



**Office of Communications**  
Margaret Pulles, Vice President for  
Strategic Development and Communications

**Contact:** Margaret Pulles 305.646.4248

## **MIAMI MUSEUM OF SCIENCE AT MUSEUM PARK**

### **Case Statement**

#### **Introductory Overview**

Building on over a half-century-long tradition of excellence, the Miami Museum of Science is creating a world-class cultural destination that will attract South Florida's diverse resident and international visitor populations. As Miami's foremost science center, it will foster the exchange of knowledge and ideas and serve as both a regional resource and science and technology gateway. The innovative Miami Museum of Science will explore the relationship of the sciences to the natural world, culture and commerce...past, present and future.

With a vision fueled by an understanding of local, regional and hemispheric needs, this economic engine for Miami-Dade County and the State of Florida will expand tourism, serve as a powerful educational resource, and help solidify Miami's position as the Gateway of the Americas.

The new Miami Museum of Science will move beyond traditional museum models, combining the best elements of science centers, natural history and cultural heritage museums, nature centers and aquariums to create a unique environment for learning and entertainment. Dynamic, multilingual, immersive exhibits, cutting-edge technology, state-of-the-art learning and conference facilities will make the new Miami Museum of Science the ideal forum for a broad range of scientific and educational programs.

## **Economic Impact**

The Miami Museum of Science conducted a multi-year feasibility study that underscored the need for such a Museum and has shaped today's vision. For this effort, the Museum assembled a team of nationally recognized experts. They concluded the planned 250,000-square-foot facility would generate a \$1.3 billion economic impact and sustain 1,150 full-time equivalent positions in the Center and throughout the community by the end of its first decade...an extraordinary return on the capital investment.

Recognizing that a project of this scale would require world-class partners, the Museum became the first major science center in the nation to affiliate with the Smithsonian Institution, our nation's museum and the world's largest museum complex. This affiliation provides access to the Smithsonian's 142-million artifacts, its unparalleled curatorial expertise and international research initiatives.

This Case Statement will describe the many benefits of the new Miami Museum of Science and the opportunity before us to create a legacy that captures the international spirit of our region.

## Laying the Groundwork

For more than 50 years, the Miami Museum of Science and Planetarium has responded consistently to changes in its audience demographics, developments in science and technology, and advances in museum practice, providing its visitors with cutting-edge programs and stimulating exhibits. Tremendous demand for the Museum's programs and services has pushed attendance on- and off-site to more than 300,000 annually, with 100,000 students served through school outreach and millions more through the Museum's internationally broadcast television programs and award-winning Web site.

Much of the Museum's success is based on a mutually beneficial partnership with government. Operating in a facility furnished by Miami-Dade County since 1960, and

with aggregate local, state and federal operating support of approximately 20 percent of the total budget, the Museum consistently matches the investment of public dollars four-fold.

To keep pace with demand, the Museum initiated a series of expansions in the early 1970s, culminating in complete renovation of its existing facility in 1991. With only 53,000 square-feet demands for exhibitions, programs and events exceeds available space. Further expansion at the present location is limited by the site's recent designation as a National Historic Landmark.

Recognizing that the demand for high-quality, science-rich entertainment and informal education will continue to grow, and understanding the constraints imposed by its current site, the Museum initiated a planning process to create the New Miami Museum of Science and Planetarium. With a \$1.8 million planning grant from the State of Florida, the Museum has completed the market studies, site evaluation, fiscal impact studies, financial projections and architectural requirements to justify the envisioned project.

In 2000 and 2001, the John S. and James L. Knight Foundation added momentum to the project with a capacity building grant and an initial capital campaign challenge gift together totaling \$1.175 million. And, in November 2001, Miami voters endorsed the Museum's expansion plan at Bicentennial Park with the passage of a bond referendum, which included funding for the Park's redevelopment and \$3.5 million in seed money for the Museum.

### A Vision Shaped by the Region's Needs

An understanding of the region's unique current needs and forecasts for the future has shaped the vision for the New Miami Museum of Science and Planetarium. As both an educational and entertainment destination attraction, it holds the promise of enhancing residents' quality of life and bolstering tourism, our #1 industry. As a center for education and cultural exchange, it will address critical education gaps in this community and throughout the hemisphere. By accomplishing its mission, it will fortify South

Florida's emergence as an international axis for economic, scientific and cultural exchange.

### A World-Class Visitor Attraction

With leisure time at a premium, people are looking for activities that provide both experience and value. Museums are environments that cultivate pleasure and learning, and studies across all demographic groups show they are the most trusted of all information resources in the United States. Quality of life measures give great weight to the existence and excellence of museums. When corporations evaluate communities for relocation, culture and recreation opportunities score high in their selection criteria.

With Miami-Dade County as a primary resident market and Broward, Palm Beach and Monroe Counties as secondary markets, the new Science Museum will consistently serve an audience of over 4.6 million residents who represent more than \$110 billion in total personal income.

South Florida is undergoing a renaissance in tourism. For the first time in decades, dozens of new hotel projects have emerged, multi-year tourism statistics, after the 2001 fall, are now rising. South Florida, however, has not kept pace with Central Florida's boom in the attractions industry and does not offer a major indoor destination attraction as a complement to our world-renown outdoor recreational opportunities.

With more than seven million of the 10 million annual visitors on vacation or visiting friends and relatives, the visitor market to the Greater Miami area is large. Income and spending characteristics of this market are high, just as with the nearly one million annual convention attendees. A major goal of the Science Center will be to appeal to this visitor market to entice them to extend their stays.

### Bridging the Digital Divide

The need for innovative programs to help build a science and technology literate society is evident both in the communities now served by the Museum and throughout the broader international region to be served by the new Science Museum. Locally, Miami-

Dade County Public School teachers face extreme challenges. Their school district, the fourth largest in the nation, is among the most economically challenged and diverse. As population growth continues, educators must deal with increasingly overcrowded classrooms and the continued need to enhance their skills to keep pace with the rapidly evolving Information Age. Regionally, while access to computer and communication technologies has exploded, South Florida as a whole is not generating a sufficient science- and technology-literate workforce to meet the challenges and opportunities of its place in the global economy.

The Miami Museum of Science is uniquely positioned to address these needs by providing an alternative venue for student learning through increased school visitation and after-school programs. With programming to complement curriculum standards, the Center will serve as a tool for teachers and as a vehicle to encourage student inquiry and interest in the sciences. Building on its designation as the nation's first science museum to be named an Upward Bound Math & Science Center, the institution will continue to expand its role as a pipeline for first-generation, low-income minority youth to pursue college and careers in the sciences.

#### An International Resource for Technology Training

With the aspiration of being the commercial and technological hub of the hemisphere, Greater Miami already ranks #5 among the top 20 telecom hubs in the world and boasts an international trade infrastructure including more than 50 foreign consulates, 23 international trade offices, 34 bi-national chambers of commerce and two free trade zones.

The Internet and telecommunications advances open up unparalleled vistas of learning, creating the potential for truly global education. New technologies are facilitating the creation of online learning communities with connectivity growing at an explosive rate. Building on the Museum's nationally acclaimed technology training programs, pioneering digital resources for teaching and learning, and leadership in distance learning methodologies, the new Center will directly reinforce the region's future as a major

Internet node and communications hub for South Florida, Latin America, and the Caribbean.

#### Fostering Cross-Cultural Understanding

Miami-Dade County boasts an extremely diverse ethnic population with a rich concentration of recent immigrants and transient foreign residents.

Uniquely for the U.S., the range and number of ethnic groups makes Miami-Dade a place where diversity is mainstream. The existing Museum, thanks to its long-term education and internship programs, celebrates diversity in its staff and visitors. This is a base for building cross-cultural understanding and the Museum is one of a few places in Miami where the different social and ethnic groups meet, united by their interest in science and technology and their realization of its importance for everyone's future.

#### Forging Hemispheric Alliances

Florida and Miami-Dade County have prospered from an increase in hemispheric trade, a leading industry on a local and statewide level. The State and County must, however, improve their trade-related infrastructure and knowledge base in order to maintain their competitive advantage on the international commerce playing field. Florida needs to continually enhance its strategic alliances with the nations of the Western Hemisphere to maintain mutually beneficial political, social and economic relations. The Miami Museum of Science, through close collaboration with the Smithsonian Institution, will build upon the Museum of Science's success at encouraging cultural exchange among the democracies of the Western Hemisphere and Florida.

The Museum already has established numerous relationships promoting international exchange. These include a long-term partnership in Jamaica to establish the island's first science center; a formal partnership with the Museo de Ciencias in Caracas, Venezuela, to create online resources and provide technology training to teachers; a successful multi-museum collaborative to mount a major exhibition on the ancient Paracas culture

of Peru and three television documentaries in that country; a multi-institution collaborative underway in partnership with Brazil to mount an exhibition on the riches of the Amazon as well as a previous documentary on that country's paleontologic discoveries; technical assistance to the Georgetown Zoo and Guyana Biodiversity Park and a documentary on their endangered species research; and consultation for a new Smithsonian-associated Museo Ecológico de Panamá designed by Frank O. Gehry and being built at the entrance of the Panama Canal.

The Miami Museum of Science will cultivate interchange and access among faculty and students, scholars and researchers on a hemispheric level to promote the exchange of ideas and scientific information and build a shared understanding among young people across these nations.

#### Science Centers as Catalysts for Economic Growth

Over the past 10 years, science centers and museums around the nation have demonstrated that they play a crucial role in accomplishing both economic and educational goals in their communities. Studies show that 100 million people visit them annually in the U.S., rivaling major sporting events in popularity.

Along with being "major components of the cultural landscape" in our nation, a growing number of science centers and museums have played pivotal roles in revitalizing blighted or underutilized urban areas. Major expansions have occurred in virtually every important American city, with notable recent examples in Los Angeles, St. Paul, Columbus and Kansas City.

While the Miami Museum of Science consistently achieves the top ranking in the state through peer evaluation and grant and contract awards at the national and international levels, the Museum's local community has not capitalized on the potential economic, educational and cultural rewards of creating a new major physical facility.

Greater Miami not only deserves, but also cannot afford to be without a world-class science museum. As a cornerstone of the City's contemplated billion-dollar investment in the revitalization of its urban core, the new Miami Museum of Science and

Planetarium will solidify and enhance Greater Miami's reputation as one of the Hemisphere's great cities.

### Mission, Ideology & Business Statement

In conceptualizing the new Miami Museum of Science and Planetarium, the Museum has called upon experts and key stakeholders for assistance and input throughout its planning process. Charrettes and roundtable discussions were conducted with leaders from the museum and entertainment, science and technology, education and research, and trade and diplomatic communities. Surveys and discussions included Museum patrons, members and volunteers. The Museum's mission and programmatic framework emerged from these dynamic interchanges. In addition to formal planning sessions, awareness building presentations and hundreds of one-to-one meetings with elected officials and leaders from the public and private sectors has been held.

### A Framework for Programs and Exhibitions

The Miami Museum of Science and Planetarium has a long tradition of public programs, which attract a wide variety of the public young and old. The new museum will expand into new content areas that appeal to wider audiences, with a bigger emphasis on cutting edge science and technology. Through partnerships with universities and industry and acting as a center for hemispheric exchange, it will act as a public showcase and experimentation zone for new discoveries, research programs and debate on the potential and impact of science and technology.

The core elements of the experience will be:

- **Spectacular Visitor Experiences:** from the latest digital imagery in the planetarium to extreme environments, visitors will be able to enjoy immersive experiences that give a new vision of the world around them.
- **Hands-On/Minds-On Interaction:** throughout the exhibition themes, the pleasure of hands on discovery leads to learning. Structured to encourage exploration, the programs provide opportunities to explore further.

- **Integrated New Media and Technology:** digital technology and a personalized guidance systems means the visit begins before arrival and continues afterwards. Whether a student or just for general interest, visitors can access on line resources and increase their knowledge and continue their participation in museum activities on-line.
- **Increasing Support for Formal Education:** the new learning facilities will provide a wide range of science and technology opportunities, offering in depth programs and links to research and industry.
- **Live Science:** through partnerships with universities and industry, scientists will present their latest research in person and also in some cases carry out their research in the museum. The visitors can participate in live and on-line debates on the impact of new developments for the future.
- **Collections:** The museums wide and eclectic collections serve as a basis for enabling visitors to understand why people collect and how objects are conserved classified and interpreted. Facilities for living collections will promote the Museum's high standards for animal care and husbandry. To bring the work of scientists and researchers to life, general visitors to the Center will be able to observe traditionally behind-the-scenes research activities as part of their regular visit. Through the Smithsonian affiliation and developing hemispheric links, new objects and collections will continually be available.
- **Multiple Perspectives:** across the disciplines and from different perspectives, the museum offers opportunities to explore differently, to seek new ideas and try new approaches. Theater, music, art installations, film, story telling and mime are among the media that can accompany the exhibitions and programs.

## **Main Programmatic Areas**

### The Experience

While community input will ultimately be a key component in defining the programmatic nature of the new institution, preliminary conceptual designs provide a wide range of science and technology topics. The initial template of the exhibition program explores how people's ideas, imagination and dreams throughout time have changed our lives and our environment. It will encourage insight into the relationship of the sciences to the natural world, culture and commerce. Building on existing key components, the new museum provides an intriguing threshold into science and technology and encourages exploration of new ideas, knowledge areas and different approaches.

### Outdoor Science Park & Wildlife Center

One of the great attractions of South Florida is the year-round ability to enjoy the outdoor environment. The current Museum's Wildlife Center and living collection consistently rank high in audience appeal. The Science Museum will build on this and create interactive science park and wildlife center. Visitors will be able to engage in hands-on exhibits in a park setting complete with native South Florida wildlife in landscaped environments. Monitoring the wider Florida environment through web cam and other sensing devices and links to research projects will give visitors different picture of how the environment, from water, flora and fauna to the atmosphere is a key part of our lives.

### Planetarium and Space Gallery

The Museum of Science's Space Transit Planetarium is world-famous for its multimedia star shows and educational programming. The New Miami Museum of Science and Planetarium will continue the institution's exemplary efforts in astronomy and space science with a state-of-the-art planetarium set within an exciting Space Gallery that features exhibits which document the study of astronomy and space exploration from ancient times to the present. Space is also the entry point for studying basic physics and

chemistry – from the ring on our fingers to the hairs on our head – all these atoms have been created in the fusion processes of stars.

### Science Theater

Over the last two decades, live theatrical presentations to interpret science themes have gained popularity across the country, though most centers suffer from the lack of professionally outfitted facilities. The Center will include a 600-seat, fully equipped theater which will be an important tool for teaching science and promoting understanding of the Americas through lectures, demonstrations, theatrical presentations, film, music and dance. Additionally, the facility will be designed for satellite conferencing for use by both the educational and business communities.

### The Learning Center and Conference Spaces

The new Miami Museum of Science and Planetarium will provide a range of hands-on science and technology programming, comprising an early childhood learning center, youth programs, pre-service teacher training, teacher professional development, and a continuing education program. The Museum's immersive, interactive exhibits will provide a science-rich hands-on environment for students, parents, teachers and educators, serving as the inspiration and the context for a variety of teaching and learning processes and resources.

Facilities will include state-of-the-art classrooms, fully equipped computer and science labs, videoconferencing facilities to support distance learning and a curricula demonstration center featuring model teachers utilizing the latest technological tools and instructional materials. The Learning Center will include a multi-purpose conference facility capable of hosting 600 occupants, allowing the Science Museum to serve as the venue for large-scale national and international summit conferences and seminars.

### The Live Science Center

Research lies at the heart of scientific achievement and science education, yet the process of science research is rarely understood. Providing live science experiences and an opportunity to meet scientists will be one of the key programmatic components of the Miami Museum of Science and Planetarium. The Live Science Center will be dedicated to interpreting research to the general public. As part of their inquiry-based experience at the Science Center, visitors will be able to observe and interact with scientists at work. The Live Science Center will play a vital role in advancing and interpreting a broad range of research topics of relevance to the hemisphere.

The new Miami Museum of Science and Planetarium will act as a showcase for ongoing research and a catalyst for promoting and cultivating partnerships and facilitating the exchange of information among organizations throughout Florida, Latin America, and the Caribbean. The research component will build on the Science Museum's affiliation with the Smithsonian Institution to become an access point for the Smithsonian's far-ranging scientific research resources. Additionally, the Live Science Center will also expand on the Museum's leading research on integration of technology into classroom practice.

### A World-Class Site for a World-Class Center

As part of its comprehensive pre-development planning process and after a thorough evaluation of sites across Miami-Dade County, the Museum's Board of Trustees ranked Bicentennial Park as the preferred location for the new Science Center. The process incorporated these three basic criteria:

- Primary – which related to the site's physical nature
- Operational – which related to the site's accessibility and ability to drive attendance
- Development – which related to the site's real estate development capacity and entitlements

Bicentennial Park's top ranking was attributable to its:

- High visibility

- Location in the tourist corridor between Downtown Miami and South Miami Beach
- Accessibility to resident populations
- Adjacency to mass transit
- Proximity to Bayside Marketplace
- Synergy with nearby business, tourist, sports, educational and cultural districts
- Potential iconographic nature

### **Museum Park Miami**

While the Miami Museum of Science was planning a new future, the Miami Art Museum (MAM) was also developing a vision and comprehensive plan for expanding their program to better meet the needs of the community. Both museums had similarly assessed their physical plants and determined that they did not have on-site expansion capacity to fulfill their goals and objectives. Based on these assessments, both museums developed their programs and site selection criteria and conducted extensive site searches. The Museum of Science and MAM independently identified Bicentennial Park as the preferred site for their respective museums.

Each institution also identified a need to elevate the cultural stature of the City of Miami and Miami-Dade County. Miami is the only major metropolitan area in America without a world-class art museum, without a world-class science center and without a world-class park. With this in mind, in the spring of 2000, the boards and executive leadership of the Miami Museum of Science and Planetarium and Miami Art Museum signed a joint resolution to create a development proposal for Bicentennial Park which provided for a world-class science center and art museum while preserving a majority of the site as magnificent open space.

Shortly after, recognizing a growing interest in revitalizing this underutilized, but valuable site, the City of Miami Commission appointed Commissioner Johnny Winton to chair the Bicentennial Park/Waterfront Renewal Committee to produce a workable implementation plan for the site to become a premier public space. The initial meeting of this Committee was held in July 2000.

As part of this initiative, the Committee held a Design Workshop, which allowed local citizens and organizations to present their recommendations for the Park. Our Museum Park concept was included in almost every design created by the 350 workshop attendees. In November 2001, Miami voters demonstrated a vision shared by the greater community when they passed a bond referendum for improvement of parks and neighborhoods. This included \$3.5 million for the Miami Museum of Science and \$3.5 million for Miami Art Museum to establish expanded museums at a renovated Bicentennial Park, dramatically moving the expansion plan forward.

The Miami Museum of Science and MAM are now working closely together to make Museum Park a reality.

### A Legacy for the Future

Science centers and art museums in the United States attract more than 325 million visitors annually. At the same time, cultural institutions anchor the world's best parks. Central Park in New York, the Mall in Washington, Golden State Park in San Francisco, Balboa Park in San Diego, Chapultepec Park in Mexico City, Tuilleries Gardens in Paris and the Parque de Retiro in Madrid are symbolic of the greatness of their cities. The opportunity is at hand for our community's leadership to convert Bicentennial Park, a neglected waterfront site, into an international cultural destination.

Museum Park Miami at Bicentennial Park envisions the New Miami Museum of Science and Planetarium and new Miami Art Museum framing 20 acres of open space. Adjacent to these landmark buildings designed by internationally known architects will be a Science Park, Sculpture Garden and great lawn, a perfect venue for public events.

The Museum Park Miami at Bicentennial Park vision will:

- Restore public waterfront parkland to public use
- Open view corridors to the water
- Revitalize downtown Miami and its surrounding neighborhoods
- Build educational and cultural resources
- Increase tourism with international institutions in a central, highly visible location

- Strengthen the economy– tourists who visit museums spend twice as much money as those who do not
- Affirm Miami’s position as the Gateway of the Americas
- Create a legacy for future generations of Miamians

At Museum Park Miami the New Miami Museum of Science and Planetarium and Miami Art Museum will create synergy with adjacent business, tourist, sports, educational and cultural districts. The two museums will attract diverse audiences 365 days a year with daytime activities, after-school and community programming, as well as evening and weekend events.

### Funding Models

When assessing key determinants in successful museum expansion programs across the nation, the Association of Science-Technology Centers identified the need for capital funding to be fully met, avoiding long-term debt service. Part of science centers and museums’ great success is that they remain affordable to the general public, particularly a family audience.

As Downtown Miami becomes the cultural and tourist destination for the region, we hope to add another critical component...a great international science center. Not only can it be an important attraction for tourists and a strong anchor in urban revitalization efforts, it should be a facility that’s financially accessible to all. This will demand the continued partnership of local government of which the Miami Museum of Science is so grateful and proud, as well as state and federal participation.

### Operating Budget

The Miami Museum of Science secured the services of the nationally respected firm of Economics Research Associates to analyze the operating performance of 22 similarly scaled science and natural history museums nationwide to test the financial viability of the New Miami Museum of Science and Planetarium and to initially project an operating budget for the Center. This break-even, stable year \$19.3 million operating budget

projection is based on a first phase 250,000-square-foot facility with annual attendance of 750,000 and a funding matrix which includes traditional revenue sources such as admissions, membership, retail sales, grants and contracts, fee-based programs, development, endowment and government support in the equivalent ratio to the current Museum operation.

### Capital Budget

Capital cost estimates for the New Miami Museum of Science and Planetarium are based on recent industry models. A 250,000 square-foot building and essential site work construction costs are currently estimated at \$95million, with exhibition and other fit-out costs at an additional \$62million. Architecture, design and management fees, escalation and contingency bring the design and construction cost total to \$223 million. With project team, start-up costs and operational support over a ten-year period, the total is \$267 million.

### **Conclusion**

The Miami Museum of Science and Planetarium is poised to create a great cultural landmark. For more than 53 years the institution and its leadership have laid a foundation for this moment, earning the respect of our peers, and the love of our community. Bolstered by the Museum's affiliation with the Smithsonian Institution, the envisioned New Miami Museum of Science and Planetarium will expand the Museum's reach throughout the hemisphere. The new Museum will serve as a world-class cultural destination and an international symbol for Greater Miami as the emerging capital of the Americas.

To make this ambitious project a reality, the Museum will require the collective support of the public and private sectors, all segments of its diverse and multicultural community, as well as strong partnerships on a local, national and international level. Please join us in this worthwhile effort.

## **Endnotes**

1 American Association of Museums, "Trust and Education: Americans' Perception of Museums: Key Findings of the Lake Snell Perry Survey," Feb. 2001.

2 The Beacon Council, "Reasons Why You Should Do Business in Miami-Dade County," [www.beaconcouncil.com/biz/why\\_miami.asp](http://www.beaconcouncil.com/biz/why_miami.asp).

3 The Beacon Council, "Insight 2001: A Report Card on the Miami-Dade Economy and Preview for the Coming Year," p. 13A.

4 Altogether, the city has about 20,000 hotel rooms, "New Highs, No Lows," Miami Business, November-December 2000, p. 11A.

5 Roughly 10 percent of Greater Miami's annual visitors are attending conventions with 898,800 delegates in 1999 spending a total of \$985 million and booking more than 2.4 million room nights according to the Beacon Council.

6 The Beacon Council, "Reasons You Should Do Business in Miami-Dade County," Miami Business Profile, 2000-2001 Edition

7 Association of Science-Technology Centers Sourcebook of Science Center Statistics 2001.

8 Ibid.

## **Pre-Development Team**

The New Miami Museum of Science and Planetarium's Pre-Development Planning Study was funded by the Florida Department of State/Division of Cultural Affairs, Florida Department of Education and Miami-Dade County. The team included project management by The Richardson Group, Atlanta, Georgia; architecture, engineering, planning and interior design by Wolfberg Alvarez and Partners, Miami; creative design and planning by The Patrick McBride Company, Miami; financial analysis by Economics Research Associates, Los Angeles; economic impact analysis by Washington Economics Group, Miami; Peter Gerber and the Roy L. Shafer Company in conjunction with the Miami Museum of Science.

Special assistance with budget: Scott Oppenheim of Oppenheim Lewis and David Wolfberg of Wolfberg, Alvarez and Partners.

(c) 2001 Museum of Science, Inc. ALL RIGHTS RESERVED. Duplication is prohibited without the express written permission of the Museum of Science, Inc.