In the small town of Williamson, WV, something unique is happening in a tiny storefront office on Second Avenue. Situated next to the Tug Valley Chamber of Commerce and located on the corner of the Mountaineer Hotel, the Smart Office is an exciting project that very well could be the most sustainable office space in Central Appalachia. The Smart Office will serve as headquarters for Williamson Redevelopment Authority’s comprehensive project, Sustainable Williamson, an effort to reenergize the local economy by connecting health, wealth and innovation and by attracting past, present and future generations to Williamson.

Using an adaptive design with movable walls and transformable space, the Smart Office will simultaneously operate as a welcome center and office for Sustainable Williamson; a highly interactive space for workforce development and sustainable construction training; a community space for stakeholder participation and a technology demonstration center. More importantly, the space provides an integrated design approach with the goal of revitalizing an otherwise stagnant rural community while using cutting-edge methods in energy optimization to demonstrate smart grid, renewable energy and energy efficiency technologies that include transparent photovoltaic (PV) windows and demand response technologies.

Designed and developed by a team primarily comprised of West Virginia-based firms and institutions, the Smart Office will earn the platinum level of LEED Certification (Leadership in Energy and Environmental Design) and will meet Living Building Challenge Criteria. Passive solar phase-change heat storage, living walls and gray water systems are featured in the design. In addition, solar PV panels and heat pipe solar thermal collectors will be added to the building’s roof to provide power and heat to the space.

The new walls in the Smart Office, built with gypsum that is used to clean exhaust from a local coal-fired power plant, and the plaza bricks made with fly ash, a by-product of coal combustion, provide a bridge between the new sustainable construction industry and traditional extraction industries.

The educational aspects of this space are perhaps the most innovative component of the project as traditional approaches to training offer very little with respect to real-world applications that are strongly desired by trainees but not typically addressed by contemporary approaches in workforce education. Training will be made available at the Smart Office for certification programs and job opportunities with a specific on-the-job training (OJT) emphasis. In order to simulate OJT where the opportunity for hands-on training is not available, an interactive 3-D computer model will share Smart Office technology worldwide, allowing the Smart Office to showcase the new direction in sustainability and workforce development through the creation of a virtual curriculum that provides the user with a series of interactive scenarios that better prepare West Virginia’s workforce for real-world jobs in the construction sector.

Innovative approaches to workforce development include addressing not only educational barriers but also cultural barriers typically found in our rural regions. To address these barriers the Coalfield Development Corporation’s 21st Century Jobs Initiative has created a transitional mentorship program designed to bridge the gap between school and work by developing community assets such as affordable housing and community buildings. Skills include construction and deconstruction labor. Crews gently demolish dilapidated structures, reusing the materials or recycling them, thereby reducing waste and providing low-cost materials to repair sub-standard structures. Coalfield Development Corporation’s work crew is presently receiving OJT while constructing the Smart Office and receiving training in a variety of certifications including LEED Green Associates.

The Smart Office is set to open in 2013 and will provide access to advanced technology, world-class training and unique opportunities not only to the town of Williamson but to the entire world. A spark of imagination, access to a world of training and increased opportunity may be all that is needed to excite young West Virginians and reenergize Williamson’s economy.

By Thomas Worlledge
Lucy Swecker
Lucy Swecker is a 2011 graduate of West Virginia Wesleyan College where she studied elementary education and communications. As a 2011-2012 Fulbright Scholar, she taught English at Kyungpook National University’s Attached Elementary School in Daegu, South Korea. Swecker will begin her teaching career statewide in 2012 as a third grade teacher in Upshur County while pursuing a master’s degree in education at her alma mater.

Mark Swiger
Mark Swiger is the Social Studies Department chair and Sustainable Schools and Entrepreneur Club advisor at John Marshall High School. He is a member and co-founder of Sustainable Learning Systems and the Green Schools Leadership Institute, and he is a founding member of the West Virginia Sustainable Schools Program. Swiger is also a member of several organizations, including the West Virginia Department of Education Entrepreneurship Stakeholder Committee. An Elkins native, Swiger resides in Wheeling with his wife and family.

Governor Earl Ray Tomblin
Governor Earl Ray Tomblin serves as the 35th governor of the Mountain State. Throughout his public service career, the Logan County native has remained dedicated to creating a better West Virginia. Since becoming governor, he has put more West Virginians back to work, reduced the tax burden on families and businesses, made testing while driving illegal, signed landmark mine safety legislation, helped crack down on drug abuse and took bold action to help prevent teenage suicide.

Marta Tankersley
Marta Tankersley is a communications major at West Virginia State University (WVSU) where she serves as editor in chief of the campus news magazine, The Yellowjacket. A 2012 summer intern for West Virginia Executive, Tankersley is a member of the Public Relations Student Society of America and the West Virginia Filmmaker’s Guild. She was also recently named director of Tower Communications, WVSU’s public relations and marketing firm.

Patrick Varah
Patrick Varah is the director of Public Relations at Academy Programs, where he has been employed since 2004. A native of Taylor County, he graduated from Shepherd University before receiving a master’s degree in journalism and mass communications with an emphasis on public relations from Marshall University. He resides near Jane Lew with his family.

Thomas Worledge
Thomas Worledge is a manager of McKale & Associates, president of the board for the U.S. Green Building Council of West Virginia and former president of the West Virginia Chapter of the American Institute of Architects. A nationally recognized expert in sustainable design, he has published numerous articles and spoken to architectural students, engineering associations and business groups on sustainable design issues.

JoEllen Zacks
JoEllen Zacks is a mother, lawyer and community leader who spends her days changing the world and the lines box. Before moving to Charleston in 2005, she was the senior director of strategic communication for the American Bar Association where she directed national campaigns and led strategic planning and spokesperson training nationwide. Zacks currently serves as the vice president of the Mountaineer Montessori School Board of Directors.

Bryan Ward
Bryan Ward is a public historian that works as the assistant director of the West Virginia State Archives. Since his graduation from WVU in the 90s, Ward has been actively promoting the state’s history as an educator, executive director, historian, grant writer, adjunct history professor, historic preservation consultant and all around ambassador for the state. His work includes publications on Arthurdale and New Deal Communities, the Kennedy campaign of 1960 and West Virginia-focused topics. He is currently working on a book about West Virginia innovators.