Commonwealth of Virginia
Secretary of Education

The Science Museum of Virginia

At A Glance

The Science Museum of Virginia inspires Virginians to enrich their lives through science.

The Code of Virginia defines the purposes of the Science Museum:

The purposes (§ 23-240) of The Science Museum of Virginia are: • to deepen our understanding of man and his environment; • to promote a knowledge of the scientific method and thus encourage objectivity in the everyday affairs of man; • to engage in instruction and research in the sciences in order to educate citizens of all ages in the concepts and principles of science and how these concepts and principles form the foundation upon which rests our technological society and its economy; • to use, subject to approval of the accredited educational affiliates concerned, Museum personnel in educational programs; • to motivate and stimulate young people to seek careers in science;• to encourage an understanding of the history of scientific endeavor; • to provide special facilities and collections for the study of Virginia's natural resources; and • to foster a love of nature and concern for its preservation.

These purposes are hereby declared to be a matter of legislative determination. (Code 1950, § 9-65.2; 1970, c. 466; 1977, c. 597.)

Staffing 61 Salaried Employees, 13 Contracted Employees, 94 Authorized, and 63 Wage Employees.

Financials Budget FY 2015, $11.55 million, 44.94% from the General Fund.

Trends
- → Visitation
- → State Support
- → Earned Income

Legend ↑ Increase, ↓ Decrease, → Steady

Key Perf Areas
- ↑ Increase outreach contact hours by 8%
- ↑ Increase Family Education program by 3%
- ↑ Increase student filed trip visits by 5%

Productivity Legend ↑ Improving, ↓ Worsening, → Maintaining

For more information on administrative key, and productivity measures, go to www.vaperforms.virginia.gov

Background and History

Agency Background Statement

The Science Museum of Virginia makes its home in Richmond's historic Broad Street Station, a timeless monument to innovation. Once, the railroad was a powerful symbol of technological advancement, as well as the overall progress of the human race. Today, a place that once functioned as a hub for moving people from one geographic location to another, serves as the state's flagship institution for informal science learning.

Built between 1917 and 1919, Broad Street Station operated continuously as a major train station until 1975. One year later, we moved into the station and began the process of transforming an architecturally dramatic and attractive space into a place that could function as a museum.

Founded in 1972, the Science Museum of Virginia officially opened its doors in 1977 to become one of the state's most highly visible, accessible, and popular destinations for families, school and community groups, and out-of-town visitors. Each year, the Museum attracts more than 300,000 visitors, hosts more than 500 community events and 75 guest speakers, and partners with the K-12 educational system, inspiring more than 60,000 students to become engaged in the fun and excitement of science. We also train hundreds of teachers on a wide variety of topics.

Today, when visitors come to the Science Museum, they enter a 60,000-square-foot world of interactive exhibits, a newly renovated Boost! Exhibit which features cutting-edge design and technology, a state of the art Digital Dome theater, live science demonstrations, teaching labs, and the Carpenter Science Theatre Company. And even though the Museum is a hands-on, experience oriented educational environment, it also stewards several iconic artifacts, including RF&P's historic executive Car ONE and an 80-ton Aluminaut submarine designed and built by Reynolds Metals Company in 1964. Our collection also features a visitor favorite, a moon rock from The Apollo XVII mission.

Gone are the days when science sat idle in a textbook. The Science Museum of Virginia is a place that incites inquiry and cultivates curiosity. The Museum operates four separate sites, including Broad Street Station, the Virginia Aviation Museum, the Danville Science Center and the Rice House.

The Science Museum of Virginia derives its statutory authority from the following Code section, and the sections which follow it in the Code of Virginia.

§ 23-239. Museum created; essential governmental function.

There is hereby created and constituted an educational institution of the Commonwealth of Virginia to be known as "The Science Museum of Virginia," hereinafter in this chapter sometimes referred to as the "Museum." The Museum is hereby declared to be a public body and instrumentality for the dissemination of education. The exercise by the Museum of the powers conferred by this chapter shall be deemed and held to be the performance of an essential governmental function.

(Code 1950, § 9-65.1; 1970, c. 466; 1977, c. 597.)

Major Products and Services

The Science Museum of Virginia presents dynamic science programming for all ages including permanent exhibits, traveling exhibitions, live science demonstrations and breathtaking large format films on the largest theatre screen in Virginia.

Outside of the walls of Broad Street Station, the Science Museum is an outstanding programming partner for schools all over Virginia as well as several community events throughout the year.

- *Factors Impacting Agency Products and/or Services:*

The economic climate has an impact on our delivery of services as state, federal, school and family budgets decline.

- *Anticipated Changes in Products or Services:*

The Science Museum of Virginia will continue to partner with the out-of-school time and community partners to advance Science, Technology, Engineering and Math with a focus on K-12 students and their families. In addition, we will be branching out assisting libraries across Virginia in training their staff to provide engaging STEM activities on Saturdays or occasionally offering programming after school or during intercessions with Year-Round School communities.

Customers

Customer Summary

The Science Museum of Virginia is challenged to reach all Virginians with its programs in an intensely competitive climate. The museum now competes with everything that occupies people's discretionary time and money, including shopping, media, and other entertainment venues. While the Science Museum maintains two facilities in greater Richmond and one in Danville, it is now using technology and partnerships to service all parts of Virginia. The Museum has shifted its focus away from emulating scientific organizations to embracing its natural role as a communications organization.

Customer Table

Predefined Group	User Defined Group	Number Served Annually	Potential Number of Annual Customers	Projected Customer Trend
Student	School Group Attendance	56,493	200,000	Increase
Families	Visitor Attendance	267,914	8,000,000	Stable
Families	Community Event Attendance	60,849	250,000	Stable
Families	Digital Outreach (Web, Social Media, and E-mail groups)	1,000,000	800,000,000	Increase

Finance and Performance Management

Finance

Financial Summary

The current funding model for the Science Museum of Virginia provides 50% State (General Fund) funding, while the remaining 50% is provided through Non-General Fund - Special Revenue which is comprised of museum admissions, program fees, facility use fees, concessions, retail sales, memberships and private support from the museum's two foundations through individual and corporate donors, endowments and grants. We also are a sub-recipient on federal grants that provide programming and exhibits such as Science on a Sphere (NOAA) and Rain Water Mitigation (NFWF-Chesapeake Bay).

The model also relies on approximately 50% capital from state sources, and 50% capital from non-state sources. Historically, state funds have supported facilities and exhibit infrastructure, while non-state sources have supported exhibit design, fabrication and program development.

Fund Sources

Fund Code	Fund Name	FY 2015	FY 2016
0100	General Fund	$5,188,359	$5,413,512
0200	Special	$5,056,830	$5,059,755
0700	Trust And Agency	$300,000	$300,000
1000	Federal Trust	$1,000,000	$1,000,000

Revenue Summary

Recent Revenue Trends include:

- Increases in state support for the yearly Master Equipment Lease Program payments for the upgrade of the Dome Theatre to the Digistar 5 Projection System.
- Increase in Rental of Land & Buildings attributable to the lease for the Bon Secours Redskins Training Camp and mission related partners.
- Increase in Contributed Revenue generated by increased program sponsorship.
- Decrease in Federal Grant revenues as the number of federal grants that support science decreases.

Educational Program Fees are recorded as Other Edu, Other Educational & General Income. Vending and Concessions are recorded as Other Edu, Sales-Miscellaneous. Foundation contributions are recorded as Other Institutional Gifts & Grants- Private. Special Event rentals are recorded as Other Institutional Rental of Quarters. Museum memberships are recorded as Other Institutional Sales Miscellaneous.

Performance

Performance Highlights

The Commonwealth of Virginia has major initiatives in which the Science Museum has a direct influence. These are education, health and family, the economy and natural resources.

EDUCATION
The Science Museum of Virginia is an educational institution that serves Virginia:

as an institution for informal science education, inspiring Virginians to embrace science as a means to improve their quality of life.
as a resource for Virginia's school children, providing facilities, exhibitions and programs not generally available in the classroom, and extending resources to meet the Standards of Learning (SOLs).
as a resource for the teachers of the Commonwealth, providing resources and educational programs, curriculum material and professional training.
as a place for families to learn together and become better informed citizens.

The Science Museum of Virginia plays a role in a number of the Governor's key initiatives. As the entry point for the Science, Technology, Engineering and Math (STEM) pipeline and as a place where families can learn together, the Science Museum can positively impact School readiness, 4th Grade Math & Reading Performance, High School Graduation, Educational Attainment and Lifelong Learning. The Science Museum is perhaps the best equipped tool the State has for engaging the public in STEM and making STEM relevant to their lives.

HEALTH AND FAMILY

Virginia's goal to inspire and support Virginians toward healthy lives and strong, resilient families directly aligns with the mission of the Science Museum of Virginia. The Museum is committed to developing and sustaining exhibits, programs and events that inspire guests to improve their

lives. Boost! – a new permanent gallery focused on physical and mental improvement – opened in 2013. The Museum continues to provide dynamic demonstrations, labs and several statewide SOL-based curriculum projects to support the Governor's goal.

ECONOMY

The Science Museum of Virginia directly employs more than 125 people, with an economic impact of approximately $25 million per year. The Museum is one of the top ten tourist attractions in Central Virginia. The Museum is a highly visible symbol of the state's interest in preserving Virginia's status as a leader in the preservation and enhancement of our economy. The Museum hosts more than 500 community events annually ranging from for business functions, non-profits and governmental agencies. Through events and programs, the Museum supports workforce quality by addressing the level of science competency in the populace, delivering education in science, technology, engineering and math (STEM) in accessible forms, educating teachers and parents about classroom technologies, and by showcasing the leaders and the businesses of the high technology sector in its programs and activities.

During the past few years, the Science Museum of Virginia has:

Upgraded to a state-of-the art Digital Dome projection System

Hosted *Body Worlds*, a life sciences exhibition with record setting attendance.

Opened *Boost!* in June 2013, featuring a modern approach to health and wellness.

Hosted 8 major national caliber traveling exhibitions related to STEM

Shown more than 20 different large format films in The Dome theater, the largest screen in Virginia.

Staged 6 original main stage dramatic productions with STEM content

Conducted hundreds of science demonstrations, labs and workshops for hundreds of thousands of visitors

Delivered more than 300 outreach programs for more than 150,000 people

Hosted more than 1,500 community special events for more than 150,000 guests

Restored the historic train car (CarOne), C&O Kanawha Class Locomotive and its Tender that are a fundamental part of Virginia's rail history

Restored an historic Richard Neutra home that is listed on the National Historic Registry, The Rice House

Commissioned an archeological survey of Lock Island, a microcosm of Richmond's history.

Raised $8 million of contributed revenues to augment base state budget

Completed a comprehensive new strategic plan for the Museum, involving more than 80 stakeholder groups

Developed and implemented a new brand architecture for the Museum

Developed a new master plan for exhibits

Selected Measures

Measure ID	Measure	Alternative Name	Estimated Trend
14614503.001.002	Number of contact hours with ourtreach programming partners	Increase outreach contact hours by 8%	Improving
14614503.001.001	Number of family-education program offerings	Increase Family Education program by 3%	Improving
14614503.001.003	Number of student field trip visits to the Science Museum of Virginia, Danville Science Center and Virginia Aviation Museum.	Increase student filed trip visits by 5%	Improving

Key Risk Factors

The Science Museum of Virginia is currently undercapitalized and must attract public and private investment in its facilities and core content to remain a leader in informal science education for Virginia. The availability of funding for capital and operations controls the timing of all projects. By their very nature, experience-based museums must constantly replace and upgrade their exhibits in order to maintain relevance to their audiences. The Science Museum has opened the new privately funded Boost! Gallery and is working on a second gallery on Speed and a new Special Event Space which are both State funded projects.

We are challenged to remain relevant and inspiring while increasing our school field trip visits and ensuring that we have content relevant

demonstrations, labs, films and exhibits that align with the Standards of Learning. We update our K-12 offerings List on our website and in our Field Trip Guide every summer to ensure that we offer teachers and students STEM education experiences in Life Science, Physical Science, Earth Science, Biology, Chemistry, Physics, History and Social Science, Health, Physical Education and Music.

Agency Statistics

Statistics Summary

The Science Museum of Virginia's base attendance has been showing steady improvements as a result of several national caliber exhibits in FY12 & FY14. We expect attendance to increase with the opening of our next gallery Speed.

FY08 262,882

FY09 229,040

FY10 215,527

FY11 210,782

FY12 250,138

FY13 256,192

FY14 315,035

The Science Museum of Virginia's membership households have grown over the last few years due to successful new membership campaigns as well as the implementation of new membership retention strategies. We expect our membership to increase once more when we open our next exhibit gallery Speed.

FY11 3,297

FY12 5,132

FY13 5,151

FY14 4,762

The following are key statistics for the Science Museum of Virginia for Fiscal Year 14.

Statistics Table

Description	Value
Total Attendance	315,035
General Admission	256,535
Group Visitation	58,500
Event Attendance	66,491
Number of Membership Households	4,762
Capital Construction Campaign Funds-Science Museum of Virginia Foundation	7,188,500
Capital Construction Campaign Funds - Capital Outlay Commonwealth of Virginia	4,940,642
Social Engagement- Facebook	17,864
Social Engagement-Twitter	10,502
Social Engagement-Web Visits	301,206
Digital Content Views	35,482
Volunteer Hours	21,671

Management Discussion

General Information About Ongoing Status of Agency

The Science Museum of Virginia has reinvented itself as a more relevant and contemporary museum. We are in the process of organizing our content around subjects that are inherently of interest to our audiences. We are focusing on inspiring people to enrich their lives through science and will concentrate heavily on families and reaching underserved audiences. Upon completion of this major undertaking, we fully expect to be identified as the “marketing agency for science.”

Information Technology

The increased number of networked exhibits has created an immediate need for a faster and easily managed network infrastructure. We will be evaluating our phone system needs as our current phone system is no longer in production and creates a level of risk as parts and services are harder to secure.

Workforce Development

- *Overview*

Effective July 1, 2012, the Science Museum of Virginia began operating at a reduced authorized FTE level of 92.00 full-time equivalents (FTEs) with 62 classified FTEs and 28 wage FTEs. There are 56 salaried employees at Broad Street Station, with 1 at the Virginia Aviation Museum, and 4 at the Danville Science Center. The Science Museum of Virginia employs a total of 59 wage employees across its 3 locations to help carry out its day-to-day operations. The Science Museum of Virginia has its main museum in Richmond, Virginia with satellite centers in Sandston, Virginia and Danville, Virginia.

The Science Museum of Virginia also has 301 volunteers that contribute in excess of 22,100 volunteer hours per year. These individuals make up a very large portion of our workforce. The Science Museum of Virginia relies on their work and expertise to be able to open the doors every day and continue offering quality educational programs and exhibit experiences.

Since its creation in 1970, the Science Museum of Virginia has continued to grow and expand programs and services. The Science Museum is proud of its significant and positive impact on the communities of the Commonwealth. In spite of the budgetary concerns highlighted above, the Broad Street Station remains the most-attended paid cultural attraction in the Richmond region and the Science Museum of Virginia is unique in the United States for its statewide network of science centers, which bring hands-on science learning and inspiration to the Virginia citizens. Current Science Museum of Virginia programming continues to be strong, and efforts are ongoing to assist schools in increasing student performance in science as evidenced by increasing pass rates for the Virginia Science Standards of Learning assessments.

The Museum is distinctive in its development of its year-round intensive drama program, The Carpenter Science Theater, which is already known for creating a unique science center social environment with culminating memorable learning experiences.

The Science Museum consistently strives to attract the highest levels of talent to the organization. A strong emphasis on cross- training and the development of multiple skill sets has been implemented. With budget limitations, the Museum has had to increase its reliance on wage employment to properly staff the museum during its hours of operation, which is 362 days/year.

Physical Plant

The Museum's Broad Street Station was constructed in 1917 and is on both the National and Virginia Historic Registers. Since its acquisition in 1977, the facility has undergone numerous improvement projects to assist in meeting the Agency's mission, and to bring the facility up to modern standards.

All capital investments are designed to enable the Science Museum to reduce operating costs or to increase net operating revenues.

CP 17974 Upgrade Exhibits and New Special Events Space-Approved

The main concourse of the Science Museum is the facilities’ primary exhibit gallery. This space contains 15,000 square feet of space on two levels. Conceptual plans are being developed to best utilize the excellent ceiling height, natural light and also to fit into the new brand architecture of the Museum. This level of funding would cover the design, fabrication and installation of exhibits, creation of interactives and media, as well as minor building modifications to accommodate the technology and infrastructure required by 21st century science museum exhibits.

Create a space to replace the temporary tent structure adjacent to the museum building that can continue to host community events. The space would be permanent and have the appropriate heating, air conditioning, lighting and electrical support to allow this activity to continue at the museum. The space would need to be approx. *17,000 SF and hold 700 people for a seated dinner. The space could also be used flexibly to host blockbuster traveling exhibitions.*

Capital Project Budget Approved: $17,126,187

Virginia Aviation Museum: Building & Exhibit Improvements-Requested

Develop improvements to the building and exhibit experiences at the Virginia Aviation Museum to include a new facade that will establish the museum as an obvious public attraction and take full advantage of the significant vehicular traffic that passes by the facility on a daily basis. This will include opening up vistas inside the building and dramatically mounting and lighting one of the historic military aircraft as a physical part of the new façade. Additionally, the exhibits in the building are well past their useful life and need a significant overhaul.

The Virginia Aviation Museum (VAM) currently attracts more than 25,000 annual visitors and is passed by 35,000+ cars per day on the access road into and out of the Richmond International Airport. A more inviting façade and improved exhibits will alert passersby that the museum is open to the public and will significantly improve upon the visitation of VAM.

Capital Outlay Request: $ 4,000,000

Low Impact, Interpretive Development of Site-Requested

Develop the Science Museum's site on Broad Street with LOT (limits of technology) demonstration projects that are both environmentally friendly and cost effective. These include limiting the storm water runoff on the site (including parking lots and the adjacent DMV site) by creating a storm water harvesting and retention system and best practices demonstration learning environment; creating a water reuse capability, generating additional power on site with alternative energy systems; robust urban farm that takes full advantage of all of these environmental systems

The LID environmental projects are compliant with new storm-water runoff regulations, improve the health of Chesapeake Bay, educate the public and developers about LID best practices, improve human health and environmental health through informal science learning strategies consistent with the museum's new strategic plan.

Capital Outlay Request: $ 5,000,000

Danville Science Center: Building, Site, Exhibit Improvements- Requested

Implement a number of small improvements to the Danville Science Center's historic buildings and site that will improve visitor safety and comfort and secure the artifacts housed within. Including: Vehicular and Pedestrian signage and treatments, replacement doors, artifacts storage cabinets, awnings, historically correct ceiling fans, historically correct lighting fixtures, new railing along re-worked ramp of Science Center, UV window tint on all Train Station windows, installation of PA system in all buildings, and development of secure outdoor exhibit space around the the Digital Dome Theater. Additionally, outfitting 4,000 SF of exhibit space at the Danville Science Center in the former Southern Railway waiting room, beneath railroad tracks. The space will house permanent and traveling exhibits and may also be used to host community events.

The Science Center's attendance has steadily grown over the last 6 years and is approaching 30,000 visitors annually. Demand for space and new exhibits is also growing, the addition 4,000 SF of exhibit/event space will allow us to host even more school groups and functions. The Science Museum of Virginia and the Danvilee Science Center sites combine to host 200,000 visitors annually. These improvements will dramatically improve safety and security of visitor and the collection.

Capital Outlay Request: $4,000,000

New Exhibit -Mechatronics Shop

A separate project will be entered to plan and construct the Mechatronics Shop in the Second Floor East Gallery. This space contains 7,400 square feet of space. Conceptual Plans are being developed to reconfigure and design the new gallery in the space. The Mechatronics Shop will offer a broad sampling of mechanical, electronic and computer engineering experiences linked together through the concept of innovation and creativity. Low-tech 'making' experiences with shop machines, basic hand tools and everyday parts are blended with high-tech digital environments in order to 'create' in whole new ways. The exhibition uses the cultural attraction of music and movies, plus highly social experiences of making things together, to broaden the audience appeal.

- *Capital Investments Alignment:*

All capital investments are designed to enable the Science Museum to provide additional services, reduce operating costs or to increase net operating revenues.