

## THE NATIONAL COMPOSITE CENTER HOLDS RIBBON CUTTING FOR NEW DAYTON CAMPUS

The National Composite Center (NCC), along with partners Montgomery County, the City of Dayton, Citywide Development Corp., Dayton Development Coalition (DDC) and Liteflex LLC held a special Ribbon Cutting Ceremony to recognize the Center's newest investment in the composite industry and the Dayton region – the Dayton Campus for Advanced Materials Technologies (DC-AMT).



*Lou Luedtke, NCC President and CEO addresses community guests and business leaders at DC-AMT Ribbon Cutting.*

The County, City of Dayton, Citywide, Dayton Development Coalition and Liteflex teamed with NCC to contribute funds for building improvements totaling more than \$1,000,000. The funds helped to launch the new Campus and initiate building renovation activities. The building is owned by entrepreneur John Prikkel, President of Liteflex. NCC's use of the building is under a lease created and managed by Citywide. NCC is investing a Third

Frontier Project grant for \$1,500,000. The Center received the grant in May for nano-enhanced sheet molding compound (SMC) scale-up. NCC is using the funds to purchase equipment for the project that will be operated and housed at DC-AMT.



*(From l to r) Montgomery County Commissioner Charles Curran, Interim City Manager Rashad Young, Montgomery County Commissioner Dixie Allen, Southwest Priority Board Chairperson Georgia Wortham, City Commissioner Dean Lovelace, Bootsie Neal, Executive Director, Wright-Dunbar Inc and other community leaders cut the ribbon.*

NCC is also taking the lead on seeking tenants for the new Campus. Based on the Center's economic development model, Campus services will accelerate tenants through their initial growth phase by helping them to bring products to market using breakthrough technologies. San Diego, California-based DR Technologies Inc., (DRT) has already committed to locate newly acquired Vector Composites Inc., at the Campus.

"The launch of the Campus and the building upgrades that are currently underway could not have happened without the cooperation facilitated

by the County, the City of Dayton, Citywide, Dayton Development Coalition and Liteflex," said Lou Luedtke, President and CEO of NCC. "By working together as a team, these groups made it possible for us to invest in the community by revitalizing an existing structure and reinventing it into a facility where invention and innovation can be nurtured."

Philip Mowry was introduced as Chief Operating Officer for DC-AMT, a dual role for Mowry who also serves as Vice-President for NCC.

"The revolutionary materials and processes that will be developed at DC-AMT will help equip manufacturers in Ohio and across the United States with the tools they need to compete in a global marketplace," Mowry said. "We're excited about the opportunity to forge another link in Ohio's Composite Valley, attract and retain high tech skills and help manufacturers bring new composite products to market faster."

## COMPOSITE ADVANTAGE TO INSTALL FRP BRIDGE DECK

Composite Advantage LLC, a comprehensive source for composite manufacturing using closed molding technology was tapped to produce an FRP vehicular bridge deck for NCC's Composites For Infrastructure (C4I) program. The Summit County Ohio bridge deck integrated sandwich construction with vacuum infusion.



*FRP bridge deck panels ready for delivery.*

Using multi-axial and uniaxial fabrics with vinyl ester resin, Composite Advantage also incorporated two layers of the TYCOR® fiber reinforced foam core. TYCOR is produced by WebCore Technologies, Inc. The deck will be installed in October.

Composite Advantage will also showcase its new Fiber Reinforced Polymer (FRP) bridge deck product at COMPOSITES & POLYCON 2006. The molded sandwich deck will be exhibited at NCC's Booth # 2328 and WebCore's Booth #2125. NCC spun off Composite Advantage in 2005 to take over production of the Center's commercial successes in the closed molding arena.

Composite Advantage specializes in large structural panels that combine the unique features of polymer composite materials with

advanced manufacturing techniques. The manufacturer is also providing a new class of closed molding techniques to customers that do not traditionally consider composites to solve unique problems or add value to existing products.

Composite Advantage's range of closed molding techniques include Vacuum Infusion, Resin Transfer Molding (RTM) and RTM Light processes. The company's technical expertise in composites and efficient manufacturing processes allow Composite Advantage to fill industry niche demands for high quality, low to medium volume, custom manufacturing.

In addition, Composite Advantage's lean manufacturing cells allow the company to quickly change out tooling to handle the variations customers may require for "families" or groupings of parts. Housed at NCC, Composite Advantage's quick response time is complimented by its access to a wide range of support technologies.

#### **NCC EXHIBITS AT COMPOSITES & POLYCON 2006**

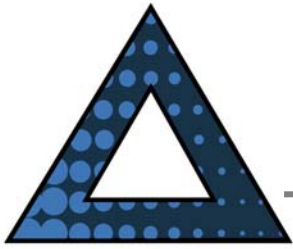
NCC will showcase key technologies including its signature Rapid Fiber Preforming, Long Fiber Thermoplastics (LFT), closed molding and testing services at Booth #2328 at COMPOSITES & POLYCON 2006. In addition to seeing the types of sample parts these technologies can produce,

visitors will be able to interact with composite design experts.

The Center's comprehensive design optimization lineup has been organized by Dr. Brian Knouff under new company Composites DOC, LLC. Housed at NCC, the company expands the range of design resources available to customers. Key partners of Composites DOC include VR&D (VanderPlaats) and Lohitsa Global. VR&D and Lohitsa will also be available at the NCC Booth. VR&D provides the finite element analysis package, Genesis™ Design Optimization software. Lohitsa will expand NCC's design capabilities by supporting the Center's customers with an extended staff of 120 design engineers experienced in a number of forms of math modeling and finite element packages.

NCC's in-house capabilities and engineering application expertise have positioned the Center as a true business technology partner for manufacturers. Equipped with a unique resource of knowledge and specialized skills, NCC can take process development, process troubleshooting, product development, prototyping and pilot production from concept to factory ready products much faster than conventional production development methods.

To help advance the fast growing market of nano-composites, NCC received Wright Frontier Grants to house and support three projects. The Center received \$1.5 million for



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production, acceleration and commercialization of a new fabrication process for carbon nanofibers and nanotube membranes or "buckypapers." A grant for \$1,800,000 is being used to launch a program for nano-enhanced sheet molding compound (SMC) scale-up for production of composite parts that retain the strength of conventional materials yet are significantly lighter and thinner. A Center for Multifunctional Polymer Nanomaterials and Devices (CMPND) is also being established at NCC. All three programs will use NCC's quick commercialization capabilities to bring new nano-composite products to market.

#### IN THE NEWS

After successfully demonstrating its capabilities to the Federal Transit Administration (FTA), the University of Alabama at Birmingham (UAB) and the National Composite Center (NCC) collaborated to make a Long Fiber Reinforced Thermoplastics (LFT) battery box access door for North American Bus Industries (NABI). The production ready composite part replaced the bus manufacturer's steel door delivering a 60 percent weight reduction and an estimated cost savings of 44 percent. An article about this case study is featured in CM Magazine's September issue.

NCC will be featured in CM Magazine's October issue for its efforts to advance projects in nano technology. Awarded a Third

Frontier Project grant totaling \$1,800,000 in May, NCC is teaming with Core Molding Technologies and other collaborators such as Inspired Innovations, LLC; Iten Industries; Polymer Ohio and Comfort Line to scale-up production for nano-enhanced sheet molding compound (SMC) composite parts that retain the strength of conventional materials yet are significantly lighter and thinner.