



# KENNEDY SPACE CENTER

A Multi-User Spaceport



## ECONOMIC IMPACT STUDY FY 2019

# Director's Message



As you look across the Space Coast's horizon, you can see that our vision of transitioning NASA's Kennedy Space Center to a bustling spaceport supporting government and commercial space operations has become a reality.

We now embark on a quest to land the first woman and next man on the Moon, and the first person on Mars. We have amazing work going on here at Kennedy Space Center which is highlighted in our annual report ([www.nasa.gov/centers/kennedy/about/annual\\_rpt/annual\\_rpt-index.html](http://www.nasa.gov/centers/kennedy/about/annual_rpt/annual_rpt-index.html)).

From an economic perspective, the spaceport has an immense impact on Brevard County output, jobs, and wages. The effect diffuses across the Central Florida landscape and spreads throughout the state of Florida. All of these accomplishments could not have been achieved without the dedication and amazing teamwork of the 11,170 workers who call the spaceport their home.

I am pleased to submit the results of the Fiscal Year 2019 economic impact assessment, covering the October 1, 2018 through September 30, 2019 period.

Robert D. Cabana  
Director, Kennedy Space Center  
January 2020



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# Premier Multi-User Spaceport



Kennedy Space Center transitioned from a government-only space launch complex to one that facilitates the largest concentration of space launch operators in the world. In FY 2019, KSC entered into an agreement with Northrop Grumman to lease High Bay 2 of the Vehicle Assembly Building (VAB) for assembly and testing of the company's Omega launch vehicle. SpaceX signed an Enhanced Use Lease for the use of undeveloped land to create a centralized campus, booster and fairing production and storage, and a launch control center. Blue Origin will expand its orbital vehicle manufacturing complex and Florida Power and Light is increasing its spaceport solar farm that will generate an additional 74.5 megawatts. Boeing completed initial production of three CST-100 Starliner spacecraft inside the Commercial Crew and Cargo Facility at KSC.

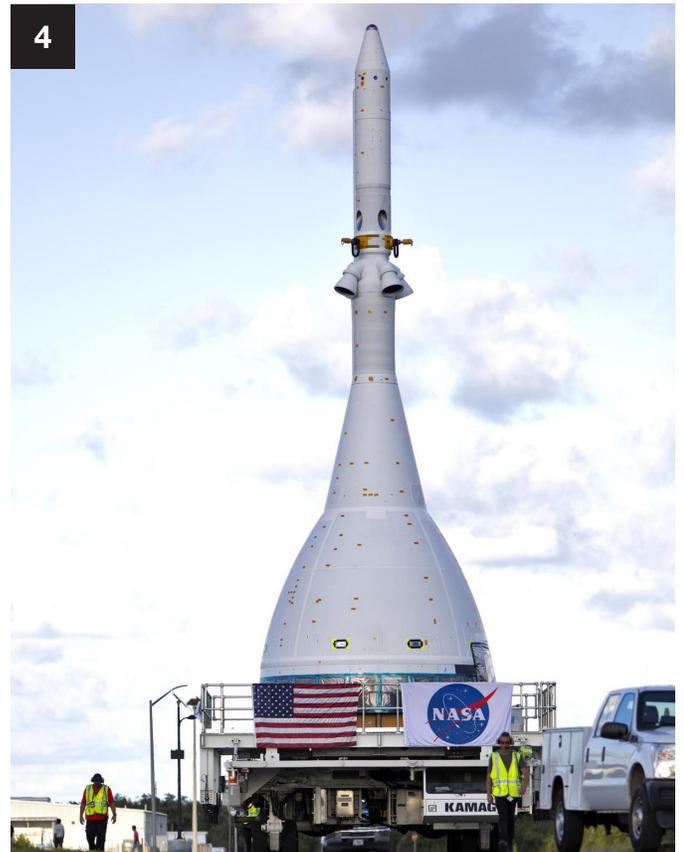
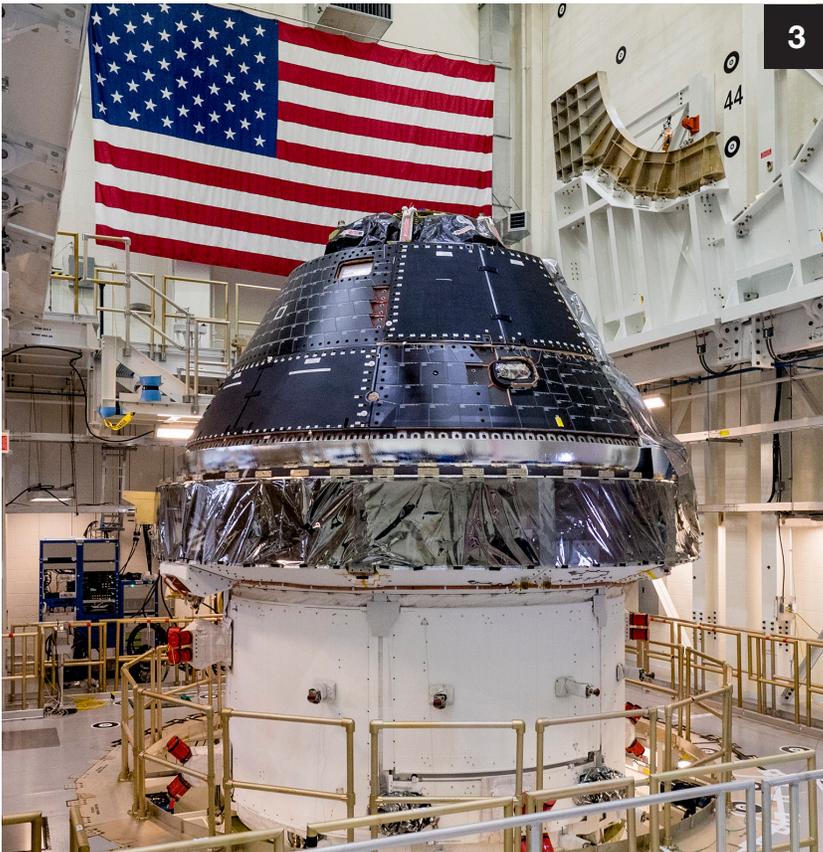
# EXECUTIVE SUMMARY

NASA Kennedy Space Center (NASA KSC) is a transformative agent safely managing, developing, integrating and sustaining space systems. Through commercial partnerships that enable diverse access to space, NASA KSC is supporting a flourishing space industry and inspiring America's future explorers and entrepreneurs. This report clearly demonstrates the significant economic impact that NASA KSC creates within the state of Florida. NASA KSC is a dynamic economic engine, generating employment opportunities, bolstering wage and non-wage compensation, and fueling the production of goods and services which greatly augment regional gross domestic product (GDP). In total, this report documents a FY2019 economic output effect of approximately \$3.98B for the Sunshine State, yielding a total income contribution (GDP) of \$2.27B. Overall, the economic activity associated with NASA KSC supports 24,146 jobs, providing a vital pillar of support to Central Florida communities.

The categories of spending which drive NASA KSC's economic impacts include civil service compensation (\$307.6M) and contractual obligations (\$924.3M) as well as expenses of its commercial launch provider partners (\$803.2M), which are partially supported by NASA contracts. In addition, space-related tourism expenditures made by out-of-state visitors to the Kennedy Space Center Visitor Complex (KSCVC) and the trip expenses of NASA KSC business travelers are contributory factors (\$148.7M). Finally, the world's preeminent launch complex for government and commercial space access also houses a number of tenants, whose operations (\$74.4M) play a complementary economic role. Further details on the direct and multiplier-inclusive effects from each spending category, as well as the aggregated effects from all sources of expenditure, are described and illustrated in the pages which follow this summary.

To highlight the diffusion of NASA KSC's economic contribution across the state of Florida, output (i.e., sales), total income (i.e., value added or GDP), labor income (a subset of value added) and employment impacts are estimated for the following geographic areas: Brevard County; Central Florida (the multi-county region of Brevard, Flagler, Lake, Orange, Osceola, Seminole, and Volusia); and, the state of Florida. Input-output models for the respective local and multi-county economies were constructed using Impact Analysis for Planning (IMPLAN), an integrated software and data package used by more than 1,300 academic institutions, federal and state government agencies, and private consulting firms.

The decade which just passed marked the evolution of NASA KSC from a government-only space launch complex to a public-private space gateway. In FY2019, the spaceport's workforce totaled some 11,170 jobholders, with approximately 3,333 not under the direct auspices of NASA. To provide a sense of perspective, in 2010, non- NASA KSC direct jobs (those held by KSCVC, commercial launch providers and tenants) comprised about 1 out of every 10 Spaceport workers. As we end the decade, that ratio is now 1 out of every 3.35 Spaceport workers. Indeed, as the next decade commences, NASA KSC has realized its goal of becoming America's premier multi-user Spaceport. And not a moment too soon, for in the next ten years, NASA KSC will embark on challenges unlike any attempted before.



1. *New Headquarters Building at Kennedy Space Center.*
2. *To commemorate the 50th anniversary of Apollo 11, Vice President Mike Pence visited Kennedy and unveiled NASA's Orion crew capsule for Artemis I.*
3. *NASA has reached a huge milestone on its path to land the first woman and the next man on the Moon by 2024. The team completed the Orion crew module design and build for Artemis I.*
4. *Workers offload the abort motor for NASA's Artemis I mission from a heavy transport truck inside the Launch Abort System Facility (LASF).*
5. *NASA Kennedy Space Center Director Bob Cabana, far right, updates community leaders, business executives, partners, educators and government leaders on Kennedy-led programs and accomplishments during a presentation at KSCVC.*

# Aggregate NASA KSC Impacts – Output

NASA KSC is a large, multi-dimensional organization, with staff consisting of scientific, professional, and trades personnel, who manage sizable external contracts. These contractual obligations are significantly larger than NASA KSC's internal payroll, and also support the commercial launch providers supplying the private teamwork to NASA KSC's public enterprise. The spaceport's economic contribution is also strengthened by the presence of non-NASA tenants housed on its premises as well as space tourism-related impacts.

A few methodological changes have been incorporated into the FY2019 report, specifically, the integration of Multi-Regional Input-Output (MRIO) analysis as well as the re-classification of select NASA KSC contractual obligations. In the case of the former, the change affords the ability to estimate how other regions are impacted by a direct spending effect, and then, in turn, how those affected regions provide spillovers impact back into the source locale. The feedback loops inherent in MRIO analysis provide for a more tailored, granular result, as does the re-classification of specific NASA contractual obligations from the other tenants to the commercial launch providers category. Cognizant of the need to offer an apples-to-apples comparison to the FY2017 study, we have updated the FY2017 results based on the incorporated methodological changes in this report, and both totals are presented in this aggregated results section.

In FY2019, approximately \$2.26B in direct spending incurred over the range of NASA KSC activities ultimately generated a total output (i.e., sales) effect of about \$3.98B. This includes both supply chain responses and income re-spending effects, collectively known as the multiplier. The ratio of total to direct spending in Florida reveals an aggregate output multiplier of 1.76. With respect to the Central Florida region and Brevard County individually, the total output attributable to NASA KSC amounted to \$3.65B and \$3.36B, respectively. The corresponding figures for FY2017 are about 9 percent lower. To discern the impacts for Central Florida counties exclusive of Brevard, simply subtract the Brevard result from Central Florida's; likewise for the state of Florida exclusive of Central Florida.

## NASA KSC Total Output

(Billions of 2019 Dollars)



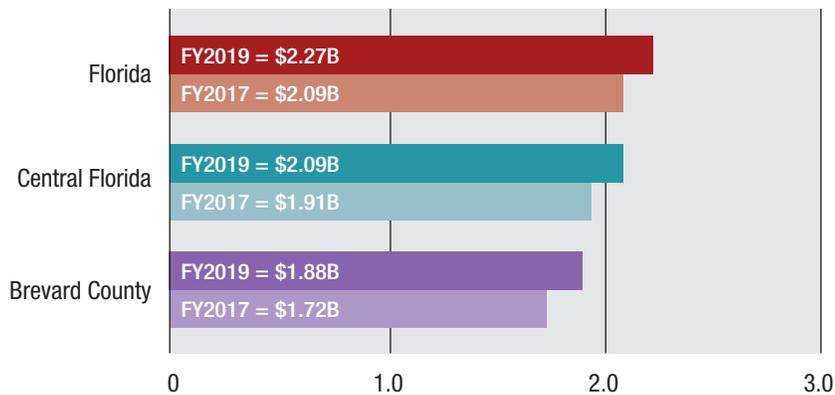
# Aggregate NASA KSC Impacts – GDP

The economic output generated by NASA KSC expenditures creates income streams – wages, dividends, interest, rents, etc. – for the various input factors utilized in the production process. These total incomes or value-added are the returns to the workers, proprietors, lenders, shareholders, and renters who serve as agents of production, and collectively are synonymous with regional gross domestic product (GDP).

In FY2019, the total value added created by all NASA KSC associated expenditures amounted to \$2.27B, inclusive of multiplier effects. This constituted an 8.7 percent increase over FY2017. As for the Central Florida region and Brevard County, the total value added attributable to NASA KSC amounted to \$2.09B and \$1.88B, respectively, exceeding the FY2017 figures by about 9.2 percent. One key subset of value added is labor income, which is the sum of employee compensation and proprietors' income. For the state of Florida, the FY2019 labor income generated by all NASA KSC expenditures amounted to \$1.79B, about 12.8 percent greater than the corresponding figure for FY2017.

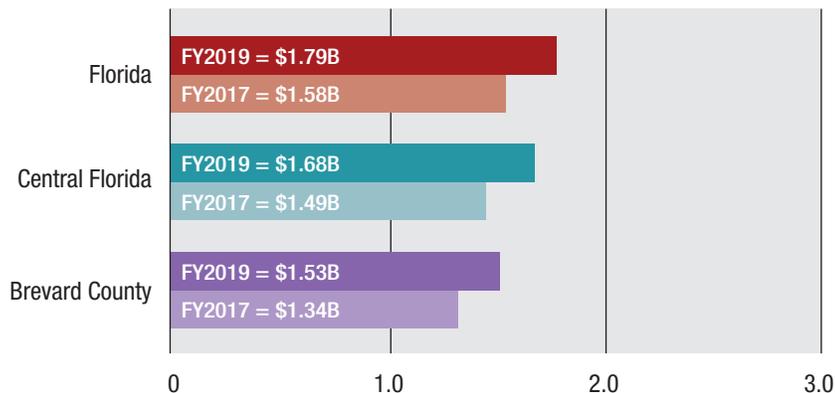
## NASA KSC Value Added

(Billions of 2019 Dollars)



## NASA KSC Labor Income

(Billions of 2019 Dollars)



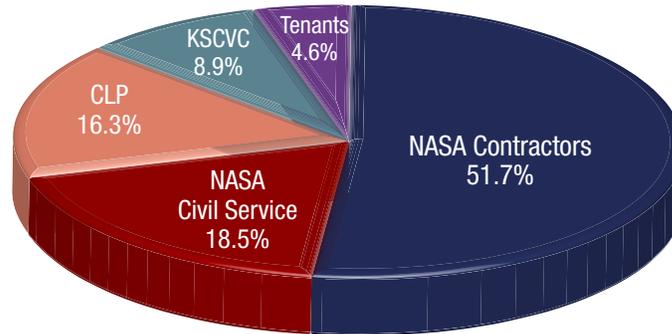
# Aggregate NASA KSC Impacts – Jobs

The economic output produced and incomes earned are the byproduct of the collective efforts of 11,170 jobholders at the spaceport. Individuals are gainfully employed in NASA KSC direct jobs as NASA civil servants and NASA contractors, or, non-NASA KSC direct jobs as commercial launch providers, tenants and Kennedy Space Center Visitor Complex (KSCVC)-related workers. Of the 11,170 jobholders, approximately 3,333 are non-NASA direct jobs. To provide a sense of perspective on NASA KSC’s transformation to a multi-user spaceport, in 2010, non-NASA direct jobs at the spaceport comprised about 1 out of every 10 spaceport workers. As we end the decade, that ratio is now 1 out of every 3.35 Spaceport workers.

Just like initial changes in output and income, the number of spaceport jobs is ultimately amplified through supply-chain and income re-spending effects, leading to an employment multiplier. In FY2019, the total jobs created in Florida by all NASA KSC associated expenditures amounted to 24,146, yielding an employment multiplier of about 2.15. In terms of jobs this constituted a 10.3 percent increase over FY2017. As for the Central Florida region and Brevard County, the total jobs attributable to NASA KSC amounted to 22,201 and 20,069, respectively, exceeding the FY2017 figures by about 10.5 percent.

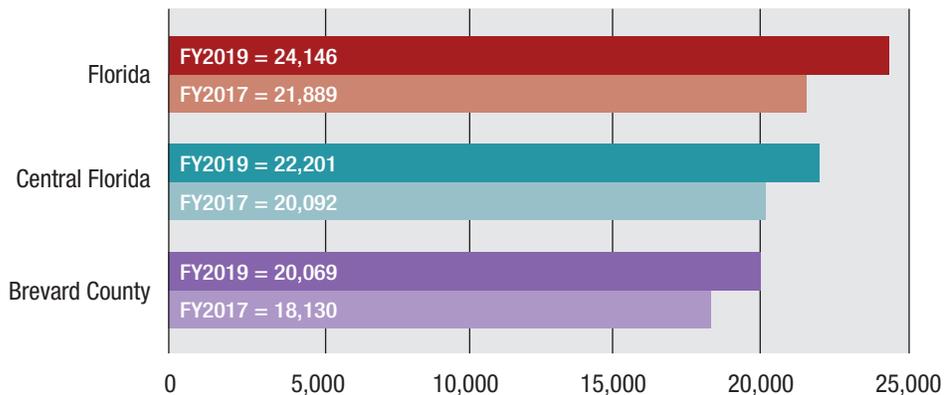
## NASA KSC Spaceport Employment

(Job Distribution)



## NASA KSC Total Employment

(Number of Jobs)

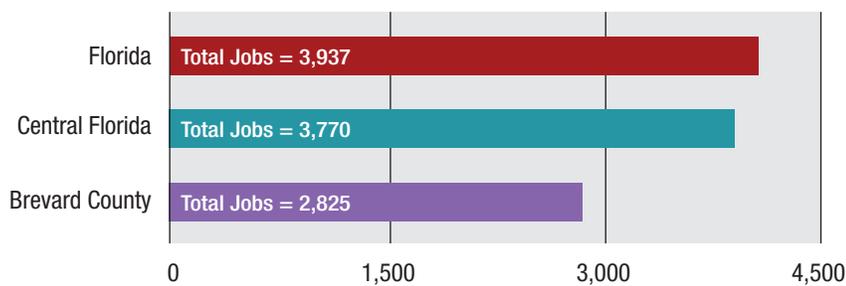


# NASA KSC Civil Service Impacts

NASA KSC's civil service employees are the spaceport's professional backbone and the institutional memory of over 55 years of space exploration endeavors in Florida. Career paths in science, technology, engineering and mathematics include: supporting acquisition and management of launch services and commercial crew development; launch vehicle and spacecraft processing, launch, landing, recovery, operations and sustaining; payload and flight science experiment processing, integration and testing; designing, developing, operating and sustaining flight and ground systems; development, test and demonstration of advanced flight systems and transformational technologies. In addition, NASA KSC career tracks include planning, maintaining, operating, and managing NASA KSC's infrastructure and programs.

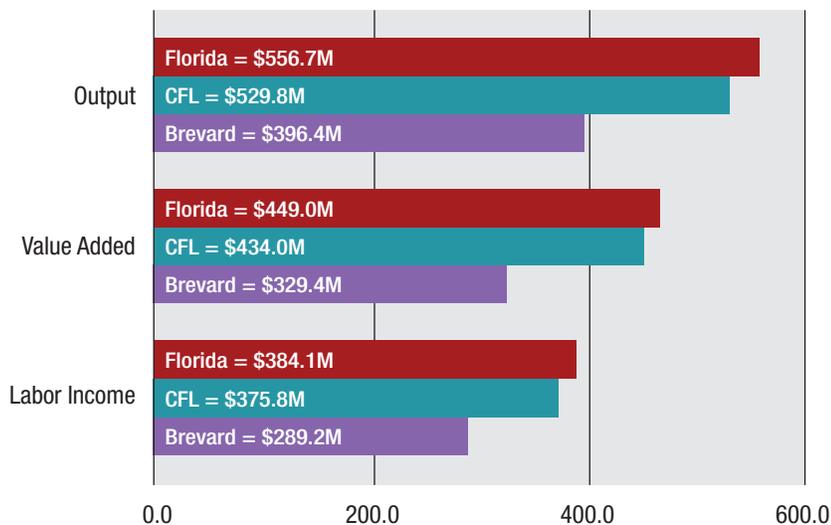
In FY2019, approximately 2,062 civil servants earning slightly more than \$307.6M in total employment compensation ultimately generated an economic output effect of approximately \$556.7M for the state of Florida. This supported almost 3,940 jobs and approximately \$449.0M in total income (i.e., value added or GDP). About 72 percent of both the output and employment impacts occurred within Brevard County.

## Civil Service Employment



## Civil Service Total Output and Income

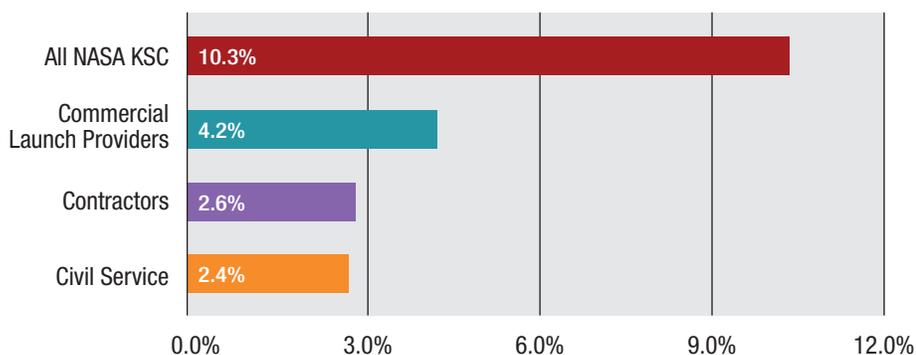
(Millions of 2019 Dollars)



## DID YOU KNOW?

NASA KSC's civil service production and income impacts were about 4.3 percent higher (unadjusted for inflation) than the corresponding figures for FY2017, as was the overall employment compensation of NASA KSC employees. This can be traced to the relative numeric stability of the spaceport workforce, which affords a more controlled budgetary and economic expansion. As for the impact of civil service employment compensation on the Space Coast economy, Brevard County's latest estimate for wages, salaries and supplements by place of work amounts to about \$14.73B. Given that NASA KSC's direct compensation (fully-loaded) is reported at \$307.6M, and that the estimated induced impact via the multiplier process is an additional \$42.1M, this implies that about 2.4 percent of all Brevard County employment compensation is attributable to the NASA KSC civil service. That translates into about \$1 out of every \$42 of employment compensation. When all NASA KSC related expenditure streams are considered, the spaceport is responsible for \$1 out of every \$9.7 of employment compensation earned on the Space Coast.

### Share of Brevard Employment Compensation Attributable to NASA KSC



Charlie Blackwell-Thompson, left, launch director for Artemis 1, and Jeremy Graeber, right, chief NASA test director, monitor activities during the first formal terminal countdown simulation inside Firing Room 1 in the Launch Control Center at NASA's Kennedy Space Center in Florida on July 12, 2019.



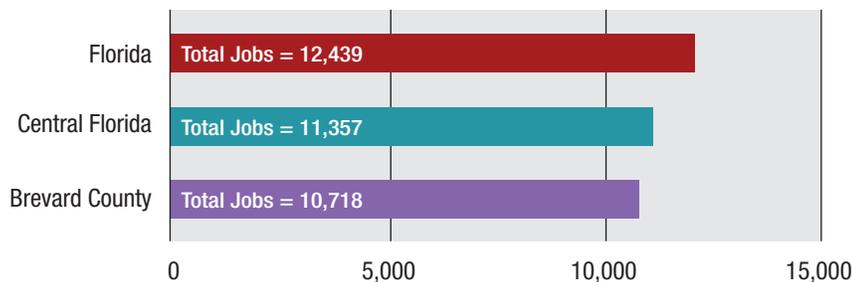
Omar Baez, right, launch director in NASA's Launch Services Program (LSP), monitors the launch of the agency's Ionospheric Connection Explorer (ICON) satellite inside Hangar AE's Mission Director's Center at Cape Canaveral Air Force Station (CCAFS).

# NASA KSC Contractor Impacts

The professional expertise brought to the table by NASA KSC’s Civil Service requires contractual arms across the spectrum of businesses to fulfill its mission and meet operational requirements. From manufacturing and construction to engineering, architectural, and computing services, NASA KSC procurement and service contracts span the gamut of industry classifications. Excluding commercial launch provider contracts which will be presented separately, total obligations in which Florida is designated as the place of performance amount to just under \$924.3M, about three times the size of civil service employment compensation

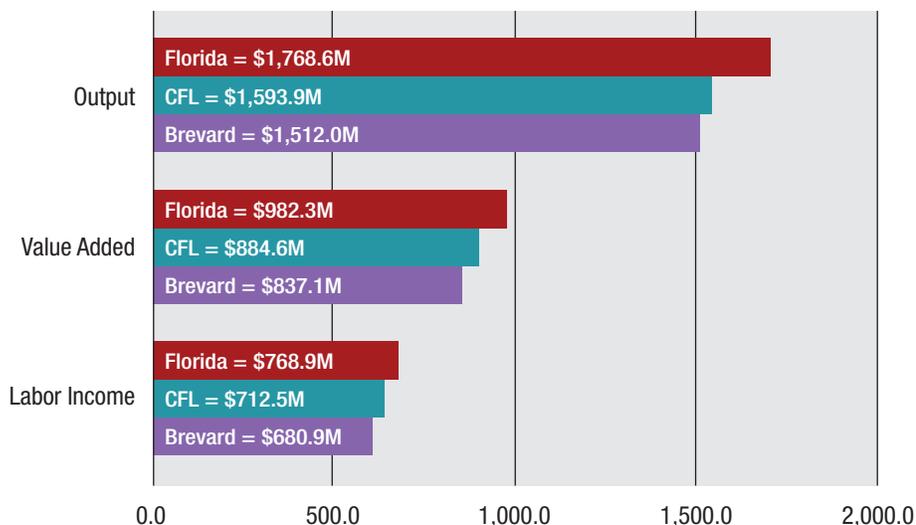
In FY2019, almost 5,800 contractor workers were employed at the spaceport, and the \$924.3M in contractual obligations ultimately generated an economic output effect of approximately \$1.77B for the state of Florida. This supported about 12,439 jobs and approximately \$982.3M in total income (i.e., value added), with the bulk of impact (i.e., 85 percent) felt in Brevard County.

## Contractor Employment



## Contractor Total Output and Income

(Millions of 2019 Dollars)

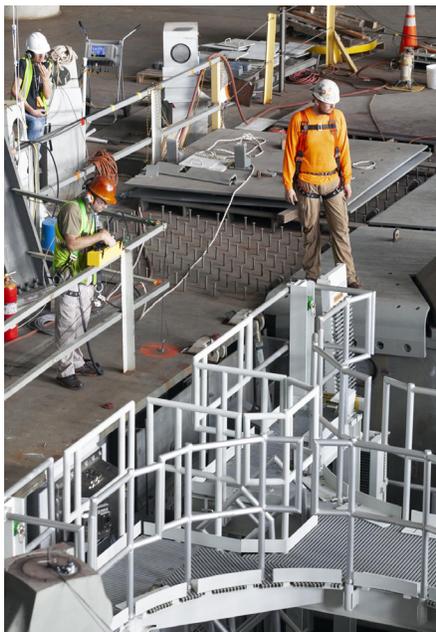
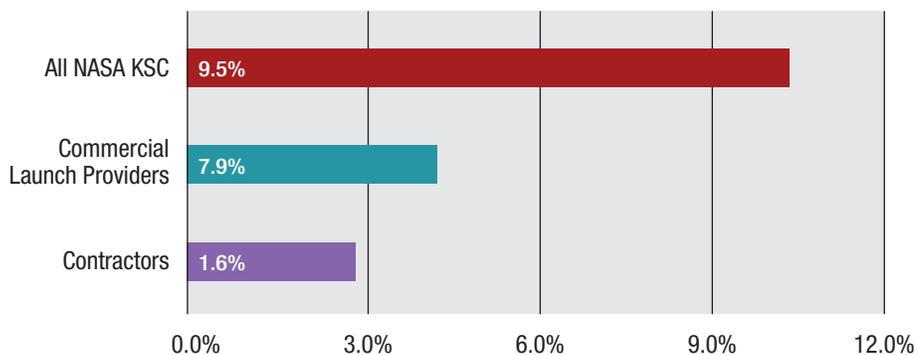


## DID YOU KNOW?

Although contracts exist along a diversity of business enterprises, manufacturing is one of the vital services contractors provide, and manufacturing is certainly a key element in the Space Coast economy. In 2018 manufacturing constituted more than 17 percent of Brevard County's GDP, more than three times larger than the share for the state of Florida. In fact, Brevard ranks 5th statewide in terms of the dollar value of its manufacturing, and when examined on a per capita basis, far exceeds its nearest competitors.

Which brings up an interesting question: what is the contribution of NASA KSC expenditures towards Brevard County's overall manufacturing GDP? When all NASA KSC expenditures impacts are filtered to examine the value-added in manufacturing occurring on the Space Coast, about \$1 out of every \$10.5 of manufacturing GDP generated in Brevard County is attributable to NASA KSC.

### Share of Brevard Manufacturing GDP Attributable to NASA KSC



Workers with Bragg Crane and Rigging prepare for the lift of the engine service platform that will provide access to the core stage of the Space Launch System (SLS) rocket on the mobile launcher (ML) in High Bay 3 of the Vehicle Assembly Building at NASA's Kennedy Space Center in Florida on June 18, 2019.



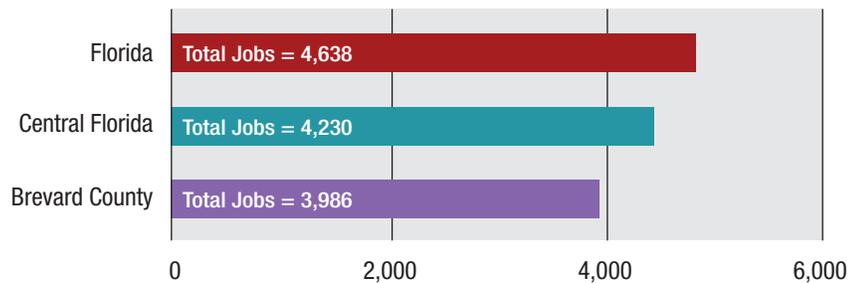
NASA's Kennedy Space Center crawler team is photographed in front of the agency's mobile launcher at Launch Complex 39B in Florida on June 27, 2019. After departing from the Vehicle Assembly Building at midnight on June 27, the mobile launcher made its final solo trek to the pad, where it remained for the summer, undergoing final testing and checkouts.

# Commercial Launch Providers Impacts

With the retirement of the Space Shuttle Program almost a decade ago, NASA KSC transitioned from a prime contractor model to a multi-user, government and commercial services platform. The key identifying characteristics of NASA KSC transformation are modernized infrastructure and the proliferation of commercial launch providers (CLPs). It is these non-governmental enterprises, working in tandem with NASA, that have facilitated the public-privatization of space exploration.

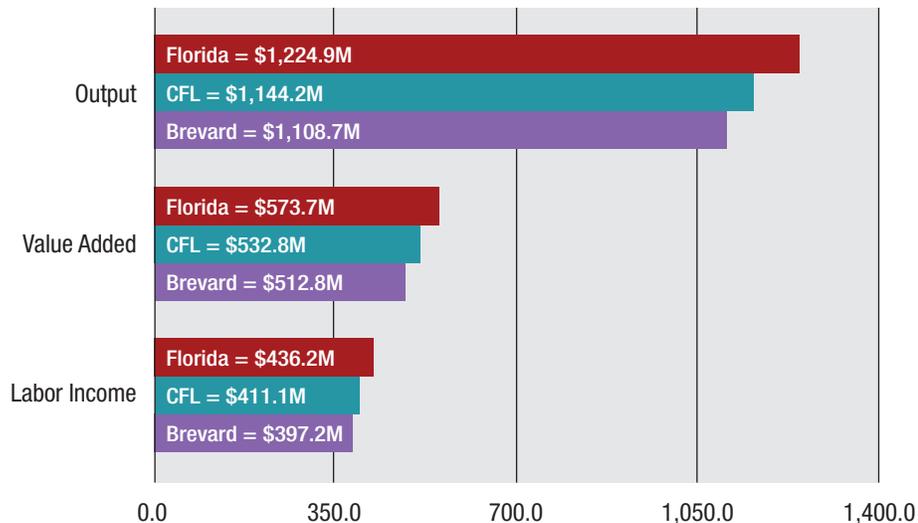
In FY2019, more than 1,800 CLP workers were employed at the spaceport in the areas of spacecraft, launch vehicles, payloads, and other components. For economic impact purposes one of the associated difficulties with this category of spending is the direct transfer of contractual obligations to other non-Florida production sites. These deflected expenditures are a reality but unknown in magnitude; thus, the analysis in this section is anchored on known employment figures and what these jobs numbers impute in terms of industry activity. In FY2019, about \$803.3M in industry sales ultimately generated an economic output effect of approximately \$1.22B for the state of Florida. This supported almost 4,640 jobs and about \$573.7M in total income (i.e., value added).

## CLP Employment



## CLP Total Output and Income

(Millions of 2019 Dollars)



## DID YOU KNOW?

In FY2019, approximately 1,821 Commercial Launch Providers (CLP) workers were employed by commercial launch partners, which include the following: SpaceX, Boeing, United Launch Alliance (ULA), Blue Origin, One Web Satellites, Northrup Grumman Innovation Systems, Sierra Nevada, Moon Express, and Orbit Beyond. In just three short years – FY2016 to FY2019 – CLP employment at the spaceport has increased by almost 65 percent.



*A SpaceX Falcon 9 rocket lifts off from Space Launch Complex 40 at Cape Canaveral Air Force Station in Florida at 6:01 p.m. EDT on July 25, 2019, carrying the Dragon spacecraft on the company's 18th Commercial Resupply Services (CRS-18) mission to the International Space Station.*



*A mockup of the cargo logistics module for Sierra Nevada Corporation's Dream Chaser, the company's reusable spaceplane, arrived at the Space Station Processing Facility (SSPF) at NASA's Kennedy Space Center in Florida in August. On Sept. 20, 2019, senior leadership had the opportunity to view the cargo module in the SSPF high bay.*



*NASA Administrator Jim Bridenstine, at left, tours the Blue Origin facilities near the agency's Kennedy Space Center in Florida on May 23, 2019. Bridenstine viewed the New Shepard booster and crew capsule that flew to space and back five times.*



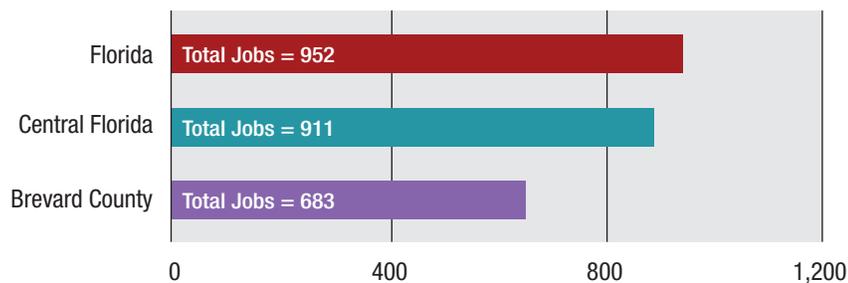
*Boeing technicians meticulously lower its CST-100 Starliner's upper dome to the lower dome before bolting and sealing the pressure vessel on March 11, 2019.*

# Impacts from Spaceport Tenants

Perhaps the least known component driving NASA KSC's economic impact is the fact that over 500 workers are employed at the spaceport with other federal agencies or commercial affiliates. These other spaceport tenants support NASA KSC's space exploration mission directly, or indirectly in either their stewardship of the Merritt Island National Wildlife Refuge, Canaveral National Seashore, or by providing consumer services (e.g., banking, food & beverages, child care, etc.) for NASA KSC workers. By benchmarking both residential and compensation patterns to the broader civil service population, economic impacts for this cohort can be established.

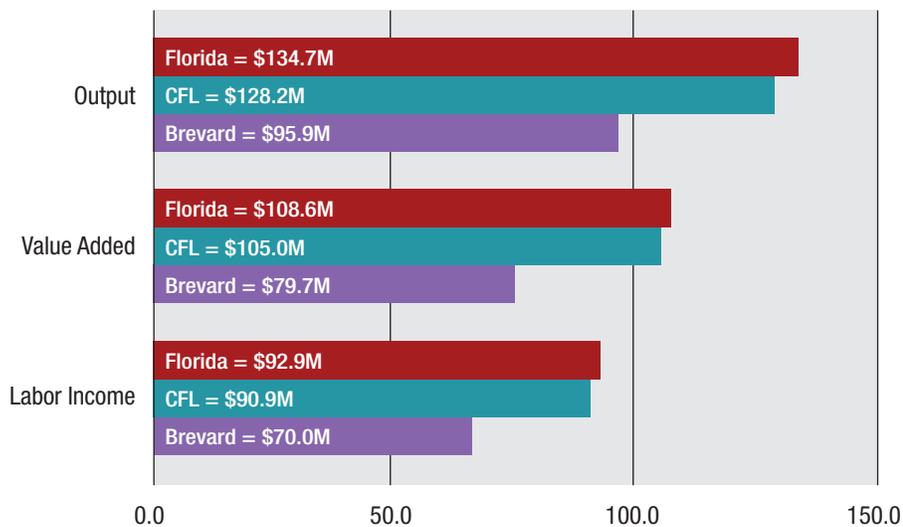
In FY2019, almost 500 spaceport tenant workers (Florida-resident) earning slightly more than \$74.4M in total employment compensation ultimately generated an economic output effect of approximately \$134.7M for the state of Florida. This supported almost 952 jobs and about \$108.6M in total income (i.e., value added). For purposes of clarity, it should be noted that the spaceport tenants employed in consumer services were excluded from the analysis to avoid double-counting. Their economic contribution would be accounted for under the induced impact associated with other NASA KSC workers.

## Other Tenants Employment



## Other Tenants Total Output and Income

(Millions of 2019 Dollars)



## DID YOU KNOW?

To those who are only familiar with NASA KSC through televised images of rockets firing at lift-off, it might be somewhat surprising to learn that the spaceport is actually located in the midst of an ecological paradise. Ensnconced within the Merritt Island National Wildlife Refuge and adjacent to Canaveral National Seashore, the area is home to numerous threatened and endangered species as well as a diversity of habitats. It is truly an amazing juxtaposition. Literally hundreds of meters from where engine ignitions occur, active nesting beaches for the endangered green, loggerhead, and leatherback turtles reside. In fact, the spaceport shoreline accounts for almost 1 out of every 4 nests in the state of Florida. More than 330 native and migratory bird species, 25 mammal, 117 fish and 65 amphibian and reptile species call Kennedy and the wildlife refuge home. Among the NASA KSC tenant workers whose economic impact was just detailed are scientific and field personnel from the Department of the Interior. These dedicated men and women are actively engaged in research, continuously monitor habitats, and work to sustain these important environmental treasures.



*Restoration efforts are underway to the dunes at the north beaches at NASA's Kennedy Space Center in Florida in this view on April 15, 2019. About 450,000 cubic yards of beach-quality sand, tested for compatibility, was transported to the space center's beaches. Once the dune is built up, native coastal vegetation is replanted, helping to stabilize the dune and offer a habitat for Kennedy's coastal wildlife. Dunes are affected by beach erosion and storm surge from tropical events, such as hurricanes.*

*Juvenile green sea turtle*



*Reddish Egret*

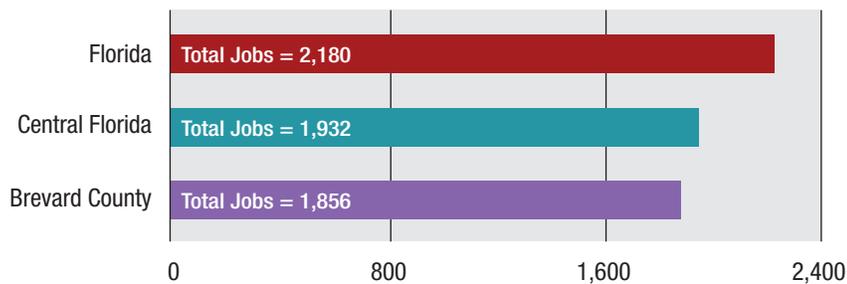


# Impacts from KSCVC & Business Travel

Space exploration captivates the mind and feeds the aspirations of both children and young adults. It should not be surprising then that Kennedy Space Center Visitor Complex (KSCVC) is an iconic tourism destination drawing visitors from across the globe. The out-of-state dollars which flow through KSCVC's coffers support operational expenditures generating significant economic impacts. In addition, capital upgrades funded by a dedicated KSCVC trust expand that impact while serving its purpose of modernizing and rejuvenating existing facilities. Complementing both of these KSCVC economic contributions is the fact that business travelers in the thousands visit NASA KSC on a regional, national, and international basis. This trifecta of visitor-originated spending is effectively NASA KSC's tourism impact.

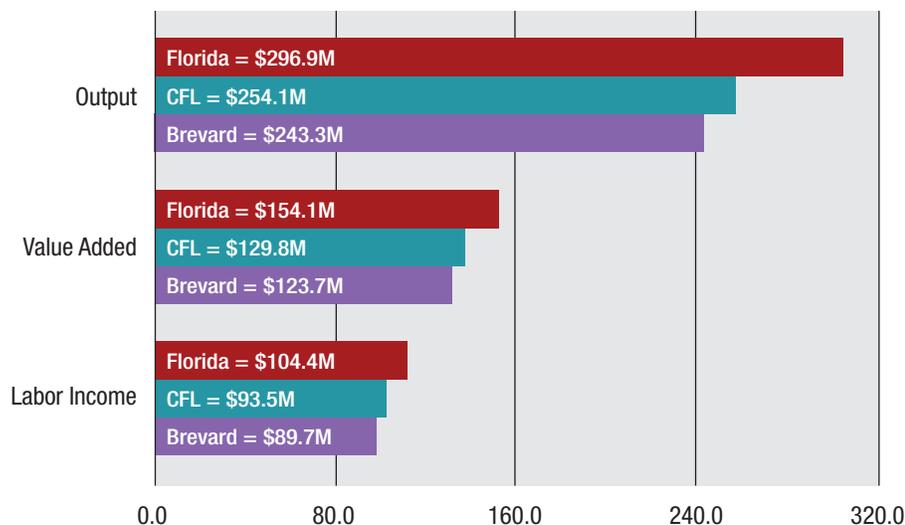
In FY2019, operating, capital, and trip-related expenditures of \$148.7M ultimately generated an economic output effect of approximately \$296.9M for the state of Florida. This supported approximately 2,180 jobs and just over \$154.1M in total income (i.e., value added). The corresponding figures for Central Florida and Brevard County reveal that about 86 percent of the output impacts occurred within the former and about 82 percent in the latter.

## KSCVC & Business Travel: Employment



## KSCVC & Business Travel: Total Output and Income

(Millions of 2019 Dollars)

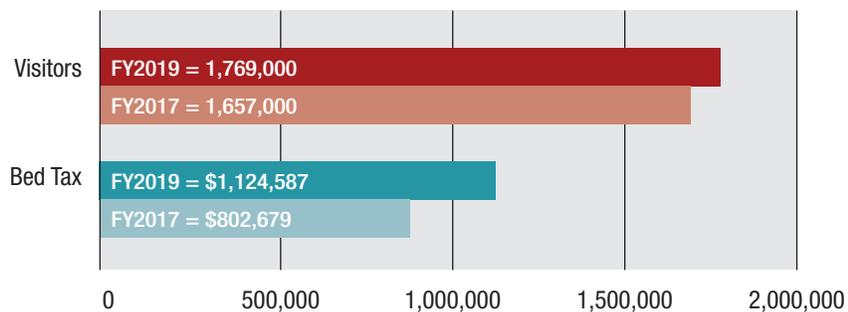


## DID YOU KNOW?

NASA KSC celebrated the golden anniversary of the Apollo 11 launch in July 2019 with an itinerary full of activities and an emotional reunion of personnel from NASA's early days. That the space program is ramping up again is obvious from the pace of launch activity as well as the rising attendance at KSCVC. Attendance increased by approximately 112,000 between FY2016 and FY2019, highlighting the renewed tourism arc that the spaceport is following as well as the likely prospects for a banner decade ahead. With a lunar return on the near horizon and a landing on Mars by the end of the decade, both leisure and business travel to the Space Coast should accelerate with a concomitant increase in demand for accommodations, dining, and retail purchases.

Bluntly speaking, it is already happening. In the Titusville area – the city just west of NASA KSC and referred to as Space City USA – bed tax collections have increased by about 40 percent from FY2016 to FY2019. These revenues are garnered from a 5 percent levy imposed on room night stays in overnight accommodations. And the lodging industry has taken notice. Expansion in room capacity is underway, with new openings expected in the next 18 months. As we enter the 2020's, slated to be the most far-reaching and game-changing decade for space flight since the 1960's, resurgent launch activity fueled by the synergistic work of NASA KSC civilian employees, contractors, and commercial partners is advancing the human space experience and galvanizing tourist interest.

## KSCVC Visitors and Titusville Bed Tax Returns



# 2019 IMPACTS OF SPACEPO

## SPACEPORT WORKFORCE



**24,146**

FLORIDA JOBS



**2,062**

NASA CIVIL SERVANTS



**5,775**

NASA CONTRACTOR EMPLOYEES



**1,821**

COMMERCIAL LAUNCH PROVIDER EMPLOYEES



**515**

OTHER SPACEPORT TENANT EMPLOYEES



**997**

KSC VISITOR COMPLEX EMPLOYEES

**11,170 + 12,976**

TOTAL SPACEPORT EMPLOYMENT

ADDITIONAL FLORIDA JOBS CREATED



Every **10** Jobs at KSC

Creates approx. **11.6** additional Jobs in Florida

### VISITORS



**1.769M**

TOTAL VISITORS TO THE KSC VISITORS COMPLEX



**1.394M**

OUT-OF-STATE VISITORS



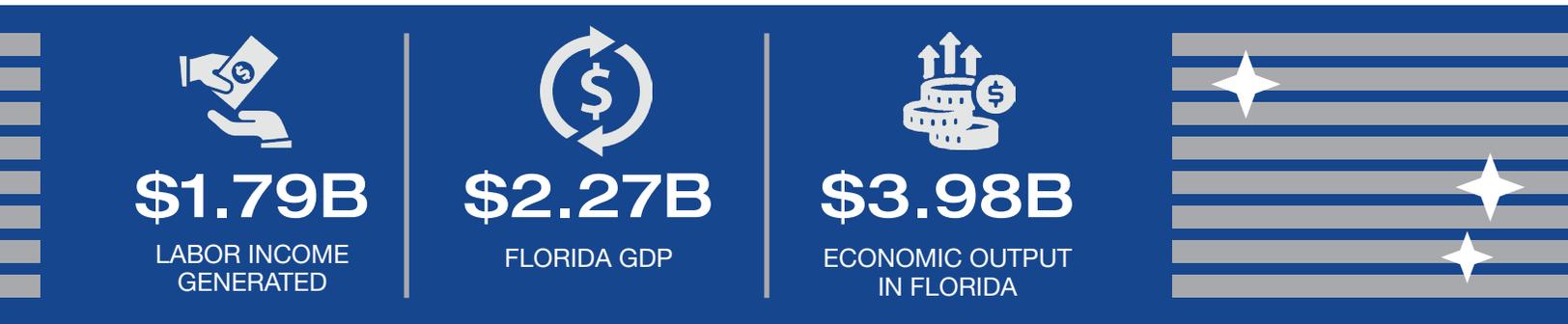
**\$113.9M**

OUT-OF-STATE VISITOR SPENDING

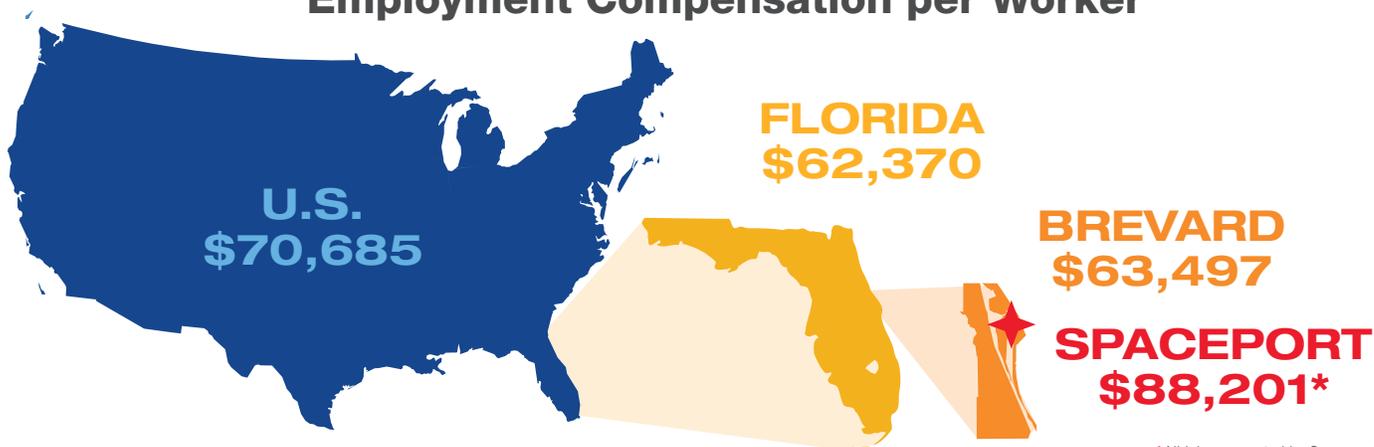
Every **\$1** spent at KSC ultimately results in **\$1.76** for Florida's Economy

# RT OPERATIONS IN FLORIDA

## Measures of Economic Activity



### Employment Compensation per Worker



\*All jobs generated by Spaceport Activities

# ECONOMIC IMPACT STUDY HIGHLIGHTS

## 24,146 FLORIDA JOBS

In FY2019, the Spaceport employed 11,170 people directly, but this initial jobs number is multiplied by secondary rounds of spending by workers and suppliers. Ultimately, an additional 12,976 jobs were created in the state of Florida, resulting in 24,146 total jobs statewide due to the work performed at Kennedy multi-user Spaceport. Thus, for every 10 direct jobs at the Spaceport an additional 11.6 jobs were created statewide, yielding a jobs multiplier of 2.16.

## \$3.98 BILLION ECONOMIC OUTPUT (SALES) IN FLORIDA

In FY2019, Spaceport operations had a direct economic impact of \$2.26B in sales on Florida's economy. This subsequently resulted in additional indirect and induced impacts of \$1.72B in sales. These secondary effects are set in motion by supply-chain responses triggered by the initial sales purchases (i.e., the indirect effect) as well as the spending activity of workers who accrued income as part of the production process (i.e., the induced effect). The result: a total Spaceport economic impact of \$3.98B in sales in the state of Florida.

## \$2.27 BILLION VALUE ADDED TO FLORIDA'S GDP

A subset of the \$3.98B in sales activity accrues to labor and non-labor resources as income payments for their productive efforts. This value-added or gross domestic product (GDP) is the sum of labor income, capital income, and indirect business taxes, and in FY2019 directly resulted in 1.31B in GDP for Florida's economy. Factoring in an additional indirect and induced impact of \$0.96B, the Spaceport ultimately generated a total of \$2.27B in GDP for Florida's economy.

## \$1.79 BILLION LABOR INCOME GENERATED

In FY2019, workers and proprietors directly earned about \$1.21B in labor income. Factoring in an additional \$0.58B in indirect and induced labor income, the Spaceport ultimately generated total labor income of \$1.79B in the state of Florida.

# SPACEPORT WORKFORCE GLOSSARY



## NASA KSC CIVIL SERVANTS

NASA'S Direct Federal employees employed by KSC or other NASA centers.



## NASA CONTRACTOR EMPLOYEES

All workers, located at NASA KSC, employed by private companies providing a good or service to NASA on a contractual basis. This number includes all types of contractors including all NASA construction/maintenance contractors.



## COMMERCIAL LAUNCH PROVIDER EMPLOYEES

All workers employed by companies providing launch vehicles, spacecraft, payloads, and other components directly related to launch operations for NASA, the Department of Defense or commercial entities at the Spaceport.



## OTHER SPACEPORT TENANT EMPLOYEES

All workers not directly employed by NASA or a Spaceport launch provider which are located on-site or near-site due to NASA KSC'S close proximity. This includes other Non-NASA Federal civil servants and their contractors, workers who provide support services, and workers associated with research, development, experimentation, and testing in support of new technologies, procedures and products to enhance the multi-user Spaceport and humankind.



## KSC VISITOR COMPLEX EMPLOYEES (KSCVC)

All workers employed by the Kennedy Space Center Visitor Complex, including all workers associated with construction activities at the KSCVC.

National Aeronautics and Space Administration

**John F. Kennedy Space Center**  
Kennedy Space Center, FL 32899  
Public Affairs Directorate

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