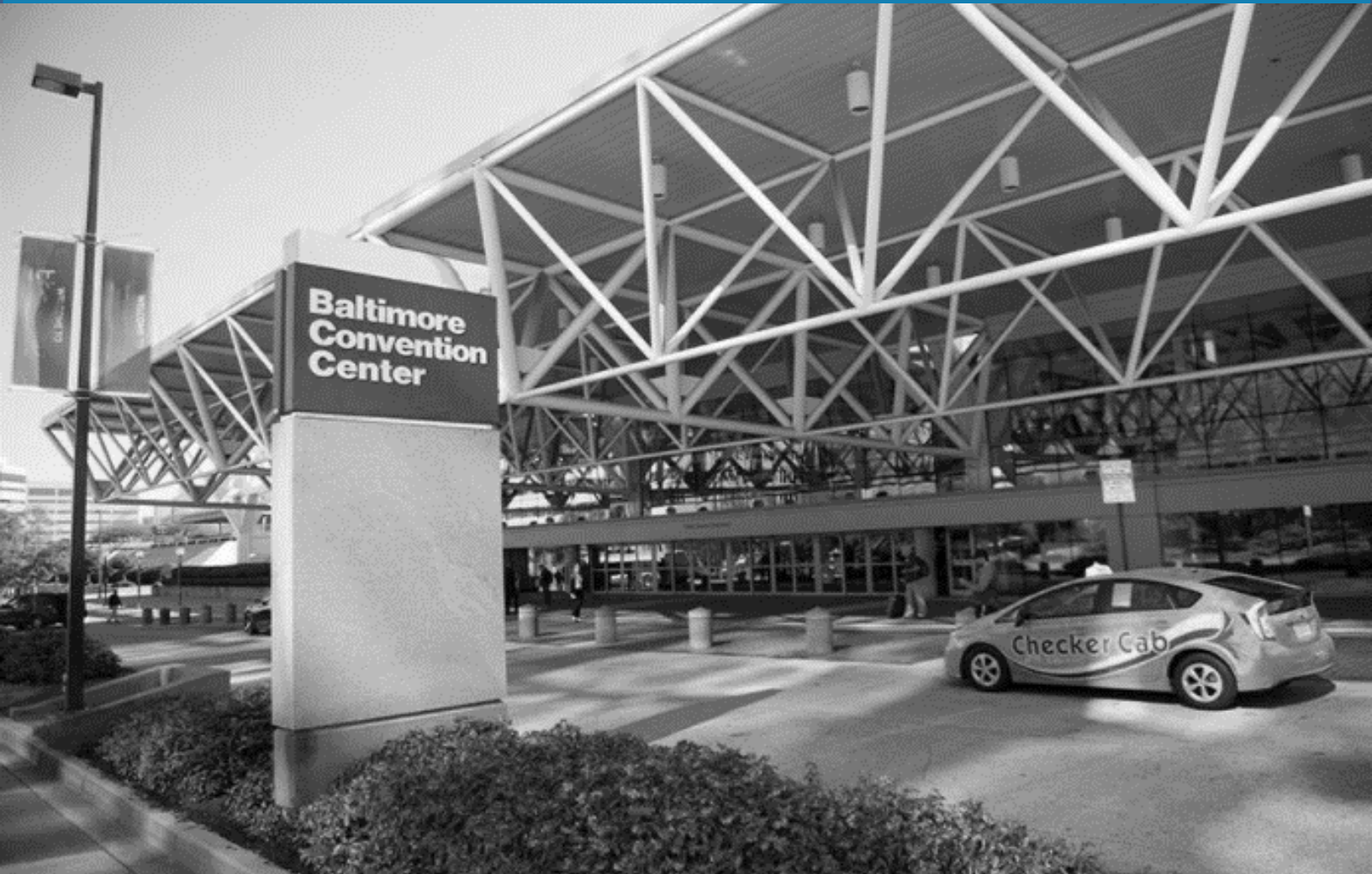




# ECONOMIC AND FISCAL IMPACT ANALYSIS

OF THE BALTIMORE CONVENTION CENTER  
FISCAL YEAR 2020

MARYLAND STADIUM AUTHORITY



December 2020

Mr. David Raith, Chief Financial Officer  
Maryland Stadium Authority  
333 West Camden Street, Suite 500  
Baltimore, Maryland 21201

Dear Mr. Raith:

Crossroads Consulting Services LLC has completed its economic and fiscal impact analysis for the Maryland Stadium Authority associated with operations of the Baltimore Convention Center in Fiscal Year 2020. The report presented herein includes the summary of our analysis.

The information contained in the report reflects analysis of secondary sources of information including, but not limited to, data obtained from management at Maryland Stadium Authority and Baltimore Convention Center. We have utilized sources that are deemed to be reliable but cannot guarantee their accuracy. All information provided to us by others was not audited or verified and was assumed to be correct. We have no obligation, unless subsequently engaged, to update our report or revise the information contained therein to reflect events and transactions occurring after the date of this report.

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 our ongoing relationship with the Maryland Stadium Authority and look forward to providing you with continued service in the future.

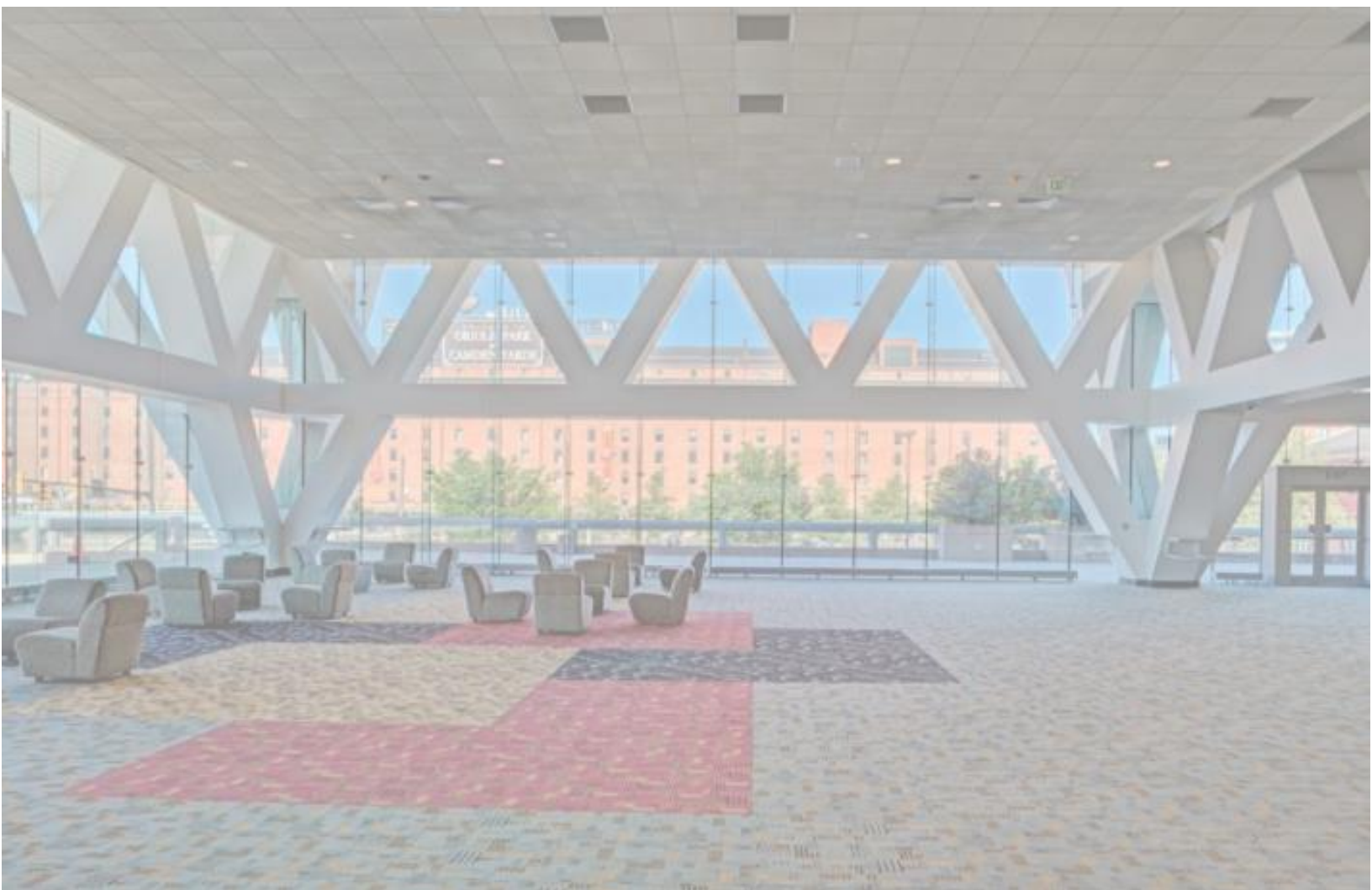
Sincerely,

*Crossroads Consulting Services LLC*

# TABLE OF CONTENTS

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<b>EXECUTIVE SUMMARY</b>	<b>1</b>
<b>GENERAL METHODOLOGY</b>	<b>5</b>
<b>ECONOMIC AND FISCAL IMPACT ANALYSIS</b>	<b>8</b>



Established by the State General Assembly in 1986, the original mission of the Maryland Stadium Authority (MSA) was to build, manage and maintain quality facilities to retain major league baseball, and return NFL football to Maryland. For over 30 years, MSA has completed projects in partnership with local governments, universities and the private sector throughout Maryland. These include convention centers, museums, theaters, parks and campus centers in addition to sports arenas. MSA is committed to enhancing the Maryland experience for those who live, work and visit here. In addition, MSA currently oversees projects such as 21st Century School Buildings Program and Project C.O.R.E (Creating Opportunities for Renewal and Enterprise) which orchestrates the demolition of blighted structures throughout Baltimore City. The sports commission for the State, known as Maryland Sports, is a division of MSA and has been since its existence in 2008.

MSA's projects promote historic preservation, adaptive reuse, community redevelopment, cultural arts and civic pride. In planning selected projects, the MSA has the latitude to negotiate with other government jurisdictions and other departments within the State. Its mandate includes creating public-private partnerships for financing and operating facilities. The Baltimore Convention Center (BCC) is one of the projects with which MSA is involved.

The BCC generates significant economic activity to downtown Baltimore (City) and Maryland (State). The primary purpose of this study is to estimate the total economic and fiscal impacts associated with the operations of the BCC in Fiscal Year (FY) 2020. Total economic impacts are estimated in terms of output (spending), employment (jobs) and personal earnings (labor income) which create fiscal impacts and are reflected as changes in tax revenues. In addition, this report compares the State tax revenues generated by BCC operations to the State's financial investment during FY 2020.

In March 2020, the global outbreak of a "novel coronavirus" known as COVID-19 was officially declared a pandemic by the World Health Organization (WHO). The pandemic has had, and continues to have, a significant impact on the convention/meeting/event industry as well as the global economy. Due to the COVID-19 pandemic, BCC closed for business in March 2020 and began serving as a field hospital ran in conjunction with the University of Maryland Medical System and Johns Hopkins Hospital in-taking recovering COVID-19 patients. BCC continues to partner with the City of Baltimore, serving as a Food Hub Distribution Center to support the City's COVID-19 Food Strategy. Additionally, under management of the University of Maryland Medical System and Johns Hopkins Hospital, BCC became a free COVID-19 testing center and a site for State personal protective equipment storage.

As a result of the COVID-19 pandemic, utilization and economic and fiscal benefits generated by BCC operations were significantly less in FY 2020 than in previous fiscal years.

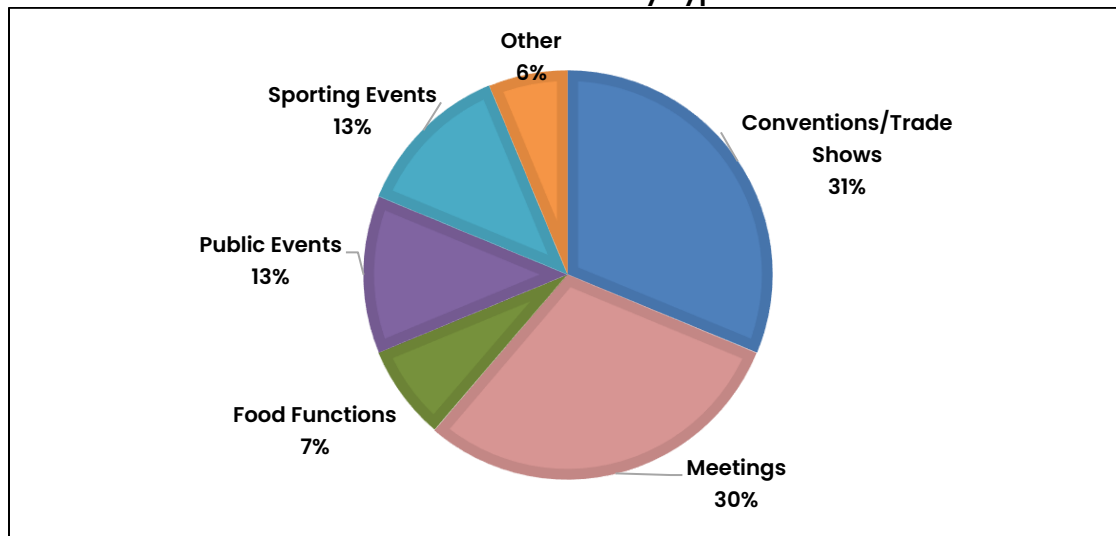
The following table summarizes BCC utilization in FY 2020.

Summary of Utilization at the BCC - FY 2020				
Event Type	Number of Events	Total Attendance	Attendee Days	Average Attendance
Conventions/Trade Shows	25	149,430	448,290	5,977
Meetings	24	38,970	58,455	1,624
Food Functions	6	1,290	1,290	215
Public Events	10	113,255	113,255	11,326
Sporting Events	10	38,922	77,844	3,892
Other	5	5,104	5,104	1,021
<b>Total</b>	<b>80</b>	<b>346,971</b>	<b>704,238</b>	

Source: BCC.

Conventions/trade shows accounted for 25 (or 31%) of total events at the BCC in FY 2020. Meetings accounted for 24 (or 30%) of total events at the BCC.

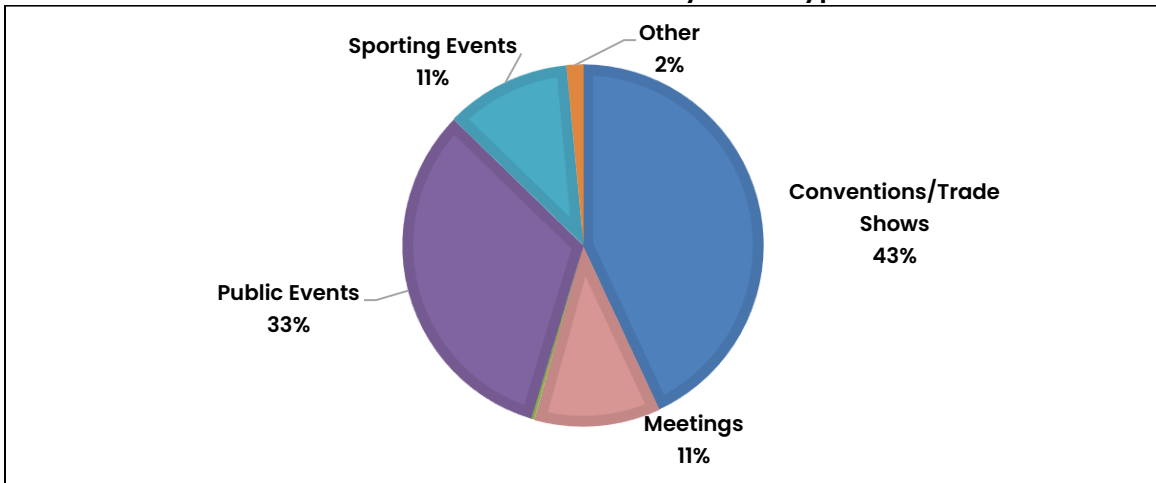
**Distribution of BCC Events by Type – FY 2020**



Source: BCC management.

Conventions/trade shows accounted for 43% of total attendance in FY 2020 followed by public events which represented 33%. In FY 2020, total attendance at conventions/trade shows, which generate significant economic activity, was approximately 149,400 which was 27% less than in FY 2019. Total attendance at public events decreased by 33% from approximately 169,700 in FY 2019 to 113,300 in FY 2020. As a result of the COVID-19 pandemic, total attendance experienced a relatively significant decrease in all event types with the exception of other events.

**Distribution of BCC Total Attendees by Event Type - FY 2020**



Source: BCC management.

As shown in the following table, event activity at the BCC was estimated to generate approximately \$371.0 million in total output which supported 3,200 total jobs and approximately \$149.0 million in total earnings at the State level in FY 2020.

Estimated Total Economic Impacts Generated from BCC Operations - FY 2020		
Category	City of Baltimore	State of Maryland
<b>Output</b>		
Direct Spending	\$197,600,000	\$208,400,000
Indirect & Induced Spending	91,700,000	162,600,000
Total Output	\$289,300,000	\$371,000,000
<b>Total Jobs (Full-Time &amp; Part-Time)</b>	2,500	3,200
<b>Total Earnings</b>	\$139,700,000	\$149,000,000

Note: Local and State amounts are not additive.

Tax revenues generated from BCC-related activities were estimated to be approximately \$31.2 million in FY 2020, of which approximately \$21.9 million (or 70%) was estimated to occur at the State level.

Estimated Tax Revenues Generated from BCC Operations - FY 2020	
Entity	Amount
City of Baltimore	\$9,300,000
State of Maryland	\$21,900,000
<b>GRAND TOTAL</b>	<b>\$31,200,000</b>

In FY 2020, the State’s investment in the BCC was approximately \$8.2 million which included contributions towards the operating deficit. The estimated tax revenues generated from BCC operations at the State level resulted in a 2.7 to 1.0 ratio of fiscal benefits to costs for the State which is particularly positive given that the facility was closed for business more than three months in FY 2020 due to the COVID-19 pandemic.

As a point of comparison, the BCC hosted 80 events that attracted approximately 347,000 in total attendance in FY 2020 which represented a 30% decrease in the number of events and an 29% decrease in total attendance from FY 2019.

Comparison of Utilization at the BCC (FY 2019 & FY 2020)			
Category	FY 2019	FY 2020	% Change
Total Events	114	80	-30%
Total Attendance	489,100	347,000	-29%

Based on information provided by BCC management, approximately 40 events were cancelled or postponed in FY 2020 due to the COVID-19 pandemic representing a loss of approximately \$2.9 million in revenues.

As shown in the table below, the decrease in event activity resulting from the COVID-19 pandemic had a significant negative impact on the economic and fiscal impacts generated from BCC operations in FY 2020 compared to FY 2019.

Comparison of Economic Impacts and Tax Revenues Generated from BCC Operations (FY 2019 & FY 2020)						
Category	City of Baltimore			State of Maryland		
	FY 2019	FY 2020	% Change	FY 2019	FY 2020	% Change
Direct Spending	\$270,135,000	\$197,600,000	-27%	\$284,948,000	\$208,400,000	-27%
Total Output	\$395,660,000	\$289,300,000	-27%	\$507,214,000	\$371,000,000	-27%
Total Jobs	3,410	2,500	-27%	4,380	3,200	-27%
Total Earnings	\$190,548,000	\$139,700,000	-27%	\$203,650,000	\$149,000,000	-27%
Total Tax Revenues	\$12,633,000	\$9,300,000	-26%	\$29,552,000	\$21,900,000	-26%

Note: Local and State amounts for total output, jobs and earnings are not additive.

This analysis estimates the total economic contribution generated from BCC operations in FY 2020. Direct spending estimates are based on data provided by facility management. 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 output (spending), employment (jobs) and personal earnings (labor income). This analysis also estimates tax revenues generated from BCC operations in FY 2020. The amount and type of event activity, origin of attendees, facility financial operations, industry trends, economic conditions, spending estimates, distribution of spending, multipliers and specific taxes quantified are variables that influence the economic and fiscal impact estimates.

## **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 BCC operations. Direct spending occurs both inside and outside of the facility by both local and out-of-town attendees. It is reasonable to assume that a portion of spending from attendees originating in the region is displaced or would have occurred somewhere in the regional economy if the event had not been held. On the other hand, attendees from outside the region may not have made purchases in the local economy if the event had not occurred.

No intercept surveys with attendees were conducted as part of this study. Spending estimates are based on data provided by BCC management, Visit Baltimore and other secondary industry research from sources that are deemed to be reliable, but accuracy cannot be guaranteed.

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 facility 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.

### Multiplier Effect

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. Advantages of this model are that it is sensitive to both location and type of spending and provides indirect and induced spending, employment and earnings information by specific industry category while considering the leakages associated with the purchase of certain goods and services outside the economy under consideration.

Once the direct spending amounts are assigned to an appropriate industry 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.

### Indirect and Induced Impacts

Indirect impacts reflect the re-spending of the initial or direct expenditures, or the business-to-business transactions required to satisfy the direct effect (e.g. impacts from non-wage expenditures). For example, an attendee's direct expenditures at the hotel restaurant require the hotel owner to purchase food and items from suppliers. The portion of these purchases that are spent within the area economy are indirect impacts.

Induced impacts reflect changes in local spending by households on goods and services that result from income changes in the directly and indirectly affected industry sectors (e.g. impacts from wage expenditures). For instance, a waitress at the hotel restaurant could have more personal income due to an attendee's visit to the restaurant. The amount of increased income that the employee spends in the community is an induced impact.

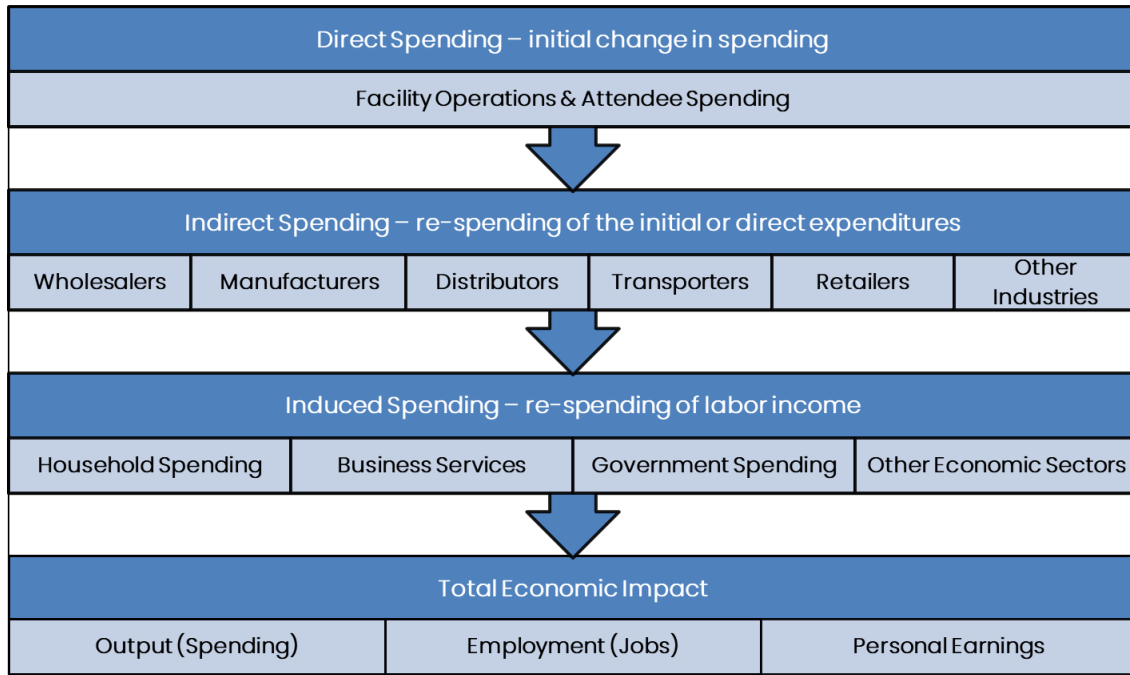
The model generates estimates of these impacts through a series of relationships using average wages, prices and transportation data, considering commute patterns and the relative interdependence of the economy on outside regions for goods and services.

### Total Economic Impact

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

- *Total Output* represents the total direct, indirect and induced spending effects generated by BCC 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-time and part-time jobs supported by BCC 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 BCC 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 BCC operations also produces 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 may also be positively impacted by BCC operations, this analysis estimated the revenues generated from room rental-transient tax and local personal income at the City level as well as sales and use tax and income tax at the State level.

In general terms, all State tax proceeds are collected in the State’s General Fund and then allocated to variety of program areas such as education, transportation, public safety and others. As such, individual revenue sources, such as the sales and use tax, are not designated to fund specific programs. As a result of this process, municipalities and counties may benefit from a variety of State and locally administered programs. For purposes of this analysis, only collections have been quantified, without regard as to how these funds are ultimately spent through the individual State departments/funds.

This section summarizes the estimated total economic and fiscal impacts at the City and State levels generated from ongoing BCC operations in FY 2020. As previously mentioned, utilization as well as economic and fiscal impacts in FY 2020 were negatively impacted by the COVID-19 pandemic and are significantly lower than previous fiscal years.

## General Overview of the BCC

The BCC has been recognized as one of the country's leading convention centers. The state-of-the-art venue is the premier location in the Mid-Atlantic for organizations to host conventions, meetings and other events. The facility has 1,225,000 gross square feet of total space which includes:

<i>Exhibit Space:</i>	300,000 total square feet divisible into seven separate halls
<i>Ballroom Space:</i>	36,700 total square feet divisible into four sections
<i>Meeting Space:</i>	70,500 square feet including 50 meeting rooms that can accommodate between 85 and 1,600 people.

In addition, the facility offers other features including pre-function space, an outdoor terrace and covered pavilion as well as access to the Skywalk, Inner Harbor and hotels via the mezzanine level.

Currently, the BCC employs approximately 136 full-time employees and 37 part-time employees. While there have been no changes to the staffing levels, part-time employees have not been scheduled to work since mid-March 2020 due to the COVID-19 pandemic.

The City and the State benefit from the facility's operations in several ways, including such tangible and intangible benefits as:

- Enhancing the area's image as a business, meetings and tourist destination
- Receiving increased regional and national exposure through destination marketing and visitation
- Providing a first-class meeting venue for area residents and out-of-town delegates/ attendees
- Serving as a catalyst for further urban redevelopment initiatives
- Generating additional economic activity and enhanced fiscal revenues

Each of these benefits is important in assessing the overall impacts of ongoing BCC operations to the region. While the value of many of these benefits is difficult to measure, the economic activity can be quantified.

## Summary of Event Activity at the BCC

The following table summarizes the event activity at the BCC for FY 2020.

Summary of Utilization at the BCC - FY 2020				
Event Type	Number of Events	Total Attendance	Attendee Days	Average Attendance
Conventions/Trade Shows	25	149,430	448,290	5,977
Meetings	24	38,970	58,455	1,624
Food Functions	6	1,290	1,290	215
Public Events	10	113,255	113,255	11,326
Sporting Events	10	38,922	77,844	3,892
Other	5	5,104	5,104	1,021
<b>Total</b>	<b>80</b>	<b>346,971</b>	<b>704,238</b>	

Source: BCC.

The number of attendee days is an important component in the methodology used to calculate economic impact. For all event types other than food functions, public events and other events, an attendee day is defined as total attendance multiplied by the event length. For example, a three-day convention with 600 delegates equates to 1,800 attendee days which reflects that the same delegates return to the event each of the three days. Attendee days for food functions, public events and other events are the same as total attendance since these attendees generally attend only once during the event. Conventions and trade shows are a primary driver of economic impact because attendees at these events typically generate more overnight stays than other event types. Conventions and trade shows combined accounted for 43% of total attendance at the BCC in FY 2020. Attendance at conventions and trade shows decreased by 27% from FY 2019. Nearly 40 events were cancelled or postponed in FY 2020 due to the COVID-19 pandemic representing a loss of approximately \$2.9 million in revenues.

## Estimated Total Economic Impacts from BCC Operations

The table below summarizes the estimated total economic impacts generated from BCC operations in FY 2020 in terms of output, jobs and earnings and is followed by a discussion of each component.

Estimated Total Economic Impacts Generated from BCC Operations - FY 2020		
Category	City of Baltimore	State of Maryland
<b>Output</b>		
Direct Spending	\$197,600,000	\$208,400,000
Indirect & Induced Spending	91,700,000	162,600,000
Total Output	\$289,300,000	\$371,000,000
<b>Total Jobs (Full-Time &amp; Part-Time)</b>	2,500	3,200
<b>Total Earnings</b>	\$139,700,000	\$149,000,000

Note: Local and State amounts are not additive.

## Direct Spending

*Attendee Spending* – Attendee spending occurs both inside and outside of the BCC. Utilization at the BCC was used to calculate attendee spending. Daily spending amounts were assigned to overnight attendees, who were estimated to stay overnight in a hotel, and day tripper attendees, who likely originate from the area or just drive in for the day.

*Sponsoring Organization/Event Producer & Exhibitor Spending* – 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.

*BCC Operations* – This category refers to operating revenues generated by the 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. Most BCC revenues are included in attendee and sponsorship organization/event producer and exhibitor spending.

*Summary of Direct Spending Inputs* – Based on this information, the direct spending related to attendees, sponsoring organizations/event producers, exhibitors and facility operations at the BCC was estimated to be \$208.4 million at the State level, of which \$197.6 million was estimated to occur in the City.

## Indirect and Induced Impacts

Based on the IMPLAN model, indirect and induced spending generated from BCC operations was estimated to generate \$162.6 million at the State level, of which \$91.7 million was estimated to occur in the City.

## Total Output

Outputs from the IMPLAN model indicate that total spending (i.e., direct, indirect and induced) from BCC operations in FY 2020 was estimated to be \$371.0 million at the State level, of which \$289.3 million was estimated to occur in the City.

## Total Jobs

Based on the IMPLAN model, the economic activity associated with BCC operations in FY 2020 was estimated to support 3,200 total jobs at the State level, of which 2,500 jobs were estimated to be 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.

## Total Earnings

Outputs from the IMPLAN model indicate that BCC operations were estimated to support \$149.0 million in total earnings at the State level, of which \$139.7 million was estimated to occur in the City.

## Estimated Tax Revenues from BCC Operations

As summarized in the table below, total tax revenues related to BCC operations in FY 2020 were estimated to be \$9.3 million at the City level and \$21.9 million at the State level. Approximately 70% of estimated tax revenues occur at the State level primarily driven by sales and use tax.

Estimated Tax Revenues Generated from BCC Operations – FY 2020	
Entity	Amount
City of Baltimore	\$9,300,000
State of Maryland	\$21,900,000
<b>GRAND TOTAL</b>	<b>\$31,200,000</b>

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 obtained online from the Comptroller of Maryland’s office, an effective tax rate was calculated and applied to a portion of City-level earnings. Because local income tax is based on where a person lives, not where they work, only a portion of the personal income taxes generated by BCC operations occurs 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.

*Hotel Room 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. In addition to the 9.5% tax, hotel rooms within the Tourism Improvement District are subject to a 2% surcharge which became effective in December 2019. The surcharge is used

to fund marketing campaigns aimed at attracting overnight stays in Baltimore. Although not quantified in this analysis, which reflects a conservative approach, the surcharge provided additional tax revenues to the City.

## State of Maryland Taxes

*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 obtained online from 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.

*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. Nonresidents were subject to a special nonresident tax rate of 1.75% in addition to the State income tax rate prior to January 2020 when this rate increased to 2.25%. For purposes of this analysis and based on information obtained online from the Comptroller of Maryland's office, an effective tax rate was calculated and applied to a portion of total earnings at the State level.

*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 by BCC operations which represents a conservative estimate relative to the sale of alcoholic beverages.

## **Summary**

The BCC is a unique business entity that generates significant economic activity to downtown Baltimore and the State of Maryland. In FY 2020, the BCC hosted 80 events that attracted approximately 347,000 in total attendance and 704,200 attendee days which was estimated to generate direct spending of approximately \$197.6 million in the City and \$208.4 million in the State (including the City). Outputs from the IMPLAN model indicate that BCC operations in FY 2020 generated total output (i.e., direct, indirect and induced impacts) of approximately \$289.3 million in the City and \$371.0 million in the State (including the City). This spending was estimated to support approximately 3,200 total jobs in the State and \$149.0 million in personal earnings at the State level. In addition, these transactions were subject to taxes that were estimated to generate approximately \$31.2 million in FY 2020 including \$21.9 million at the State level.

In FY 2020, the State's investment in the BCC was approximately \$8.2 million which included contributions towards the operating deficit. The estimated tax revenues generated from BCC operations at the State level resulted in a 2.7 to 1.0 ratio of fiscal benefits to costs for the State which is particularly positive given that the facility was closed for business more than three months in FY 2020 due to the COVID-19 pandemic.