



EDA

Economic Development America

COMPETING GLOBALLY ★ GROWING REGIONAL ECONOMIES ★ CREATING JOBS

SUMMER 2007

IN THIS ISSUE

EDA's Excellence in Economic Development 2007 Award Winners

★ Special feature:

The Five New Realities of Economic Development in the 21st Century

by Sandy K. Baruah, Assistant Secretary of Commerce for Economic Development





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Table of Contents

- 4** The Five New Realities of Economic Development in the 21st Century
By Sandy K. Baruah, Assistant Secretary of Commerce for Economic Development
- 6** EXCELLENCE in URBAN OR SUBURBAN ECONOMIC DEVELOPMENT
Creating a Gateway to the Future
By David P. Forsberg, President, Worcester Business Development Corporation
- 10** EXCELLENCE in RURAL ECONOMIC DEVELOPMENT
Daring to Endeavor! The Ohio State University Endeavor Center
By Jerry Driggs, Manager, The Ohio State University Endeavor Center
- 12** EXCELLENCE in ENHANCING REGIONAL COMPETITIVENESS
KCSOURCELINK: Providing Entrepreneurs the Right Resource at the Right Time
By Maria Meyers, Network Builder, KCSOURCELINK
- 15** EXCELLENCE in ECONOMIC ADJUSTMENT STRATEGIES
Strengthening Knowledge-Based Initiatives in New Orleans: Growing the Biosciences Industry
By Caitlin Cain, Economic Development Director, Regional Planning Commission of New Orleans
- 18** EXCELLENCE in TECHNOLOGY-LED ECONOMIC DEVELOPMENT
Institute for Human and Machine Cognition: Creating a Habitat for Innovation
By Dr. Pamella Dana, Senior Advisor for Strategic Initiatives, Institute for Human and Machine Cognition
- 22** EXCELLENCE in COMMUNITY and FAITH-BASED SOCIAL ENTREPRENEURSHIP
Pyramid Community Development Corporation: Changing Lives, Transforming Communities
By Genora Boykins, Chairperson, Pyramid Community Development Corporation Board of Directors
- 25** EXCELLENCE in INNOVATION
Paulding County, Georgia's Plan for Jobs, Growth and Environmental Sustainability
By Pat Crook, County Administrator, Paulding County, Georgia



EDA Excellence in Economic Development Awards 2007

To advance in the 21st century worldwide marketplace, our regions need to continually advance the art and science of innovation and competitiveness – not just in the private sector, but in our own approach as economic development professionals as well. It is difficult and important work, and one of our roles at the Economic Development Administration is to spotlight success. A key method for accomplishing this is to recognize “best practice” strategies through the EDA Excellence in Economic Development Awards program, and to share those best practices with economic development practitioners throughout the nation.

The Excellence in Economic Development Awards competition is open to nonprofit organizations, local, state and regional government entities, and universities and colleges. Nominations for each category were reviewed by a selection panel of highly qualified and independent economic development practitioners, academics and government representatives, and the winners were selected in early June 2007.

I am pleased to announce the following winners:

Category: Urban or Suburban Economic Development
Winner: Gateway Park, LLC, Worcester, Mass.

Category: Rural Economic Development
Winner: Ohio State University Endeavor Center
Piketon, Ohio

Category: Enhancing Regional Competitiveness
Winner: KCSourceLink, Kansas City, Mo.

Category: Economic Adjustment Strategies
Winner: Regional Planning Commission of
New Orleans, New Orleans, La.

Category: Technology-led Economic Development
Winner: Florida Institute for Human and Machine
Cognition, Pensacola, Fla.

Category: Community and Faith-Based Social
Entrepreneurship
Winner: Pyramid Community Development
Corporation, Houston, Texas

Category: Innovation
Winner: Paulding County Board of Commissioners,
Dallas, Ga.

These organizations have succeeded in addressing the new realities and the “what’s next” in 21st century economic development. This issue of *Economic Development America* is dedicated to sharing the innovative thinking, planning and execution that went into each of these award-winning economic development initiatives.

I trust you will find these articles as insightful as I have, and I thank the authors for sharing their experiences with us.

Sincerely,

Sandy K. Baruah
Assistant Secretary of Commerce
for Economic Development



MARK YOUR CALENDAR! EDA's fifth and final 2007 Economic Development Symposium is coming up on **September 26 in Kansas City**. EDA is hosting the entrepreneurship-themed event in partnership with its Denver and Chicago regional offices, the International Economic Development Council (IEDC) and the National Association of Regional Councils (NARC).

Don't miss this opportunity for learning, networking, and training related to EDA programs!

Attendance is free, but registration is required. For more information, visit www.iedconline.org/EDASymposia

The Five New Realities of Economic Development in the 21st Century

Assistant
Secretary of
Commerce for
Economic
Development

By **Sandy K. Baruah** As the head of the Economic Development Administration, I'm in the "what's next" business.

I am constantly asking myself and others questions like: What is the next strategy to keep the U.S. economy growing? What do economic development leaders need to do today to be able to take advantage of the next big thing tomorrow? How can our regional economies engage and succeed in the worldwide marketplace?

In order to answer these "what's next" questions, I believe we must consider "five new realities" of economic development in the 21st century global economy.

NEW REALITY #1: WE ARE IN A GLOBAL ECONOMY.

While perhaps the most obvious, it's also the most important. In the 21st century, we are truly in a global economy, or as New York Times columnist Tom Friedman says, the world is flat. In the new flat global marketplace, competition is not just from the firm down the road. Our competition comes from any person in any corner of the globe with a good education, a good idea, and a good Internet connection.

Let's put this into perspective with a little globalization quiz: Which of the following cars is the most "American" and which is the least "American:" the Ford Mustang, the Toyota Siena, or the Pontiac GTO? While car aficionados may know, the answer is not as obvious as it might appear.

- The Pontiac, while an American brand, is actually a product from Australia (GM's Australian subsidiary Holden) with a U.S.-built engine.
- Ford's iconic Mustang is an American product, built in America, and contains about 65 percent U.S. part content.
- The Toyota, while considered an "import," is not only built in America by American workers, it has a higher percentage of U.S.-sourced parts than the "all-American" Mustang.

So, yes, our competition is indeed global, but our understanding of what is American, and what is not, likely needs to be updated. With the global marketplace come opportuni-

ties for global partnerships – opportunities to expand our markets and increase our competitiveness. And, with 95 percent of potential customers for American products outside the United States, this reality becomes more important every passing day.

As we realize that both our potential markets and our competitors rest outside the confines of the United States, we must realize that our development approaches must grow beyond the traditional notions of competing against the city or county next door for the next "smokestack" prize.

NEW REALITY #2: THE PACE OF CHANGE WILL CONTINUE TO ACCELERATE.

Competition is intense, and the pace of change will continue to accelerate. It took 55 years for the automobile to spread to one-quarter of the U.S. population. It took 35 years for the telephone to do the same thing. The personal computer accomplished the same level of market penetration in 16 years, the cell phone in 13 years, and the Internet in only seven years.

Every day it seems the gadget we bought yesterday becomes outdated as the new and improved version hits the marketplace. There are good jobs that exist today that we couldn't even dream up four years ago: Podcast manager, blog writer, iPod accessory manufacturer, satellite radio host.

Even the nature of innovation itself is changing: Innovation is becoming multidisciplinary as different technologies converge, creating fields that didn't even exist just a few decades ago. People smarter than I am debate where bioinformatics or nanotechnology will take us, but all agree that they will become major drivers of the U.S. economy.

This new reality, in which cycle times for products and ideas continue to shrink, will require all institutions – public, private, educational and non-profit – to continually adapt and change. Those that don't are at risk. Those that do have the opportunity for reward.

Time is a master with no mercy. As leaders, we are all responsible for adapting and evolving our organizations to meet the challenges that time will bring. This is difficult, because with today's rapid pace of change, change is often necessary before people are ready to embrace it – a particular challenge for governments at all levels.

NEW REALITY #3: THE COMPONENTS OF COMPETITIVENESS CAN NO LONGER BE PURSUED SEPARATELY.

The world becomes a bit more complicated every day, and in order to respond to this increased complexity we must realize that the components of competitiveness can no longer be pursued separately. Just as technologies are converging to create new fields of innovation, so are the components of competitiveness merging to shape economic growth in the 21st century. This reality holds two important lessons at the local and regional levels:

First, the idea of workforce development, community development, economic development and educational programs occurring in separate silos can no longer be tolerated. These interconnected challenges must be tackled in concert.

Second, in our new 21st century global economy, we must acknowledge what we all learned on the school playgrounds of our youth – that we are stronger when we stand together than when we stand alone. Standing together means that we must look beyond traditional political jurisdictions – the city boundary, the county line, even the division between states – and work together. The competitiveness of America's companies is in large part tied to the competitiveness of the economic regions in which they do business.

NEW REALITY #4: PUBLIC-PRIVATE PARTNERSHIPS BECOME MORE CRITICAL EVERY DAY.

While governments at all levels, universities and other non-profit institutions are important players, we must not forget that the private sector is the most important element of any successful economic development strategy. Unless the private sector is ready, willing and able to invest in a community, economic growth simply will not occur, regardless of how much government spends. The private sector should not just have a seat at the table, but should actively be engaged as a full partner in strategies for economic growth. Within the parameters of public accountability, the private sector should be helping to shape the development strategies that will lead to more higher-skill, higher-wage jobs.

NEW REALITY #5: THE ABILITY TO INNOVATE IS THE ONLY SUSTAINABLE COMPETITIVE ADVANTAGE.

At the end of the day, it is the ability to innovate that is the only sustainable competitive advantage in the 21st century. It's not location. It's not even the cost of doing business. Factors

such as these will continually shift in a dynamic worldwide economy. But if a nation can maintain its edge in innovation, it will grow and prosper.

America is clearly the world's leader in innovation. The spirit of discovery is one of our national strengths. From Edison's light bulb to Jarvik's artificial heart to the iPod to the frozen pizza, we have brought more technological breakthroughs to the marketplace than any other nation – and this has made not just America, but the world, safer, healthier, more productive and more prosperous.

The 20th century undoubtedly belonged to the United States. Our leadership in the 20th century was founded on our ability to foster new ideas and bring them to fruition. At the dawn of the 21st century, we must not be complacent in our prominence. More than ever, international competitors are rapidly commercializing technological advances, educating highly skilled workforces and offering world-class research opportunities.

Companies – by necessity – must continually innovate to stay one step ahead of their global competitors, especially as the pace of change in our global marketplace continues to accelerate. If they don't, they will cease to exist. There are no pit stops in this race.

Meanwhile, government and nonprofit leaders at all levels have the same responsibility to adapt their approach to fit the changing times. Government – by design – moves slowly, and that can be a problem in our fast-moving economy. Unless government can offer flexible and innovative programs and tools to economic regions, we risk putting these areas that we are responsible for at a competitive disadvantage in the global marketplace. Innovation is just as important in the public sector as it is in the private sector.

THE FIVE NEW REALITIES OF 21ST CENTURY ECONOMIC DEVELOPMENT

So, these are some of the “new realities” of 21st century economic development:

- We are in a global economy.
- The pace of change will continue to accelerate.
- The components of competitiveness can no longer be pursued separately.
- Partnership with the private sector is critical.
- Innovation is the only sustainable competitive advantage.

We must consider these new realities as we work to answer the “what's next” question in 21st century economic development. If we can innovate as economic development professionals to address the challenges and capitalize on the opportunities presented by these new realities, our regions will succeed in the worldwide marketplace, and our communities will prosper.

I, along with EDA professional employees across America, look forward to working with you to strengthen regional economies. ★ ★ ★

Creating a Gateway to the Future

President,
Worcester
Business
Development
Corporation

By David P. Forsberg By confronting reality, securing resources, and implementing change, former industrial cities can successfully transition into vibrant centers of economic growth. Worcester, Massachusetts, is one community on the threshold of a significant economic turnaround, thanks to the transformation of former brownfields into an exciting project that has already begun to create new jobs and tax revenue.

Gateway Park is literally creating a new gateway to Worcester, turning a formerly blighted area into a showcase for the city's growing life sciences and bioengineering industry. Bringing the project to fruition, however, required teamwork, planning and a great deal of patience.

Confronting reality

Located at the northern end of the Blackstone Valley in central Massachusetts, Worcester played a major role in the Industrial Revolution in the United States and flourished until about 50 years ago. When its manufacturing industry dropped steeply, Worcester was left with few opportunities for economic growth; today, the city finds itself with over 200 documented brownfield sites. While there has been new investment in some areas of the community, other areas of

Worcester still contain pockets of distress, underutilized parcels and vacant facilities.

Recognizing the mark left by its industrial past, Worcester developed a Comprehensive Economic Development Strategy (CEDS) in the early 1990s to revitalize its downtown and certain neighborhoods facing high social and economic distress. Squeezed for usable space, Worcester recognized that its biggest hope for economic expansion and urban revitalization lay in reclaiming its brownfield sites to accommodate new and innovative industries.

Creating partnerships

Rising to the challenge was the Worcester Business Development Corporation (WBDC), whose mission is to serve as an innovative and leading force in the economic



Gateway Park is strategically located to revitalize a large area of brownfields at the north end of downtown Worcester, creating a new gateway to the city.

Gateway Park, LLC was formed to create a mixed-use, life sciences-based park where Worcester Polytechnic Institute would locate its new Bioengineering Institute.

development of Worcester and the region. WBDC has a long history of working collaboratively on brownfields redevelopment and urban revitalization projects. Yet critical to the WBDC's success in addressing the city's economic situation was identifying both the right project and the right partner.

Worcester Polytechnic Institute (WPI), a university with a history of integrating science and technology-focused educational experiences into the community, emerged as the natural choice. WPI had recently established the Bioengineering Institute (BEI), an interdisciplinary research and development organization created to develop and commercialize innovative, life sciences-based technologies. With the support of political and community leaders, WPI was already working to ensure that the BEI would become a hub for technology development, technology transfer, small business incubation, investment and manufacturing.

Weaving WPI's vision into Worcester's economic agenda only made sense. Thus Gateway Park, LLC was formed as a public-private partnership to create a mixed-use, life sciences-based park where WPI would locate its life sciences and bioengineering facilities. The project would fulfill multiple goals: meeting the city's overall economic development strategy; revitalizing downtown and abutting neighborhoods by improving infrastructure and parking; remediating brownfields; creating and retaining jobs; and bringing new businesses and 24/7 activity to the area.

The team also recognized that by creating affordable space to meet the specialized needs of life science companies, they could capitalize on a growing industry and the trend among these businesses to locate west of Boston. In addition, although the partners of Gateway Park, LLC are both non-profits, the intent of the project was to keep all but one of the properties that would comprise the new complex on the city tax rolls.

The right location makes all the difference

The location that was identified for the project provided a unique opportunity to clean up a blighted area that is the first view of Worcester seen when approaching the city from the north. This 55-acre commercial/industrial district, just off Interstate 290, contained multiple contaminated and underutilized properties. Adjacent to the northern end of downtown Worcester, the site also is located near WPI's campus and was considered a viable location for the BEI.

Paying attention not to displace any thriving businesses on the site, an 11-acre area was identified for the first phase of the park. This area included eight separate parcels owned by five different entities, making land assembly a major challenge. In some cases, simply tracing the current property owners created additional obstacles. But after five parcels owned by Parker Metal were purchased, the Gateway Park team was able to purchase the adjacent parcels through private negotiations as well.

Planning out the vision

A master plan was commissioned following site selection. The master plan process involved the entire 55-acre area, which included the eight parcels owned by Gateway Park, LLC, five parcels owned by the city of Worcester, and the remainder in private ownership. Two of the 27 buildings in the project area were completely vacant and several others



WPI's Life Sciences and Bioengineering Center is a rehabbed, historic brick mill building with space for office, retail and meeting use, joined with a new, four-story laboratory building. The completed facility opened in April 2007.

At full build-out, the 11 acres will be home to 500,000 square feet of commercial space and 1,600 to 2,000 high-wage, high-skill jobs, with the vast majority in the bioengineering and life sciences field.

were less than fully occupied. The site also had a high concentration of historic institutional and industrial buildings, several of which had previously been rehabbed for office, retail or institutional uses. In addition, two National Register historic districts – the Lincoln Armory Square District and the Washburn and Moen Northworks District – comprised much of the project area.

The 11-acre parcel chosen for initial renovation and development was envisioned as a lively, pedestrian-friendly work and residential area. A series of plazas, open spaces and restaurants would serve the area's residents and employees, as well as people from downtown, WPI and other surrounding areas. Final plans call for the Gateway site to house five life sciences buildings totaling 500,000 square feet of flexible, adaptable lab space, with a two additional parcels available for housing and retail development. As the master plan progressed, WPI furthered its commitment to the project by deciding to locate the BEI in a new Life Sciences and Bioengineering Center to be built at Gateway Park.

Because the master plan was comprehensive for the entire project area, it also included proposed long-term uses for parcels not owned by Gateway Park. Development of these parcels will depend on future acquisition by Gateway or the interest of the current owners.

Facing environmental challenges

Confronting reality when revitalizing industrial areas means facing up to environmental cleanup challenges. During the master planning stage, a consultant was hired to investigate the type and extent of contamination for eight properties at the site. In most cases, the sampling data indicated minimal environmental contamination. Even though specific concentrations of contaminants exceeded state notification thresholds, subsequent risk analyses of overall site conditions indicated that limited remediation was necessary to achieve regulatory closure on six parcels, allowing development plans to progress.

However, two parcels required extensive remediation. One property had a long history of oil releases from one or more underground storage tanks, and groundwater contamination issues had to be addressed. Contaminated soil was removed and the site achieved regulatory closure in 2004.

But the largest environmental issues were uncovered on another parcel of land while the then-current owner, New England Plating, was dismantling its operations. A complex site with a long history of industrial uses, this parcel required

a much more aggressive cleanup strategy. Because the plating company was located on one side of an open culvert and had been dumping its industrial waste for decades, cyanide, heavy metals and EPHs were detected in the soil, as well as in the culvert. The result of these findings led to a revision of the master plan to locate parking over the most contaminated area. Denser development was planned for cleaner parcels, resulting in the need for a zoning change. This change allowed for removal of the most contaminated soil and a cost-effective reuse of the site.

When the environmental cleanup was completed, four of the 11 acres had been remediated.

Working with neighbors

Recognizing the stake that neighboring businesses and residents have in the process, the Gateway partners developed a community participation plan that went far beyond holding public meetings. First, adjacent property owners and neighborhood groups participated in the master plan process. Later, representatives of Gateway Park attended those groups' regularly scheduled meetings, or called special meetings to keep stakeholders informed of site assessment and remediation activities, provide progress reports, solicit opinions and feedback, and offer regular opportunities for dialogue. Often, the concerns raised did not deal with the environmental components of the project, but rather with traffic or other development-related issues. Concerns such as building height were



This building stood on the site's most contaminated parcel. The findings of the environmental investigation led to a revised master plan to locate parking over this area, and denser development was planned for cleaner parcels.

addressed, and a five-story height limitation was placed on a parcel of land abutting a condominium complex and incorporated into the overall master plan for Gateway Park.

Gateway Park, LLC was also engaged in a process with the Worcester City Council and its Commerce and Development Committee to obtain their endorsement of the master plan and zoning change approval. With enthusiastic support from both the neighborhoods and the city for the master plan and the zoning change, the Gateway Park development proceeded through site assessment, building demolition, remediation, and construction of roadways, a garage and WPI's Life Sciences and Bioengineering Center. All the while, the Gateway team continued to provide regular updates to both organized and ad hoc groups and the city, and readily addressed any questions or concerns.

Securing resources

As with other brownfields projects, Gateway Park faced a number of funding issues related to the remediation of the site. For example, there was a lack of funding available for asbestos and lead paint removal, and existing brownfields programs covered only a fraction of ground-based cleanup costs. Without the support of former mayor Timothy P. Murray, now Massachusetts lieutenant governor, and other elected and appointed city officials, the project would not have met its financial goals. Congressman James McGovern and the city were aggressive in working with Gateway to seek federal and state funding for the project, resulting in the commitment of several million dollars in grants.

The total cost of the project to date is \$80 million, including investments in cleanup, renovating and building the WPI Life Sciences and Bioengineering Center, and constructing a parking garage, surface lots and roadway improvements.

Implementing change

After facing environmental cleanup and financing challenges, the Gateway team tackled the design phase for the first building that would be constructed on the site, WPI's Life Sciences and Bioengineering Center. Being careful to pay tribute to Worcester's industrial heritage, the team worked with architects to design a building that would blend in with the adjacent brick mill and other nearby buildings. An existing building on the site was rehabbed and merged with a new building to create the completed facility, which opened in April 2007.

The connected structures are a new four-story laboratory building and a smaller, renovated four-story industrial building that includes space for office or retail uses on the first level, and office and meeting facilities on the upper levels. Designed for cross-collaboration among scientific disciplines, the new center has lab space comprising open bays that are allocated according to research area, rather than department affiliation. The building also has small offices for graduate students, shared equipment, and specialized facilities such as warm and cold rooms, tissue culture rooms, microscopy suites and facilities for laboratory animals.



Designed for cross-collaboration among scientific disciplines, the center has lab space comprising open bays that are allocated according to research area, rather than department affiliation.

WPI has already leased more than 80 percent of this 125,000-square-foot building for its life science-related graduate research programs (from four academic departments), the BEI, and the university's Corporate and Professional Education Division. In addition, Massachusetts Biomedical Initiatives, a nonprofit economic development organization, has moved its headquarters and a new incubator facility into the building. Blue Sky Biotech Inc., a contract research organization, is the anchor tenant, leasing approximately 3,800 square feet. Blue Sky already has ties to WPI, whose academic researchers possess strengths in biophysics that meld well with Blue Sky's discovery biologists.

The center now contains 369 new and relocated jobs in the bioengineering and life sciences fields. For the rest of Gateway Park, potential tenants have already been identified for two buildings, and two additional parcels are ready for development and seeking tenants. At full build-out, the 11 acres will be home to 500,000 square feet of commercial space and 1,600 to 2,000 high-wage, high-skill jobs, with the vast majority in the bioengineering and life sciences field.

A bright future

The City of Worcester, the WBDC and WPI all have worked in partnership to make Gateway Park a success. A site that once hummed with the machinery of the Industrial Revolution is now home to a modern research center, and soon will be home to numerous emerging and established life sciences companies. Today, Gateway Park is making room for a new economic revolution in the life sciences. ★★

For more information, visit <http://www.worcesterbdc.com>.

Daring to Endeavor!

The Ohio State University Endeavor Center

Manager,
The Ohio State
University
Endeavor
Center

By Jerry Driggs

The Ohio State University Endeavor Center is a training center and business incubator that is spurring economic growth and diversification in southern Ohio. The center provides a set of services unique in its rural, four-county area – office and light industrial space for lease, in-depth counseling, access to advanced technology, and networking opportunities – all for new and emerging businesses.

The Endeavor Center opened for business in Piketon in July 2005, but the process of its development actually began in the early 1990s. The Ohio State University (OSU) South Centers – research and extension programs of OSU's College of Food, Agriculture, and Environmental Science, and the Ohio Agriculture Research and Development Center – opened during this period to help local farmers and entrepreneurs use applied research to make informed business decisions. As the extension/research center grew, a business development center was created to meet the demand for technical assistance to business owners. After several years of sustained growth, it became clear that a feasibility study was needed to determine the potential for a business incubator to succeed.

The feasibility study considered the characteristics of the potential incubator's location, the western Appalachian region of southern Ohio. It has historically suffered high

rates of unemployment, low educational attainment and low median household income. The region's median income of \$28,500 is nearly \$16,000 below both state and national levels. Only 73 percent of the region's population has obtained a high school diploma, and just 6 percent possesses an advanced degree.

While noting these factors, the study also recognized many assets: the can-do spirit and independence inherent in the region's residents; several industry clusters of significant strength; and the support of local and state officials for the creation of a center to foster economic development.

The study concluded that an incubator was feasible, and the U.S. Economic Development Administration, the U.S. Department of Agriculture and the Ohio Department of Development each provided funding for construction. With those funding partners lined up, The Ohio State University agreed to fund the remaining portion of the project and to locate the center on the OSU South Centers campus in Piketon. The Endeavor Center cost \$4 million to construct and contains approximately 20,000 square feet of office space and 7,000 square feet of training classrooms.

A model for business

The Endeavor Center's mission is two-fold: first, to provide services that help new and emerging businesses grow and create high-tech, high-skill, high-wage jobs; and second, to demonstrate to the business partners housed in the center how a successful, growing business operates.

While the Endeavor Center is home to more than 20 small businesses, it is also a small business itself. Its yearly incubator revenue of \$500,000 is derived from three primary sources: office rental to businesses housed in the facility, classroom rental to community groups, and "virtual" incubator clients. (Because demand for space has exceeded avail-



The OSU Endeavor Center provides services and space to help new and emerging businesses grow, in a region with historically high rates of unemployment and low incomes.

ability, the center developed a virtual incubator program in which businesses can use the center for phone, address and mail service, to meet with clients, and also receive technical assistance. These businesses also get first right of refusal when space becomes available at the center.)

Since December 2005, the center has operated at greater than 90 percent occupancy, but it also has experienced many of the same issues that any growing business encounters. Its successful operation has hinged on two key strategies contained in its plan for achieving financial sustainability.

First, a partnership was formed with the Southern Ohio Diversification Initiative (SODI). SODI was formed to lead community efforts in exploring reuse options for the Department of Energy's uranium enrichment facility in Piketon, and to retrain laid-off plant employees for other occupations. SODI saw the Endeavor Center as a way to address both issues, and agreed to supply operating funds for the center's first five years, until a sustainable financial position could be reached.

The second strategy was to service a local industry cluster that is based on two projects under way at the DOE plant – a cleanup project for eventual return of the site to community use, and the development of a new uranium enrichment facility based on centrifuge technology. While many of the contractors for these projects do not necessarily meet the mission of the incubator, it was determined that they would provide important contacts and networking opportunities for small businesses housed in the center, and also be able to support higher rental rates. Thus, a two-tiered rental rate system was implemented, based upon how closely a prospective partner meets the mission of the center.

A wonderful synergy between DOE contractors and local businesses has since developed. All the small businesses housed in the center have benefited from regular contact with the firms participating in projects at the plant site. Many now have contracts with one or more of the projects' contractors, and several have significantly revamped their product offerings and staffing to support major new opportunities presented by this partnership.

A common complaint in the community about projects conducted at the plant site had been the lack of economic impact on local small businesses. However, the synergy generated between the small businesses housed at the Endeavor Center and the DOE contractors who use the facility as a base of operations has significantly changed that. Not only have contracts been granted to small business partners at the center, but the center has become a point of contact for other small businesses in the area that want to make connections and participate in projects at the plant site.

The training/classroom space at the Endeavor Center also has played a key role in encouraging this synergy. The facilities include a sixteen-station computer lab, a large conference room, two smaller classrooms and a small conference room, and are available for other businesses in the community to use.



In addition to space for businesses, the Endeavor Center includes a sixteen-station computer lab, a large conference room, two smaller classrooms and a small conference room, all available for other businesses in the community to use.

Structured for success

Endeavor Center clients have access to a wide variety of OSU South Centers personnel with expertise in direct marketing, small business development, manufacturing and technology, and much more. In addition, the Small Business Development Center at OSU South Centers provides access to counselors, and Endeavor Center management and staff also are known for providing expert, unbiased business advice to all potential entrepreneurs.

The Endeavor Center has experienced rapid growth in occupancy and revenues and still managed to anticipate and surpass the needs of its business partners and the community. One reason the center has been able to do this is the leadership of the Operational Council. Formed several years before construction of the center began, this advisory board comprises community leaders from various fields, including academia, local government, economic development professionals and successful local business owners. The council created policies and procedures for nearly every phase of incubator operations, such as partner occupancy, graduation and counseling. It also helps determine the appropriate mix of business types and sets the center's strategic goals.

Results

In two years of service, the Endeavor Center has helped its business partners create more than 80 high-paying jobs for the community. The center has created synergy between local small businesses and DOE contractors, resulting in the award of several million dollars in contracts to businesses both housed in the center and in the broader community.

The Endeavor Center looks to the future, endeavoring to be a shining example of product and service innovation as it assists local businesses in creating good jobs for the economic benefit of the region. ★★ ★

For more information, visit <http://endeavor.osu.edu/>.

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Builder,
KCSourceLink

By Maria Meyers Starting and growing a small business is an immense challenge. What may begin as a life-long dream often becomes mired down in the day-to-day burdens of managing and growing a business – developing business plans, conducting market research, building Web sites, managing cash flow and supervising employees.

In regions around the country, countless service providers are available to help entrepreneurs manage these challenges. This abundance, however, often leaves small business owners with fewer answers and more questions: Which organizations are the most knowledgeable about *my* kind of business? Which can offer the help I need *right now*? Which can help me two years down the road, when my needs change?

Kansas City-based KCSourceLink was created to solve this problem by connecting small businesses quickly and effectively with the resources to help them grow and prosper.

How KCSourceLink works

KCSourceLink was created in 2003 by a powerful collaboration among the Ewing Marion Kauffman Foundation, the U.S. Small Business Administration and the University of Missouri-Kansas City's Henry W. Bloch School of Business and Public Administration. Since then, KCSourceLink has emerged as a major component of the Kansas City region's economic development strategy, and is now part of the Bloch School's Institute for Entrepreneurship and Innovation.

KCSourceLink connects a network of more than 140 resource partners – organizations that offer business-build-ing services for small business success. KCSourceLink strengthens the network by:

- Raising community awareness to bring more entrepreneurs into the network and increase entrepreneurial activity;



Mike Jackson, president and CEO of MicroJek in Kansas City, Missouri, needed help positioning MicroJek's nanotechnology product within the biotech community in the Kansas City region. KCSourceLink helped him successfully network into resources and influential business leaders.

- Identifying gaps in services and initiating innovative programs and strategic alliances;
- Creating a continuously improving process for providing quality services;
- Finding new ways to increase funding for resource-provider programs; and
- Measuring economic impact.

The network is made up of many kinds of organizations: incubators, small business development centers, organizations such as SCORE, groups that provide microloans, angel networks, chambers of commerce, economic development corporations and more.

Aspiring and existing business owners are referred to the appropriate resource by calling a hotline number, visiting our Web site (www.kcsourcelink.com), or by approaching any of the resource partner organizations. Because of the

tools, training and networking facilitated by KCSOURCELINK, the resource partners have knowledge of and access to the same information as our referral specialists, or “network navigators.”

As part of the hotline referral system, KCSOURCELINK’s network navigators follow up with the entrepreneur to assess the appropriateness of referrals, quality of service, need for additional resources, and economic impact. Follow-up is done four to six weeks after initial contact, at six months and again at one year.

Establishing the network

While it would be impossible to attribute the idea for KCSOURCELINK to any one person or group, it blossomed thanks to work done at The Bloch School to improve the scholarship and instruction of entrepreneurship on the UMKC campus. As part of an urban university, The Bloch School links the academic and business communities in ways that serve the small business owner and provide experiential learning for UMKC students.

In 2000, Bloch School entrepreneurship outreach programs were moved to a small building on the outskirts of the UMKC campus, and other business development organizations were invited to join them. By 2003, about 20 support organizations were located together, creating a one-stop-shop for entrepreneurs.

As the building became populated, discussions among The Bloch School, the U.S. Small Business Administration and the Ewing Marion Kauffman Foundation began to focus around expanding this network throughout the community. After all, the region enjoyed a rich base of entrepreneurship support organizations, about 150, all over the metro area.

Given Kansas City’s far-flung geography, leaders believed that any one location could never serve the entire market, so the network would need to be more than a single building. In addition, it would be much more difficult to recruit partners and build community-wide support for a building in Kansas City, Missouri’s midtown.

The idea evolved that a network, rather than one physical location, would be the best way to link partners from all parts of the metro area. The challenge for entrepreneurs was that they often didn’t know where to start, and got shuffled from place to place in search of the right service provider. In this model, wherever an entrepreneur started in the network would be the right place, because he or she would be referred to the right resource for their needs and stage of business. Thus, KCSOURCELINK moved from being a one-stop-shop to being a metro-wide, bi-state link for entrepreneurs.

Often, regions organize virtual entrepreneurial networks that allow online peer-to-peer mentoring between entrepreneurs and small business owners. It was noted many times that Kansas City couldn’t have a network without the non-profit service providers. KCSOURCELINK’s approach is to make the nonprofit service providers key constituents, equal to the entrepreneur. Also, KCSOURCELINK does not compete with the



Amanda Mindham, president and CEO of J&A Traffic Products in Blue Springs, Missouri, was able to expand her business after KCSOURCELINK referred her to business planning and financial mentoring programs.

service providers by offering services directly to entrepreneurs, but instead focuses on assessment and referral.

Getting organized: The tools

With more than 100 partners involved, a process and tool had to be developed that would provide an easy way for the entrepreneur to access the right resource at the right time. The Resource Navigator was created to organize resource partner programs and services into a user-friendly, online database. Entrepreneurs and service providers alike can go online, answer a few questions about business needs and get to the specific resources they need.

In addition, many of the KCSOURCELINK partner organizations did not have a method for managing clients and tracking impact. Fifteen of the partner organizations came together to brainstorm about a good management system, and out of that process Biz-Trakker was born. Biz-Trakker is a versatile client management system that allows for easy referrals between organizations, manages events, and has an embed-



Barbara Graham, owner of Dollars & Sense in Kansas City, came to KCSOURCELINK to help her transition from corporate America to owning a retail store. KCSOURCELINK matched Graham to resources that helped her obtain financing, business licenses and permits, and connect to product wholesalers.

ded survey system that measures business growth and economic impact. It can also aggregate information anonymously across organizations to determine entrepreneurial activity in a region.

Accomplishments and impact

Four to six weeks after a contact is made, KCSOURCELINK follows up with entrepreneurs to make sure they were connected to the resource they needed. Ninety-eight percent of feedback from these follow-up calls is positive. In addition, KCSOURCELINK surveys clients to determine impact of the contact. For example, 100 respondents to a client survey reported that:

- 16 started a business;
- 13 expanded significantly;
- 20 are actively engaged in growing a new business;
- 12 solved an operational problem; and
- 14 made significant changes to the nature of their business.

Selected accomplishments since June, 2003 include the following:

- **140+ KC-area resource organizations** are partners in the KCSOURCELINK network.
- **2,600 aspiring and existing business owners** have accessed the KCSOURCELINK network via telephone hotline or e-mail.
- **Over 6,700 online searches** for resources have been made in The Resource Navigator since its activation in January, 2004.
- **An average of 6,700 visitors per month** access the KCSOURCELINK Web site for other valuable resources, including a wide variety of research in the Resource Library, a comprehensive list of network and sponsor organizations in the Resource Directory, news articles and client success stories.

- Partner surveys show that resource organizations also benefit from KCSOURCELINK:
 - KCSOURCELINK raises community awareness, resulting in more clients.
 - Clients are better matched to organizations, resulting in increased productivity.
 - Partners have more knowledge of other network services, resulting in new cross-referral and collaboration opportunities.

KCSOURCELINK also has facilitated a number of collaborations among network partners, including:

- Ten partners collaborated to bring AmeriCorps-VISTA volunteers to their organizations.
- More than 20 partners are collaborating to review training classes available throughout the network and investigate training delivery systems to better meet the needs of the entrepreneur.
- Ten organizations collaborate to host a monthly entrepreneur happy hour for the high-tech market.
- Seven organizations partnered to market services to the Hispanic population.

National expansion

The Kauffman Foundation grant that started KCSOURCELINK included the charge to incubate a model in Kansas City that could be used in other areas of the country. Other cities and regions are now using the SOURCELINK model and tools to connect their entrepreneurs with resources for growth.

NetWork Kansas, a statewide initiative of the Kansas Center for Entrepreneurship, was one of the first to adopt the SOURCELINK system. Developed as a result of the Kansas Economic Growth Act of 2004, NetWork Kansas connects nonprofit resource organizations to entrepreneurs and small businesses statewide through a telephone hotline and a Web site (www.networkkansas.com).

The Toledo, Ohio Regional Chamber of Commerce connects its area's resources with the Resource Navigator, and the Charlotte, North Carolina region uses both The Resource Navigator and Biz-Trakker. The Urban Entrepreneur Partnership network uses the SOURCELINK system in Milwaukee, Cleveland, Cincinnati, Jacksonville (Florida) and Atlanta to assist minority and urban entrepreneurs. The SOURCELINK model is being adopted in areas of Mississippi and Alabama, and is also being expanded into other regions of Missouri as Missouri SOURCELINK.

KCSOURCELINK has accomplished much of value to the Kansas City region for both businesses and partner organizations. The future of our economy lies in the hands of today's entrepreneurs. In Kansas City, KCSOURCELINK is ensuring that when those business builders need help, assistance is just a call or a click away. ★★

For more information, visit www.kcsourcelink.com or www.ussourcelink.com.

Strengthening Knowledge-Based Initiatives in New Orleans:

Growing the Biosciences Industry

By **Caitlin Cain**

*Economic Development
Director, Regional Planning
Commission of New Orleans*

Healthcare and the biosciences industry represent a significant share of New Orleans' regional economy. An estimated 2,960 people are employed in biotech-related fields, and over 8,000 in medical and healthcare-related services. Pre- and post-Katrina, the area's bioscience institutions have been conducting cutting-edge research in areas such as gene therapy, cancer biology, peptide pharmaceutical design and infectious diseases. Consider these facts:

- Federal and private grant funding in New Orleans exceeded \$180 million in 2003 and is growing substantially. In fiscal year 2005, the New Orleans area accounted for \$130 million in awards from the National Institute of Health (NIH).
- A 1999 study prepared by Tim Ryan of the University of New Orleans noted that Louisiana State University Health Sciences Center accounted for an annual economic impact of over \$1.3 billion for the city of New Orleans.
- A 2004 study prepared by Oakland Econometrics revealed that Tulane University Health Sciences Center produced an annual spending impact of \$1.2 billion, which yielded over 13,000 direct and indirect jobs for the city of New Orleans.
- Louisiana State University retains over 50 percent of the physicians it trains in the state (the second highest rate in the nation), which means this industry, unlike many others, has the greatest ability to retain and attract bright, young minds – a state-wide goal set by the Louisiana 2020 plan.
- Much of the downtown revival pre-Katrina, especially in the Warehouse District, was directly attributed to the growth of healthcare and medical enterprises and the bioscience industry.

Katrina devastated much of the bio-medical infrastructure, but much remains in place. To ensure the continued growth of this important sector, the Regional Planning Commission of New Orleans (RPC) received a grant from



Construction is scheduled to begin this fall on the 175,000-square-foot Louisiana Cancer Research Center. This \$90 million, joint LSU-Tulane facility will provide laboratory space for university researchers to conduct cutting-edge cancer research.

the U.S. Economic Development Administration (EDA) in 2006 to craft a regional biosciences strategy, which was completed by Eva Klein & Associates. This strategy – referred to as the New Orleans Regional Biosciences Initiative and endorsed by over 30 public, private and not-for-profit organizations – focuses on creating a management structure for the New Orleans Medical District that will foster a thriving bioscience industry in a post-Katrina environment.

Assets to build on

The New Orleans Medical District includes many world-class bio and medical organizations, including the Louisiana State University Health Sciences Center (LSUHSC), Tulane University Health Sciences Center (TUHSC), Xavier University, Delgado Community College, and associated biotech companies. All of these facilities are located in downtown New Orleans.

Prior to Hurricane Katrina, the New Orleans Medical District was building a framework for entrepreneurial success. The LSU and Tulane health sciences centers and the state of Louisiana came together to form the Louisiana Gene Therapy Consortium and the Louisiana Cancer Research Consortium, to leverage the universities' research strengths and attract additional research dollars from the National Institutes of Health.

More recently, two major medical facilities are planned:

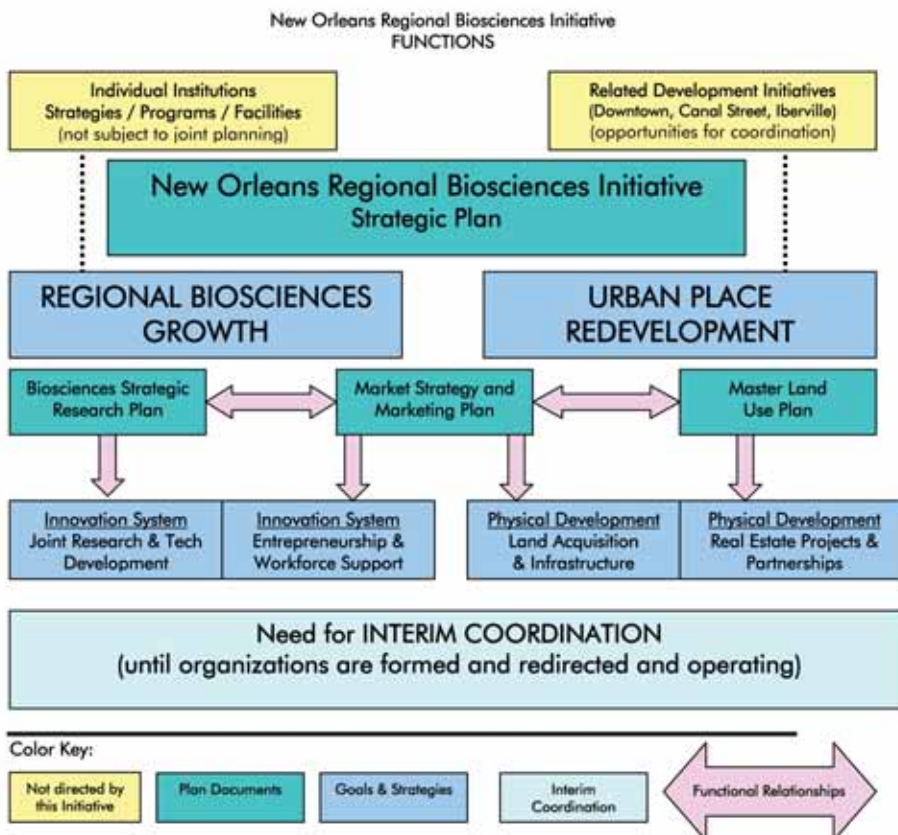
- Construction will begin this fall on the \$60 million New Orleans Bio Innovation Center (NOBIC), which will be one of three wet lab incubators in the state of Louisiana and will assist in the commercialization of university-based technologies. The 66,000-square-foot facility will employ over 200 full-time professionals and will include space for meeting rooms and at-grade retail. NOBIC will work closely with Tulane and LSU as partners in numerous research consortiums and clinical facilities. The state of Louisiana has committed \$37 million to the project, and the U.S. EDA will provide an additional \$1.25 million. NOBIC will be located at the gateway to the greater medical district.

- Construction will begin in October 2007 on the 175,000-square-foot Louisiana Cancer Research Center, located at the heart of the New Orleans Medical District. This \$90 million, joint LSU-Tulane facility will provide laboratory space for university researchers to conduct cutting-edge cancer research. The center will seek designation as a National Cancer Institute Cancer Center in 2010. Since Hurricane Katrina, the consortium has recruited 15 new investigators and has secured approximately \$8 million in NCI funding.

But the project with the greatest promise for New Orleans is the potential development of a joint Veterans Administration-LSU teaching hospital. The VA Hospital, which is located in the medical district, received extensive damage due to Hurricane Katrina, and as a result is considering relocating outside of downtown New Orleans. The potential loss of the VA Hospital threatens to undermine the extensive collaborations and work that have been established to date within the medical district.

The LSU-VA collaborative, to replace both the Old Charity and VA hospitals mothballed after Katrina, would result in a shared academic teaching hospital with ongoing research, trauma care and a private patient base. Cost savings of up to 30 percent could be realized from shared instrumentation (CT, MRI, laboratories, etc.) and shared infrastructure costs (power plant, human resources, information technology, food services, etc.). The VA-LSU project would result in the creation or retention of 10,000 full-time jobs; involve capital investment of \$2 billion; and have an annual impact of \$1.26 billion.

Clearly, the biosciences industry, if aptly supported, has the potential for directly fueling the recovery of New Orleans.



The New Orleans Regional Biosciences Initiative

The vision of the New Orleans Regional Biosciences Initiative (NORBI) is to create a globally competitive innovation economy for the New Orleans region by leveraging the region's knowledge institutions to perform globally competitive biomedical research; to grow and attract entrepreneurial companies; and to anchor a vibrant urban community at the region's core.

To achieve this vision, the plan fosters consensus in four areas:

1. *An Innovation System Strategy* that includes research and technology development, entrepreneurship and knowledge workforce development;
2. *A Physical Development Strategy* that covers urban planning, financing and management; land and infrastructure; real estate project development and asset management;

3. A *Market Strategy* and marketing plan outline; and
4. A *Leadership and Management Strategy* that organizes functions for accomplishing the long-term strategic plan, covering entity role strategies and collaboration process strategies.

The NORBI plan was approved unanimously on April 3, 2007, by all members of the biosciences stakeholder group. To achieve this level of support, the RPC structured the planning process to include a series of workshops and a site visit to study the biosciences industry in St. Louis. Each of the workshops focused on one of the above four issue areas and resulted in a series of detailed issue papers, which were honed into the final NORBI plan. The document has been well received because of its brevity, the consensus-oriented nature of the process and its overall market-oriented approach.

Incremental steps are under way to achieve this vision. Currently, the RPC is working to implement the Greater New Orleans Biosciences Economic Development District (GNOBEDD), created in 2005 by state enabling legislation. This large swath of land, in which the existing medical district is located, has been designated to accommodate future biosciences/medical-related growth. The outline of an organizational structure for GNOBEDD came out of the planning process and continues to be developed. Once fully operational, this entity (which holds taxing and bonding authority) will help manage both the programmatic and physical development components of biosciences growth.

The RPC has initiated a land use master plan for the district that will provide short- and long-term physical growth visions, including a full asset inventory, for a subsection of the GNOBEDD area. The plan will be completed this fall. In addition, existing organizations such as the New Orleans Medical Complex and the Bio Innovation Center have agreed to work through a programmatic restructuring initiative to better conform to the vision and management strategy provided in the NORBI plan.

Retaining the VA hospital and the importance of clustering

The growth of downtown New Orleans – and hence, the competitiveness of the entire region – is reliant on continued, clustered investment in healthcare delivery and medical sciences research and innovation practices.

Clustered development is not a new concept. Leading national medical districts have been clustering their teaching facilities, hospitals and research centers in downtown settings for decades. Beyond the usual downtown assets of infrastructure, workforce and transportation availability, most significant to industries like the biosciences are the informal networking opportunities that proximity provides, which stimulate ideas and information exchange. Successful bioscience industry growth in St. Louis, Philadelphia, Baltimore, Boston and other cities would not have happened if it were not for the downtown clustering of medical industries adjacent to institutions of higher learning.

Collaborations between Tulane, LSU and Xavier universities, coupled with the retention and construction of a new LSU teaching hospital (484 beds) and the VA Hospital (200 beds), each within walking distance of the other, will create a



The Greater New Orleans Biosciences Economic Development District (GNOBEDD), whose boundaries are shown in yellow, was created in 2005. The GNOBEDD holds taxing and bonding authority and will help manage both the programmatic and physical development components of biosciences industry growth.

dynamic teaching and research environment that will grow into a competitive biosciences research hub. The region's higher education institutions need the VA and the LSU teaching hospitals located nearby so their respective doctors, researchers and students can learn and practice in one concentrated medical district setting. A strong city center, adjacent to a well-organized, vibrant medical campus, will attract and retain creative minds. The success of NOBIC in launching biomedical businesses also depends on having all similar facilities clustered together.

Positioning for success

This investment is so significant that at a recent meeting of the Regional Planning Commission, a resolution to build and retain the VA and LSU hospitals in downtown New Orleans passed with universal support from seven parishes. A similar resolution passed with unanimous consent at a New Orleans City Council meeting and at a board meeting of the Downtown Development District, the main economic organization for downtown New Orleans.

Retention of these two hospitals and implementation of the unanimously adopted NORBI strategy will set New Orleans apart from other similar-sized medical districts, giving the region the competitive advantage it needs. The groundwork has been laid, collaborations have been forged, a strategy has been adopted and a decision regarding the reconstruction of a 1-million-square-foot, state-of-the-art health care facility in downtown New Orleans is imminent. Retention of our existing assets and focused investment going forward truly will allow New Orleans to foster a more knowledge-oriented, recession-resilient economy. ★★ ★

For more information, visit www.norpc.org.

Editor's note: As this issue was going to press, the Department of Veterans Affairs announced its intention to rebuild the VA Medical Center in downtown New Orleans.

Institute for Human and Machine Cognition:

Creating a Habitat for Innovation

Senior
Advisor for
Strategic
Initiatives,
Institute for
Human and
Machine
Cognition

By Dr. Pamela Dana

At first glance, Pensacola might seem an unlikely home to one of America's most cutting-edge, high-tech research organizations. A coastal community with a bustling tourism industry, Pensacola is known more for its sugar-white beaches, centuries of history and rich military tradition than for scientific research. But that reputation is changing rapidly, and one important reason is the work of the Institute for Human and Machine Cognition (IHMC).



IHMC's headquarters in downtown Pensacola's historic district has helped to revitalize the surrounding area.

Located in historic downtown Pensacola, IHMC has become more than a home for fascinating research and development. It has, in fact, become a habitat for innovation – re-energizing Pensacola's downtown, spurring new development nearby, providing new jobs both directly and indirectly, and making major contributions to the local economy.

About IHMC

Unlike traditional research centers that focus on specific disciplines, IHMC was founded on the principle that technology should be created in a way that will leverage and extend the cognitive and physical capabilities of human beings.

Consequently, IHMC's unique team of multi-disciplinary researchers first endeavors to define the human task in question, and only then to create the technology that – when “fitted” to the human requirement – will provide enhancements that benefit mankind. Improving this relationship between man and machine is the central focus of IHMC, which accounts for the broad range of projects the Institute undertakes. That's also why IHMC employs an interdisciplinary team of researchers who can lend their expertise to a variety of research subjects.

IHMC was founded in 1990 at the University of West Florida (UWF) and incorporated as a statewide not-for-profit research institute in 2003 by the Florida legislature. The Institute is home to top scientists and engineers collaboratively engaged in cutting-edge developments in the fields of artificial intelligence, robotics, human-machine interaction, cognitive psychology and computer science. IHMC researchers collaborate extensively with industry, government, and university partners to develop science and technology that can help achieve society's broader goals. Through its groundbreaking work with NASA, DoD, DARPA, and a range of private-sector partners, the IHMC has earned global recognition.

IHMC also benefits from its affiliations and strong partnerships with Florida universities, including UWF, University of Central Florida, Florida Atlantic University and the Florida Institute of Technology. By taking a team approach to advanced research, IHMC and the universities are able to extend their resources and leverage each others' capabilities.

A few of the Institute's many research innovations include the development of biologically inspired robots;



Biologically inspired robots like this one can overcome obstacles that would stop a wheeled vehicle or robot. IHMC is writing software to make “Little Dog” a big player in tomorrow’s military.

browsers without pages; aircraft cockpit display that is free of traditional gauges; sensory substitution devices that enhance human sensory perception (sight, balance, spatial awareness) through the sense of touch; and prosthetic exoskeletons that, when attached to human limbs, enable the wearer to enjoy enhanced mobility, performance, strength and speed.

These amazing innovations have captured the public’s imagination and brought worldwide attention to IHMC, as people are understandably fascinated with robots, artificial intelligence and novel, next-generation technology.

A habitat for innovators

Ultimately, however, IHMC is a product of its people. According to Dr. Ken Ford, IHMC’s chief executive officer, the Institute must attract top-level researchers from around the world to remain competitive in pursuit of excellence.

“It is not enough for IHMC to recruit people who are ‘among’ the best in their fields,” he said. “IHMC must be able to hire the worldwide leaders in their respective disciplines.”

IHMC’s results in that regard are impressive. For example, the entire state of Florida is home to five fellows of the Association for the Advancement of Artificial Intelligence, and all five are employed by IHMC.

This level of talent, which is reflected in all aspects of IHMC’s work, brings a measurable economic impact of its own. Each world-class researcher is directly responsible for the creation of five to ten new high-wage jobs in Pensacola with average salaries of more than \$100,000. For Florida’s economy, that means a boost of approximately \$5 million for every such researcher who comes aboard.

As one might expect, these employees are highly sought after. So the real question becomes: How does Pensacola con-

tinue to attract and retain the kind of talent necessary to fuel IHMC’s spirit of innovation?

One answer lies in Dr. Ford’s understanding of the needs and desires of today’s top talent. Young professionals are being recruited heavily to join firms and organizations all over America. Traditional hotspots like Silicon Valley and North Carolina’s Research Triangle are perennial leaders in attracting “creative class” workers. However, more and more of these young people are eschewing the traditional in search of a unique life experience. The nature of their work means that they are able to live virtually anywhere that offers broadband Internet and overnight delivery services.

These young people are more affluent than previous generations, so money is oftentimes less important than the type of work they are doing – and the types of amenities available when they are away from work. They are more idealistic, seeking opportunities to contribute to the community and the chance to make a real difference.

Of course, Pensacola isn’t San Francisco or Boston or Austin, and Northwest Florida certainly isn’t Silicon Valley. What Dr. Ford and his leadership team recognized, however, is that this could be an important selling point for a generation that wants to carve out its own path in life, away from the campus-like environments of a Sun Microsystems or Microsoft. Indeed, downtown Pensacola, with its unique and charming historic district, is well on its way to becoming the kind of livable, walkable downtown space that these young, creative people find most attractive.

A habitat for community partnership

Thus, IHMC moved from the north-county campus of the University of West Florida to the heart of historic downtown Pensacola in 1999. Rather than isolate itself from its neighbors, IHMC made an affirmative decision to invite them in, offering its facility as a free public meeting place and hosting an evening lecture series that has featured renowned experts on everything from national security to gourmet cooking. Rather than hide its talent away in an ivory tower, IHMC’s

Author Richard Florida, in his book *Rise of the Creative Class*, had this to say about IHMC:

“The IHMC has convincingly demonstrated how a major scientific and technical center can play a catalytic role in rebuilding and strengthening the fabric of an urban community. Not only has the IHMC made a direct contribution to the economic development of its surroundings; its role as a powerful talent magnet has had enormous regional, state, and national benefits. All of this assures the IHMC’s place as a new model for interdisciplinary research institutes that strive to be both entrepreneurial and academic, firmly grounded, and inspiringly ambitious.”



The future campus of IHMC is envisioned as an open setting with human-scale, walkable streets, conceptualized in this rendition by renowned urban planner Ray Gindroz.

scientists devote considerable time to educational programs both at IHMC and in the schools, to pass along their enthusiasm for discovery to a new generation of local school children.

The fruits of IHMC's involvement in the community have been spectacular. In what once was an under-appreciated section of town, new offices and new residential development are springing up. A nearby old house that previously sat vacant now houses a designer boutique. In just a few short years, IHMC's street has become an upscale address for lawyers, realtors and other professionals. Of course, IHMC did not cause the transformation of this neighborhood by itself, but played a critical catalytic role.

It is easy to see the physical impact of IHMC on downtown Pensacola. Less obvious, however, is the sense of encouragement and optimism that has come as a result of its presence. With each new landmark discovery, invention or patent, the community can celebrate IHMC's success, knowing it will pay dividends far beyond the Institute's walls.

The energy that has been created through this transformation will continue as IHMC implements the expansion of its physical location in Pensacola. The build-out of IHMC's downtown headquarters envisions human-scale streets with offices, shops and residences integrated seamlessly throughout the entire block.

Key to this plan is a deep appreciation for the history of the area and the preservation of its character and charm. Someone once said, "New ideas are often born in old places." Thus, IHMC is focused on creating a downtown headquar-

ters center that doesn't reinvent the neighborhood so much as restore it to a style reminiscent of the city's earlier days, when the inner city was truly the heart of the community.

Plans are under way to expand IHMC into the central region of the state as well. A new branch will make collaboration easier among the Institute and its affiliated universities in central and south Florida.

A habitat for entrepreneurial spirit

Simply having the right people in the right place isn't enough to ensure success, however. The right attitude – the right collective mindset – is necessary to make the whole greater than the sum of its parts. Toward that end, IHMC has adopted a market-driven philosophy that demands the best of its team members. Although they may not have the same level of job security as their counterparts in traditional colleges and universities, IHMC staff members have opportunities and flexibility that would not be possible on any campus. Dr. Ford says this approach is attractive to a select breed of researcher: "IHMC wants the people who are willing to take chances and confidently pursue groundbreaking ideas. We will pick no low-hanging fruit."

The entrepreneurial spirit extends into the marketplace as well. One major objective of IHMC is to develop new intellectual property that can be spun-off or licensed for sale and use by the public. Proceeds from such agreements are returned to IHMC and shared with the inventors, in much the same way as a business reinvesting its profits.

One recent spin-off has been the CMapTools knowledge modeling software that IHMC and UWF developed jointly. CMapTools is a computer program that allows users to construct, navigate, and share knowledge in an intuitive manner that promotes easier understanding of complex data. Ceryph, a start-up company, will license and support a commercial version of CMapTools software that they have entitled "Insight."

Another innovation that soon will be ready for commercialization is OZ, a revolutionary new aircraft cockpit instrumentation system. OZ represents a major enhancement to the way pilots process information from their spatial orientation and onboard sensor instrumentation, thus significantly improving flight safety and operator efficiency. A small firm, eSky, is licensing the OZ technology for commercialization in multiple aviation venues.

Other research at IHMC is improving the safety and effectiveness of our men and women in uniform, equipping robots to take on responsibilities that once put our service members in harm's way. Still other innovations could one day help increase the mobility and function of people who are paralyzed, blind or otherwise impaired.

IHMC has become a habitat for innovation – re-energizing Pensacola’s downtown, spurring new development nearby, providing new jobs both directly and indirectly, and making major contributions to the local economy.

A habitat for leadership

The final element in the IHMC equation is leadership. Only with an energetic and visionary team at the helm is IHMC able to recruit, retain and lead the enormous talent under its roof and facilitate the collaboration that is necessary for success.

As the co-founder (with Dr. Alberto Cañas) and CEO of IHMC, Dr. Ken Ford is Florida’s only member of the National Science Board, a post he was appointed to by President George W. Bush. Dr. Ford also serves on the NASA Advisory Council, the Air Force Science Advisory Board and the Space Florida Board of Directors, as well as a number of other high-level positions.

He has assembled a strong leadership team that includes highly celebrated research leaders; military leaders (retired Navy Vice Admiral Tim Wright, Marine General Spider Nyland, and Lieutenant Colonel Sharon Heise, an Air Force officer with a distinguished career in research and development); a top legal professional (Julie Sheppard, senior Florida attorney and Bar member); and a seasoned venture

capitalist (Rob Wilson, a 25-year technology investment veteran). These team members work closely with scientists and engineers to realize the Institute’s goal of spurring innovation in R&D and economic development.

A habitat for innovation

The story of IHMC is a story of talented people coming together in a special place. It is a story of community investment and entrepreneurial spirit. And it is a story of strong leadership that has remained focused on achieving what many thought was improbable or impossible: uniting the best and brightest talent with the singular goal of improving the relationship between humans and their machines.

The results are best summed up in an editorial comment by the Pensacola News Journal in its edition of March 17, 2007:

“Few organizations, public or private, have made a more positive impact on downtown Pensacola in the past decade than the Florida Institute for Human and Machine Cognition. A research think tank for the study of robotics and human performance, the nationally recognized Institute today has become a center point of urban revitalization and renaissance.”

Northwest Florida is not Silicon Valley – and that’s the point. IHMC has changed the playing field for Pensacola, and its experience offers lessons for other communities throughout America. Talented people are at the heart of innovation. Innovative organizations can be a catalyst for community revitalization. Together, those elements foster economic development. And it all begins with leaders who have the vision to see beyond obvious limitations – and the commitment to bring that vision to life. ★★

Dr. Pamela J. Dana is the former director of Florida’s Office of Tourism, Trade and Economic Development. For more information about IHMC, visit www.IHMC.us.



OZ is an intuitive cockpit display without traditional dials and gauges, making it easier for pilots to absorb flight data more effectively. OZ has the potential to revolutionize the way pilots receive situational information.

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By Genora Boykins Central Southwest Houston has a characteristic that all real estate professionals know adds value to property – **location.** It is minutes away from a revitalized downtown, a world-renowned medical center and a new NFL stadium. An interstate, U.S. and state highways, and a tollway provide ready access to the area, and its 50 square miles of undeveloped land offers room to grow.

It is difficult, then, to pinpoint why an area surrounded by tremendous resources has seen minimal growth for over 50 years. A City of Houston Planning and Development report, completed in 2000, cited the lack of housing maintenance programs and government, corporate and social services in the area since the first modest, one-story homes were built in the 1950s. This contributed to declining neighborhoods and lower quality of life for the mostly African-American and Hispanic individuals living there.

Approximately 25 years ago, Windsor Village United Methodist Church, located in the area, was experiencing its own challenges. Membership had dropped to 25 people, pastors came and went, and the church was in debt. That was the situation when Kirbyjon Caldwell was assigned as the senior pastor. Under his leadership and the congregation's commitment to serving God, the church's membership increased over the years to 15,000 people. Over 100 ministries have evolved from Windsor Village UMC to address the social, emotional, spiritual, educational and economic needs of both members and non-members.

Other than what the church was providing to the community, there were no other significant social services in the area. Eventually, nine nonprofit organizations were birthed out of Windsor Village to provide services ranging from shelter for abused children to support for families of AIDS patients. The Pyramid Community Development Corporation (CDC) was one of those nine nonprofits. But before Pyramid could begin the housing development work typical of other local CDCs, an economic development opportunity – one that could transform the social landscape of central Southwest Houston – came in the form of a donated, empty retail store.

Building a 21st century partnership model

In the summer of 1992, two corporate leaders approached Pastor Caldwell to ask if he knew anyone in the community who might have a use for a vacant Kmart building. After prayer, thought, input from a Windsor Village Bible study class and inspiration from a trip to an Arkansas Wal-Mart, Pastor Caldwell had a vision for the asbestos-filled, dilapidated building. Why not transform it into a center that would provide



Pyramid CDC turned a vacant Kmart building into the Power Center, which now includes a bank branch, health services, a school, a conference center, office space for lease and more. The Power Center provides employment for 230 people.

much-needed goods and services to the community? The property, consisting of two buildings and 24 acres of land, was donated to Pyramid CDC by the grocery store chain that owned it. The Windsor Village leadership brainstormed about the potential use of the facility and land, and following a community needs study, The Power Center concept was created.

The small Pyramid CDC board consisted of an attorney, a human resources manager, a housewife, an accountant and Pastor Caldwell. With no local model to follow, research into the accomplishments of other CDCs led them to the work of Monsignor William Linder, a founding member of the American community development movement. His New Community Corporation in Newark, New Jersey, built businesses and buildings and created jobs. The board decided that The Power Center should be a one-stop facility that would empower the community economically, socially, educationally and medically by bringing together for-profit, non-profit and government entities.

The Pyramid CDC board met once a week over the life of the development. Additional meetings were held to interview contractors, to monitor a minimum of 50 percent minority contractor participation, negotiate leases and resolve various issues. The board's team included an executive director, an owner's representative and an advisory committee of construction professionals.

To make the project more manageable, it was broken into phases that were started once financing was secured for each component. Financing and funding came from a variety of sources, including Windsor Village UMC, individual contributions, foundation and federal grants, and in-kind gifts. The initial construction estimate for the facility was \$2.4 million. After three years and at a total cost of \$4.5 million, all of The Power Center components were completed.

The renovations resulted in the complete transformation of two buildings totaling 104,000 square feet. More than 560 jobs were created during the construction and development phase, many of which were targeted to low-income individuals. Today, the Power Center provides employment for 230 people, serves more than 11,000 families a month and generates \$15 million in economic activity annually. The center includes a bank branch; a private family healthcare office, a pharmacy and an optical center; a Woman, Infants & Children's program office; a hair salon; a school; real estate development offices; Entrepreneurial Power Suites (low-cost office space with shared services) and the Jesse H. Jones Conference Center.

Through this initial project, the Pyramid CDC board learned that the keys to a successful community development project included an authentic vision, community buy-in, diverse partnerships, in-kind gifts and multiple streams of financial support. One additional component was critical: faith. Operating solely on facts in the midst of seemingly insurmountable obstacles would have kept the project from getting done.



Corinthian Pointe, a 462-home subdivision developed by Pyramid CDC, includes many high-quality, affordable homes. Amenities such as trees, garages and sidewalks have contributed to increases in property values.

Realizing a 234-acre vision

Collaboration and cooperation drive the projects inspired by Pastor Caldwell and led by Pyramid. Pointe 234, a 234-acre, mixed-use community currently under construction, is no exception. In this development, Pyramid CDC is partnering with a group of nonprofit, for-profit and public entities to create a community intentionally designed to help individuals and families grow to their greatest potential.

A 2002 University of Houston needs assessment and survey of residents underscored the poverty present in the area and the need for childcare, early childhood and youth development programs, advanced education, job training, employment, dropout prevention and teen abstinence programs. The assessment findings helped define the components of Pointe 234 – including housing, retail, community and educational facilities – as well as its proposed services and programs.

Pyramid's next major development project, Corinthian Pointe, is a component of Pointe 234. Corinthian Pointe is a 462-home subdivision described by former Secretary of Housing and Urban Development Mario Cuomo as the largest residential community developed by a nonprofit entity. Eighty percent of the homes fit the city of Houston's designation as affordable, and a third of the homes are occupied by low-income families.

Shattering myths about affordable housing

- *Myth No. 1:* Below-market-rate housing means cheap construction.
- *Myth No. 2:* Below-market-rate housing can't be mixed in with market-rate homes, or "the projects" will bring neighbors' values down.
- *Myth No. 3:* Affordable housing should be institutional-looking, because the residents won't take care of their homes anyway.



The Family Life Center, phase one of the 423,000-square-foot Kingdom Builders' Center (shown above), is slated for completion in fall 2007. It will contain multiple community facilities, including a charter school.

- *Myth No. 4:* Affordable housing developments invariably bring a neighborhood down.
- *Myth No. 5:* Affordable housing draws only a certain segment of the population.

Determined to build first-class affordable housing and dispel these myths, Pastor Caldwell and the Pyramid board toured suburban areas around Houston. A top executive at Ryland Homes, one of the country's largest homebuilding companies, understood the vision. Despite the fact that his company had never built affordable housing, and had never built within Houston city limits, he was willing to take on the project. He also agreed to satisfy the board's requirement to mentor minority builders during the process in order to increase their capacity.

Pyramid financed the infrastructure needed to support the housing development through the creation of a Tax Increment Reinvestment Zone. It hired a land planning and development company to plat the subdivision and paid a project manager a per-lot cost to manage the entire project. The owner's representative from The Power Center development also worked in an advisory capacity on the project. Ryland Homes designed the houses, applied its usual construction standards and still kept the homes priced within reach of low- to moderate-income families. Pyramid provided the marketing efforts for the subdivision.

Corinthian Pointe was built in three phases, with each phase selling out before it was completed. The final phase was completed this year. More than 45 percent of the households are Spanish-speaking and the remainder are primarily African-American. Many are first-time homeowners. In partnership with federal and city entities, Pyramid conducted counseling classes to help potential homebuyers obtain financing and learn about the responsibilities of homeownership.

Deed restrictions in the subdivision are clearly communicated and tightly enforced. Each of the 462 homes is brick, and amenities such as trees, garages and sidewalks have contributed to increases in property values. Collectively, the households in Corinthian Pointe spend \$16.5 million per year, and generate an additional \$8.6 million in economic impact. In addition, Corinthian Pointe has become a catalyst

for greater community revitalization: Three other unaffiliated residential projects are under way in the immediate vicinity.

Besides Corinthian Pointe, Pointe 234 also includes a 750-student elementary school, a YMCA and two nationally known pharmacy stores. Under construction now is the Family Life Center, which is phase one of the 423,000-square-foot Kingdom Builders' Center. (Phase two of the center, slated for 2008, will include a sanctuary and prayer center.) When the Family Life Center opens in September 2007, it will house:

- Gymnasium/multipurpose area
- Education wings for children, youth and adults
- Infants & toddlers' nursery
- Climbing gym, aquarium and 30-foot slide
- Children's party room
- M.D. Anderson Therapeutic Play/Learn Center
- Parent-approved arcade
- Growth and development center
- Aerobics and weight rooms
- Library and computer lab
- Web-based Houston Independent School District charter school for 9th through 12th graders

The Family Life Center also will house the Kingdom Builders' Retail Center, which will include a book and gift store, a café, a floral shop and a printing center. The retail center received a \$1.2 million grant award from the U.S. Economic Development Administration and is expected to create 41 jobs. Other phase one funding includes capital campaign contributions from the Windsor Village UMC congregation, bank financing, foundation grants and philanthropic gifts.

Other construction slated for Pointe 234 in 2007 is the Texas Children's Pediatrics Clinic. The clinic's mission is to provide medical care for children and youth from infancy to 18, regardless of the ability to pay. In 2008, construction on an independent living facility, a commercial/retail park, a community park and an amphitheatre will be complete.

Valued at \$172 million, this history-making project will create 2,000 construction jobs and more than 400 permanent jobs. It is expected to have an estimated economic impact of \$50 million annually.

A small percentage of Windsor Village UMC members are beneficiaries of the projects they have helped fund and deliver, and that is okay with the risk-takers, innovators and entrepreneurs who make up the congregation. They are led by a social entrepreneur who believes that job creation and the pursuit of economic justice are part of the mandate to share Christ and His kingdom with the world. In Pastor Caldwell's vision, for a church to intentionally turn its back on economic development and financial enlightenment denies one of the main threads that runs through the Bible, and passes up the opportunity to make America a safer, more vibrant place to live. ★★

For more information, contact Deborah Anderson, Executive Director, Pyramid CDC, at (713) 723-6837.

Paulding County, Georgia's Plan for Jobs, Growth and Environmental Sustainability

By **Pat Crook**

County Administrator,
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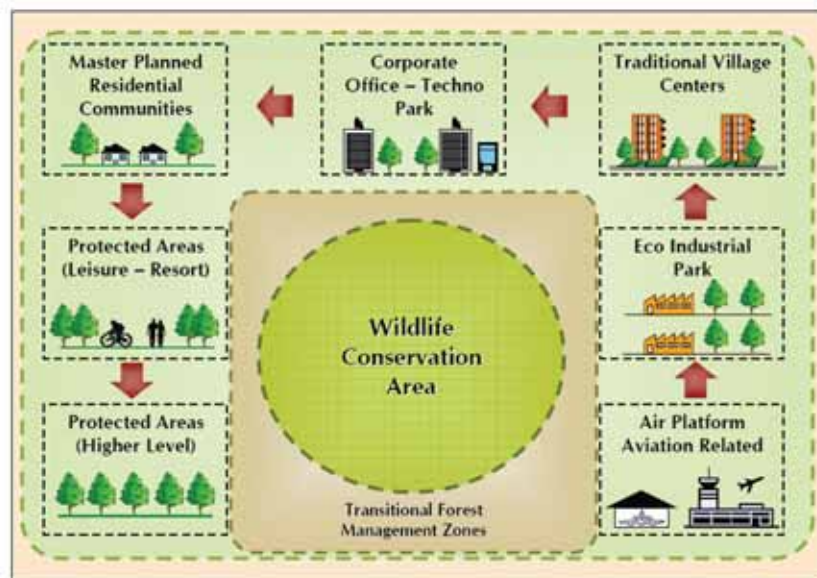
Atlanta is Georgia's economic engine. With an increase in the Atlanta metro population of nearly 900,000 between 2000 and 2006, the region also realized the nation's highest increase in commute time and continued its struggle to improve air quality. For several years, state agencies, committees and task force groups have attempted to find solutions to the area's growth-induced transportation and air quality problems. Plans and programs have been developed to discourage sprawl and encourage local governments to implement smart growth and environmentally sensitive initiatives.

Thirty miles northwest of Atlanta lies Paulding County, a bedroom community of 125,000 residents. Since 1990, Paulding has been among the top ten fastest-growing counties in the United States. Each morning, 75 percent of the county's working population navigates congested roadways to jobs in neighboring metro-area counties. In the early 1990s, many of the county's residents worked in neighboring Cobb County, at Lockheed Martin Corporation; employment in the county at that time was limited to local government, the school system and a handful of small manufacturers. While there are more jobs in the county today, the largest employment growth segments are retail and construction.

Planning for jobs

In the late 1990s, Paulding began to explore options for economic development. A major barrier to local economic growth was the county's limited transportation infrastructure, having no interstate highway access and only two major

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The project is envisioned as a "green" development, with work, residential and transportation uses clustered around a wildlife conservation area.

four-lane highways. Other barriers included a lack of local post-secondary educational institutions, limited telecommunications options, and land uses primarily focused on residential and retail development.

Paulding undertook the largest obstacle first – transportation – with plans to develop the first new general aviation airport in Georgia in over 25 years. But once the county got site approval for the airport from the Federal Aviation Administration in 2005, it was presented with a new set of challenges.

The site was in the largely undeveloped, northwest section of the county, an area with an abundance of unspoiled forestland, hills, streams and wildlife, divided by the only four-lane highway that runs through the entire county. It's not an area that one might usually consider for an economic development initiative, particularly near a booming metropolitan region such as Atlanta.

Getting this project off the ground would require an innovative master development plan. The county enlisted the expertise of consultant Franco Eleuteri to develop a plan for the 10,000-acre area surrounding the airport, with the objective of creating a self-contained, "green" development that maintains the rural environment while expanding the county's tax base and eliminating much of the out-commute. The result is a new model for economic development: a technologically advanced, eco-friendly community that encompasses working, living and recreation spaces and adjoins an expanded conservation area.

The plan for the 10,000-acre site takes advantage of the undulating terrain, abundance of streams and the existing Goldmine Lake by setting aside about 50 percent of the land as a protected natural area. This complements the adjacent Paulding Forest initiative, in which the county is working with The Nature Conservancy and the Georgia Department of Natural Resources to purchase and preserve over 7,000 acres of forestland. Ultimately, these two projects will provide the largest contiguous forest and wildlife conservation area in the region. Environmentally sensitive solutions are incorporated throughout the rest of the plan as well, in ener-

gy production and water conservation measures, waste handling, and project design and construction.

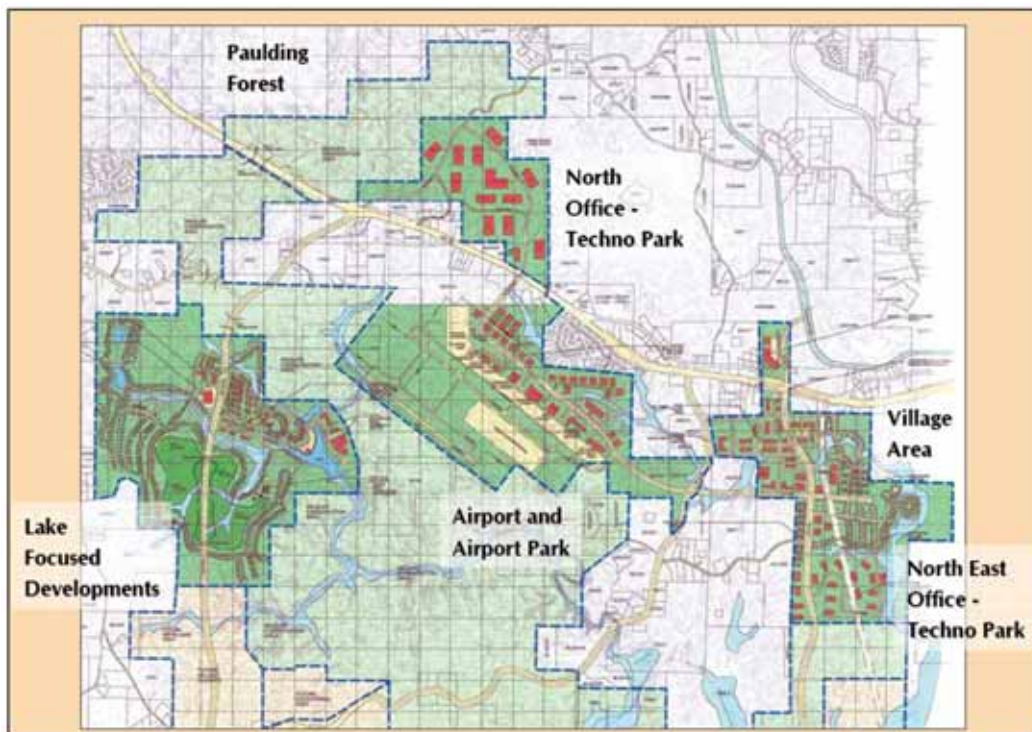
The plan is based on the "technopolis" concept pioneered by the Japanese, in which an integrated living, working and recreation environment is built with the latest techniques and incorporating the latest technologies. Living in harmony with nature, creating flexible work environments through design and technology, and eliminating the estimated one working month per year that the average Atlanta resident spends commuting to work all enable people to be more productive.

In addition, the initiative is designed as a public-private partnership, to be built in phases and to ensure financial and economic feasibility.

The development plan

Initial land use allocations in the plan include the following:

- **Air transportation cluster:** This component includes the air platform for general aviation and very light jet (VLJ) use, plus a mixed-use airport park. The 5,500-foot runway is currently under construction and is expected to open in October 2008. The county is currently seeking proposals from fixed-base operators to construct the terminal and hangars and operate the airport. Based upon early response from the local general aviation community, the county anticipates an immediate need for twenty hangars.
- **Office/research/technology clusters:** The county is accepting proposals from private partners to develop these employment nodes. Three such clusters are included in the master plan. They will take advantage of the latest in networking technology, New Generation Networks, which will be discussed in detail later.
 - **Village centers:** Private partners also are being sought for the development of village centers, which will serve as focal points for retail, service and community activities, using concepts of New Urbanism. The county plans for each village center to have its own unique character.
 - **Education cluster:** In proximity to a village center and adjoining residential areas, the plan includes an education cluster with a focus on higher technical education. The county is actively working toward attracting four-year and graduate degree programs, as well as expanding existing technical education in the education cluster.
- **Lake-focused cluster:** Surrounding Goldmine Lake, the plan calls for a resort, hotel and convention area, together with an active-adult living development specifically focused on enabling work from home.



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- **A master-planned community cluster:** This area is planned for low density, executive-style homes aimed at attracting world-class professionals and academics, also with a focus on enabling work from home.

The plan also includes a variety of transportation options. Principal vehicular roads are complemented by a network of trails for bicycle, pedestrian and equestrian movement, to provide easy access between individual clusters. In the past, the county worked with the PATH Foundation on the Silver Comet Trail, which currently runs from Smyrna, Georgia, through Paulding County and the Paulding Forest on to Alabama. The county will work with the PATH Foundation again to extend a trail spur from the Silver Comet and loop through the development clusters. When Alabama completes its segments, the trail will extend to Anniston and be over 100 miles long.

At full implementation, the development is expected to be home to a total population of 30,000, of which an estimated 60 percent will both live and work in the development area.

Technology

The development approach goes beyond the creation of a master-planned community to enable its inhabitants and those of surrounding counties to participate in an advanced technological environment. This facilitates working from home, within the techno-parks, or within incubators or “hives” – a new kind of clustered workspace – which are part of the program.

Foremost among the development’s technological characteristics is the use of New Generation Networks (NGN), also known as “next generation networking” or “broadband convergence networks.” NGN is a term that is increasingly being used to describe the latest state-of-the-art networking platforms, which bring together mobile and fixed telecommunications to allow a seamless flow of voice, video and data applications over a single network. This network can be accessed from virtually any location – home, office, car, park, village square or coffee shop.

This capability is driven by the use of fiber optics and fiber-to-the-premises (FTTP), as well as the use of distributed systems. Users will be able to access applications on an as-needed basis, rather than downloading them to personal computers, allowing residents to work from home more efficiently. The county is currently receiving proposals for a public-private partnership that will provide the technology infrastructure and operations.

The project’s air service also relies on the latest technology. It capitalizes on the Small Aircraft Transportation System (SATS), a joint research project between the FAA and NASA, along with local airports and aviation authorities. It is designed to facilitate transportation between small general aviation airports using small aircraft as an alternative to traditional airline travel. VJL and air taxis are expected to provide efficient and cost-effective air travel, and DayJet, a per-seat, on-demand jet service, has already committed to providing service.

Technology also is planned to contribute to the project’s environmental sustainability. One way is by creating a num-



The airport’s 5,500-foot runway is currently under construction and is expected to open in October 2008. A mixed-use park also will be built at the airport site.

ber of mini hydroelectric plants using existing streams. These mini hydro plants could create an electrical capacity of approximately two megawatts, helping meet the project’s objective of reducing per capita, non-renewable energy use by 30 percent.

Implementation

The county expects to complete the purchase of the 7,000-acre Paulding Forest within the next twelve months. By the end of 2007, development will begin on the first cluster, a business and technology park immediately adjacent to the airport. The next to be developed is likely to be a mixed-use cluster of approximately 1,000 acres. The county is currently preparing to construct transportation and technology infrastructure for these first two developments.

The plan for this initiative sets a new standard for a regionally driven, globally competitive development by:

- Achieving an integrated living, working and recreation program within an efficient and self-contained habitat;
- Maintaining over 50 percent of the land as a wildlife conservation area adjoining Paulding Forest;
- Providing the most advanced technologies and addressing transportation issues;
- Using “green” building materials and techniques to reduce energy consumption, and
- Providing a structure that enables the private and public sectors to partner to meet financial and economic goals.

Paulding County is optimistic about a future that builds on its natural beauty while creating jobs and improving the quality of life. It may just be a model that eventually contributes to the competitiveness of our country. ★★★

For more information, contact Blake Swafford, Interim Economic Development Director, at (770) 505-7700 or bswafford@paulding.gov.

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