

How the **SVHEC** is Leveraging *Virginia Tobacco Indemnification & Community Revitalization Commission* Funds to Innovate and Sustain Workforce Education

TIC as catalyst

Over the past decade, the *Virginia Tobacco Indemnification & Community Revitalization Commission* (**TIC**) has been a vital catalyst in sustaining and growing the innovative workforce education efforts of the *Southern Virginia Higher Education Center* (**SVHEC**), a unique model of how different agencies and localities can successfully collaborate to use state funds efficiently and effectively. With **TIC** grants and unflagging community support, the **SVHEC** has moved beyond simply serving as a broker of education to developing a non-traditional, demand-driven educational paradigm. We are now positioned to re-conceptualize what education looks like in the 21st Century. This would have not been possible without **TIC** funds, which have allowed the **SVHEC** to build an educational infrastructure from which a groundbreaking effort to redefine how education is packaged and paid for in the New Economy is being launched. The **TIC** has been and continues to be a key driver in our advancement and has contributed to the following institutional milestones:

1. Solidifying base facility infrastructure
2. Developing innovative demand-driven programming
3. Acquiring sophisticated technologies in support of programming
4. Attracting a pool of talented, creative, and visionary team members
5. Cultivating private/public partnerships advancing future sustainability

Background

For twenty years the Southern Virginia Higher Education Center (**SVHEC**) has been a progressive community-based institution dedicated to transforming the farm and factory-based economy of Southern Virginia by using education and innovation to retool the workforce. Early on community leaders recognized the critical role that education and educational access would play in rebuilding the economy and lobbied the Commonwealth to establish a traditional institution of higher learning in the area. Unsuccessful in their efforts and unwilling to take “no” for an answer, the **SVHEC** – then known as the Continuing Education Center – was established in 1988 as a unique and non-traditional grassroots community collaborative. In 2005, the Continuing Education Center became a state agency and was renamed the **SVHEC**. From its first location in a trailer behind the local high school, the **SVHEC** has grown

to support eleven educational partners that in 2009 served an annual student population of almost 3,000 from 16 Virginia counties and 4 cities. Students attend classes in a state-of-the-art repurposed tobacco warehouse that houses some of the Commonwealth's most sophisticated digital, simulation, and advanced manufacturing technology. In twenty years of service, the **SVHEC** has established itself as a virtual "one-stop educational shop" where students have access to 75 degree programs spanning a comprehensive range of options: literacy/GED, high school dual enrollment; and associate, bachelor, master, and doctoral degrees. In 2010 the **SVHEC** will engage regional stakeholders in rededicating its focus on workforce development by zeroing in on demand-based programming that qualitative and quantitative data identify as being critical to preparing regional workers for current and future jobs.

Facility infrastructure

TIC funds have contributed to the SVHEC's ability to successfully renovate, equip, and operate its current (and future) facility.

Donated by a local benefactor, the **SVHEC's** current building, a re-purposed tobacco warehouse, was completely renovated and equipped in 2001 *without* state funds. Undeterred by consultants who advised that an effort to raise renovation funds would be unsuccessful, the current facility became a reality thanks to **TIC** funds in combination with a successful capital campaign by the Halifax Educational Foundation (HEF), a \$1.75 million local bond referendum passed with 75 percent voter approval, and grants and donations from various other stakeholder groups. Another former tobacco warehouse has recently been donated and is currently undergoing an historical renovation that is again being financed, thanks to a **TIC** grant and historical tax credits, with no state monies. These projects allow rural, low income, and educationally-challenged students access to state-of-the-art labs and classrooms where some of the Commonwealth's most sophisticated digital, simulation, and advanced manufacturing technology is now housed. Renovating and establishing the educational and technological infrastructure for our current and future base of operations would not have been possible without **TIC** Education Committee, Economic Development Committee, and Special Projects Committee grants:

- **2001:** **SVHEC** Technology & Furnishings for the initial move into the current facility
- **2003:** Build out of Advanced Technology Lab
- **2004 & 2006:** Parking lot expansion and West Wing build out of administrative suite, classrooms, Berneche Conference Room, bathroom and student lounge.(2 phases)
- **2007:** Build out of Center for Nursing Excellence

- **2008:** Innovation Center Renovation

Innovative, demand-driven programming

TIC funds have made it possible for the SVHEC to expand into developing innovative, demand-driven programming, which is opening doors to unique national and international collaborations, many of which have revenue-generating potential.

Until recently the **SVHEC** has primarily functioned as an educational broker by providing the *environment* – facilities, technology, and support services – that makes “getting an education” possible for rural and economically-challenged constituents. A recent State Council for Higher Education in Virginia (SCHEV) report, however, expanded the **SVHEC’s** role to include *program development and innovation*. In a January 2006 *Report on the Analysis of Education Demand in Southside Virginia and Recommendations for Action*, SCHEV recommended that the **SVHEC** (1) work with K-12 and existing higher education institutions to build a “college-going culture” in Southside and (2) strengthen regional economic development by introducing new higher education degree programs that capitalize on local assets.

Using part of a 2007 \$1.5 million **TIC** Southside Partnership for Technology-Enabled Education grant, **SVHEC** staff and key partners spent 18 months vetting the SCHEV recommendations: analyzing regional economic, educational, and demographic data; reviewing the current literature; conducting benchmarking visits at community-based organizations across the country; and hosting a well-attended regional conference. An over-arching theme in the research indicated that today’s workforce requires students versed in creative thinking skills to succeed in work and life. Knowledge Economy workers not only require an understanding of the “what” and “how” as explored in traditional academic subjects (science, math, and technology), but also an understanding, awareness, and appreciation of the “why.” This has given rise to **SVHEC’s** “signature” *Business of Art & Design* programs:

- **Product Design & Development:** The Product Design & Development curriculum prepares students with a comprehensive understanding of the ways in which the method, measure and language of design drive the practice of business and the process of innovation. The applied associate’s degree (AAS) curriculum emphasizes ways in which collaborative design thinking and strategies can partner with business process to establish sound decision in innovative product development. The technologies used to produce “proof-of-concept” products will consist of the most advanced CAD/CAM systems. This approach will proactively support workforce development and performance

improvement within business and industry. There is a desperate need to fill these jobs in manufacturing and within the related service sector as well as prepare students with the opportunity to pursue advanced degrees leading to career options in high technology industries.

- **Digital Art & Design:** A skills-oriented, project-based AAS curriculum synthesizing broad principles of design with specific techniques using the latest technology to create effective visual communication solutions, Digital Art & Design students will be prepared to transfer to four-year degree programs and/or to begin careers in digital design industries. Employment and career opportunities include: computer graphics artist, graphic designer, brand developer/communications manager, layout artist, video production, web and interactive design, photography, multimedia artist, and animation.

These programs use 21st Century creative applications and technology to develop the skills necessary for exploring the “why” while preparing students for design-oriented and creative careers through real-world, project-based learning and collaboration. *Business of Art and Design* programs foster a college-going culture by establishing a unique 2+2+2 educational pathway that draws students into the college pipeline early and eliminates barriers along the way. The 2+2+2 pipeline begins with junior and senior-level high school dual enrollment courses that lead to a 2-year community college AAS degree, which in turn articulates to a bachelor’s degree (BS) at a senior-level institution. At any point along the pipeline, students are able to “step off” with employable and marketable skills. In 2009, our inaugural year, national recognition for student projects has produced local, state, national, and international collaborations and affiliations, many of which have significant revenue-generating potential.

Acquisition of technology

TIC funds have allowed the SVHEC to provide students, educational partners, and the community with unprecedented access to technology and connectivity that they otherwise would not have. The access is critical to preparing a workforce equipped to function in a technology-driven economy.

Southern Virginia Education Network: (SVEN): TIC funds have provided the staffing and network infrastructure necessary to build and implement the SVEN, a private and affordable regional network. SVEN allows a five-partner coalition to leverage resources to procure a singular large internet gateway that allows regional educational content to be shared electronically between partners. This technology is vital to opening up educational access in rural Southern Virginia.

Center of Nursing Excellence (CNE): Launched in September 2008, the CNE establishes a complete nursing career pathway from Certified Nursing Assistant (CNA) to Associate Degree in Nursing (ADN)

through Master of Science in Nursing (MSN) and Family Nurse Practitioner. The CNE prepares healthcare workers using simulated patient environments that replicate hospital settings. Simulated settings include Home Health Care, Intensive Care and ER; Birthing and Newborn; and a 5-bed Basic Skills Lab. The CNE facility build-out was made possible by **TIC** funding and has also allowed the acquisition of advanced CNE equipment and provided operating funds for **SVHEC** staff that support multiple partner nursing education programs as well as education and training for community health care providers. Since January, 144 students and healthcare professionals have utilized the CNE facility.

Digital Art & Design/MAC Lab: **TIC** funds have outfitted a 21- station Apple MAC Lab for *Digital Art & Design* students. The lab is fully equipped with design-industry standard hardware and software including Adobe Photoshop, Illustrator, and iMovie. Twenty-nine additional stations (for a total of fifty stations) will be available when the new *Innovation Center* comes online next year. In a 2009 competition sponsored by Layers Magazine, a nationally distributed professional publication, *Digital Art & Design* dual enrollment students designed CD covers for its spring edition. Student Stephen Woltz's design was selected tops in the competition, resulting in a positive journal write-up for both student and program.

Business of Art & Design (BA&D) Lab: When early demand for the *Product Design & Development* program resulted in equipment and lab needs well in advance of renovation plans for the new building, the **TIC** again came to our aid. With **TIC** support, the **SVHEC** was able to build-out an un-renovated portion of its current facility to open a 7,000 sq. ft. laboratory housing \$1.5M in classical and advanced woodworking machinery that includes a 12-seat computer classroom. The new building will house a full complement of advanced manufacturing equipment using a smart factory approach. Launched in fall of 2008, *Product Design & Development* student projects have already received national recognition. In July 2009, a team of **SVHEC** high school dual enrollment students won the Association of Woodworking & Furnishings Suppliers (AWFI) Fresh Wood Student Competition. Highlighting outstanding construction design achievements by students, the AWFI competition is the largest competition of its kind. Exposure from this achievement has lead to several exciting public/private collaborations, which are detailed in the Sustainability section (below).

R&D Center for Advanced Manufacturing Technology: **TIC** funds are being used to renovate a second **SVHEC** building, *The Innovation Center*, which will house Workforce Services, Business of Art & Design programs, and the R&D Center for Advanced Manufacturing Technology. \$1.375 million in **TIC** funds has also been dedicated to ensure that R&D Center operations can begin immediately. The R&D Center will

assist regional industries in solving product design issues, creating new products or components, and lowering manufacturing costs through technological efficiencies. Using a “Smart Factory” approach the R&D Center will work in tandem with the *Product Design & Development* and *Digital Art & Design* programs, leveraging the human capital of the **SVHEC**’s regional and international educational partners, its state-of-the-art design and production facility, and its unique cohort of design and development students who will be exposed to hands-on learning and real-world projects that contribute to regional economic development.

Recruitment of key team members

TIC funds have allowed the SVHEC to recruit and attract to rural Southern Virginia a pool of talented, creative, and visionary practitioners and thinkers. These individuals are drawn to the SVHEC’s progressive and unique TIC-funded projects and represent key team players that comprise the human capital that will sustain the SVHEC over time.

The **SVHEC** has only been successful in acquiring permanent funding for one of the positions listed below – the Network Administrator position. A vigorous lobbying effort is currently underway to acquire funding for the remaining positions. Failure to retain this vital human capital will seriously curtail progress on the innovative projects described in this document and cripple SVHEC operations.

Network Administrator: TIC funds associated with the Southern Virginia Education Network (SVEN) made it possible to hire Chris Morris, a graduate of the Danville/Pittsylvania County Public School Systems. A talented Network Administrator who received his training from Danville Community College, Chris was recruited from Dan River Mills Inc., in Danville, VA, a textile manufacturer relocated from Southside after being purchased by an overseas company. Chris keeps the SVEN operational and provides network and general IT support for more than 200 SVHEC personal, classroom, and laboratory computers.

Program Coordinator, Product Design & Development Program: With funds from a TIC Southside Partnership for Technology-Enabled Education grant, the SVHEC recruited David Kenealy to create and implement one of two of the SVHEC’s signature programs, the *Product Design & Development* program. David’s professional career includes comprehensive experiences within each area of the design/build process. David strategically transitioned in and out of education by taking various and extended sabbaticals that allowed him to stay current on product design and development methodology as practiced within the global residential furniture industry. On faculty at Rockingham Community College, he established a successful product design and development program for the North Carolina Community College System. As Director of QA, Engineering and Sample-Making for Maitland-Smith, Inc., whose primary manufacturing operation is based in Cebu, Philippines, David focused on putting into place an

intra-department, collaborative approach to the product development process. David has also served as Plant Manager for Highland House Furniture, based in Mandawa, India.

Lab Technician, Product Design & Development Program: Months before graduating from David Kenealy's Rockingham Community College program, Clint Johnson was offered a position with Old Biscayne Designs, an international furniture manufacturing facility producing high-end home furnishings. Spear-heading a new division that could design and build custom ordered furniture, Clint's efforts provided the company with an important competitive edge. Thereafter, Clint started his own custom woodworking company, Nostalgic Revival, working closely with the Historic Preservation Society in Americus, GA, where he focused on the revitalization of historic area homes. Clint closed the doors to his business to follow his mentor, David Kenealy, and joined the **SVHEC** in August of 2008, as an instructor in the pilot year of the new *Product Design and Development* program. He currently works with dual enrollment and community college students, assisting them in the development of their skills as professionals and educating them on how to become valuable assets to local economy.

USA/TopSolid Institute Instructor: Hailing from Seattle, WA, where he performed high-end landscaping with one of the area's most prestigious firms, Kevin Chrystie also studied under David Kenealy at Rockingham Community College, where he learned to craft museum quality furniture pieces. Upon graduating with honors, one of his creations, "The Game Table," was accepted out of 150+ pieces to the Design Emphasis student competition at the Atlanta International Woodworking Fair (IWF). He then joined the team of craftsmen at Brooks Millwork, in Greensboro, NC, where he helped create distinctive pieces of architectural millwork. Recruited by mentor David Kenealy, Kevin joined the effort to get the *Product Design & Development* curriculum off the ground in 2008. He focuses on schooling students in how to incorporate and utilize Advanced Manufacturing and CAD/CAM/CNC technologies into the shop. Upon recommendation of Missler, Inc., Kevin is diversifying his talents to include the launch of the nation's first TopSolid Training Institute and providing CAD/CAM instruction for regional workers.

Program Coordinator, Digital Art & Design Program: A lifelong resident of the New River Valley, *Digital Art & Design* program coordinator Ben Capozzi turned down a teaching position at his alma mater, VPI, to come to the **SVHEC** in 2008. With a background that includes an award-winning stint as a comic book publisher, digital media instructor for the Educause award-winning Faculty Development Institute, and freelance brand design consultant for Papa John's Pizza Inc, Capozzi's eclectic skills have spelled success in the classroom for Halifax County youths with student work being published nationally in the industry trade magazine "LAYERS," juried participation in Kate Englebrecth's international THE GIRL PROJECT, and Awards of Excellence from the Printing Industry of Virginia. From just 15 high school students in the fall of 2008, *Digital Art & Design* courses have grown to serve more than 162 high school and adult students over the past 12 months with more than 226 anticipated by the end of spring 2010. Capozzi's connections with Virginia Tech have also enabled the SVHEC to further its partnerships there, as well as forge new ties with nearby Longwood University and Danville Community College.

Research & Development Specialist: A Mississippi native, Catherine Stevens holds a B.A. in International Affairs from Sweet Briar College and the Master of Science in Public Health, focusing on Health Policy, from the University of North Carolina at Chapel Hill School of Public Health. She served as Projects

Manager for the Program on Health Professions at the Cecil G. Sheps Center (Chapel Hill, NC), a nationally recognized social sciences research center. Catherine has developed a data collection and management unit in support of SVHEC institutional assessment, grant writing, and academic research critical to the organization's mission. The newly formed Research Data Collection and Management unit (RDCMU) is also building a central repository of economic, educational, and demographic data for the southern region of Virginia. Ms. Stevens' role in the RDCMU is to assist the Directors in developing the institutional assessment framework, including identifying appropriate metrics and developing data collection systems. She also collects, manages, and analyzes data, and disseminates analytical findings to support southern Virginia school systems, communities, cities/towns, and counties for program development and revitalization planning.

Lab Simulation Specialist & Manager, Center of Nursing Excellence (CNE): Holding a master's degree in nursing, Cindy Crew brings years of valuable experience as registered nurse, nurse manager, and nurse instructor. One of the only individuals in the region certified to develop, teach, and train utilizing the CNE simulation equipment, Cindy recently received advanced simulation training at Fort Hood, Texas. She is dedicated to her profession and is always learning about new developments and technological advancements in the field.

On-site Coordinator, Tobacco Commission Loan Forgiveness Program: The TIC Loan Forgiveness Program makes it possible for students in the region to pursue a Bachelor's or Master's degree in any field and then return to Southside and work in any field. With the nearest coordinator's location at Abingdon's Southwest Education Center, SVHEC students found it hard to complete the application process; consequently, Southside funds were not being fully expended. Upon request, the TIC placed Paul Farrar at the SVHEC to serve as the Southside On-site coordinator, increasing student access to aid. All funds are now being utilized.

Sustainability

In addition to providing vital funds for educational staff, equipment, and infrastructure, TIC grants have also given rise to private/public partnerships that otherwise might not have been developed. Many of these collaborations have led to cost-savings and the development of sustainable, revenue-generating programming.

1. **Southern Virginia Education Network (SVEN):** Five state organizations working together to buy internet connectivity is more cost effective than if each agency procured it individually. The Southern Virginia Education Network (SVEN) is a coalition of SVHEC, New College Institute, The Institute of Advanced Learning and Research, Institute for Teaching through Technology and Innovative Practices (an outreach of Longwood University), and the Southern Virginia Regional Technology Consortium (13 public K-12 school districts). SVEN collaboratively built a private regional network with funds provided by the TIC. Collectively the coalition procures a singular large internet gateway. SVEN allows regional educational content to be shared at the highest quality.

2. **Planned Coatings Program:** A collaborative effort between the **SVHEC**, the Halifax County Industrial Authority, the University of Northern Iowa, and the for-profit company American Wood Finishing Institute (AWFI) to host a February 2010 training event in coatings and coatings applications. The partnership and training will have a direct impact on both the public and private sectors of Southern Virginia. The training event will bring attention to the innovative educational programs available in Southern Virginia, draw interest in a new coatings program at the **SVHEC**, and will utilize virtual reality process training at the Modeling and Simulation Center based at the Riverstone Technology Park in South Boston, VA.
3. **Wine Barrel Commercialization:** A partnership between the **SVHEC**, Virginia Tech, and DB Global, LLC in the development of a new and innovative wine barrel. The project, part of Virginia Tech's New Product Development and Commercialization Grant Program, will result in a new product design that will enable one of the Commonwealth's small manufacturers to compete more aggressively in the global marketplace. This public/private partnership will highlight the innovative thinking and creativity that symbolizes the **SVHEC's** *Business of Art & Design* programming, and the tangible assets organizations receive from collaboration with higher education.
4. **WoodLINKS Chair Commercialization:** A tentative agreement between the Halifax Educational Foundation, the **SVHEC**, and Old Dominion Woodworks to manufacture a limited production runs of the **SVHEC's** *Product Design & Development's* award-winning chair design. The chair, developed by high school WoodLINKS students in the program's pilot year, was the national class project winner during the American Wood Finishing & Suppliers Fresh Wood Student Competition held in July 2009. If the project proceeds, a fourth international partner, Galway-Mayo Institute of Technology in Letterfrack, Ireland will become a part of the collaborative effort and will assume a physical presence in South Boston, VA.
5. **Martinsville Speedway Clock:** A formal agreement between the **SVHEC** and the Martinsville Speedway will engage high school WoodLINKS and community college *Product Design & Development* students in the design and engineering of a grandfather clock to be given to the Speedway's March 2010 race winner. The clock, once produced by Ridgeway Clocks in Martinsville, has been outsourced to China in the recent past. This partnership, therefore, holds special significance: Not only does it present students with a project based, real world design challenge, but it also marks the resurgence of manufacturing in Southern Virginia.

6. **USA/TopSolid Training Institute:** Partnership between the **SVHEC** and France based software company Missler Software to establish the USA/TopSolid Training Institute at the **SVHEC**. Missler Software makes TopSolid—a leading Computer Aided Drafting/Computer Aided Machining (CAD/CAM) software. Through this partnership the **SVHEC** has been designated as the only U.S. educational training facility for TopSolid. In the months to come, training events will bring individuals from across the United States to the Commonwealth for a one-of-a-kind training experience. Additionally, this partnership has expanded the **SVHEC**'s workforce training efforts to provide access to the high level training regional and statewide corporations require remaining competitive.
7. **Riverstone Design Studio:** The **SVHEC** is partnering with the Halifax Industrial Development Authority to establish the Riverstone Design Studio at the Riverstone Technology Park in South Boston, VA. The Design Studio will serve as an internship site for students in the **SVHEC**'s *Digital Art & Design* program. These students will develop conceptual abilities, problem-solving skills, and the technical know-how that is required in a fast paced, competitive work environment. The experience will prepare students for the job market by allowing them to work with real world clients who bring real world design challenges.
8. **Business of Art & Design:** The **SVHEC** has developed the *Business of Art & Design* curricula in collaboration with the Halifax County Public Schools, Danville Community College, Virginia Tech, and the Galway-Mayo Institute of Technology in Letterfrack, Ireland.

Conclusion

While **TIC** funding has obviously been critical to the **SVHEC**'s distinctive institutional development, the **SVHEC** recognizes that, by design, the **TIC** was never intended to be a permanent source of operational revenue. Therefore, **SVHEC** staff and trustees have worked with the Halifax Educational Foundation (HEF) over the past year to develop a sustainable institutional business model that will more effectively support operations going forward. While the current state budget shortfall will make acquiring additional state (or partner) funding difficult in the near term, **SVHEC** leaders are keenly aware that these changes are necessary to establish a sustainable fiscal framework. Progress to date includes the following:

- **Best Practices Review:** Upon **SVHEC** request, the Department of Budget & Planning (DPB) is conducting a “Best Practices” study of **SVHEC** operations. A thorough and comprehensive review

of SVHEC development, funding, partner relationships, and organizational challenges, a full report with recommendations is anticipated in early 2010.

- **Partner Cost-sharing Study:** Since early fall, a committee of **SVHEC** Trustees has been examining the current **SVHEC** partner-cost sharing model. Pending recommendations of the Best Practices Review, the committee anticipates adjusting the partner cost-sharing model to reflect a more equitable sharing of costs between the **SVHEC** and its educational partners.
- **New HEF Director of Development:** On recommendation of the **SVHEC** executive director, the HEF is conducting a search for a Director of Development. A new position, this individual will work closely with the **SVHEC** team to establish current and future resource needs and develop requisite fundraising, “friendraising,” and grant writing revenue streams.
- **Revenue-generating programming:** As increasing federal accountability standards further diminish the ability of traditional educational institutions to respond quickly to the growing demand for on-time and flexible training, the **SVHEC** is developing needs-based and revenue-generating programming outside the traditional academic paradigm. Strategic public/private partnerships with industry and professional associations are making ventures like the USA/TopSolid Institute and (planned) Industrial Coatings Center a reality. Additional non-traditional, revenue-generating collaborations are planned in 2010 and beyond.