

Connecticut Science Center

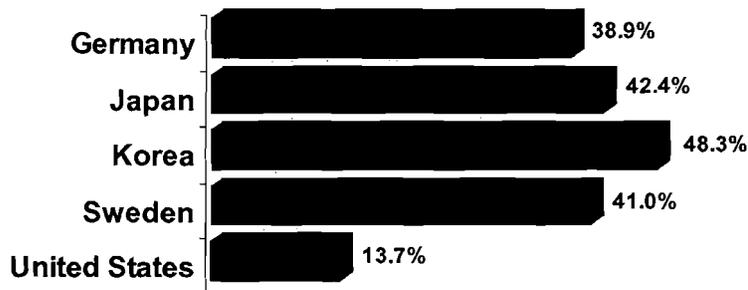
February 2007

The Crisis in Science Education

1. America's world ranking in 18- to 24-year olds receiving science degrees

- 1974: #3
- 2004: #17

2. Graduate degrees awarded in sciences:



Source: Organization for Economic Co-operation and Development, August 2001

Public Hearing Testimony Speaker:
CT Science Center
Ted Seng
Bill Number:

Date:
3/12/07

1415

Mission and Purpose

The Connecticut Science Center (CSC) will be a powerful and highly strategic asset in the race to better prepare Connecticut students for new science learning requirements, and careers in the field. While the State invests billions in traditional school-based education, a first class university system, and many other vital education initiatives, few of these have the Science Center's unique ability to help teachers and parents motivate their children to appreciate, study and enjoy science. At a time when imminent science mastery tests and critical workforce needs add urgency to this topic, the Connecticut Science Center stands apart with its promise to break the barriers that typically prevent students from embracing science. Without their interest and enthusiasm, science is too often a subject to avoid or survive, not learn and enjoy.

Even before it opens, the Connecticut Science Center already hears the concerns of teachers as they prepare their students for the 2008 science testing requirements. The CSC has served hundreds of educators with programs that will help them better prepare their students. Their progress is made possible through the equally urgent imperative felt by Connecticut's leading employers, who have committed \$30 million to date to make real Connecticut's premier interactive science learning destination and all of its services.

Connecticut Science Center Impact on Education

Mission

To create an engaging and sustainable science center that serves families and schools and has a significant impact on student and adult learning in Connecticut.

The missing ingredient in elevating science in the hearts and minds of our children is often motivation. That's why the Connecticut Science Center lives at the intersection of learning and enjoyment, where a child's natural curiosity will meet a world of science that is relevant and inspiring.

Hands-on activities and close-to-home applications penetrate traditional learning barriers. These experiences foster a sense of accomplishment and confidence, giving our children a strong start at school and in life.

1. On average, 365,000 people per year will experience the educational science exhibits and programs of the Connecticut Science Center. Of these visitors, 75,000 will be school children visiting with their classes.
 - School trips will be designed to directly address learning requirements of the State of Connecticut's Science Education Framework.
 - Teachers will receive pre- and post-visit preparation materials and programs to amplify and extend the value of the visit.
2. Another 50,000+ school children will be served by the Center's outbound science education programs, giving teachers statewide the tools they need to motivate and educate.
3. Two years before it opens, 400 educators from throughout Connecticut have already been trained in the Connecticut Science Center's *GE Institute for Inquiry*. This high-impact program is helping educators strengthen their skills to be more effective in teaching science in their classrooms.
4. Families will attend together, enjoying an enriching, powerful science learning experience that helps parents engage directly in their children's education.

Project Status

Well under construction, the CSC will dramatically emerge on the horizon of Connecticut's capital city, opening in 2008, and symbolizing the seriousness of our state's commitment to science and science education. As it does so, crucial economic choices are being made that will affect the ultimate impact and sustainability of the institution. These decisions are driven by the pressures of an ambitious and important mission, the final determination of public and private commitments to the project, and a challenging construction market.

Full exhibit plans for 40,000+ square feet, in ten major galleries, covering physical, biological, earth and space sciences, with over 200 exhibits, have been designed with fabrication scheduled for June 2007 to May 2008. These exhibits have been shaped by professional exhibit designers, guided by Connecticut public opinion, educators, scientists, community leaders, students and others.

The exhibit areas will be supplemented by four classroom labs, a 3-D digital theater; function room; gift shop and cafeteria.

The Connecticut Science Center's public programs will include after-school and summer school classes, camp-ins, family kits, unique offerings for special interest groups, forums and debates, evening and weekend programming, science in the community events, distance learning, science demonstrations by Connecticut Science Center staff – at the Center, and throughout the state in classrooms and community sponsored events; as well as youth employment and a significant volunteer corps.

Operating Expenses

The Connecticut Science Center has been conceived as both a major statewide science education institution, and as a cultural and tourist destination. Institutions of this type and size, throughout the country, typically receive 25% to 35% of their annual operating budget from public sources – mostly state government.

Since the first studies of creating a state-of-the-art science center in Connecticut, it has been clearly recognized that a combination of public and private investment would be required to sustain a successful institution and maximize its educational and economic impact. Informed by industry averages in 2003-2004, the CSC considered an annual revenue budget of \$2+ million in public funding each year, in a total budget of approximately \$10 million. In its 2006 Master Plan, the Center reduced that amount to \$1.2 million as part of an ongoing effort to reduce planned expenses (approximately \$8 million) and improve the balance of earned/unearned revenues.

This \$1.2 million of requested state aid for 2008-2009 (\$300,000 for 2007-2008), would be part of a stable year \$7.9 million operating budget. The projected budget has been a part of the CSC's five-year business plan for 2008-2012. It projects both expenditures and revenues, by major category. Each version of the business plan (there have been three to date, and one or two more before opening) has reflected the most reasoned and prudent estimates, guided by the most current data from:

- Market analysis driven by demographics;
- Comparable institutions – nationally;
- Local/regional non-profit experience;
- Institutional needs, as driven by the mission.

Presently, the Connecticut Science Center plans to earn approximately 54% of its operating income each year, which is more than institutions of comparable size. The effect of this is to limit CSC's reliance on annual funds from the State of Connecticut to 17% of budget, which is significantly below the national average of 25-35%.

Operating Funds Sources: Industry Profile vs CT Science Center

	Earned Income	Public Funds	Private Funds & Endowment Income
All Science Centers	43.8%	30.6%	25.6%
Comparable (Expenses >\$6.5m)	44.9%	34.8%	20.2%
CT Science Center Plan (est.)	54.0%	17.0%	29.0%

Source: Connecticut Science Center and Association of Science - Technology Centers

CSC's relatively lower dependence on annual State funding hinges on its ability to create excitement and education for visitors, sell a wide range of programs and services and build an endowment fund larger than the national average.

Economic Impact

1. The Connecticut Science Center will be a major new contributor to the mission of helping to create more scientists; and the economic growth that will result from greater employment in math, science, technology and engineering.
2. As part of the Hartford renaissance, the Connecticut Science Center is a cornerstone of a larger series of development projects attracting over \$1 billion in investment.
3. The Connecticut Science Center has already helped the new Connecticut Convention Center attract new regional and national convention business, serving as a destination attraction for off-site meetings and special functions.
4. On a scale akin to one of its partner institutions, the Maritime Aquarium in Norwalk, the Connecticut Science Center and can be expected to generate similar economic impact in the range of \$30- to \$40 million annually.
5. The Center is creating hundreds of construction jobs, and will employ nearly 100 full and part time staff when it opens, all of whom will pay taxes and add to the local economy.
6. Fundamentally, institutions such as the Connecticut Science Center, add value to the quality of life in Connecticut. The Center will significantly improve the prospects for entertaining, educational family outings for Connecticut residents, while adding to the attractiveness of the state and its capital city to those from out-of-state.
7. An annual state appropriation for the Connecticut Science Center would also reflect the significant state (\$107 million), and private and other (\$43 million) investment in the capital and start-up expenses of the Center; and the high quality and efficient programs and services regularly provided by other major non-profit institutions in Connecticut, which have been receiving annual state support.

Conclusion

For the first time in its history, Connecticut is about to offer its citizens a truly world-class science learning destination. This resource, while challenging to create and sustain, will be a singular symbol of a generation's devotion to science in the lives of our children, a field of study for all, and a career for many in the great Connecticut tradition of innovation. This new institution can achieve its full potential, and so will those who are inspired by its presence, motivated by its resources, and informed by its teachings.