

## **Our History**

South Carolina's Coalition for Mathematics and Science (SCCMS) operates as a Center within the College of Engineering and Science at Clemson University. The Coalition's tax-exempt status comes from Clemson University and the Clemson University Foundation. In 2009, at the request of the SC Department of Education, SCCMS took on the role of managing the statewide STEM infrastructure formerly known as the South Carolina Statewide Systemic Initiative for Mathematics & Science and now called S<sup>2</sup>TEM Centers SC.

The South Carolina legislature has allocated funding for the math and science centers since 1993. Funding peaked at ~\$4 million annually in 2001 (as measured in 2011 dollars).

## **A 5 Region Model for a Functional STEM Infrastructure**

\$2.8 million annually would fully fund five regional S<sup>2</sup>TEM centers and SCCMS. This infrastructure would function best as a public/private/fee-for-service funded, not-for-profit entity. As such, we are seeking only a base of recurring funding of \$1.75 to \$2 million from the State and committing to generating additional funding through grants, contracts and service fees. Our 3-year commitment of \$250,000 annually from Boeing and ~\$400,000 in fee-for-service revenue indicate our capacity to engage partners.

## **Outputs**

**Advocacy** - Through events like our recent STEM Summit, SCCMS has proven that we can engage a diverse community seeking information about the economic development, national security and personal learning aspects of STEM education.

**Action** - Fully funded, each of the five S<sup>2</sup>TEM centers would have the capacity to annually deliver ~9,000 hours of support for innovation, research and implementation in STEM education. Historically, our specialty has been in assisting schools with implementing curriculum standards. Specific actions have been informed by the interests of our funding partners and enacted through the expertise of our centers' staff.

## **Outcomes**

Our analysis of PASS and End of Course data indicate that currently failure (as measured by identified need for further instruction) outpaces success by approximately a 2:1 ratio in math and a 3:2 ratio in science. However, changing the outcomes of instruction for 100,000 students can flip these ratios. It is important to note that 100,000 successes do not make failure in mathematics and science go away. They do move failure from the expected to the exception. That shift in perception is necessary to gain enough traction across the entire state to make the problem of poor performance in STEM content areas be seen as solvable. Thus, the outcomes we would want to be measured against are directly related to student learning in STEM content areas. We have enacted this intention in our Boeing funded research initiative: *Inquiring Minds: Reading to Learn and Innovate in Mathematics and Science* proposal.