in both markets.

Entertainment Events

Examples of entertainment events include: public, ticketed concerts featuring touring musical performances by rock, pop, middle-of-the-road, country & western, folk, religious/gospel, etc.; family shows that are primarily oriented toward youth or appeal to the family atmosphere such as the circus, Disney on Ice, Sesame Street Live, Monster Jam, Marvel Universe Live! Harlem Globetrotters; and rodeo/bull riding events.

The music industry is constantly evolving and shifting. As discussed earlier in the Key Industry Trends section, live music performance has been an important part of the music business. Concerts generally provide a strong opportunity for a facility to capture rent, merchandise sales, food and beverage sales, facility fees, ticket surcharge commissions, and parking fees. Many markets, including Baltimore, have strong competition amongst live performance venues.

Although concerts tend to be one of the most profitable event types, the number of concerts at a venue is highly dependent on external factors such as the supply and popularity of touring acts in any given year combined with date availability at a venue during an artist's tour. In addition, some artists sign clauses that protect the promoter by limiting their ability to play concerts within a certain mileage radius, date range, or media market. One advantage of family shows is that they generally provide a solid base of programming as their touring schedule is more consistent than concerts and non-tenant sporting events.

Royal Farms Arena has a long history of hosting successful concerts, family shows, and other entertainment activities. Most promoters indicated that Baltimore is a strong market for entertainment events. As a point of reference, Disney on Ice currently plays Royal Farms Arena twice annually which is generally reserved for successful markets in major metropolitan areas such as Los Angeles, Chicago, Newark/New York City, and Boston. In addition, Royal Farms Arena has historically been effective in hosting a wide variety of music genres whereas some markets tend to have niches in certain types of music like country/western.

Further, Baltimore is viewed as a separate, unique market from Washington, D.C. As such, event promoters will typically play both markets. Event promoters were supportive of a new, modern arena with a larger seating capacity and a larger floor space in downtown Baltimore.

For concert activity, promoters indicated that a capacity between 15,000 and 18,000 would be ideal and place Baltimore in a stronger position to attract more events and directly compete with Capital One Arena on a regular basis. Further, the ability to curtain off the upper level for certain events will be important to create an intimate atmosphere for guests and for concerts requiring a flexible capacity based on unpredictable ticket sales. Offering flexible seating configurations that can be scaled accordingly based on the artist/event requirements will increase programming opportunities for the facility and help differentiate from other direct competitors. Promoters also commented on the need for sufficient parking for both production and guests with an increased capacity which can be particularly challenging in an urban environment.

Because Royal Farms Arena does not have a major professional league or collegiate sports tenant, its date availability was viewed as a major advantage. Both facility management and event promoters both mentioned that a competitive disadvantage for Baltimore is the 10% admissions and amusement tax. As a point of reference, Capital One Arena in Washington, D.C. does not have an admission tax and the admissions and amusement tax at Merriweather Post Pavilion is 5%.

Other Civic/Community Events

Civic/Community events include, but are not limited to, high school and collegiate graduations/commencements, meetings/seminars, political rallies, educational/training sessions, lectures, corporate functions, banquets/receptions, and other special events that typically include general assembly seating and/or a flat floor space. Royal Farms Arena hosts a variety of these events throughout the year including commencements for Johns Hopkins University, Loyola University, and University of Maryland, Baltimore (UMBC).

Overall Market Analysis Summary

Leadership at the City and State levels has expressed strong interest in supporting and facilitating both new development and redevelopment projects in Baltimore. Royal Farms Arena's presence within Baltimore's urban core makes it an important consideration in the City's future long-term planning efforts. As such, the purpose of this study is to update specific market and economic analyses to serve as a tool for the City and the State to assess the merits of constructing a new arena in downtown Baltimore.

Royal Farms Arena currently serves as Baltimore's primary indoor venue for sports and entertainment activity. The arena, which currently has an AFL team, averaged approximately 119 performances and 526,100 attendees from FY 2012 through FY 2016 which provides a solid base of existing event activity.

Despite its age, facility management has been able to make improvements to Royal Farms Arena in recent years through reinvestment of the facility's operating profits. However, from a long-term perspective, the facility may struggle to retain market share based on its capacity and amenities for event producers, artists and guests, particularly given the increasing supply of newer, more modern sports and entertainment facilities in the region.

This section discussed various supply and demand factors such as demographic/economic attributes, accessibility, historical operations of Royal Farms Arena, competitive supply of area facilities, key industry trends, and potential demand generators that may influence the potential event activity that could occur at a new arena in downtown Baltimore.

The following summarizes relative strengths/opportunities associated with the proposed new arena project:

- Large, growing population base in the primary and secondary markets with discretionary income available to spend on events
- Baltimore's Designated Market Area (or media market) is approximately 3.0 million people which ranks 26th in the U.S.
- Geographic location for event routing purposes
- Accessibility to downtown via multiple modes of transportation options
- Solid base of existing business at Royal Farms Arena
- Positive interest expressed by event promoters to grow existing events and explore options of bringing new events to the market
- From a programming and routing perspective, Baltimore is viewed as a separate and distinct market from Washington, D.C.
- Many concert and family show promoters indicated they consider Baltimore a "must play" market, particularly given historical success at Royal Farms Arena
- Well-respected management team with a strong reputation and established relationships with event promoters/producers/agents in the sports and entertainment industry
- Strong recognizable brand identity within sports, family show and concert industries
- Historical and projected growth in the live entertainment industry
- Potential synergies with nearby assets such as the BCC including the opportunity to co-host events on an occasional basis such as general sessions/assemblies for conventions
- Downtown Baltimore is an established destination for entertainment, restaurants, and retail
- Supply of hotels at multiple price points, which is particularly beneficial for large, special events that draw out-of-town attendees
- Established marketing entities such as Visit Baltimore and Maryland Sports that can assist with attracting large, special events such as NCAA tournaments
- Generates year-round activity that can serve as a catalyst for downtown
- No existing debt service on Royal Farms Arena
- Opportunity for impactful redevelopment of existing site location if a new arena is developed elsewhere in downtown Baltimore

Relative challenges/threats associated with the new arena project include, but are not limited to:

- Lack of Fortune 500 companies based in Baltimore and a relatively low number of large companies
- Amount of premium seating product currently offered in the market relative to the amount and type of corporate/employment base
- Ability to support significant premium seating product on a long-term basis, particularly without an established, consistent minor league anchor sports tenant
- Competitive supply of newer, more modern sports and entertainment facilities in the area vying for the consumer's discretionary income
 - Despite challenges related to date availability, Capital One Arena in Washington, D.C. offers 20,500 seats, approximately 6,500 more than Royal Farms Arena, and does not charge an admissions and amusement tax which makes it more attractive to some event promoters/producers because of the potential to increase profitability
- Regional markets continue to invest in their arena assets
- Impact of potential new sports/entertainment venues in the market
- Consolidation of live music industry creating a competitive market for live touring entertainment acts
- Concert business is dependent on the amount and type of touring product in any given year
- Historical lack of success by multiple minor league professional sports teams
- Limited availability of on-site parking for patrons as well as loading docks for move-in/move-out and marshalling of production trucks in an urban setting
- Potential funding sources for construction/development
- Potential changes in general economic conditions that could adversely impact the dynamics of the project

Market research indicates that a new arena in downtown Baltimore could provide an enhanced asset to the community which could improve quality of life and livability for area residents, serve as a catalyst for additional growth and new business in downtown, and create synergies with other local assets that could be used in conjunction with the proposed new arena. From a long-term planning perspective, a new facility could help retain the base of existing business in the market and provide the opportunity to attract incremental new event activity.

Based on the research conducted for this study, it is estimated event activity at the proposed new arena could potentially range from 140 to 150 performances and 684,300 to 738,500 in total attendance in a stabilized year of operations.

Preliminary Program Recommendations

Based on market research, the following summarizes preliminary building program recommendations:

- A minimum fixed seating capacity of 15,000 that can accommodate approximately 17,000 for concerts (with a 270-degree, end stage configuration)
- Ability to augment fixed seats with temporary seating to host premiere events such as NCAA tournaments
- Flexible seating configurations through a curtaining system that can be scaled accordingly based on the artist/event requirements to maximize programming opportunities
 - Design needs to incorporate the ability to adequately accommodate premium seating patrons in a smaller configuration when the curtaining system is used
- 8 to 10 luxury suites that are flexible and can be used for other functions such as meetings, seminars, and food functions
- Support space for premium seating areas that may include hospitality areas, food and beverage options, private restroom access, parking, and private entrances
- Large floor space to accommodate assemblies and various family shows such as motorsports
- Permanent ice plant to support a regulation ice surface
- Proximate parking for patrons
- Front-of-house amenities and related technology infrastructure to accommodate modern ticketing systems, a variety of food and beverage options, merchandise sales areas, sponsor activation areas, social media, etc.
- Back-of-house production elements including marshalling area, secure parking for production trucks and vehicles, dedicated docks/ramps for load-in/out, secure backstage access points, appropriate rigging capabilities, production offices, locker rooms and catering areas
- Amenities consistent with being an integral part of a broader entertainment district

Research conducted for other studies including surveys of Baltimore area businesses did not indicate strong support for premium seating. However, the amount and type of premium seating is highly market-driven and partially dependent on the presence and caliber of an anchor sports tenant(s).

One of Royal Farms Arena's market strengths is date availability relative to its competitive supply which is impacted by its lack of multiple sports tenants that require a significant amount of prime dates. In addition, not offering luxury suites is advantageous to many event promoters from a seating manifest and revenue sharing perspective. This programming dynamic provides facility management with an opportunity to book more profitable events (such as concerts) which has resulted in a positive financial operating income over the last several years.

It is possible that the potential interest in and demand for premium seating from area businesses could increase as development plans for a new arena continue to move forward and key components such as arena capacity, site location, and anchor tenant base are more clearly defined. Consequently, prior to design and construction, market support for premium seating concepts should be further evaluated as well as the associated impacts from a long-term marketability and financial perspective. For instance, it may be deemed more viable to create large group space or "decks" rather than traditional suites and club seating. These and other programming decisions will be further evaluated when facility management develops a marketing and operating strategy as well as a business plan for the proposed new arena. From a planning perspective, the key at this juncture is design flexibility that can ultimately be adjusted to meet market demand and evolving patron needs.

TABLE OF CONTENTS

1. Introduction	1
2. Market Analysis Update	4
3. Economic Analysis Update	24
4. Limiting Conditions and Assumptions	32

ECONOMIC ANALYSIS UPDATE

This section of the report summarizes the estimated economic activity to the City of Baltimore and the State of Maryland from operations of the proposed new arena and other business activity that would be supported in a future stabilized year of operations.

Consistent with the MSA's vision for serving as a catalyst for improving quality of life, creating a climate where industry can flourish and contributing to the local communities where projects are located, the proposed new arena would be a unique business entity that generates significant economic activity to downtown Baltimore and the State.

General Methodology Overview

This analysis estimated the economic impacts generated in the local and State economies from the on-going operations of the proposed new arena including facility operations as well as spending by attendees on items such as lodging, restaurants, retail, entertainment/recreation, and transportation. This initial measure of economic activity reflects analysis of primary and secondary sources that are deemed to be reliable, but accuracy cannot be guaranteed.

This analysis assumes that the proposed new arena is built downtown and will continue to be operated by an experienced management team with established relationships with event promoters/producers/agents in the sports and entertainment industries. It also assumes that no other similar competitive facility is built in the immediate market.

Once the amount for direct spending is quantified, a calculated multiplier is applied to generate the indirect and induced effects. The sum of direct, indirect, and induced effects equals total economic impact which is expressed in terms of spending (output), employment (jobs), and personal earnings. This analysis also estimates the tax revenues generated from the proposed new arena during a stabilized year of operations. Current tax rates are assumed to remain constant.

Methodology - Economic Impact Analysis

Regional input-output models are typically used by economists as a tool to understand the flow of goods and services among regions and measure the complex interactions among them given an initial spending estimate.

Direct Spending

Estimating direct spending is the first step in calculating economic impact. Direct spending represents the initial change in spending that occurs as a direct result of operations of the proposed new arena. Direct spending occurs both inside and outside of the facility.

Indirect/Induced Impacts

The economic activity generated by operations of the proposed new arena affects more than just the facility itself. In preparation for new spending in the economy, several other economic sectors are impacted and jobs are created. Indirect effects reflect the re-spending of the initial or direct expenditures or the business-to-business transactions required to satisfy the direct effect. Induced effects reflect changes in local spending on goods and services that result from income changes in the directly and indirectly affected industry sectors. The model generates estimates of these impacts through a series of relationships using local-level average wages, prices and transportation data, considering commute patterns and the relative interdependence of the economy on outside regions for goods and services.

Multiplier Effect

In an effort to quantify the inputs needed to produce the total output, economists have developed multiplier models. The estimation of multipliers relies on input-output models, a technique for quantifying interactions between firms, industries and social institutions within a local economy. This analysis uses IMPLAN software and databases which are developed under exclusive rights by the Minnesota IMPLAN Group, Inc. IMPLAN, which stands for *Impact Analysis for Planning*, is a computer software package that consists of procedures for estimating local input-output models and associated databases. The IMPLAN software package allows the estimation of the multiplier effects of changes in final demand for one industry on all other industries within a defined economic area. Its proprietary methodology includes a matrix of production and distribution data among all counties in the U.S. As such, the advantages of this model are that it is sensitive to both location and type of spending and can provide indirect and induced spending, employment and earnings information by specific industry category while taking into account the leakages associated with the purchase of certain goods and services outside the economy under consideration.

Once the direct spending amounts are assigned to a logical category, the IMPLAN model estimates the economic multiplier effects for each type of direct spending attracted to or retained in the local area and the State resulting from operations of the proposed new arena. The multipliers used in this analysis reflect IMPLAN's latest available economic data for transactions.

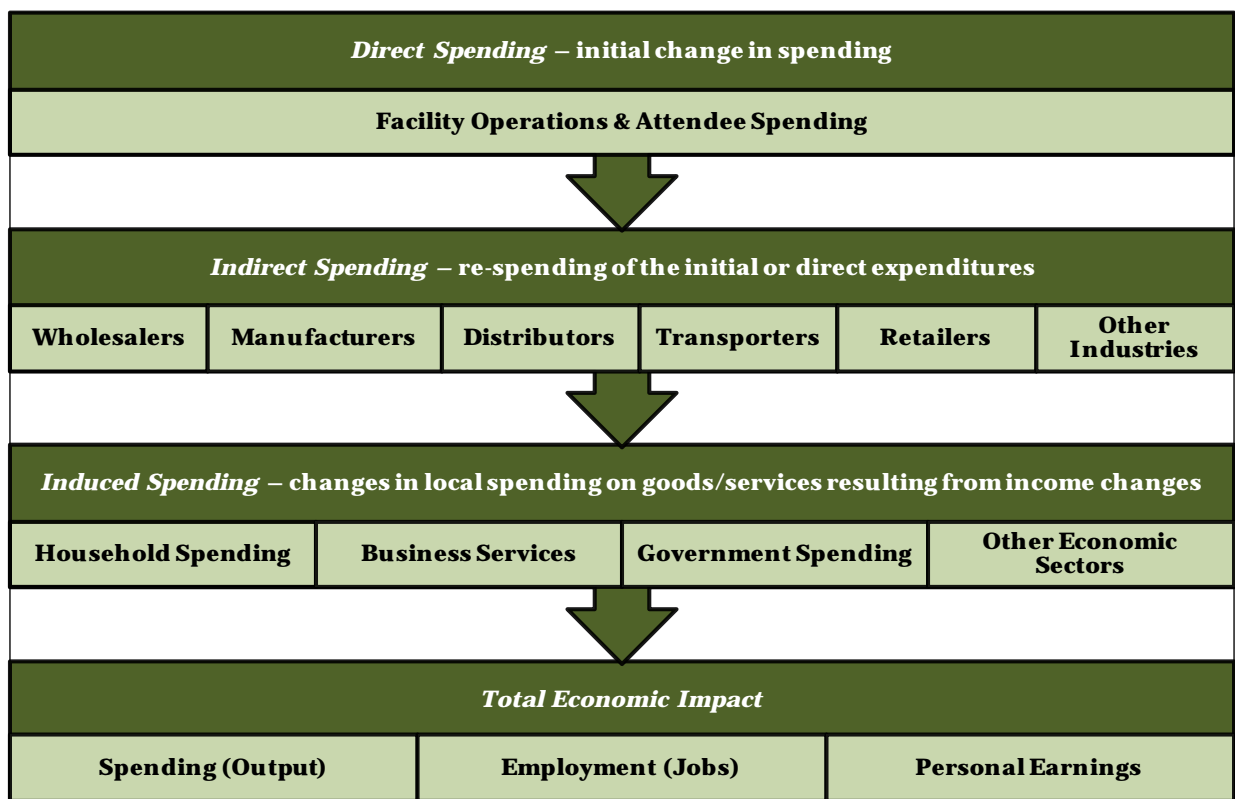
Total Economic Impact

The calculated multiplier effect is then added to the direct impact to quantify the total economic impact in terms of spending, employment and earnings which are defined below:

- *Spending (output)* represents the total direct and indirect/induced spending effects generated by the proposed new arena during a stabilized year of operations. This calculation measures the total dollar change in spending (output) that occurs in the local economy for each dollar of output delivered to final demand.

- *Employment (jobs)* represents the number of full and part-time jobs supported by the proposed new arena during a stabilized year of operations. The employment multiplier measures the total change in the number of jobs supported in the local economy for each additional \$1.0 million of output delivered to final demand.
- *Personal earnings* represent the wages and salaries earned by employees of businesses associated with or impacted by the proposed new arena during a stabilized year of operations. In other words, the multiplier measures the total dollar change in earnings of households employed by the affected industries for each additional dollar of output delivered to final demand.

The following graphic illustrates the multiplier effects for calculating total economic impact.



Methodology - Fiscal Impact Analysis

The estimated spending generated by the proposed new arena during a stabilized year of operations creates tax revenues for the City and the State. Experience in other markets suggests that while a significant portion of the direct spending likely occurs near the facility, additional spending occurs in other areas within the State, particularly spending on items such as business services and everyday living expense of residents. Major tax sources impacted by facility operations were identified and taxable amounts to apply to each respective tax rate were estimated. Although other taxes, such as property taxes, may also be positively impacted by operations of the proposed new arena, this analysis estimates revenues generated from admissions and amusement tax, hotel/motel tax, local personal income tax and parking tax at the City level and sales and use tax and income tax at the State level.

Estimate of Total Annual Economic Impacts from On-Going Operations

The table below summarizes the estimated total economic impacts generated from the proposed new arena during a stabilized year of operations in terms of direct, indirect/induced and total spending, jobs and earnings and is followed by a discussion of each component.

Comparison of Estimated Annual Economic Impacts Generated From Proposed New Baltimore Arena Operations				
Category	City of Baltimore			
	Three-Year Average	New Arena (Stabilized Year)		Incremental New (Stabilized Year)
Spending				
Direct	\$22,900,000	\$28,300,000 -	\$30,200,000	\$5,400,000 - \$7,300,000
Indirect/Induced	11,900,000	14,600,000 -	15,700,000	2,700,000 - 3,800,000
Total Output	\$34,800,000	\$42,900,000 -	\$45,900,000	\$8,100,000 - \$11,100,000
Total Jobs	350	430 -	460	80 - 110
Total Earnings	\$15,400,000	\$19,000,000 -	\$20,300,000	\$3,600,000 - \$4,900,000
Category	State of Maryland			
	Three-Year Average	New Arena (Stabilized Year)		Incremental New (Stabilized Year)
Spending				
Direct	\$23,800,000	\$29,400,000 -	\$31,400,000	\$5,600,000 - \$7,600,000
Indirect/Induced	18,400,000	22,700,000 -	24,300,000	4,300,000 - 5,900,000
Total Output	\$42,200,000	\$52,100,000 -	\$55,700,000	\$9,900,000 - \$13,500,000
Total Jobs	420	520 -	560	100 - 140
Total Earnings	\$16,500,000	\$20,400,000 -	\$21,900,000	\$3,900,000 - \$5,400,000

Note: State amounts include local amounts.

Direct Spending

Direct spending related to operations of the proposed new arena is estimated to range from \$29.4 million to \$31.4 million at the State level, of which \$28.3 million to \$30.2 million is estimated to occur in the City.

Indirect/Induced Spending

The IMPLAN model is used to generate the indirect and induced impacts spawned from the estimated economic activities within the area. The indirect impacts represent inter-industry trade from business-to-business. Likewise, the induced impacts represent the economic activity spurred by the household trade that occurs when employees make consumer purchases with their incomes. Based on inputs from the IMPLAN model, indirect/induced spending spurred by the proposed new arena is estimated to range from \$22.7 million to \$24.3 million in the State, of which approximately \$14.6 million to \$15.7 million is estimated to occur in the City.

Total Output

Outputs from the IMPLAN model indicate that total (i.e., direct, indirect, and induced) output is estimated to range from \$52.1 million to \$55.7 million in the State, of which approximately \$42.9 million to \$45.9 million is estimated to occur in the City. Dividing the total impacts by the direct impacts yields an economic multiplier of approximately 1.52 at the City level and 1.77 at the State level. Thus, every dollar of direct spending is estimated to generate \$1.52 in total economic activity at the City level and \$1.77 at the State level.

Total Jobs

Based on the IMPLAN model, which calculates the number of jobs per \$1.0 million in direct spending, the economic activity associated with the on-going operations of the proposed new arena is estimated to generate between 520 and 560 total jobs in the State, of which 430 to 460 total jobs are estimated to be generated in the City. These jobs would be created in many sectors of the economy, which both directly and indirectly support the increased level of business activity in the area.

Total Earnings

Outputs from the IMPLAN model indicate that total earnings generated from the on-going operations of the proposed new arena are estimated to range from \$20.4 million to \$21.9 million in the State, of which approximately \$19.0 million to \$20.3 million is estimated to be generated in the City.

Estimate of Total Annual Fiscal Impacts (Tax Revenues) from On-Going Operations

As shown in the following table, total annual tax revenues generated from on-going operations of the proposed new arena are estimated to range from \$2.6 million to \$2.8 million at both the City and the State levels.

Comparison of Estimated Annual Fiscal Impacts Generated From Proposed New Baltimore Arena						
Entity	Historical Three-Year Average	New Arena (Stabilized Year)			Incremental New (Stabilized Year)	
City of Baltimore	\$2,078,000	\$2,649,000	-	\$2,841,000	\$571,000	- \$763,000
State of Maryland	\$2,110,000	\$2,627,000	-	\$2,802,000	\$517,000	- \$692,000
GRAND TOTAL	\$4,188,000	\$5,276,000	-	\$5,643,000	\$1,088,000	- \$1,455,000

The following provides a description of the taxes estimated in this analysis.

City of Baltimore Taxes

Admissions and Amusement Tax - The admissions and amusement tax is a local tax collected by the Comptroller's Office for Maryland's counties and Baltimore City, incorporated cities and towns, and the MSA. The tax is imposed on the gross receipts from admissions, the use or rental of recreational or sports equipment and the sale of merchandise, refreshments or services at a nightclub or similar place where entertainment is provided. Admissions and amusement tax rates are set by local officials and vary by locality and by activity with a few exceptions and special situations. The City of Baltimore applies a 5% tax on movies on the historic register and single-screen movie theatres and a 10% tax on the admission or amusement cost for all other activities such as movies, athletic events, concerts, and golf. If the gross receipts from the activity is also subject to the sales and use tax, the admissions and amusement tax is limited to 5%.

Local Personal Income Tax – The City of Baltimore imposes a local personal income tax of 3.2% which is calculated as a percentage of taxable income. For purposes of this analysis and based on information provided by the Comptroller of Maryland, an effective tax rate was calculated. Because local income tax is based on where you live, not where you work, only a portion of the personal income taxes generated by operations of the proposed new arena occur in the City of Baltimore.

Hotel/Motel Tax – The City of Baltimore levies a hotel/motel tax of 9.5% on all gross amounts of money paid to the owners or operators of hotels in the City by transient guests or tenants for renting, using, or occupying a room or rooms in those hotels for sleeping accommodations. The hotel/motel tax does not include State sales tax.

Parking Tax – The parking tax is a local tax collected by the State Comptroller's Office for local municipalities based on the gross amount paid for occupying a parking space. The parking tax rate is currently 20% in the City of Baltimore.

State of Maryland Taxes

Sales and Use Tax – The State of Maryland collects 6% sales and use tax from sales and leases of tangible personal property and services throughout the State and a 9% tax on alcoholic beverages. For purposes of this analysis, the 6% tax rate is applied to estimated taxable spending at the State level generated from operations of the proposed new arena which represents a conservative estimate relative to the sale of alcoholic beverages. Ticket sales are excluded as they are reflected in the admissions and amusement tax.

Personal Income Tax – The State of Maryland imposes a personal income tax assessed against personal income earned in the State. The State income tax is a graduated rate ranging from 2.0% to 5.75% of taxable income. Non-residents are subject to a special nonresident tax rate of 1.75% in addition to the State income tax rate. For purposes of this analysis and based on information provided by the Comptroller of Maryland, an effective tax rate was calculated and applied to a portion of total earnings at the State level.

Corporate Income Tax – A corporate income tax of 8.25% of corporate federal taxable income adjusted by State modifications is also levied by the State of Maryland on corporations. For purposes of this analysis and based on information provided by the Comptroller of Maryland, an effective tax rate was calculated and applied to a portion of total output at the State level.

Construction Impacts

Although not quantified in this analysis, construction costs associated with the construction of the proposed new arena would provide additional economic and fiscal impacts to the local and State economies during the construction period. These benefits would include the creation of jobs which produce earnings for area residents, as well as increased tax revenue from the purchase of materials and supplies.

TABLE OF CONTENTS

1. Introduction	1
2. Market Analysis Update	4
3. Economic Analysis Update	24
4. Limiting Conditions and Assumptions	32

LIMITING CONDITIONS AND ASSUMPTIONS

This analysis is subject to our contractual terms, as well as the following limiting conditions and assumptions:

- This analysis has been prepared for the Maryland Stadium Authority (Client) for its internal decision-making purposes associated with the proposed new arena in downtown Baltimore and should not be used for any other purposes without the prior written consent of Crossroads Consulting Services, LLC.
- This report should only be used for its intended purpose by the entities to whom it is addressed. Reproduction or publication by other parties are strictly prohibited.
- The findings and assumptions contained in the report reflect analysis of primary and secondary sources. We have utilized sources that are deemed to be accurate but cannot guarantee their accuracy. No information provided to us by others was audited or verified and was assumed to be correct.
- Although the analysis includes findings and recommendations, all decisions relating to the implementation of such findings and recommendations shall be the Client's responsibility.
- Estimates and analysis regarding the proposed new arena, are based on trends and assumptions and, therefore, there will usually be differences between the projected and actual results because events and circumstances frequently do not occur as expected, and those differences may be material.
- This analysis does not constitute an audit, a projection of financial performance, or an opinion of value or appraisal in accordance with generally accepted audit standards. As such, we do not express an opinion or any other form of assurance. Any estimates or ranges of value were prepared to depict current and potential future market conditions.
- Although this analysis utilizes various mathematical calculations, the final estimates are subjective and may be influenced by our experience and other factors not explicitly stated in this report.
- We have no obligation, unless subsequently engaged, to update this report or revise this analysis as presented due to events or circumstances occurring after the date of this report.
- The quality of ownership and management of the proposed new arena has a direct impact on its economic performance. This analysis assumes responsible and competent ownership and management. Any departure from this assumption may have a significant impact on the findings in this report.
- Multiple external factors influence current and anticipated market conditions. Although we have not knowingly withheld any pertinent facts, we do not guarantee that we have knowledge of all factors which might influence the operating potential of the proposed new arena. Due to quick changes in the external factors, actual results may vary significantly from estimates presented in this report.
- The analysis performed was limited in nature and, as such, Crossroads Consulting Services, LLC does not express an opinion or any other form of assurance on the information presented in this report. As with all estimates of this type, we cannot guarantee the results nor is any warranty intended that they can be achieved.
- The analysis is intended to be read and used in its entirety. Separation of any portion from the main body of the report is prohibited and negates the analysis.
- In accordance with the terms of our engagement letter, the accompanying report is restricted to internal use by the Client and may not be relied upon by any party for any purpose including any matter pertaining to financing.