

“We Will Not Let This Place Dry Up
and Blow Away”

An Economic Development Story

The Uptown Consortium, Inc. in Cincinnati
Leveraging Anchor Institutions to Strengthen Neighborhoods

Vegas 2.0

Rebooting Nevada’s Economic Engine

Power & Water

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William C. Sproull, FM
IEDC Chair

dear colleague

With summer winding down and our Annual Conference on the horizon, I am pleased to update you on the many projects IEDC has been working on in 2014 and all the exciting things we have in store for the remainder of the year.

The 2014 Annual Conference, "Steering Toward the Future: Convergence, Connectivity, and Creativity," is nearly here. This October, Fort Worth will play host to the largest gathering of economic development practitioners in the world. With numerous breakout sessions, networking events, and panel discussions on a broad array of economic development issues, IEDC's Annual Conference has something for everyone.

Keynote speakers will include The Honorable Kay Granger, U.S. Congressional Representative from Texas; Bruce McNamer, Head of Global Philanthropy, CEO, JPMorgan Chase Foundation; Betsy Price, Mayor of Fort Worth; The Honorable Vinai Thummalapally, Executive Director, SelectUSA, U.S. Department of Commerce; Jean Wallace, Vice President of Human Resources, Lockheed Martin Aeronautics; and The Honorable Jay Williams, Assistant Secretary for Economic Development, Economic Development Administration, U.S. Department of Commerce.

At the end of last year, when the board of directors was discussing what strategic initiatives to roll out in 2014, one idea quickly came to the fore: developing young professionals. Our newly created Young Professionals Task Force, led by IEDC board member Cecilia Harry, has been brainstorming ways in which we can attract bright, young professionals to meaningful careers in economic development. I am pleased to announce that one such way will be through a scholarship program for young professionals to attend our Annual Conference, free of charge.

We will be awarding over 40 scholarships to both domestic and international applicants, including students and those just beginning their careers in economic development. Additionally, the Annual Conference will feature several networking and mentoring events aimed at young professionals, to help build their network of contacts and learn from seasoned professionals. Starting in 2015, with Board approval, IEDC will launch a permanent advisory committee that will focus on young professionals in economic development. Membership on the committee will comprise a select group of motivated, young economic developers, committed to creating opportunities for those wishing to enter the profession.

In the interest of expanding our international scope, I recently represented IEDC abroad at two conferences. I met with our European colleagues in Brussels at the European Association of Development Agencies' (EURADA) spring conference, which focused on the topic of Eco-Innovation, and I spoke at the World Association of Investment Promotion Agencies' (WAIPA) World Investment Conference in Istanbul, on the role investment promotion agencies can play in business retention. I will also be attending the Economic Developers Association of Canada annual conference in Calgary in late September.

We hope to see you in Fort Worth this year. We at IEDC are excited for the year's flagship event and look forward to exploring new and innovative ways to ensure healthy economic development in the future.

Sincerely,

A handwritten signature in dark ink that reads "Bill Sproull".

William C. Sproull, FM
IEDC Chair

The IEDC Economic Development Journal

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Danville, Virginia, is one of a growing number of American cities that operates its own advanced fiber-optic broadband telecommunications network. Launched over a decade ago primarily to stimulate economic growth and development, “nDanville” (network Danville) has positioned Danville as a digitally connected community capable of supporting any high-tech or telecommunications business needing gigabit-plus broadband service.

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“we will not let

THIS PLACE DRY UP AND BLOW AWAY”

By C. Mark Smith, FM, HLM

The doctor's diagnosis was devastating. Fifty-three-year-old Sam Volpentest had a rare form of cancer of the jaw and perhaps less than a month to live. It was a defining moment that changed the direction of his life and the future of his adopted community of Richland, Washington. His recovery was difficult – eight painful operations between 1957 and 1963, radiation therapy, and a new lower jaw fabricated with bone from his hip – but he would live to fight other battles, saving and shaping the future of his community.

It was my honor to present Sam with IEDC's Chairman's Award for Lifetime Achievement in Economic Development at a community gala on the occasion of his 100th birthday in 2004. I had come to know and admire him because his adopted community had also become mine. By that time he was a community icon, both respected and feared, a man with powerful friends and legendary accomplishments, who came to work every day, even at his advanced age. I knew the broad outline of his many accomplishments, but I would later come to realize, after I wrote a book about him, that Sam Volpentest's story was more amazing than I had ever imagined.

THE EARLY YEARS – Honing Sales Skills and Personal Contacts

He was born in Seattle in 1904 to poor Italian immigrants. His father, Rosario Volpentesta, changed his name to Volpentest upon arrival at Ellis Island and worked as a day laborer and a boot black in a



C. Mark Smith (right) presents Sam Volpentest with IEDC's Chairman's Award for Lifetime Achievement in Economic Development at a community gala on the occasion of his 100th birthday.

downtown Seattle barber shop. His mother was a midwife and worked as a laundress.

Young Sam Volpentest was a small man with big dreams – street-smart, ambitious, and strong-willed. He was determined to become a success in life. He began to work at the age of 10 to help support his family but found enough spare time to become one of Seattle's first Eagle Scouts in 1921. Always interested in music, he founded one of Seattle's original radio dance bands. He worked full-time from the age of 17 – first as a clerk, and then as a star salesman – for a pioneer Seattle wholesale grocer, selling tinned coffee and vegetables on a set route in downtown Seattle that included restaurants, speakeasies, and corner grocery stores.

C. Mark Smith, FM, HLM, spent 40 years managing economic development organizations at the federal, state and local level. He spent 25 of those years serving on the boards of the Council for Urban Economic Development (CUED), the American Economic Development Council (AEDC), and the International Economic Development Council (IEDC).

He is the author of numerous articles in professional journals and, more recently, is the author of two books of political biography. His latest is *Community Godfather: How Sam Volpentest shaped the history of Hanford and the Tri-Cities*. (cmsmith@earthlink.net)

AN ECONOMIC DEVELOPMENT STORY

The rich history of IEDC and its predecessor organizations is filled with examples of how individuals – some well-known and some unknown – have contributed in major ways to the economic growth and future success of their communities. Too often, these contributions go unrecognized and the lessons learned from their accomplishments remain unlearned because we never knew of them.

This is the story of Sam Volpentest – son of immigrants, grocery salesman, tavern owner, community cheerleader, economic developer, lobbyist, political insider, and community icon – who fought to save his community from “drying up and blowing away.” In recognition of his efforts, he received IEDC's Chairman's Award for Lifetime Achievement in Economic Development at the age of 100.

Over the next 22 years, he honed his sales skills and personal contacts, not only surviving, but prospering through the Roaring Twenties, the Great Depression, and the years leading up to World War II. Everyone remembered his vice-like handshake that pulled the normally taller recipient toward him and off balance. Sam once asked to see the business card of the son of a friend who had just started in business. Looking at it, he asked the young man if he owned a paper punch. He proceeded to punch a hole in the card. The young man, incredulous, asked why. "When you hand your card with a hole in it to someone, they will invariably ask you about the hole. That will allow you to make your sales pitch, and they will have asked for it."

As a young man, he idolized his favorite uncle, a smalltime bootlegger, gambler, and club manager, who was well known in Seattle's private club and after hour's scene. The uncle managed the Italian Club, a hangout for business leaders of Seattle's small Italian community. Its fine dining room and convivial bar attracted many of the city's aspiring politicians, including Albert Rosellini and Warren G. Magnuson.

A state legislator who would be elected governor of Washington in 1956, Rosellini was the first Italian-American and Roman Catholic to be elected governor of a state west of the Mississippi River. Magnuson, known to all as "Maggie," was a future congressman and U.S. senator who would chair both the Senate Commerce and Appropriations Committees and become President pro tempore of the Senate.

Volpentest never forgot Magnuson's admonition that "the closest path to a politician is through your own wallet." Beginning in the mid-1950s, he



Sam Volpentest's success as a hot-shot wholesale grocery salesman is evident in this 1925 family photo.



The women's barracks at Camp Hanford, Christmas 1944. Fifty-one thousand workers lived there while Hanford was being built.



The Hanford B Reactor after its completion in 1944. It produced the plutonium used in the atomic bomb dropped on Nagasaki the following year. The Columbia River is in the background.

began to raise money for Magnuson and Rosellini as well as for Washington's new junior senator, Henry M. Jackson. The men became close friends and political allies.

HANFORD ENGINEER WORKS – Producing Plutonium for the Atomic Bomb

Today, the Tri-Cities Metropolitan Area – consisting of the contiguous cities of Kennewick, Pasco, and Richland, and located in southeastern Washington state – is a fast-growing, economically diversified region known for its fine wine and tech-based economy. But it wasn't always like that.

In mid-1943, the region was a rural backwater still inhabited by Indians and a few thousand farmers, orchardists, and ranchers who eked out a living from their arid shrub steppe lands along the banks of the Snake, Yakima, and Columbia rivers. The remoteness of the area, its cold, clean river water, the abundant electricity produced by recently-completed hydro-electric dams, and its small population were just what the U.S. Army was looking for when it selected 670 square miles along a wide bend in the Columbia River as the site for the Hanford Engineer Works, an industrial complex where plutonium would be produced for the atomic bomb.

Within a year, the original residents had been displaced, the land appropriated by the government, and 51,000 construction workers, recruited mostly from the south and mid-west, were building three nuclear reactors and more than 500 other buildings on the site. Most of the workers lived in Hanford Camp, a massive complex of barracks and support facilities that most resembled a prisoner of war camp. Administrators,

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scientists, and senior engineers lived and worked in a new, planned community of “alphabet” houses, dormitories, and administrative buildings in Richland Village, located approximately 20 miles south of the reactors.

Built over the original Richland town site, the gated and fenced community was owned and operated by the army and its primary contractor, E. I. du Pont de Nemours. Security was tight, and most of the workers’ families had no idea what their husbands and fathers did each day. It became the subject of jokes. A cartoon in the weekly newspaper showed one small boy saying to another, “I know what they make at the Hanford Site. It’s toilet paper, because every day my dad brings home a couple of rolls in his lunch box.”

Hanford’s fortunes waned after the end of World War II and then picked up again to meet the needs of the Cold War. Sam Volpentest arrived in 1949, responding to a blind ad in the *Seattle Times* seeking potential business owners willing to locate in a new strip mall the army was building to address Richland’s appalling lack of retail businesses. Sam wanted to open a grocery store but settled for a tavern when he learned that the grocery store had already been promised to another. The weather was hot, the workers were thirsty, and Sam was a good listener. His tavern prospered, and he bought several more.

A LIFE-CHANGING EVENT

By the mid-1950s, Sam had become convinced that Richland would never grow so long as it was owned and operated by the federal government. He became active in local efforts to incorporate Richland and force the government to sell their land and buildings to the residents. He didn’t know it at the time, but the Atomic Energy Commission (AEC) and their new prime contractor, General Electric, had also come to the conclusion that administering atomic communities was more trouble than it was worth. One man who helped them reach that conclusion was Washington’s junior senator, Henry M. “Scoop” Jackson.

As a congressman, Jackson had been a protégé of Sam Rayburn, the powerful Speaker of the House of Representatives. He was given a seat on the important Joint Committee on Atomic Energy and held a keen interest in the AEC and in Hanford. Sam, a lifelong Democrat, appreciated Jackson’s efforts and began raising money for him during his 1956 reelection campaign.

Sam Volpentest’s cancer changed his life. No longer able to work in his taverns because of a draining wound from his jaw, his physical inactivity and the continuing pain and disfigurement resulting from multiple operations, led to bouts of severe depression. Concerned, his wife contacted the influential publisher of the local *Tri-City Herald* and asked if he couldn’t find something for Sam to do. Sam was recruited to help in the fight

to incorporate Richland and to sell its buildings to their occupants.

He attacked his new challenge with his characteristic energy and salesmanship. Incorporation was finally achieved in July 1958 after 12 years of controversy. In recognition of his efforts, he was named chairman of the “Commencement Day” celebration and then elected president of the nascent Richland Chamber of Commerce in 1960.

A COMMUNITY VISION AND THREE PROJECTS

In his acceptance speech to the chamber of commerce, Sam laid out a community vision and listed three specific projects that he saw as necessary to implement that vision. The first was to win *Look* magazine’s prestigious “All-America City” award. He organized the campaign and helped make the city’s presentation. Approximately a year later, his picture was in the *Tri-City Herald* – his jaw still swathed in bandages from a recent operation – pointing up to a sign that proclaimed, “Welcome to Richland: All-America City.”



The Richland Federal Building, which Sam secured with the help of Senator Warren Magnuson in 1962, nears completion in 1964.



With Washington Governor Albert Rosellini (r) in 1963. When Sam served as president of Seattle’s Italian Club in 1938, Rosellini served as his vice-president.

Sam’s second goal was to improve the transportation access to his remotely-located community. He proposed a 29-mile highway across the Hanford Site and a new bridge over the Columbia River – then served by a six-car ferry – that would significantly decrease the time it took to drive to Seattle and Spokane. With the help of his old friend, Albert Rosellini, now governor, he helped convince the

state legislature, which sought support for building a section of interstate highway through Seattle in time for the Seattle World’s Fair, to support a compromise which allowed both projects to be built.

But it was Sam’s third goal that attracted the most attention. The Tri-Cities was almost totally dependent on Hanford for both its direct and indirect jobs. Any government decision that would reduce the activity at Hanford would devastate the community. He was looking for something that would assure the local residents that the

federal government was not going to abandon them if the work at Hanford slowed down. He had just the right project in mind – a massive new federal building – and he knew just whom to ask for it.

In 1962, his old friend, Warren Magnuson, was a senior member of the Senate Appropriations Committee. He explained that new federal buildings normally took 15 years or more to get funding authorized and appropriated, and a new building built. But these were not normal times. Magnuson was up for reelection and facing a particularly difficult Republican challenger.

Sam went to work raising campaign contributions from local businessmen (mostly Republicans), and Hanford contractors and labor unions reminding them of the many ways that Magnuson could help the community and of his own close personal connections to the senator. In the middle of the campaign, Magnuson announced that funds had been appropriated for a new seven-story, \$8.2 million, federal building in Richland. Sam later said, "I don't know how he did it, and I didn't ask."



Sam first met John F. Kennedy during the Washington state Democratic convention in 1958. He convinced him to come to Hanford to dedicate the n Reactor's companion steam generating plant in 1963.

SELLING MEMBERSHIPS IN A NEW ORGANIZATION

In August 1963, President John F. Kennedy agreed to a Nuclear Test Ban Treaty with the Soviet Union. The treaty prohibited atmospheric testing, initiated a system of verifications and controls, and greatly reduced the need to continue to produce plutonium. Kennedy was assassinated before all of the provisions of the test ban treaty could be implemented and impact the production facilities at Hanford. However, that didn't stop the flow of rumors forecasting the community's impending doom.

Sam and two other local businessmen, Glenn C. Lee and Robert F. Philip, both Republicans and the owners of the influential *Tri-City Herald*, often heard the rumors during their frequent trips to Washington. Expressing their concerns and the growing sense of community panic to Senators Jackson and Magnuson, they were referred to a consultant who was familiar with the AEC and experienced in helping other communities diversify their local economies. The only problem was that there was no money available to pay his fee.

Based on information they obtained from the consultant and from other communities in Washington state, they decided to create a local economic development organization in February 1963. They called it the Tri-Cities Nuclear Industrial Council (TCNIC). Sam was its unpaid executive and set out to sell memberships in the new organization. Before long, he had raised the \$25,000 necessary to hire the consultant.

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Volpentest, Lee, and Philip decided on four goals for the new organization. They included:

1. Conducting "a careful assessment of the present and potential resources of the area, particularly those derived from nuclear or related technologies;
2. Considering new governmental programs and private enterprise activities best suited to employ those resources, and stimulating efforts to attract them to the area;
3. Taking steps to focus the attention of private and public organizations on the potential uses of these resources; and
4. Carrying out a pilot program to interest qualified enterprises in new undertakings in the Tri-City region."

TCNIC's small board of directors consisted largely of trusted friends and business leaders. In order to control their message and to limit unwanted participation, small businessmen, women, and local government officials were excluded. There was only token representation from organized labor. Community support for TCNIC was far from unanimous. The three small local chambers of commerce were suspicious of it, believing that it would undercut their local small business membership base.

Sam Volpentest and Glenn Lee also had their local detractors, but for different reasons. Sam's always profane, hard-driving personality and take-no-prisoners style of fundraising had turned many in the community against him, while Lee's no less aggressive personality, plus his reputation as a union-busting martinet, hardly endeared him to Hanford's organized labor unions.

When the consultant's report was received, it was not very optimistic. General Electric, Hanford's prime contractor, was unwilling to welcome other contractors to the site or to share their research facilities. Working with

an agreeable Senator Jackson, Sam and his supporters applied pressure on the AEC to divide up GE's contract into smaller components and to require that new contractors invest in local non-Hanford-related projects as the price of being awarded a lucrative Hanford contract. At the same time, TCNIC promoted higher education, improved highway access and better air service, and was influential in creating a new visitor and convention bureau.

SAVING THE COMMUNITY

The news they had been dreading arrived on the night of January 8, 1964, when President Lyndon Johnson delivered his first State of the Union message. Tucked in between the praise of John Kennedy's legacy, the battle for civil rights, the War on Poverty, a federal tax cut, government frugality, and military cutbacks – was the news that would impact Hanford for the next decade: “We must not stockpile arms beyond our needs or seek an excess of military power that could be provocative as well as wasteful.”

Johnson's announcement amounted to a 25 percent reduction in the amount of plutonium produced and the loss of 2,000 jobs, but that was soon expanded to include the shutdown of all eight Hanford reactors over the next decade and the potential loss of most of the Tri-Cities work force. Sam was defiant, telling a reporter, “We're not going to let this place dry up and blow away.”

Two weeks later, General Electric announced that it would be leaving as Hanford's contractor and that the \$1.4 billion in nuclear reactors and related facilities, as well as the additional \$80 million in laboratory facilities currently being operated by GE, would be re-bid and turned over to new contractors. Not surprisingly, the community viewed the twin announcements as a full-fledged disaster. TCNIC, the community's newly formed economic development organization, was unproven and virtually unknown.

To help ease local community concerns and give TCNIC more standing, he worked with Senator Jackson to arrange a high-profile visit by Dr. Glenn Seaborg, the chairman of the Atomic Energy Commission, and several powerful U.S. senators to the Tri-Cities in early February 1963. The visit resulted in the outline of a strategy to save the community. Studies were commissioned to look at which Hanford facilities and technologies might lend themselves to being sold to private industry.

The AEC and senators agreed to promote Hanford with other government agencies. At the same time, they would see what could be done to slow down the pace of the reactor closures, which were being driven by the Bureau of the Budget and the White House. TCNIC was also granted unusually direct access to officials in Washington, D.C., and the plan to split up the Hanford contract and to require that new contractors fund local projects unrelated to their Hanford work was implemented.

The process of recruiting new contractors to Hanford began almost immediately. When they arrived for a visit, Sam's sales pitch was always the same: the availability of existing nuclear and research facilities at Hanford, an unparalleled pool of nuclear construction workers and expertise, a surplus of trained nuclear operators, a community that embraced nuclear energy, inexpensive land and cheap electric power, the recreational benefits of the Columbia River, and the area's mild climate.

He also never failed to mention his connection to the state's powerful senators, or that his personal influence with them might be useful in resolving any problems associated with a company coming to Hanford. When one potential contractor sent him an unsolicited check to act on their behalf, he sent it back.

The slow drip of reactor closure announcements continued throughout the 1960s. Each announcement resulted in a new round of community pessimism. People left town. Consumer spending declined. Bankruptcies soared. Each announced shutdown raised the question of how the lost jobs would be replaced.

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Sam's response was that the Hanford site should become an integrated nuclear energy park with as many as 20 nuclear power reactors, along with all their associated support facilities, producing enough electric power to export to California and throughout the west. The resulting financial windfall would be used to support the growth and economic diversification of the local community. One potential solution to the closures – managing and cleaning up the nuclear waste – wasn't much discussed, and when it was, didn't seem to be a realistic alternative to him and a community full of dedicated nuclear supporters.

Still an unpaid volunteer at TCNIC, he pursued other business interests, including real estate development, banking, and an early computer startup company, while still working roughly 60 hours a week on behalf of TCNIC – a tall order for a man now in his sixties. By the end of the decade, Sam Volpentest was seen both by his community and by officials in Washington, D.C. as a force to be reckoned with, a reputation he worked hard to burnish during the following decades. Not everyone liked his style, but it was hard to argue with what he had achieved. His was the constant and energetic voice promoting the Tri-Cities economy.

The new Hanford contractors were largely in place by 1965. Their ability to create non-Hanford jobs and invest in the broader community produced uneven results. Even when new projects were successful, as in the case of a new hotel in Richland and a large meat-packing plant, the jobs that were created did not pay the wages or provide the benefits of those that had been lost with the shutdown of the reactors. One major exception was Battelle's acquisition of the old GE Research Laboratories. Battelle acquired 275 acres for their new campus and spent \$12 million on new buildings. By 1967, they had 2,600 scientists, engineers, and researchers working on a broad array of scientific research.

Sam always took credit for bringing Battelle to the Tri-Cities. It is true that he lobbied them both in Columbus and in New York City. But as such things often happen in the economic development business, it turned out that Battelle's president had graduated from the University of Washington and was looking for a Pacific Northwest location.



President Richard Nixon, Washington Governor Dan Evans, Tri-City Herald publisher Glenn C. Lee, and Sam during Nixon's September 26, 1971, visit to break ground for the Fast Flux Test Reactor. Volpentest was no fan of Nixon's, but he took control of the ceremony to better showcase the Tri-Cities.



A traditional economic developer for TCNIC, using pictures and local economic reports to pitch the "Miracle in the Desert" to new businesses in 1970.

"DON'T EVER BE AFRAID TO DREAM"

Between 1965 and 1985, Sam engaged in a series of efforts to attract new missions to Hanford. Again, he worked closely with Senators Jackson and Magnuson and with House Speaker Tom Foley, who represented Washington's Fifth District, cutting deals with powerful senators and congressmen from other states. He became the region's indispensable lobbyist, making as many as 20 trips a year to the nation's capital at his own expense. Now in his 70s, Sam was still an exceptional salesman. His remarkable energy, arts of persuasion, infallible memory, and dogged persistence were seen as being even more effective because people knew he wasn't being paid for his efforts. Congressman Norm Dicks told me, "It was never about Sam. It was always about his community, and that was a powerful message."

The two decades between 1965 and 1985 saw major changes at Hanford. The production reactors were gone. Efforts to attract major new programs like the 200 BeV Accelerator, breeder reactors, uranium enrichment plants, and a new underground storage facility for nuclear waste all failed as they fell prey to politics, huge cost overruns, and changing national priorities. Existing programs, like the multipurpose N Reactor and liquid sodium-powered Fast Flux Test Facility, reached the end of their usefulness or were unable to attract new missions.

The Three Mile Island and, later, the Chernobyl nuclear disasters played into the public's growing concerns about the safety of nuclear energy, which were already being fanned by environmentalists, social activists, and anti-nuclear politicians. Not surprisingly, Volpentest saw these forces as enemies who threatened the livelihood

of thousands of Hanford workers and the future of the Tri-Cities economy, potentially undoing his years of hard work and effort. Yet, he refused to give up hope. "Don't ever be afraid to dream," he would say. "He

was," one associate remembered, "like a lead horse with blinders on."

He continued to fight for his vision of a nuclear energy park at Hanford. He thought that the Washington Public Power Supply System (WPPSS), which was attempting to build five new nuclear power plants at the same time – three of them at Hanford – was the answer to his dream. However, the effort was clearly beyond the agency's capability. Mismanagement, technical difficulties, labor problems, growing anti-nuclear sentiment, and a massive debt load finally led WPPSS to default on \$2.25 billion in bonds and lay off more than 5,000 workers, ending Sam's dream of a nuclear energy park at Hanford.

TIME FOR A NEW APPROACH – New Voices Demanding to Be Heard

By 1985, the combination of a recent national recession, lost projects, and the collapse of WPPSS led to an economic crisis in the Tri-Cities that was every bit as intense and painful as the one in 1963. Regardless of Sam's and TCNIC's efforts, the Tri-Cities remained as dependent on Hanford as ever. It was time for a new approach.

TCNIC was no longer able to deal with the crisis. There were too many new voices demanding to be heard. Local governments, the chambers of commerce, environmental groups, agribusiness, and organized labor all demanded a seat at the table. Sam opposed these calls because he believed that the real power and money in the community still rested with the Hanford contractors and that expanding the local economic development effort would result in blurring the message. "We have to speak with one voice," he said.



With Senators Henry M. Jackson (left) and Warren G. Magnuson at the height of their legislative powers in 1980.

But by 1985 both Senators Magnuson and Jackson were gone. His longtime ally, the *Tri-City Herald*, had been sold to new owners. Sam's was just one voice, however respected and influential, and he got outvoted and the decision was made to create a new broadly-based economic development organization which would engage in a broad spectrum of economic development and diversification activities. In May 1985, TCNIC acquired the debt, assets, and membership of the largest of the local chambers of commerce, reinventing itself as the Tri-City Nuclear Industrial Development Council (TRIDEC). Sam insisted that the word "nuclear" be retained in the title.

His objections to the formation of TRIDEC were overcome by creating a paid executive vice president position that left him in sole charge of all Hanford-related activities and government lobbying. A new president would be hired to handle everything else. For the first time, Sam would be paid for his efforts.

The new TRIDEC board brought together for the first time and at the same table all of the suspicions, distrusts, animosities, and competing community and economic interests that had been building in the Tri-Cities for the past 25 years. Hanford interests, local business interests, agribusiness interests, and the units of local government – themselves badly fragmented – held widely differing views about what the organization should become.

There were complaints from the other organizations that were still not represented at TRIDEC's table. The chambers, still upset by the merger, complained when TRIDEC handled business leads they felt they had first developed. Mike Schwenk, TRIDEC's new president, solved this by creating a new Case Management Committee, where representatives of all the local economic development organizations gathered once a month to discuss current leads and available properties. Sam continued to control the agenda of a newly created Hanford Programs Committee. Because it dealt with the community response to the Hanford budget and sensitive lobbying issues, no other board members were permitted to attend its meetings.

Gradually, TRIDEC's transition problems and the health of the local economy began to resolve themselves.

TRIDEC completed two highly successful community fundraising campaigns and expanded their services to include entrepreneurial development and business assistance and recruitment of non-Hanford businesses to the community.

Sam's longstanding interests in improved highway access and air service led to the Tri-Cities finally being included on the interstate highway system. With TRIDEC's help, a new air terminal was built. A branch campus of Washington State University was located in north Richland, near the Battelle campus and the offices of the major Hanford contractors.

Ever pragmatic, he learned to work with new political allies, including a number of Republicans. His effectiveness on Capitol Hill remained undiminished, helped along considerably by the relative cohesiveness of the Washington delegation and by what came to be known as the "legend of Sam," in which stories of his legendary exploits were passed down from elected officials to their staff, some of whom were ultimately elected to Congress themselves.

CLEANING UP THE HANFORD SITE – Unanticipated Consequences

By the late 1980s, it was clear that Hanford would have to change forever from a production mode to a cleanup mode. After intense negotiations that lasted almost a year, the Department of Energy, the U.S. Environmental Protection Agency, and Washington State signed what became known as the Tri-Party Agreement. For the first time, the agreement set certain milestones and time frames for cleaning up the site and treating the approximately 56 million gallons of nuclear waste that had been accumulating for 40 years. The cleanup of the Hanford site progressed slowly at first and a great deal of money was wasted as DOE struggled to embrace a cleanup mentality and to develop the new technology that was required.

The Tri-Party Agreement led to a number of unanticipated consequences, but the largest was the positive impact that the injection of between one and two billion dollars a year would have on the Tri-Cities economy. Sam was not convinced at first, considering cleanup jobs of lesser importance than the jobs they were replacing. "These are not the kind of jobs we need," he said. But as cleanup efforts progressed, and the money flowed, even he could see the obvious benefits to the community.

WORKING IN HIS 90s

Some of Sam's most effective economic development work took place when he was in his 90s. In 1994, he helped broker an agreement between Battelle's Pacific Northwest National Laboratory (PNNL) and the Department of Energy to locate the 200,000-square-foot, \$230 million Environmental Molecular Science Laboratory on the campus of PNNL.

With the help of his new political allies in Washington, he also found \$365 million to fund the Laser Interferometer Gravitational-wave Observatory (LIGO) on the



The sprawling Volpentest HAMMER Education and Training Facility. It was Sam's favorite project.

Hanford site. LIGO was designed to detect gravitational waves that were believed to have originated hundreds of millions of light years away during the dawn of the universe. It was the largest project ever funded by the National Science Foundation.

Sam's last project was also his favorite. The \$30 million Volpentest HAMMER (Hazardous Materials Management and Emergency Response) Education and Training Facility provided realistic training for thousands of Hanford workers who were transitioning to cleanup. It was also one of the most difficult projects to fund. He helped forge a partnership among the federal government, national labor unions, and Hanford contractors to fund the



The manager of DOE's Richland Operations Office announces that they had re-named the main highway through the Hanford Site Volpentest Boulevard.

facility. In recognition of his efforts, the facility was named for him. "It was the most important project I ever worked on," he said.

MAKING A DIFFERENCE TO HIS COMMUNITY'S FUTURE

As he approached his tenth decade, Sam had become a living legend. He still drove to work at TRIDEC every day – his head barely visible behind the steering wheel of his Oldsmobile 98 sedan. His annual birthday parties attracted hundreds of people. Seven hundred attended his 100th birthday party, when IEDC presented him with its Chairman's Award for Lifetime Achievement.

The story of Sam's life teaches us several lessons as economic developers. You don't always have to be right, but you have to be wrong for the right reasons. You have to believe in your product and in yourself. His story reminds us that the one constant we all face in personal and professional lives is change. Successful communities grow when they experience the happy combination of conditions that provide the potential for economic growth, a community vision, and community leaders who are committed to that vision and who, like Sam, are determined

not to "let our community dry up and blow away" in the face of adversity. Finally, Sam's life reminds us that one person – even the most unlikely among us – can make a real difference to the future of our community. 🌐

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the uptown

CONSORTIUM, INC. IN CINCINNATI

By Beth Robinson, CEcD

The Uptown Consortium has been leading the effort to revitalize Uptown Cincinnati for the past decade. It is a private nonprofit organization comprised of five member institutions: Cincinnati Children's Hospital Medical Center, Cincinnati Zoo & Botanical Garden, UC Health, Tri-Health, and the University of Cincinnati. Through the Consortium, these anchor institutions have strategically leveraged their financial and human capital to improve the Uptown community.

Uptown Cincinnati is an economic engine for the entire Cincinnati region. It is the dominant center for healthcare and learning, characterized by a high concentration of research capabilities and talent. Over 55,000 people work in Uptown, making it the second largest employment center in the region behind downtown Cincinnati. Geographically, the area is strategically located just outside the downtown central business district, serving as a gateway to the city's residentially oriented neighborhoods and along the city's major transportation corridors.

Despite these significant assets, Uptown's neighborhoods suffer from a disproportionate share of the social issues affecting the city of Cincinnati. Issues related to crime, housing, social needs, and community and economic development affect the

Geographically, the area is strategically located just outside the downtown central business district, serving as a gateway to the city's residentially oriented neighborhoods and along the city's major transportation corridors.



Group Health Medical Office Building.

quality of life in the community. Nearly 30 percent of the population reports incomes at or below the poverty line. At 21 percent, homeownership is much lower than the city's homeownership rate of 39 percent and the national average of over 65 percent. Unemployment at 17 percent is over three times higher than the city's average.

These social and economic conditions led to the creation of the Consortium in 2004. For the past ten years, it has been working to reinvest in the neighborhoods surrounding the campuses of the anchor institutions. The Consortium's work affects the 50,000 residents of Uptown Cincinnati in addition to the 55,000 people who work at the member institutions, and over 1.4 million visitors who travel to Uptown annually to visit the Cincinnati Zoo.

These investments have created and retained an estimated 3,300 jobs, nearly 400,000 square feet of office

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LEVERAGING ANCHOR INSTITUTIONS TO STRENGTHEN NEIGHBORHOODS

The Uptown Consortium is a non-profit community development corporation dedicated to building strong public-private neighborhood partnerships to restore and revitalize the five urban neighborhoods that comprise Uptown Cincinnati. The Consortium's members are the five largest employers in the area and employ nearly 50,000 people, have a payroll of \$1.4 billion, and produce an annual economic impact of over \$3 billion. UCI's areas of focus are public safety, transportation, housing, and community and economic development. The Uptown Consortium received the IEDC Gold Award for Neighborhood Development in 2013.

and retail space, and over 500 residential units. The foundation of the organization's work is strong public-private partnerships to support a multifaceted approach that includes the following objectives:

- **Promote Uptown neighborhoods** as vibrant communities where people of diverse economic and cultural backgrounds live, work, learn, and play through marketing and communications initiatives.
- **Support economic development** through integrated strategies that support the growth and vitality of the business community, create and retain jobs, and create a welcoming place to do business.
- **Promote community development** efforts by building partnerships with neighborhood stakeholders and leveraging Uptown's many assets including diverse and interesting neighborhoods, students, and home to the city's major employers.
- **Ensure Uptown is a safe, attractive, and walkable** community for its residents, employees, students, and visitors.
- **Create a clear sense of direction, distinct place,** and better access to neighborhoods, retail centers, and major institutions.

ORGANIZATION

The CEOs of Uptown's largest employers officially formed the Consortium in 2004. These leaders comprise the Board of Directors and provide leadership and guidance in establishing and implementing the organization's mission. Since its inception, the organization has been committed to working with the community in realizing the shared goal of a better Uptown.

At its formation, the Consortium initiated an intensive community outreach process that involved more than 40 individual and group sessions with over 300 key community, civic, and institutional leaders. The Uptown Cincinnati Strategic Opportunity Plan, prepared by the Consortium in December 2004, brought together all the diverse elements of these efforts.

The organization has continued to meet formally and informally with a wide range of residents, community councils, business owners, developers, and other leaders to inform and be informed. Formal input from community partners is now influenced by several advisory bodies: Community Development Committee, Public Safety Committee, and the Management Operations Committee (among others).

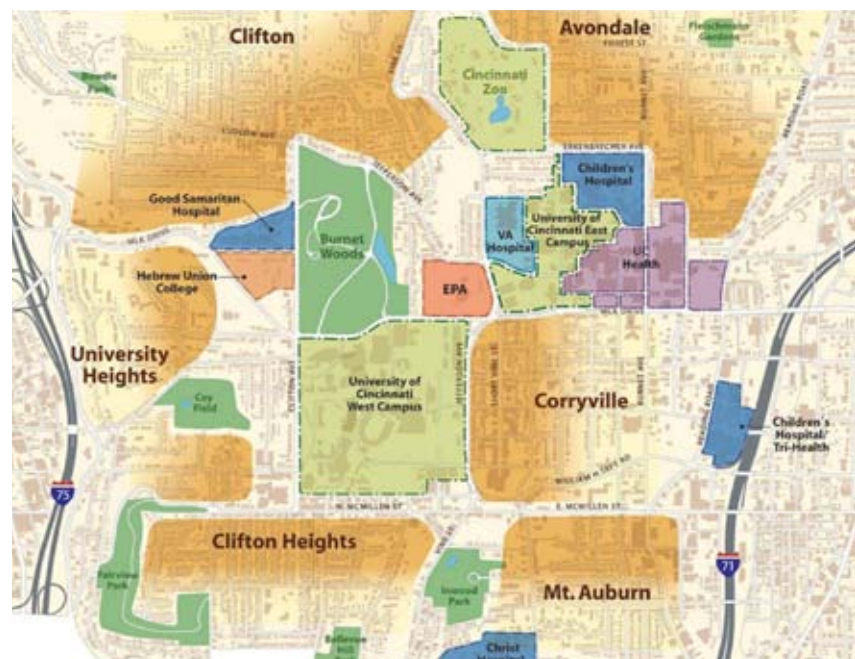
The Consortium was created to direct its members' investments in the Uptown community and serve as a conduit between the institutions and surrounding communities. The organization is led by a Board of Directors composed of the presidents and chief executive officers of the five member institutions. The support and commitment of the member executives are critical to success and sustainability.

The Management Operations Committee, a second tier committee comprised of high ranking staff from member organizations and two neighborhood representatives, contributes thoughts and ideas toward policy making and programs. The five professional staff, led by the president and CEO, implement the policies and programs formulated by the Board and Management Operations Committee while providing input into the policy-setting process. Policies and priorities are established with active community involvement and input through various committees and outreach. Public meetings, summits, design seminars, and other events have been used to solicit community input and communication.

Financial support is provided by annual operating grants from the member institutions as well as project fee income. Real estate development activities were initially capitalized by a \$36 million investment from the member organizations. The Consortium has also been successful in obtaining over \$7 million in funding from the city of Cincinnati and the Ohio Housing Finance Agency for various projects and initiatives.

AREAS OF FOCUS

Catalytic and comprehensive neighborhood development distinguishes the organization's unique work. Since its inception nearly ten years ago, the Consortium has invested over \$120 million through direct investments and federal New Markets Tax Credits, inducing over \$1 billion in development throughout Uptown. As stated earlier, the organization's investments have created and retained an estimated 3,300 jobs, and produced nearly 400,000 square feet of office and retail space and over 500 residential units. Following are highlights of project investments and results in the areas of community development and economic development, transportation and planning, and safety.



Uptown Area Map.

COMMUNITY DEVELOPMENT & ECONOMIC DEVELOPMENT

Avondale

The Consortium, in cooperation with the Burnet Avenue Revitalization Team – a business/resident partnership – launched a \$100 million project to bring life back to an 11-square-block area surrounding Burnet Avenue in the Avondale neighborhood. The project features: nearly 200,000 square feet of office space for the *Cincinnati Herald* and Cincinnati Children's medical office building, and multilevel parking garage; Burnet Place, a 62-unit rehab housing complex also offering 6,800 square feet of street-level commercial space; and Forest Square, a 21-unit senior housing complex.

The corridor was once crime ridden with the distinction of being one of the city's crime hotspots. It is now one of the city's safest corridors, assisted by the Consortium's annual support for off duty police officers and investment in surveillance cameras. Over 60 blighted properties were acquired and either demolished or redeveloped through the organization's efforts.

Corryville

Working closely with community stakeholders, the organization developed a plan to revitalize the Short Vine Business District. This once thriving commercial area in the Corryville neighborhood had been declining for the past 25 years and was characterized by vacant and dilapidated properties and criminal activity.



Views on Vine.

The Consortium has invested \$60 million in federal New Markets Tax Credits and direct investments to help turn around the street. These projects have included the construction of a 132-room Hampton Inn hotel and a 210-space public parking garage; the Views on Vine, a mixed-use project with 102 apartments and 180,000 square feet of retail space; and the acquisition of and investment in a portfolio of commercial properties. Today, the Short Vine Business District is on its way back as an

U SQUARE @ THE LOOP

The Uptown Consortium provided \$24 million in New Markets Tax Credits to help fill the final financing gap for a LEED certified mixed-use project covering two city blocks between McMillan and Calhoun streets within the Clifton Heights neighborhood across from the University of Cincinnati's campus. U Square at the Loop is comprised of 161 apartments, 80,000 square feet of retail space, 40,000 square feet of office space, and two 358-space parking garages. U Square was completed in August of 2013 at a cost of \$70 million.

The genesis of the project began with the 2001 Clifton Heights/UC Joint

Urban Renewal Plan which identified the area for redevelopment. The Clifton Heights Business Association, the Clifton Heights – University Heights – Fairview (CUF) Neighborhood Association, and the university then established the Clifton Heights Community Urban Redevelopment Corporation (CHCUTC), a nonprofit group charged with implementing the plan.

The project stalled for several years. The development group Towne Properties was ultimately selected in 2008 to refine the plan and create the complex funding strategy necessary for successful implementation. Allocations from three New Markets Tax Credits

allocates were secured to help finance the project, including the Cincinnati Development Fund, PNC Community Development Entity (CDE), and the Uptown Consortium, in addition to private equity

and tax increment financing and tax abatements from the city of Cincinnati.

The project has brought new life and vitality to an area that was once in decline and characterized by fast food restaurants and blighted buildings. Today over 20 dining and apparel retailers are located at U Square, complementing the adjacent neighborhood business district filled with locally owned, unique dining venues.

The road to success was long, however, and tested the endurance and commitment of its supporters. In the more than 10 years it has taken to plan and execute the project, the Consortium and its partners have overcome land acquisition battles, failed attempts by the first developer selected and, most recently, the economic downturn. Ultimately, collaboration among many community partners was necessary in order to bring this long planned development to fruition.



arts and entertainment district with increased demand for retail space and over \$25 million in private investments underway or completed in the past two years.

Clifton Heights

The Consortium invested \$24 million in federal New Markets Tax Credits to help finance the construction of U Square at the Loop, a catalytic mixed-use project in Clifton Heights including 80,000 square feet of retail, 40,000 square feet of office, and 161 apartments. This project anchors the south side of Uptown Cincinnati, returning long vacant land to productive reuse, revitalizing the local retail market, and creating approximately 480 permanent job opportunities and 130 full time equivalent jobs during construction.

Clifton

The organization helped finance a new facility in the Clifton neighborhood for Group Health Associates, a full-service medical center providing patient access to primary care doctors and specialists. This project is important because it ensures that Group Health Associates remains in the community long-term, preserving the availability of medical services in the urban core and resulting in the retention and expansion of approximately 200 jobs. The project will also help to attract higher income residents to live and work in the urban core.

A program was recently launched to lay the groundwork for revitalizing the Ludlow Avenue Business District. In partnership with community stakeholders, a retail leasing consultant has been hired to work with property owners and residents to develop a blueprint for identifying tenant prospects and district branding.

Green Energy

An allocation of New Markets Tax Credits (\$4 million) was provided to help finance a pioneering green energy project at the Cincinnati Zoo. In 2011, the largest publicly accessible solar array in the country was installed over a 700-car surface parking lot at the zoo. This project powerfully demonstrates the merits of sustainable and renewable energy alternatives. As part of the project, a scholarship fund was established with Cincinnati State Technical College specifically for residents of Uptown's member communities. The fund provides three scholarships for Cincinnati State's Solar PV Installer Certificate Program. The project also created and retained jobs and established Uptown and Cincinnati on the forefront of Ohio's emerging green economy.

Uptown Litter Abatement

Funding is provided through a partnership with Keep Cincinnati Beautiful for litter abatement in Uptown's business district areas, removing over 100,000 pounds of litter annually. This program has dramatically improved the livability of Uptown Cincinnati.

Uptown Business Retention & Small Business Development

The Consortium formed a partnership with the Hamilton County Economic Development Company to implement a business retention program to identify at-risk businesses and identify and support potential business expansion opportunities. The program also provides technical assistance and small business coaching to businesses in Uptown. Over 100 businesses are assisted annually through this program.

An allocation of New Markets Tax Credits (\$4 million) was provided to help finance a pioneering green energy project at the Cincinnati Zoo. In 2011, the largest publicly accessible solar array in the country was installed over a 700-car surface parking lot at the zoo. This project powerfully demonstrates the merits of sustainable and renewable energy alternatives.



Melink Solar Canopy at the Cincinnati Zoo and Botanical Garden.

TRANSPORTATION AND PLANNING

New Uptown Interchange

The organization provided funding and on-going advocacy to create a new interchange on I-71 to improve access in Uptown. The project began construction this summer. Once completed, it has the potential to create 7,000 jobs and induce over \$750 million in investments.

Way-finding System

The Consortium spearheaded the effort to create and install new way-finding signage throughout Uptown. Previously, the signage was confusing, dilapidated, and in many instances inaccurate or lacking altogether. This new system has improved access and way finding throughout the area.

Transit Improvements

The organization worked with Queen City Metro in designing improved and direct routes to Uptown Cincinnati. The goal is to increase transit ridership within the second largest employment center in the region. The transit authority has also invested \$6 million in collaboration with the city of Cincinnati to create enhanced bus shelters, improved signage, and branding to create an Uptown Transit District.

Land Use and Transportation Planning

In 2013 in conjunction with the city of Cincinnati, the Consortium launched a Corridor Planning Study for the area along Martin Luther King, Jr. Boulevard (MLK) and Reading Road. This study is critical in order to proactively plan for the impacts of the proposed construction of a new interchange at the intersection of MLK and I-71 in the next few years.

The Uptown community wants to see the MLK corridor be a connector among the institutions, business districts, and neighborhoods and become a mixed-use district/place where pedestrians can feel comfortable participating in the vibrancy that this area offers. The community also wants to avoid the possibility of the corridor evolving further towards an auto oriented route between I-71 and I-75 when the new I-71/MLK interchange is completed.

The plan's purpose is to provide a blueprint to achieve a desirable mix of land uses, transportation infrastructure elements, and urban design, and to guide investment that will protect the existing institutions and neighborhoods from the impacts of the future highway interchange. While the new interchange is desired, the plan will provide the opportunity to proactively enhance the corridor from a pedestrian, residential, business, and sense-of-place perspective. It will reflect the community's vision for a vibrant, diverse, healthy, and growing mixed-use node within the Cincinnati region.

SAFETY

Crime is down precipitously in Uptown since the Consortium's creation in 2004. In the last year alone, Part 1 crimes (violent and property) are down by 12 percent. In 2006, there were 4,586 Part 1 crimes in the area; by 2012, that number had been reduced to 3,594.

The Cincinnati Police, Uptown Consortium, University of Cincinnati, and local residents and community councils have worked diligently to keep safety at the forefront by developing neighborhood-specific crime prevention strategies, initiating public outreach programs, and improving current police response methods. The following initiatives are just a few examples of how the community is addressing the ongoing issue of safety.

NEW I-71 INTERCHANGE SERVING UPTOWN

The Ohio Department of Transportation began construction this summer on a new Uptown interchange on I-71 and Martin Luther King Drive. Completion of a new, full interchange will provide full interstate access to the second largest employment center in the Cincinnati metropolitan area. An interchange at Martin Luther King Drive was part of the original plan for the I-71 interstate in the 1970s but was eliminated during construction due to budget considerations.

The Uptown Consortium began working to remove this access impediment in 2006 by joining with several partners, including the city of Cincinnati, the Ohio Department of Transportation, and the Ohio-Kentucky-Indiana Regional Council of Governments. Together, they commissioned the Uptown Transportation Study, which looked at all aspects of transportation in the area and provided detailed recommendations for substantive change. The study included a recommendation for improved access to I-71 near Martin Luther King Drive.

In 2009, the Consortium and its partners initiated and funded the Uptown Access Study. The work was guided by the Implementation Partners, a core group of community stakeholders organized to provide input and direction on plan recommendations. Completion of this study resulted in the selection of a preferred design for the new interchange.

The Consortium forged key partnerships to advocate for the project and secure funding. The organization secured additional support for the project from the Hamilton County Commissioners, the Greater Cincinnati Chamber of Commerce, and the Cincinnati Business Committee in addition to the original project sponsors. With universal community support, the financing pieces came together with the Ohio Department of Transportation committing \$60 million toward the \$105 million cost of the project. The Ohio-Kentucky-Indiana Regional Council of Governments contributed \$25 million, and the city of Cincinnati closed the financing gap with a \$20 million funding commitment. The interchange will be completed in the fall of 2016.

The immediate benefits of the interchange include improved access to Uptown for employees, residents, visitors, and people seeking health care. Long term, the interchange will have a positive impact on jobs and private development, attracting new jobs and spin-off development and resulting in the retention and expansion of existing local employment.



Uptown Camera Surveillance Initiative

The Uptown Consortium's Safety Committee worked with the Cincinnati Police to plan and finance the installation of surveillance cameras at strategic locations in the Avondale, Clifton, and Coryville business districts. The organization contributed \$132,000 toward installation.

The University of Cincinnati Policing Institute

The organization contracts with the University of Cincinnati Policing Institute to provide crime analysis reports for each Uptown neighborhood. Results are then shared with the Cincinnati Police and community councils so that neighborhood-specific strategies for deterring crime can be put in place.

LESSONS LEARNED

The Consortium has learned several significant lessons over its ten-year history. First, catalytic development takes longer and requires more investment than anticipated. In the beginning, the Consortium projected a much quicker pace in inducing private investment and a higher rate of return on investment. We have had to adjust those projections to reflect the realities of market conditions.

Second, no single entity can solve all the issues facing urban neighborhoods. Strong partnerships must be developed and sustained over time with local government, nonprofit service providers, and the community in order to advance the mission.


Third, realistic goals and objectives must be developed based on financial resources and capacity. The Con-

sortium has scaled back the organization's original goals to align with what can be realistically accomplished with available resources.

Finally, community stakeholders must be engaged fully in the planning and execution of development and program initiatives. This is key to developing a full and sustainable partnership based on shared objectives.

The creation of the Uptown Consortium by the CEOs of the five largest institutions in the city of Cincinnati was a bold and innovative move. These institutions realized that they were in a unique position to improve their surrounding communities. The members have embraced their role as anchor institutions and assumed greater responsibility for economic and community development. They have committed their leadership, expertise, and capital to improve Uptown and enhance their ability to attract talent, students, and patients.

The organization has been innovative in its approach to community engagement. Through a series of committees and other vehicles, it has fully engaged stakeholders in the Uptown neighborhoods, which has resulted in true partnerships and collaboration.

The Uptown Consortium model is replicable in other communities anchored by major institutions such as hospitals and universities. These institutions are drivers of job growth and already play a vital role in stabilizing neighborhoods. By engaging the surrounding communities, these anchors can help remake neighborhoods into vibrant, livable places. 



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vegas 2.0

By Jonas Peterson, CEcD

INTRODUCTION

In Las Vegas, the boom and bust cycle is alive and well. Few communities fell as fast or as hard during the great recession. Fewer still have been able to successfully restructure their economic development efforts, rise out of the downturn, and quickly chart a new path toward growth and diversification. The following article highlights the unique, innovative, and distinctly Las Vegas effort underway to reboot Southern Nevada's economy.

BOOM

In 2007, the Las Vegas metro area was the fastest growing region of the United States. Gaming revenue had grown over 14 percent the previous year to an all-time high of \$6.7 billion.ⁱ Nearly 40 million visitors per year were emptying their wallets in and around the Strip.ⁱⁱ Together, these two powerhouse industries built remarkable wealth and spilled over benefits to almost all other industries. Success was so rampant that few paid attention to economic development.

BUST

By 2010, Southern Nevada's seemingly endless boom had come to an abrupt end. One out of every six jobs vanished. Rapid population growth had sharply reversed to a -3.4 percent population decline in 2011.ⁱⁱⁱ The region's economic output shrank by approximately 10 percent in real terms from 2007 to 2010.^{iv} Home prices dropped by as much as 50 percent and the metro area suffered a foreclosure rate of one filing for every 60 households, approximately seven times the national average.^v And, Las Vegas also led the nation in unemployment at 14.9 percent.^{vi} Simply put, Southern Nevada was in the depths of economic despair. (See figures 1-3)

FIGURE 1

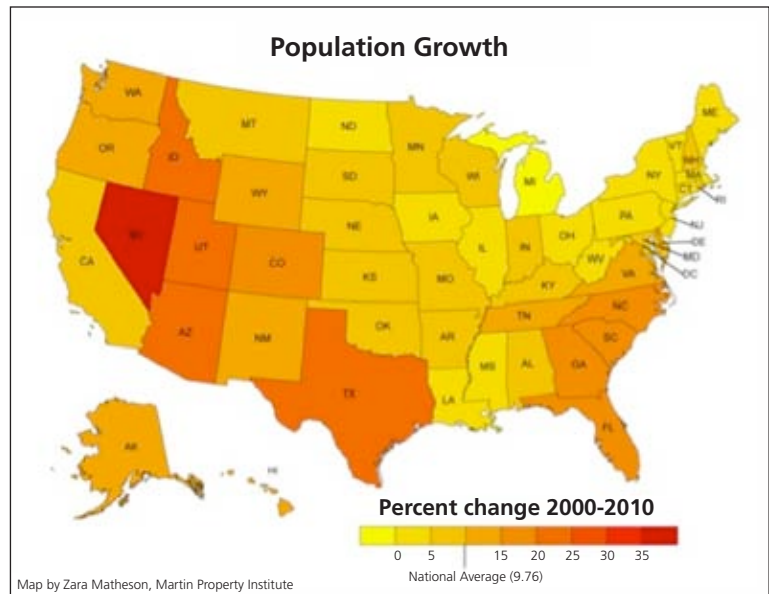
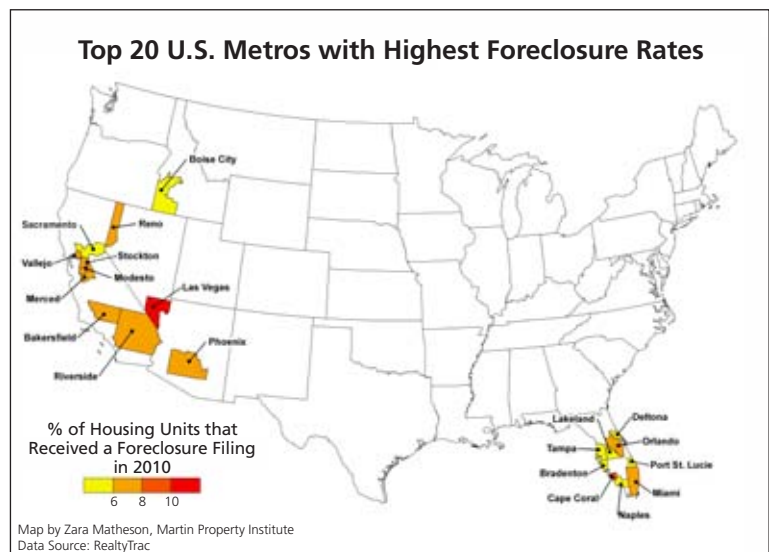


FIGURE 2

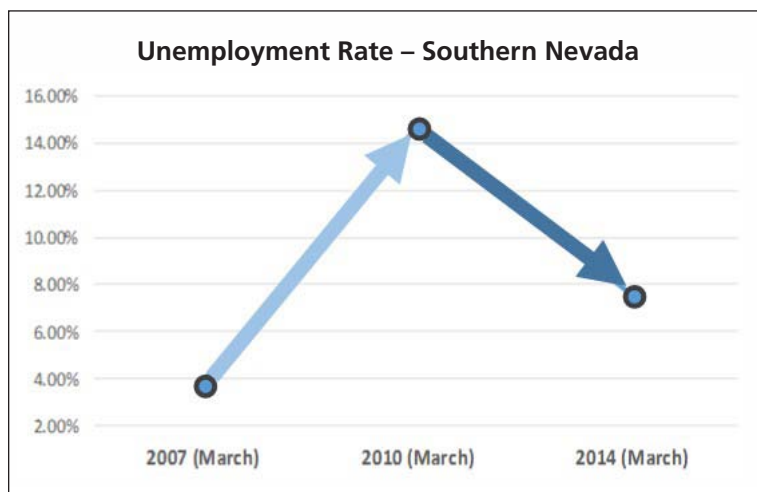


REBOOTING NEVADA'S ECONOMIC ENGINE

In Southern Nevada, the Las Vegas Global Economic Alliance (LVGEA) has quickly emerged as one of the most productive economic development organizations in the western United States. Armed with a mandate to restructure a regional economy that was hard hit by the great recession, LVGEA partnered with a robust network of private and public sector leaders to transform the regional economy. Now, several years after implementing a revamped economic development strategy, this article explores what has changed and how the new strategy has propelled the region toward a faster economic recovery and a broader, more diverse economy.

Jonas Peterson, CEcD, is the chief operating officer of the Las Vegas Global Economic Alliance. (JonasP@lvgea.org)

FIGURE 3



REBOOT

The great recession brought devastation but also illuminated the need for a new approach to economic development. On January 7, 2011, the University of Nevada Las Vegas (UNLV) hosted Nevada 2.0: A broad-ranging conference designed to explore opportunities to diversify Nevada's economy by examining similar efforts in nearby states. The event brought together more than 400 key players for a comparative analysis of Nevada's business opportunities. Presentations by guest speakers from Salt Lake City, Denver, Phoenix, and Dallas were featured as well as interactive panel discussions with Nevada business and political leaders to start identifying next steps.^{vii}

Nevada 2.0 outlined the strategic investments, improved capacities, and policy changes needed to develop and sustain a significantly more diversified state economy. Out of the Nevada 2.0 conference two things were clear: 1) the region was hungry for a return to prosperity, and 2) leadership at all levels was galvanized. Like never before there was an appetite and a mandate for regional cooperation and a robust, structured, innovative, and effective economic development strategy.

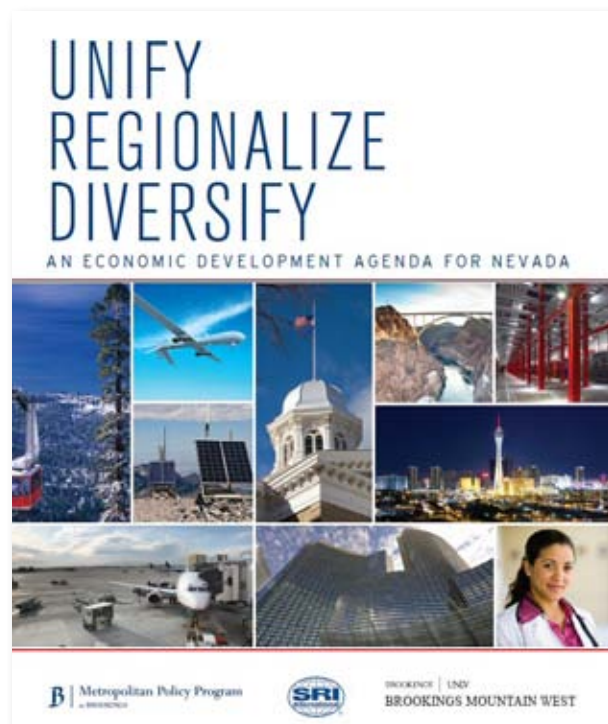
BUILDING A STATEWIDE STRATEGY: BROOKINGS SRI REPORT

In order to capitalize on the momentum generated at Nevada 2.0, public and private leaders began an intensive strategic planning process. At the state level, The Brookings Institute and SRI International, two research and policy organizations, were engaged to redefine the state's strategy, identify industry clusters, and outline policy options for the state and its regions to build a more unified, regionally vibrant, and diversified Nevada.

The Brookings-SRI study confirmed that Nevada's fundamental strength for economic development has been and will continue to be its extremely business friendly operating environment, including low taxes, relatively low costs, limited regulation, and ease of business start-up/permitting. Key challenges included: limited economic planning and cooperation; an immature innovation and technology commercialization enterprise; and substantial workforce skills shortfalls.

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Prior to 2011, the study noted that regional economic development efforts were largely ad hoc efforts lacking an overarching strategy, strong leadership, and accountability. Furthermore, efforts were constrained to leveraging Nevada's low tax and business-friendly environment for business attraction purposes rather than bolstering efforts to grow the state's human capital, innovation economy, new industry creation, and expansion of home-grown industries.



Unify, Regionalize, Diversify – An Economic Development Agenda for Nevada



*Comprehensive Economic Development Strategy of
LVGEA & Southern Nevada*

With regard to innovation and technology commercialization, the study reported a dearth of research facilities, doctorate degree-holders, venture capital investments, and lower-than-average federal research and development spending. Given the state's longtime reliance on gaming, tourism, and construction, the study also noted that the state had neglected to invest in education to equip Nevada's workforce with the skills necessary to compete in a 21st century global economy.

Following this review of Nevada's deficiencies, the Brookings study called for Nevada to upgrade its diffuse economic development system so that the state at once leads more vigorously, empowers its regions more fully, and also sets a state-wide platform for new growth. With this in mind, the Brookings study implored the state to unify, regionalize, and diversify as follows:

- **Unify:** Install an operating system for 21st century economic development
- **Regionalize:** Support smart sector strategies in the regions
- **Diversify:** Set a platform for higher-value growth through innovation and global engagement

LEGISLATING A NEW ECONOMIC DEVELOPMENT SYSTEM

While the Brookings-SRI study was being completed, political leadership quickly advanced the policy changes needed to restructure and strengthen Nevada's economic development system. Governor Brian Sandoval successfully led the charge, with broad, bipartisan support, to approve groundbreaking legislation known as Assembly Bill 449.

AB 449 funded a new Governor's Office of Economic Development (GOED) and 10 Regional Development Authorities for each region of the state. It also authorized significant investment in new tools and resources such as a Catalyst Fund, a deal-closing fund designed to help businesses relocate or expand to Nevada, and a Knowledge Fund, which provides grants for research, innovation and commercialization in Nevada. The bill provided \$15 million to support these new economic development initiatives and became the legislative cornerstone of what

has proven to be a dramatically new, and more productive structure for economic development throughout Nevada.

The ability to build upon the inherent strengths of state, regional, and local EDOs is critical to the success of any new economic development structure. Some states have led with a top-heavy approach that stifles local priorities and business involvement. Others have strengthened local EDOs but not capitalized on the economies of scale and political clout gained through regional and statewide efforts.

Through AB 449, Nevada provided an innovative and balanced structure and funding mechanism that enabled regional EDOs to leverage state resources, manage interactions with local partners, and to scale their overall activity in different markets. Simply put, Nevada implemented a balanced approach to economic development that few others have been able to achieve.

BUILDING A NEXT-GEN EDO: LAS VEGAS GLOBAL ECONOMIC ALLIANCE

Approximately 70 percent of Nevada's population and economic activity resides in Southern Nevada, within the Las Vegas MSA. So, in order for Nevada to be successful, Southern Nevada needed to quickly build a regional economic development organization that could partner with the newly formed Governor's Office of Economic Development while leading the southern charge for business attraction, retention, expansion and community development.

In March of 2012, a broad consortium of Southern Nevada business leaders including area chambers of commerce, municipal and county economic departments, education institutions, and leadership from the previous Nevada Development Authority submitted an application to the state Governor's Office of Economic Development to form a new Regional Development Authority. In May, the application was officially approved and the Las Vegas Global Economic Alliance (LVGEA) was born as a 501(c)(6) membership organization with a board of directors and funding drawn from both the public and private sectors.

Unlike its predecessor, LVGEA had a broad mission: To grow the economy in Southern Nevada through connectivity; community development; and aggressive business recruitment, retention, and outreach. The community recognized the link between community and economic development. With that in mind they demanded a more robust economic development effort that also supported and enriched the community.

ORGANIZING A REGIONAL STRATEGY – COMPREHENSIVE ECONOMIC DEVELOPMENT STRATEGY

In the fall of 2012, the Las Vegas Global Economic Alliance (LVGEA), the Governor's Office of Economic Development (GOED), and more than 300 community stakeholders from all over the region began the work of building a regional strategy to complement and localize the statewide framework already established by the Brookings-SRI study. This regional strategy became known as Southern Nevada's Comprehensive Economic Development Strategy (CEDS).

The CEDS document includes hundreds of catalyst projects, regional demographic information, economic analyses, and information on the strategies and tactics that the LVGEA and its regional partners would use to develop new industries and diversify the economy in Southern Nevada. CEDS identified six target industries with the highest growth potential for Southern Nevada:

- **Business & IT Ecosystems**
- **Clean Technology**
- **Gaming, Tourism & Conventions**
- **Global Finance & Banking**
- **Health Care & Life Sciences**
- **Aerospace, Defense & Unmanned Aerial Vehicles**

In writing this document, the community came together like never before to support economic development. Ultimately, the U.S. Economic Development Administration accepted the CEDS in September of 2013, which served as an important prerequisite for groups like the LVGEA to be eligible to receive Economic Development Administration grants in the future.

TRANSLATING PLANS INTO ACTION

With the state and regional strategy now in place, only one more planning document was needed – A tactical action plan to transition from strategy to implementation.

During its first full year of operations, LVGEA had created marketing, branding, and fundraising plans. Additionally, informal goals and performance metrics had been discussed but not formally organized, tied to Board priorities, or agreed upon.

With the above issues in mind, LVGEA created an internal strategic plan organized around four strategic imperatives:

1. Achieve and Maintain Operational Excellence

- a. Attract, develop and retain an extraordinary team of people; responsibly steward funds; operate effectively and efficiently; develop and expand enterprise capability

2. Lead, Facilitate & Steward Regional Economic Development

- a. Identify and attract next generation and emerging-market firms; retain and expand existing businesses in the Las Vegas region; engage community and business leaders in the economic development process; coordinate and collaborate with regional and statewide partners; promote the development of other new employment centers in the region

3. Elevate Southern Nevada's Position as a Global Business Destination

- a. Raise the profile of Southern Nevada as a global business location; implement a branding strategy that will promote Las Vegas as a great location for business; develop an integrated multi-channel marketing campaign; advance a legislative agenda to promote a truly positive business climate; improve contact relationship management

KEY PERFORMANCE METRICS FY 2014	
Strategy	Metric
I - Achieve and Maintain Operational Excellence	Total Capital Campaign Funds Committed (Over 3 Years)
	Employee Engagement Survey (1 - 7 Scale)
	Revenue (Cash + In-kind)
	Meetings/Events
	Meeting/Event Attendance (Cumulative)
	Annual Audited Financial Statements
	Number of Major Investors (\$25 K+)
II - Lead, Facilitate & Steward Regional Economic Development	Total Businesses Attracted or Expanded
	Total Businesses Attracted
	> Businesses Attracted (Direct)
	> Businesses Attracted (Indirect)
	Total Jobs Attracted
	> Jobs Attracted (Direct)
	> Jobs Attracted (Indirect)
	Businesses Expanded
	> Jobs Expanded
	Retention / Expansion Outreach (Survey + In-Person)
	Client Inquiries
	Capital Investment
	New Headquarters
	International Relocations
	Economic Dev't Events + Meetings (Led + Supported)
III - Elevate Southern Nevada's Position as a Global Business Location	Convention + Tradeshow Participation
	1-year Fiscal Impact
	1-year Economic Impact (Direct + Indirect)
	Social Media Engagement Index
	Value of Traditional Advertisements (paid + in-kind)
	Global Initiative Events + Meetings (Led + Supported)
	Outreach Events (led + supported)
IV - Become an Engine of Community Dev't	Press Hits in Southern Nevada
	Press Hits outside Southern Nevada
	Contacts in CRM database
	Research and/or Community Policy Reports Generated
	Outreach Events + Key Mtngs (Led + Supported)
	Strategic Initiative Events + Key Mtngs (Led + Supported)
	Investment in Grow – LV, an LVGEA-led 501(c)3 non-profit

4. Become an Engine for Community Development

- a. Advocate for a prepared and educated workforce; enhance quality of life; establish LVGEA as highly-credible, knowledge-based, and collaborative; work with regional partners to leverage capital planning to uplift neighborhoods; expand beyond initial CEDS mandates to maximize LVGEA's contribution to the region; evaluate, prioritize, and coordinate interagency infrastructure improvements to support economic development; explore the relationship between target sectors and tourism economy

The plan contained the most robust set of economic development performance metrics ever utilized in Southern Nevada. LVGEA's strategic plan added action steps to the state and regional strategy while assigning leadership roles and project delivery schedules.



SWITCH Innevation Center, a public-private conference, coworking and collaboration space in Las Vegas.

ENGAGING THE PRIVATE SECTOR

During the boom years in Las Vegas there was a very limited appetite for investment in economic development from the private sector. Business was good, really good, and business leaders found it difficult to invest in more economic development while they were struggling to keep up with customers already knocking at the door.

Limited private sector investment led to a very limited scope of economic development work. As a result LVGEA's predecessor, the Nevada Development Authority, was charged with leading a regional business recruitment effort with a relatively small budget of \$2.7 million/year and eight full-time staff.

When the recession hit, everything changed, including the private sector's penchant for economic development. The public sector, by necessity, led the charge and built the framework. However, it was the private sector that demanded improved systems, cooperation, and increased results. Along the way, private leaders backed their direction by leading the charge on key issues, transforming communities and investing at levels never before seen in Southern Nevada.

Tech Titans Step Up

In Las Vegas, the burgeoning tech industry began to emerge as a leader in community, political, and economic development engagement. Two local tech CEOs stepped up in a big way during the great recession to help reboot Las Vegas: Rob Roy from SWITCH and Tony Hsieh from Zappos.

SWITCH is a powerhouse tech company that you may not have heard of. They operate the most reliable colocation, connectivity and cloud technology system in the world, providing the safest data storage, lightning-fast internet speed and the globe's most affordable connectivity to passionate start-ups and Fortune 1000 enterprises.



SWITCH SuperNAP facility, the only carrier-neutral colocation data center on planet earth that is certified Tier IV Gold by the Uptime Institute.

The founder of SWITCH, Rob Roy, is not only a pioneer in the tech industry but a leader of Nevada's economic development efforts. He built the SWITCH Innevation Center, a cutting-edge business incubator, sits on the Board for the Governor's Office of Economic Development, and has provided

the single largest financial investment in LVGEA's history. If that weren't enough, he has positioned SWITCH as an economic development partner for the state, helping recruit businesses, building a local tech industry, and rebooting Las Vegas.

The Downtown Project is a community revitalization effort led by Tony Hsieh, CEO of Zappos, an online shoe and clothing store. The Project's mission is to transform Downtown Las Vegas into the most community-focused large city in the world. Through the Downtown Project, Hsieh has allocated \$350 million to aid in the revitalization of Downtown Las Vegas. That investment includes \$200 million in real estate, \$50 million in small busi-



The Container Park, a Downtown Project retail initiative that opened in 2013 and added a family-friendly shopping environment that boosted redevelopment efforts in downtown Las Vegas.

nesses, \$50 million in education, and \$50 million in tech startups.

Together, these two tech titans have put Las Vegas on the map for technology. Their efforts are assisting start-ups, attracting new firms, refocusing educational systems, and reshaping how economic development is accomplished in Southern Nevada.

ENGAGE Campaign

To harness the increased level of support that was voiced by other private sector leaders, LVGEA kicked off a capital campaign, known as ENGAGE Southern Nevada in October of 2013. ENGAGE was designed to provide LVGEA with the increased resources needed to deliver on the broad mission established by the Brookings-SRI report, CEDS, and LVGEA strategic plan.

The stakes for ENGAGE were high. In order to build the necessary organizational capacity, LVGEA needed to generate unprecedented levels of private investment. Business leaders had articulated a clear vision of LVGEA becoming a robust community and economic development organization. Through ENGAGE, those private sector leaders had the chance to determine whether or not that vision became a reality.

The goal of ENGAGE was to raise \$7.5 million (\$2.5 million/year for three years) from private sector sources. This amount was more than double the historical level of private contributions to economic development in Southern Nevada. On a per-capita basis, ENGAGE set the investment bar for private investment higher than many competing metro areas which enjoyed drawing from significantly more mature corporate institutions.

By February of 2014, after just five months of campaigning, the goals of ENGAGE were not only met but exceeded. During this short period of time, LVGEA had transformed an under-resourced and consequentially under-performing EDO into a regional leader in the southwestern United States.

The culmination of the ENGAGE campaign marked the end of an intense focus on organization building. LVGEA's staff level had increased from 9 to 20. The organization had moved from a confining office of 3,956 sq. ft to over 12,939 sq. ft, located in the SWITCH Innovation Center. And, the organization's annual operating budget more than doubled from \$2.7 million in 2011 to \$5.4 million in 2014. Simply put, LVGEA had the resources necessary to deliver on the new mission; now it was time to deliver results.

DELIVERING RESULTS

During its first full year of operations, LVGEA achieved significant results. The organization rallied hundreds of public, private, and educational leaders around the innovative, shared economic development strategies necessary to reboot Southern Nevada's economy.

To deliver on the new strategies, LVGEA amplified its existing economic development work with new community development, research, and marketing roles. Additional staff and financial resources enabled the orga-

nization to more than double in size and extend global reach. And, LVGEA, along with the region's economic development partner organizations, provided start-up, expansion, and relocation assistance to 62 businesses, which will provide more than \$450 million in new capital investment.

Most importantly, the work of LVGEA and countless partner organizations is paying off for Southern Nevada. By early 2014, the unemployment rate fell to 7.6 percent. Home values skyrocketed 27 percent from the previous year.^{viii} Population growth returned to a healthy 2.3 percent and a job growth rate of 3.4 percent (June) led the nation. And, perhaps most importantly, dramatic job growth in target industries is occurring throughout the region and state. (See figures 4 and 5)

In the aerospace industry, government and private sector leaders organized under the Nevada Institute for Autonomous Systems applied for one of four UAV test site designations being offered by the Federal Aviation Administration. By early 2013, Nevada learned that their application was successful. Southern Nevada military institutions such as Nellis Air Force Base are now positioned to become worldwide leaders in the \$89 billion UAV industry.^{ix} Over 15,000 UAV related jobs for southern Nevadans are now expected over the next ten years.

FIGURE 4

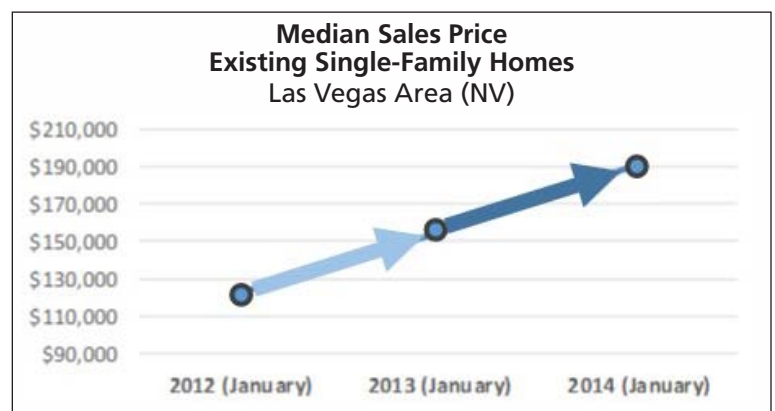
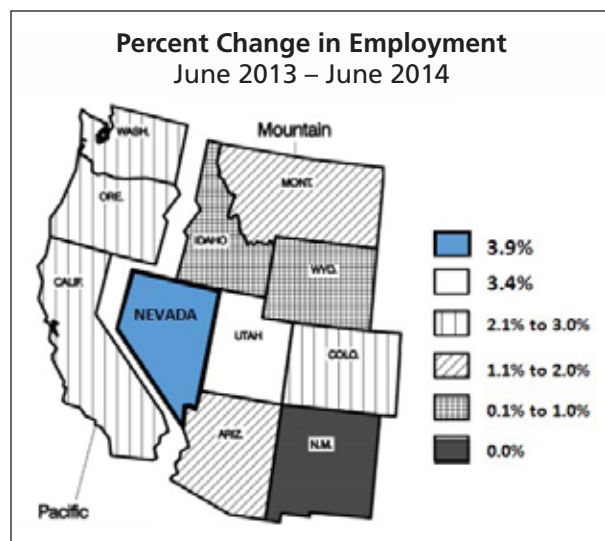


FIGURE 5





The Global Business District, a planned international business destination composed of major renovations to the Las Vegas Convention Center, further leverages a World Trade Center designation and will be a central hub of transportation connectivity.

In the technology industry, Vegas is gathering worldwide attention as a go-to destination for entrepreneurs and start-ups. The Downtown Project consistently receives national media attention for their ambitious efforts to revitalize downtown and establish a culture that attracts new technology firms. SWITCH has recently invested millions of dollars in additional infrastructure and new facilities to continue their dominance in the data storage industry. New business incubation facilities, training programs and funding sources, such as NV Angels and Silver State Opportunities Fund, are now in place to support technology projects.

Tourism and entertainment is thriving once again. A record number of visitors (39.7 million) made the trip to Las Vegas in 2013.^x And new, Vegas-sized construction projects have been announced such as the \$2.5 billion Global Business District, \$4 billion Resorts World, and \$350 million AEG/MGM Arena.^{xi}

In addition to luring jobs and capital investment, Nevada's improved business environment has led the state to the top of many prominent business rankings. In 2014, the American Tax Foundation recognized Nevada as the leading state in the country for both corporate and

individual income taxes.^{xii} That recognition was quickly followed by Chief Executive magazine ranking Nevada as the best western state for business.^{xiii}

Altogether, the indicators for Southern Nevada look dramatically different than just a few short years ago. Bust has once again returned to boom but in a very different way. This time around public and private leaders united together to reboot, restructure, and fundamentally improve the region's economy. ☺

ENDNOTES

- ⁱ Bloomberg. Gaming Revenue for Las Vegas MSA. <http://www.bloomberg.com/news/2013-09-30/gaming-revenues-for-nevada-and-las-vegas-table-.html>
- ⁱⁱ Las Vegas Convention & Visitor Authority. Annual Visitor Statistics, 2007. <http://www.lvcva.com/includes/content/images/media/docs/ES-YTD20128.pdf>
- ⁱⁱⁱ Bureau of Labor Statistics. <http://research.stlouisfed.org/fred2/data/LASV832URN.txt>
- ^{iv} Bureau of Economic Analysis. Data for Nevada, Las Vegas, Reno and Carson City.
- ^v Las Vegas Sun. Las Vegas leads nation in foreclosures. <http://www.lasvegassun.com/news/2009/mar/11/las-vegas-leads-nation-foreclosures/>
- ^{vi} Bureau of Labor Statistics. <http://research.stlouisfed.org/fred2/data/LASV832URN.txt>
- ^{vii} University of Nevada Las Vegas. Nevada 2.0. <http://nv20.unlv.edu/about.html>
- ^{viii} Diversify Nevada Data Portal for Clark County. <http://www.diversifynevada.com/data-library>
- ^{ix} Teal Group Report. June 17, 2013. <http://tealgroup.com/index.php/about-teal-group-corporation/press-releases/94-2013-uav-press-release>
- ^x New York Times. http://www.nytimes.com/2013/08/01/us/as-las-vegas-recovers-new-cause-for-concern.html?_r=0
- ^{xi} Bloomberg. Genting to spend as much as \$4B on Vegas Casino. <http://www.bloomberg.com/news/2013-12-17/genting-to-spend-up-to-4-billion-finishing-off-las-vegas-resort.html>
- ^{xii} Tax Foundation. 2014 State Business Tax Climate Index Ranks and Component Ranks. <http://taxfoundation.org/article/2014-state-business-tax-climate-index>
- ^{xiii} Chief Executive magazine. 2014 Best & Worst States for Business. <http://chiefexecutive.net/regional-report-west/3>

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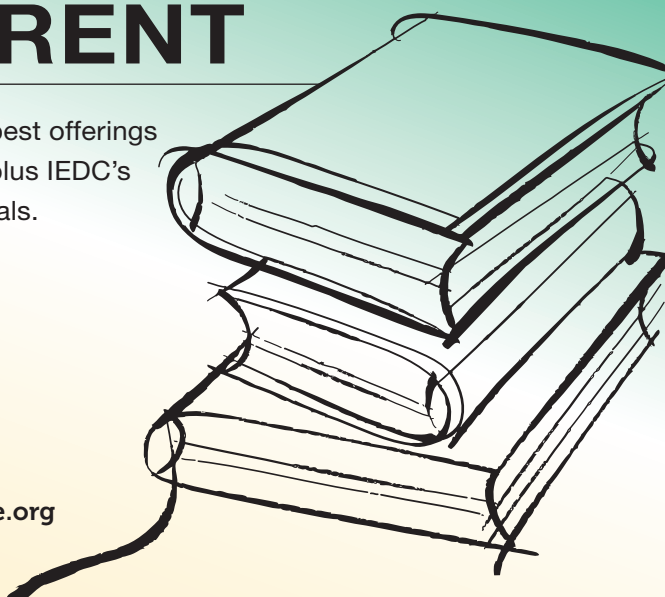


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NEWS FROM IEDC

WHITE HOUSE FORUM ON ECONOMIC DEVELOPMENT

The 2014 White House Forum on Economic Development was held in early August. Fifty-one senior economic development professionals, including members of IEDC's Board of Directors, Economic Development Research Partners, and Public Policy Advisory Committee, joined 18 senior administration officials in a day-long dialogue on current economic development issues.

Representatives from the National Economic Council, White House Business Council, SelectUSA, Economic Development Administration, International Trade Administration, Department of Energy, Small Business Administration, National Science Foundation, National Institutes for Standards and Technology, Department of Agriculture, and the Office of Science & Technology Policy covered topics including foreign direct investment, workforce development, export promotion, entrepreneurship, and manufacturing.

Plans for the upcoming 2015 SelectUSA Investment Summit and IEDC Federal Economic Development Forum, both being held in March of next year, were also discussed.

ANNUAL EDRP RETREAT HELD AT THE EDWARD LOWE FOUNDATION

The Economic Development Research Partners (EDRP) held their annual retreat at the Edward Lowe Foundation in Cassopolis, MI. Twenty-six EDRP members joined staff and guests to explore new ideas and common challenges in economic development, with the goal of developing a research agenda for 2015.

The end result of the retreat was a decision to research three topics over the next year. One longer paper will focus on the economic development impact of infrastructure, while two shorter ones will focus on the strategic use of incentives and revitalizing underinvested areas.



TECHNICAL ASSISTANCE PROVIDED IN SALINA, KANSAS

The city of Salina and the Salina Airport Authority, on behalf of a group that also includes the Salina Chamber of Commerce and Saline County, have contracted with IEDC to assist with efforts aimed at establishing a new economic development organization in the community. IEDC has conducted significant background research and

phone interviews, along with a recent three-day site visit to Salina. During the visit, IEDC facilitated discussions with over 36 individuals and 15 different organizations.

Information gathered during the site visit was analyzed and combined with background research for a written report presented to the client in mid-August. IEDC staff then met with the Salina Working Group to discuss initial feedback. The final report is scheduled to be delivered in September.

AEDO PROGRAM WELCOMES NEW MEMBER, REACCREDITS THREE MORE

IEDC announces the accreditation of its 42nd AEDO member: the City of St. Charles Economic Development Department.



Located in St. Charles, Missouri, the EDD has been led by Economic Development Director David Leezer, CECD, since 2011. The EDD becomes the third AEDO in Missouri.

In addition, IEDC recently reaccredited three AEDOs: The Beacon Council (Miami, FL); the Tulare County Economic Development Corporation (Tulare County, CA); and the Roanoke County Department of Economic Development (Roanoke, VA).

These organizations represent the high quality and dedication to excellence that the Accredited Economic Development Organization (AEDO) program demands. Earning accreditation is an effective way for economic development entities to increase their visibility in the community and gain independent feedback on their organizational operations.

EDRP HOSTS WORKFORCE WORKSHOP

The Economic Development Research Partners (EDRP) recently hosted *Workforce Development through the Lens of Economic Development* at Gallup World Headquarters in Washington, D.C. The event was designed to inform an upcoming EDRP paper on workforce development policy. Participants heard from thought leaders from the federal workforce program, as well as educators and the business community.

In a survey of participants, 85 percent said the workshop met their objective of learning more about workforce development, while 15 percent felt their expectations were exceeded. Survey respondents praised the event for providing exposure to opportunities for change and improvement, as well as the good discussions.



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Submissions are accepted throughout the year. The Journal Editorial Board reviews all articles and determines which articles are accepted for publication.

For more information contact Jenny Murphy, editor, at murp@erols.com (703-715-0147).

IEDC sponsors an annual conference and a series of technical conferences each year to bring economic development professionals together to network with their peers and learn about the latest tools and trends from public and private experts.

IEDC also provides training courses and web seminars throughout the year for professional development, a core value of the IEDC. It is essential for enhancing your leadership skills, advancing your career, and, most importantly, plays an invaluable role in furthering your efforts in your community.

For more information about these upcoming conferences, web seminars, and professional development training courses, please visit our website at www.iedconline.org.

CONFERENCES

2014 Annual Conference

October 19-22
Fort Worth, TX

2015 Leadership Summit

January 25-27
Palm Beach, FL

2015 Federal Forum

March 29-31
Arlington, VA

2015 Spring Conference

June 7-9
Madison, WI

2015 Annual Conference

October 4-7
Anchorage, AK

2016 Leadership Summit

January/February
New Orleans, LA

2016 Federal Forum

April 3-5
Arlington, VA

2016 Spring Conference

June 12-14
Tulsa, OK

2016 Annual Conference

September 25-28
Cleveland, OH

2014 TRAINING COURSES

Introduction to Economic Development

October 1-3
Toronto, ON

Real Estate Development and Reuse

October 9-10
Atlanta, GA

Economic Development Credit Analysis

October 15-17
Fort Worth, TX

Entrepreneurial and Small Business Development Strategies

October 30-31
Edmonton, AB

Real Estate Development and Reuse

November 6-7
Lansing, MI

Business Retention and Expansion

November 13-14
Chapel Hill, NC

Technology-Led Economic Development

December 4-5
Phoenix, AZ

2014 CERTIFIED ECONOMIC DEVELOPER EXAMS

October 18-19

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December 6-7

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(Appl. Deadline: October 6)

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All Together Now! Crowdfunding and Your Community

December 16

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Disaster Preparedness & Economic Recovery: Free Webinar Series

October: Using the National Emergency Grant (NEG) for Economic Recovery

November: How to Write a Winning Grant Application

December: Open for Business: Crisis Communication



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power & water

By Greg Flisram, CEcD

Despite the efforts of city boosters everywhere to tout their city as the next hub for “bio” this or “tech” that, generally, the most effective economic development strategy is to realign local strengths to new and emerging global markets. Milwaukee, long known as a center of brewing, craft manufacturing, and the design and production of specialized industrial machinery, is trying to do just that by repositioning its legacy assets around the evolving needs of a rapidly urbanizing world; one faced with unprecedented environmental strains and resource depletion.

By expanding partnership opportunities between industry and academia, and offering whole new platforms for applied research, Milwaukee is hoping to rebuild a culture of innovation and entrepreneurship in the critical spheres of water and power technology. This modern industrial-cum-cleantech focus is intended to return the city to a center of engineering and industrial prowess for a resource-constrained age.

Like other cities known for their niche economic specializations, Milwaukee’s unique strengths in water and power can be attributed to institutional assets and knowledge that have accrued over many decades. The city’s formative 19th century economy centered on harnessing and monetizing the area’s two main resources: an abundant and widely navigable fresh water system, and a large and fertile countryside. Successive waves of Northern European immigration, particularly from Germany, populated the area with unusual numbers of highly skilled and entrepreneurial tradesmen, engineers, machinists, and inventors to the point where the city became known by the late 19th century as the “Machine Shop to The World.” The city became a large exporter of beer and industrial machinery and

By expanding partnership opportunities between industry and academia, and offering whole new platforms for applied research, Milwaukee is hoping to rebuild a culture of innovation and entrepreneurship in the critical spheres of water and power technology. This modern industrial-cum-cleantech focus is intended to return the city to a center of engineering and industrial prowess for a resource-constrained age.

became well known for its ambitious public works projects, particularly its expansive and modern water and sewer systems.

By the mid 20th century, the city was home to companies such as AO Smith Corporation, Allis Chalmers, Cutler-Hammer, and Johnson Controls Inc. and had evolved into a center of motorized power control, hydraulic and propulsion systems, and a wide assortment of engines, turbines and generators with various industrial applications. These companies built-up their own R&D departments and became a major driver of patent activity in the region. The city had also added three engineering colleges and a strong technical education system to support the efforts of its predominantly manufacturing-based economy.

Although many of the region’s legacy companies relocated production to other regions beginning in the 1970s and 80s, they have retained much of their engineering and product development infrastructure and talent in southeastern Wisconsin. Tapping into this deep reservoir of institutional know-how and steering it in new directions is the impetus behind two parallel initiatives underway in the region to both modernize and reenergize an industrial eco-system that – like beer – had once made Milwaukee famous.

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MILWAUKEE’S ELEMENTAL ECONOMIC STRATEGY

The city of Milwaukee is attempting to redeploy its legacy assets in water and power-based engineering and manufacturing by pairing them with new platforms for applied research. The hope is to help the local economy regain some of its innovation footing and create a more nurturing environment for new water and power company start-ups. The recent launch of twin accelerator projects has given the city a legitimate claim to being a leader in developing a more sustainable water and power infrastructure for an increasingly resource-constrained world.

THE GLOBAL WATER CENTER

An historic outgrowth of Milwaukee's 20th century "beer to gears" economy (and the city's later concern with fixing its recurrent problems with accidental sewage discharges into Lake Michigan) was the growth of numerous smaller companies involved in the purification, filtration, conservation, testing, treatment, pumping, and metering of water. A study performed by the University of Wisconsin – Milwaukee in 2009 identified 161 such companies in the seven-county Milwaukee region as of 2009. Together with the university's existing Great Lakes Research Institute at the Port of Milwaukee, along with newer cultural attractions like Pier Wisconsin (an environmentally-focused Great Lakes learning center jutting out into Lake Michigan), a new water-themed "Fresh Coast" brand identity began to take hold in the region starting in 2008.

The cluster's global economic potential (estimated to be about \$500 billion annually) and the research opportunities it presented for area universities provided a strong rallying point that extended across industry, government, and academia. This groundswell resulted in the creation in 2008 of the Milwaukee Water Council, a corporate-led industry trade organization spearheaded by the CEOs of Badger Meter Inc. (a local manufacturer and servicer of municipal water and gas metering systems) and AO Smith (water heaters) and organized and funded under the aegis of the Greater Milwaukee Committee – a long-standing philanthropic and civic advocacy organization representing some of the largest corporations in the region.

The Water Council's mission is to spotlight the industry and facilitate connections among businesses, academia, venture capitalists, serial entrepreneurs, and traditional EDOs. The organization's mission according to its website is to "... [a]llign the regional freshwater research community and water-related industries to establish the Milwaukee region as the World Water Hub for water research, economic development and education." The organization currently has 130 members from across industry and academia and helps profile the work of the over 100 water scientists presently working in the region.

According to a recent Forbes article, one fifth of the world's population lacks access to clean water and by 2025, 1.8 billion people will live in water scarce areas of the world. Referring to the Milwaukee project in the article, Harvard University professor Rosabeth Moss

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The Global Water Center located on the edge of Milwaukee's Third Ward warehouse district.

Kanter was quoted in the article as saying, "The Milwaukee example was particularly striking because it wasn't high tech. It was in a different arena. It required a lot of imagination. It meant reframing people who are making pipes and valves to being in the water business."

With the help of local government and industry leaders, the newly formed Water Council successfully lobbied the University of Wisconsin Board of Regents to establish the nation's first and only School of Freshwater Research at the University of Wisconsin – Milwaukee in 2009. A key role of the school is to support the existing water industry cluster and to work toward commercializing water science-based research that can support new business formation in the region. This effort was further supported by the creation of a special water law program at Milwaukee's Marquette University, an Institute for Water Business at nearby UW-Whitewater, and the city's subsequent designation as a UN Global Compact City of freshwater expertise.

Although the Water Council's role primarily has to do with promoting research and helping build water-based businesses, it has also served as something of an unofficial forum for the controversial local debates over diverting Lake Michigan water to communities outside the Great Lakes watershed, and the even more contentious debate about preventing the encroachment of the highly invasive and eco-system altering Asian Carp

from entering into the Lakes from the Chicago Ship Canal. The Water Council has also hosted several water conferences in the city to help reinforce its position as a leader and “first mover” in the water industry.

Recognizing a further need for a visible industry hub and dedicated business incubator, the Water Council opened the doors to the Global Water Center (GWC) building in September 2013. The GWC, funded through member donations and various state and federal grants including from the National Science Foundation, is the focal-point of a new water industry seed accelerator where fledgling water-related businesses can connect to mentorship opportunities, venture capital, and specialized technical assistance in addition to cultivating critical vendor/supplier relationships with the corporate membership of the Water Council. Geographically, the new GWC building straddles the edge between Milwaukee’s trendy Third Ward neighborhood and a former 18-acre industrial brownfield rechristened as a future urban tech park called the Reed Street Yards. The tech park is positioned to host businesses being spun out of – or attracted to – the GWC.

The \$22 million GWC building is a renovated 100,000-square-foot, seven-story former box factory and warehouse featuring a lecture hall, exhibition space, and a state-of-the-art water flow lab in addition to more traditional offices and common areas. A full two thirds of the building was already leased upon the building’s opening, including a full floor dedicated to UW-Milwaukee’s new School of Freshwater Sciences. The Wisconsin Economic Development Corporation, the state’s lead economic development agency, contributed \$750,000 to the build-out plus grants of \$50,000 apiece to each of the 13 water start-ups located at the GWC. A law firm specializing in water

issues as well as a small venture capital group are also housed within the accelerator.

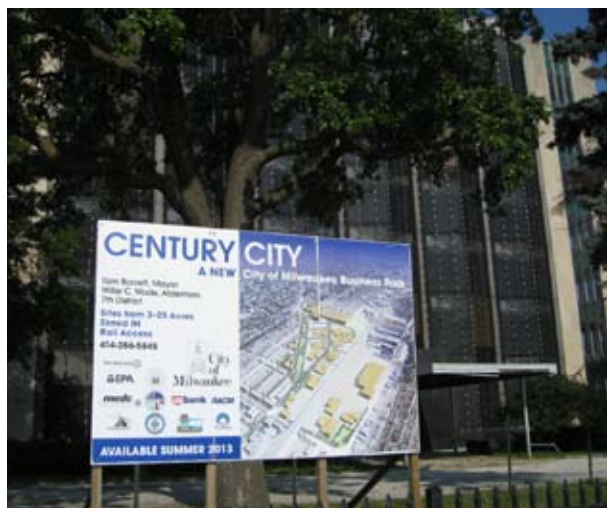
“Our goal from the outset has been to position ourselves as the Silicon Valley of water technology,” says Rich Muessen, CEO of Badger Meter and one of the founding members of the Water Council. “The reason this has worked so well is because of the many water-based companies in the region, whether they’re involved in water purification, water delivery, water conservation or water fixtures, very few are competitors as opposed to being complementary to one another. That, and because this has been largely industry and not government driven.”

Similar to the Water Council in overall concept but markedly more expansive in ambition, scope, and reach is the Midwest Energy Research Consortium (M-WERC), an organization focused on collaborative research and business start-ups in the areas of energy, power and control (EPC) systems. Its mission is to reconstitute, realign, expand, and leverage existing EPC assets within the region for new and emerging global market opportunities, resulting in new energy and power systems technologies and cleantech businesses.

THE MIDWEST ENERGY RESEARCH CONSORTIUM (M-WERC)

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Like the Water Council, M-WERC’s membership represents a broad array of companies and higher education institutions throughout the upper Midwest looking to leverage their combined resources to build the region’s capacity for innovation and entrepreneurship around industries where it already has a competitive edge. The organization’s six targeted technology areas include: distributed energy research and systems, building energy



The city of Milwaukee’s master plan for the northern quadrant of the 30th Street corridor in front of AO Smith’s long-abandoned former research building - the last surviving AO Smith building in the corridor.

and efficiency, energy storage, the energy-water nexus (i.e. hydro-power), and renewables and bio-fuels. Its core mission areas include: technological innovation, market and industry expansion, public policy support, workforce development and organization development, and strategic collaboration.

The organization is part trade group, research consortium, business accelerator, and community developer and has bold plans to rebuild a large swath of its immediate neighborhood as it rebuilds and retools an entire industry. It differentiates itself from the numerous other energy-focused business accelerator programs throughout the country by its emphasis on collaborative industry-driven research focusing on advanced-stage research with clear, near-term market potential (versus university-led initiatives that tend to be skewed more toward the long-term advancement of disruptive, paradigm-changing technologies such as fuel cells).

M-WERC's founder and CEO, Alan Perlstein, a one-time industry executive for the Milwaukee-based power and controls division of defense contractor DRS Technologies, has a vision of reestablishing the "industrial commons" (i.e. the interlinked network of companies and research-engineers) that had at one time established Milwaukee as an industry leader in power and control systems in the US. The commons can be traced back to the inter-company ferment created through the various mutations, collaborations, and spin-offs from Milwaukee's seminal EP Allis Co. during the early 20th century. The company, later known as Allis-Chalmers, was a major manufacturer of heavy industrial equipment and helped spawn myriad other companies that made-up an extended outsource-network of suppliers and component manufacturers.

Quoted in a recent article in the Milwaukee Business Journal, Perlstein said that given the presence of many of the aforementioned large power companies extant in the region, that "The Midwest and Milwaukee in particular, arguably has the nation's strongest energy, power and controls cluster already. We're an unknown giant," he said. He also cites a recent report entitled the *Wisconsin Economic Future Study* which has identified the parent economic cluster of electrical equipment manufacturing as one of the fastest and most important driver industries in the state of Wisconsin. In the same article, Milwaukee Mayor Tom Barrett added further credence by saying, "The Water Council's prominence did not happen overnight. We have to talk about Milwaukee's prominence as an energy hub and, fortunately, it's not something that we have to make up."

Like the Water Council, M-WERC plans to operate an industry-specific business accelerator and research labs. However unlike the Global Water Center's trendy digs adjacent to downtown Milwaukee, M-WERC's accelerator will be housed in the recently vacated former headquarters of Eaton Corporation's Milwaukee division in the city's rather desolate and isolated 30th Street Industrial Corridor. The corridor, buoyantly rebranded as "Century City," was at one time a major tentacle of the



The former Eaton Corp. research building re-birthed as Century City Tower in Milwaukee's 30th Street Industrial Corridor. The building houses M-WERC's energy, power and controls accelerator, the Energy Innovation Center (EIC).

city's industrial landscape and a major source of manufacturing jobs for Milwaukee's black working class. It began falling on very hard times in the 1980s with the relocation of several of the city's mainstay corporations such as car frame manufacturer The AO Smith Corporation along with the many smaller, co-located companies making up its extended supply-chain.

Although companies such as Master Lock Corporation and Harley-Davidson still maintain production facilities in the corridor, the neighborhood presents a somewhat post-apocalyptic aspect and has been dubbed "Detroit 53216" by one local writer in reference to its level of desolation and the local zip code.

Perlstein's visionary goal is to incubate and grow new companies in the energy, power and controls sector in the uniquely-equipped, seven-story, 200,000-square-foot former Eaton research building then having those companies spin-out their production and jobs in the surrounding neighborhood. A main focus of the research he is attempting to commercialize among and on behalf of M-WERC's extended network of member companies and university research labs relates to distributed energy and micro-grid technologies. (Distributed energy and micro-grid generally refers to interconnected, autonomous, and multivariate energy sources that can be integrated into a single system to assure energy redundancy and security for large, dependant power users. The networked system can either supplement the main power grid or operate independently from it.)

Perlstein's ultimate goal is to have the adjacent Century City business park hard-wired as a distributed-energy power-park to serve as a working demonstration of micro-grid technology and to attract high power users to the neighborhood. M-WERC is currently working on another micro-grid demonstration project in Madison, WI.

The organization's membership has grown dramatically in recent years to 70 and includes all three of Milwaukee's engineering schools (UW-Milwaukee, Marquette University, and the Milwaukee School of Engineering) along with UW-Madison and five Wisconsin technical colleges. Corporate members are scattered throughout eight Midwestern states extending from Ohio to Minnesota. These members include power system heavy hitters, Rockwell Automation, Briggs & Stratton, Kohler Power Systems, DRS Technologies, Eaton Corporation, and Johnson Controls which is an industry leader in smart building technology and lithium-ion battery research.

Its broad-based membership has been used to leverage funding from the Department of Energy and the Wisconsin Economic Development Corporation along with corporate donations. Since its founding in 2009, M-WERC has funded over 19 research projects totaling over \$2 million in grants with plans to fund an additional \$500,000 in grants in 2014. M-WERC will also serve as the Wisconsin "franchisee" of the Minneapolis-based Cleantech Open – a provider of virtual incubator services for clean-tech start-ups. The affiliation with Cleantech Open will provide M-WERC with access to a proven business boot camp training module, as well as invaluable connections to a nationwide network of business mentor and angel/venture capital groups.

Disavowing a bunker mentality however, M-WERC's mission is not only to incubate new companies, but also to improve conditions in the neighborhood by providing jobs and job training to neighborhood residents and helping to facilitate neighborhood redevelopment. Partnering with them, and located under the same roof, is the Northwest Side Community Development Corporation (NWSCDC), one of the city's most enduring and agile CDCs.

As evidence of the organization's growing regional influence and leadership, M-WERC recently led Milwaukee's successful initiative to be selected for the federal government's new and highly coveted *Investing in Manufacturing Communities Partnership* program. Essentially, the program grants designated communities "most favored nation status" in the receipt and coordination of resources across various federal agencies. Milwaukee was chosen as one of only seven communities nationwide for this important designation based, in part, on the strength and size of its EPC cluster and supporting capacities as highlighted by M-WERC.

Although M-WERC's accelerator building is physically untethered to an anchor institution (such as a university or corporate lab that could provide a built-in feeder to

it), Perlstein is hoping to attract tenants by marketing the Eaton building's loaded-for-bear power capacity, robust telecommunications systems, and handsome interior appointments that include a full gym, cafeteria, state-of-the-art teleconference facilities, and a small but impressive collection of modern art. That, and the commitments of area universities to have a visible presence at the facility. Still, crime in the neighborhood is a concern (if not a reality) and has been cited by Eaton and others as a reason they decided along with several predecessors to decamp to the suburbs. The blocks immediately surrounding the accelerator contain several boarded-up apartment buildings, vacant lots, and abandoned factories.

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To assure that doesn't happen, the NWSCDC is working with the city of Milwaukee to leverage its allocation of federal neighborhood stabilization funds for the concentrated rehabilitation of several neighborhood blocks directly adjacent to the industrial corridor. The city is also working on a green infrastructure initiative in the area and has recently completed demolition of the nearby former AO Smith factory – a behemoth-sized complex of aging industrial buildings that were abandoned in the late 1990s. NWSCDC is also being positioned as the de facto master developer for M-WERC by working to assemble and control land, package tax credits and other incentives, and recruit developers.

AN "INFRA-TECH" FUTURE?

It is far too early to know if Milwaukee's twin projects will drive economic growth in a major way. Only time will tell. There does however seem to be more excitement and energy building around these two economic opportunities than any of the uninspired ideas of the recent past. The difference-maker this time around is the existence of a relatively new regional economic entity known as the Milwaukee 7 – a public-private regional economic

development organization created in 2006 and nominally representing the seven counties that make up metro Milwaukee. "M-7" has been instrumental in helping rally corporate and government leaders around unique, asset-based opportunities that the region is uniquely positioned for.

Perhaps more importantly, the opportunities are being presented and led more or less organically by top industry executives in their respective fields working in partnership with a capable and ambitious group of universities looking to aggressively increase their research profile rather than from the top-down by government.

The city's new, more measured focus on *what it already knows* versus the largely policy and incentive-based strategies that have characterized earlier economic development efforts has done a great deal to establish a new local zeitgeist based on ingrained local knowledge and tradition.

Each organization also has well-connected and active board membership giving them both credibility and financial clout vis-à-vis state agencies and venture capitalists. Finally, the *tech-tinged* water and power opportunities are areas that seem both realistic and attainable for a city like Milwaukee that, unlike its urban neighbors of Chicago and Madison, WI, has never been a very strong player in science-based academic research.

The city's new, more measured focus on *what it already knows* versus the largely policy and incentive-based strategies that have characterized earlier economic development efforts has done a great deal to establish a new local zeitgeist based on ingrained local knowledge and tradition. This focus dovetails with the region's recent rediscoveries of its artisanal customs around local food, skilled-crafts, and industrial design, and gives the city and region ideas that they can legitimately "own" versus the prevailing "me too" strategies of recent history. By refocusing around water and power, the city and region have returned, in a sense, to some of their original driver industries. Smartly, these happen to remain the same basic elements that will continue to drive economic development across the globe. 🌐

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connecting danville,

VIRGINIA, TO THE FUTURE

By Joe King

Danville, Virginia, is one of a growing number of American cities that operates its own advanced fiber-optic broadband telecommunications network. Launched over a decade ago primarily to stimulate economic growth and development, “nDanville” (network Danville) has positioned Danville as a digitally connected community capable of supporting any high-tech or telecommunications business needing gigabit-plus broadband service. Providing the “last mile” link to a large, robust regional fiber network operated by the nonprofit Mid-Atlantic Broadband Communities Corporation, nDanville not only provides blazing fast internet service, but also directly connects businesses to practically any point in the world at multi-gigabit speeds.

Economic development professionals in communities that have state-of-the-art broadband delivered by private sector cable TV and telephone companies can consider themselves lucky. Cities like Danville located in “broadband deserts” have found it necessary to develop their own broadband utilities to make commercial grade broadband available to their businesses. Broadband Communities Magazine estimates there are at least 135 public sector fiber networks operating in America. Many like Danville are aggressively using broadband to promote economic development.



The Dan River flows through the center of Danville.

Municipal broadband networks use different technologies and come in all shapes and sizes. Because there is no single deployment model, Danville does not recommend that other communities simply copy its municipal broadband program approach. However, a strategic process similar to that undertaken by Danville should be followed by any community considering a large scale broadband deployment. This article shares the nDanville story and lessons learned with hopes that local governments will actively exchange information and collectively develop best practices on broadband deployments.

Joe King is city manager of Danville, Virginia.
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DEPLOYMENT OF A MUNICIPAL BROADBAND NETWORK

Some communities cannot wait for national telecommunications companies to build advanced local broadband networks. That may never happen in small, isolated cities. Localities in that situation find they must develop their own systems. The economic development rewards for doing so can be significant, but entering the broadband business is neither for the faint of heart nor for the uninformed. Danville, Virginia's approach should not be simply replicated, but it makes sense to follow its five-step process to:

- Determine the community's real need for broadband;
- Define the local government's role in meeting that need;
- Select a suitable broadband business model;
- Develop and strategically implement a plan of action; and
- Leverage success.

DANVILLE'S BROADBAND DILEMMA

Danville sits right on the North Carolina border in the middle of Virginia. Cities and towns in this Virginia-North Carolina region grew prosperous during the 19th and 20th centuries through their tobacco processing, textile, and furniture industries. Since its inception nearly 200 years ago, Danville served as a tobacco market hub and a century later also as a major textile manufacturing center. Market changes and globalization brought on the gradual demise of these legacy industries.

After experiencing 20 years of decline, Danville's tobacco and textile plants were closed by the turn of the 21st century and nearly 12,000 jobs and 20 percent of the city's population were lost, mostly because displaced middle-income workers left to find jobs elsewhere. Danville had become a mill town without its mills, a community with an emaciated middle class, high poverty and unemployment rates, and low educational attainment, and falling to the bottom of "best places" ratings.



Danville is located in southern Virginia on the Virginia-North Carolina border.



Legacy industries were textiles and tobacco.

The community saw it coming. With Danville's old industries declining around them, community leaders reached a consensus 15 years ago that the region must shift from its traditional manufacturing and agricultural economy to a more diversified knowledge-based economy capable of creating and sustaining family-wage jobs. Economic developers at that time lost a recruitment competition for a large data center. Recognizing that the area lacked the infrastructure necessary to support commercial information technology development, building a broadband communication network became a high priority.

Recognizing that the area lacked the infrastructure necessary to support commercial information technology development, building a broadband communication network became a high priority.

Population: City: 43,000 Metropolitan area: 106,000
Size: City: 44 sq. mi. Electric service area: 500 sq. mi.
History: Founded in 1793 and incorporated in 1830; tobacco and textile manufacturing center
Government Structure: Council-Manager
Municipal Employment: 1,134 full-time employees
Services: Basic municipal services, plus water, sewer, natural gas, electricity, and telecommunications utilities

Virginia was then suffering a serious digital divide. It ranked among the top ten states in America for broadband deployment, with some of the world's highest concentrations of information technology, telecommunications, data centers, and internet companies in Northern Virginia. But areas outside these concentrations ranked among the nation's lowest in broadband availability.

Economic developers serving bustling Virginia and North Carolina communities an hour or two from Danville could rely on private sector telecommunications companies to provide cutting-edge services. While telephone and cable companies in Danville did a good job providing basic residential services within reach of their networks, those in rural areas had nothing but dial-up internet service. More critical to Danville's economic development ambitions, business-grade connections were limited and expensive. Adelphia (now Comcast) provided TV and basic internet services over its coaxial cable network in Danville, and Verizon offered limited-area digital subscriber line (DSL) internet and commercial T-1 service over its copper wire telephone network. A local internet service provider offered wireless Wi-Fi within range of its copper wire-connected antenna

network. This was, and for the most part still is, the kind of desolate broadband environment typical of small, isolated cities and rural areas.

With availability of robust broadband becoming an increasingly essential part of community infrastructure, the city of Danville adopted the following statement of principle in 2003:

Danville's businesses, institutions, and households should have affordable broadband services on par with those available elsewhere in Virginia in order to ensure access to entertainment, cultural, health, and especially to educational and economic opportunities. This will require a variety of both wireless and wired services and applications.



nDanville was launched to help achieve this goal. Keeping with its conservative philosophy, the city's preference was that the private sector take the lead in providing broadband services. Its local private sector providers – Comcast and Verizon – were beginning to deploy fiber elsewhere and offer increased bandwidth and expanded services. But they promised no such system investments anytime soon in Danville.

City leaders recognized that Danville's geographic isolation and weak economic and demographic profile did not offer attractive business growth opportunities for the incumbents. As a municipal electricity distributor serving a 500-square-mile territory, Danville had the opportunity to make use of its power poles and utility right-of-ways to deploy fiber cable. nDanville and the Mid-Atlantic Broadband Communities Corporation took up the challenge and built local and regional advanced multi-gigabit fiber optic networks to serve Danville and southern Virginia.

BROADBAND TECHNOLOGIES

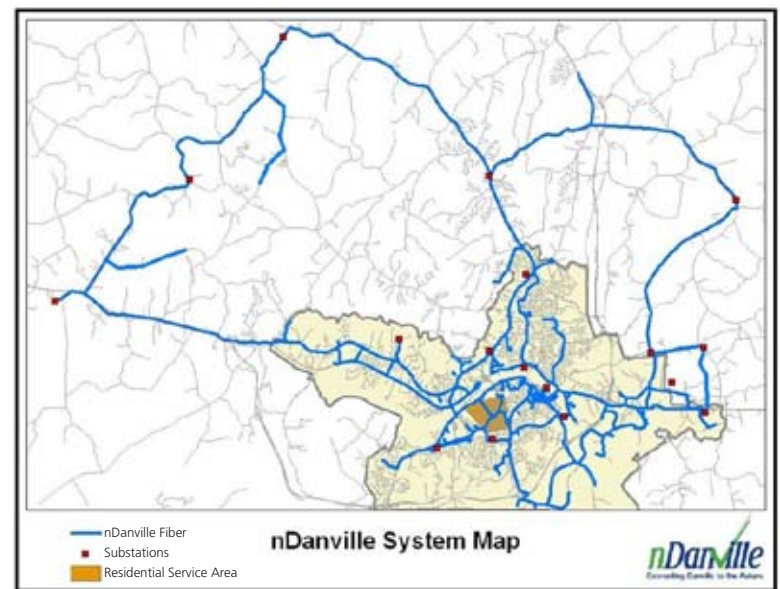
Most of us have at least a general understanding that the internet is a huge, worldwide collection of individual computers and computer networks in homes, businesses, governments, and institutions that are linked together by a variety of cable types and radio waves through network layers. Information, whether in the form of text, graphics, music, or video, is digitized, broken down into packets, independently routed along paths of least resistance (although potentially halfway across the world through several different network nodes), and reassembled at the destination computer.

Packets that can make it to the highest internet tiers with the fewest bounces between network elements travel the fastest. How much digitized data can be transported across the internet in a given amount of time depends on how much data you're sending, how your computer is connected, and over how many network elements and layers your data packets must travel.

Measured in kilobits, megabits, or gigabits per second (Kbps, Mbps, or Gbps, respectively), "bandwidth" is the

product of the speed at which the digital information is traveling and the size of the conduit in which it is traveling. While demand for bandwidth seems to grow exponentially, not every user needs the same amount.

Someone sending and receiving basic e-mails and accessing basic internet websites can get by with a 750 Kbps to 1.5 Mbps connection. Sharing high-resolution photographs or video clips and viewing highly graphical websites might require 3-6 Mbps. High quality, two-way video conferencing and remote educational applications could take 10-25 Mbps. Interactive medical applications like those involved in remote operation of imaging and diagnostic equipment could easily require 50 Mbps. Since most users require more



Danville's fiber optic cables extend outside the city limits to electric substations.



The Mid-Atlantic Broadband Communities' regional fiber network provides nDanville direct, lightning fast national and international connections.

bandwidth to receive data than to send data out, most services are configured disproportionately to and from their computers.

When Danville was deciding what to do about its broadband dilemma, some municipal telecommunications networks used coaxial cable (the type used by most cable TV companies), some used fiber-optic cable networks, others used Wi-Fi deployed over hot spot antennas or antenna networks, one or two were experimenting with broadband over power lines, and a few were contemplating the exciting newly developing WiMAX (Worldwide Interoperability for Microwave Access) technology that deployed Wi-Fi more powerfully and required fewer antennas. There was a growing variety of combinations and variations of each network technology. Proponents of different broadband solutions took on almost ideological zeal in depicting theirs as the Holy Grail. The hyperbolic noise generated by vendors and enthusiastic users made it hard to think clearly.

This phenomenon continues today. And broadband decision making is further complicated by what the Gartner Research Group, a leading information technology research and advisory company, has termed “technology hype cycles.” Many broadband stratagems that attract enthusiastic early adopters fail to meet inflated expectations. Some completely sputter out. Others achieve only marginal success. Several communities wasted significant time and money after betting on the wrong technologies. Danville determined from the outset that it would avoid the latest fads, take a technology agnostic approach, and design a system that best met municipal and economic development needs over the long term.

In the Danville of 15 years ago, wireless, DSL, and coaxial cable service could provide no more than 1.5 Mbps of bandwidth. While some municipal or business applications can function satisfactorily within these limits, nDanville placed its bets on an advanced fiber-optic network. Only fiber could promise a highly reliable network and almost unlimited bandwidth and flexibility to meet widely different user needs. It's essentially future-proof. The fiber itself could be expected to function for decades. Change out or upgrade the electronic equipment and operating software and you're good to go for the next generation uses.

Part of a decision to deploy fiber is to determine how far out to do so. Like so many other broadband elements, this network feature offers a bewildering array of design choices ranging from the gold standard fiber-to-the-premises (FTTP), often referred to fiber-to-the-home (FTTH), to the less speedy fiber-to-the-node (FTTN), neighborhood, or last-amplifier, where the customer location is connected by copper wire to fiber terminated at

some point as far as a mile or more away. Danville recognized that some businesses would need very high-speed internet access, others would need direct point-to-point connectivity between multiple business locations, and some would need both. Only fiber to the premises can support this range of requirements. So, Danville decided to deploy its fiber all the way to the customer premises.

BUSINESS MODELS

The next important question was what business model to employ, retail or wholesale open access. A municipality following the retail model functions like an internet service provider that directly provides services to each customer. The open access approach entails municipal construction and operation of a network over which private sector telecommunications businesses provide services to the customers and then pay fees to the municipality for use of its network. An open access network can offer fiber that is “lit” by communications electronics and fully functional, “dark” until the customer lights it using his or her own electronics, or both lit and dark fiber options.

The retail vs. open access dispute has lasted for decades. Similar to geeky debates over broadband technologies, advocates of each business model are zealously convinced of the superiority of their approaches. The Fiber-to-the-Home Council trade association reports that retail based municipal networks outnumber open access operations by four to one and enjoy twice the new customer “take rate.” Unfortunately, Virginia and at least 18 other states have passed legislation limiting the role local governments can play in the broadband marketplace.



nDanville fiber optic cable installer

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The hyperbolic noise generated by vendors and enthusiastic users made it hard to think clearly.



nDanville servers and routers

Sticking to its economic development mission, nDanville was launched using an open access business model. nDanville provides direct internet services to municipal and public school users, but business and residential customers are served by one of two private companies operating on nDanville that share revenue with the city.

Bristol Virginia Utilities has run one of the nation's flagship municipal retail operations since 2001, providing "triple-play" internet, television, and telephone services. Danville considered following suit. However, the Commonwealth of Virginia enacted a law in 2002 allowing the state's 15 municipal electric utilities to directly offer triple-play telecommunications services, provided that they neither subsidize those services nor charge rates lower than the incumbents. In other words, forget about using the retail model. In practical terms, grandfathered in by the new law, Bristol would be the only municipality in Virginia that could do so.

The state-imposed barriers proved to be of little consequence to Danville. Its businesses were not well served with advanced network and internet services, but at the time Danville was deciding which broadband model to use, its residents were generally satisfied with their telephone, DSL, cable, and satellite TV services. Broadband speeds provided to residents would not support sophisticated home-based businesses, but there were very few of those in Danville.

The city decided it would not only be inappropriate to compete with the private sector in providing TV based entertainment, but also too expensive. Projected debt service and operating costs were too high to allow for competitive monthly fees. And the experience of other municipalities getting into the retail TV business told Danville that the incumbent providers would likely employ predatory pricing to drive the city out of the business.

Sticking to its economic development mission, nDanville was launched using an open access business model. nDanville provides direct internet services to municipal and public school users, but business and residential customers are served by one of two private companies operating on nDanville that share revenue with the city. The first has been with nDanville from the outset. The second joined just this year and nDanville is working to recruit more. Providers offer an array of services, including internet access, VOIP (Voice Over Internet Protocol) telephone service, and IPTV (Internet Protocol Television) service, which convert sound, video, radio signals into digital packets and send them over computer networks.

SUCCESSFUL DEPLOYMENT

With initial loan financing of \$2.5 million from the city's electric fund (quickly repaid with interest) and without state or federal grants or taxpayer or utility rate-payer subsidies, the city deployed its current 175-mile fiber optic network in three phases at a deliberate pace and on a *pay-as-you-go* basis. *The First Phase*, completed in 18 months in 2004 with the \$2.5 million loan, connected all utilities and public works infrastructure facilities, including electric substations, water pumps, reservoirs, wastewater pump stations, and traffic control signal lights, and municipal and school buildings.



nDanville is helping make Danville's historic River District a center of economic development revitalization.



Fiber-connected Wi-Fi antennas provide free internet in municipal parks.

Fiber cables are now also connected to antennas in municipal parks and in the city's River District to provide free public Wi-Fi services in those areas. The city reads and controls utility meters and electric grid elements by radio signals over a reliable network of fiber-connected antenna towers. This was a better fit for Danville Utilities' 500-square-mile territory than installing fiber to every meter at a much greater expense. Even the most advanced smart meter and smart grid electric systems require only small bursts of data.

nDanville now provides connectivity to public and private K-12 schools, the Danville Community College, Averett University, and city and county libraries. School connections enable on-line access to teaching resources such as videos, distance instruction between school campuses, robust internet access, on-line testing, automation of back office functions, and information exchanges between student households and the schools.

An important part of nDanville's financial success ever since has been its ability to compete with the investor-owned telecommunications firms as an "E-Rate" provider. The Federal Communications Commission's E-Rate program provides grants to schools and libraries to help pay for telecommunications services and internet access. E-Rate enabled payments to nDanville by the city, and

county school systems have provided the means to sustain and expand the city's broadband network.

Since mid-2007, nDanville's *Second Phase* has been extending fiber connections to businesses within reach of the network and to all parcels in the city's industrial parks. The city also established the "nDanville Medical Network" and connected the local hospital, clinics, and other health care facilities. One hundred forty five business and medical service locations are currently served. Customers include:

- Internet service providers
- Banks and credit unions
- Accounting firms
- Law offices
- Engineering consultants
- Insurance agencies
- Radio stations
- Hospital, medical, and dental clinics
- Funeral homes
- Atlanta Braves minor league team's stadium office
- Retail stores
- Restaurants
- Car dealers
- Motels
- Churches
- Museums
- Welding shops
- Manufacturing plants

Undertaken in 2011, the *Third Phase* is incrementally deploying fiber through neighborhoods as capital funding is available. Over 100 households spread across 40 city blocks are now connected with most of them receiving more than one service – internet, television, and/or telephone – from private sector providers operating on nDanville. Fiber optic cable has been installed in several newly constructed apartments in beautiful old brick tobacco warehouses in Danville's historic River District.

PROVIDING INTERNET & POINT-TO-POINT CONNECTIVITY

In addition to nearly unlimited access to the internet, the city government, public school districts, and several business customers with multiple locations use nDanville to create their own wide area networks. For example, nDanville connects the Danville Regional Medical Center to its five clinics scattered around the community at speeds ranging from 5 to 250 Mbps over its own network. The hospital additionally has a 25 Mbps internet connection and its clinics have internet connections ranging from 5 to 10 Mbps. A local dental practice likewise directly connects its four clinics with fiber at 5 to 10 Mbps and provides each with 2.5 Mbps internet connections.

nDanville's connection with the Mid-Atlantic Broadband Communities Corporation's regional network allows similar direct fiber reach to offices and data centers in northern Virginia; Charlotte, North Carolina; Atlanta, Georgia; and nearly anywhere else. This expansive connectivity made it possible for Danville to recruit the Noblis Center for Applied High Performance Computing



In addition to nearly unlimited access to the internet, the city government, public school districts, and several business customers with multiple locations use nDanville to create their own wide area networks.

with its Cray XMT supercomputer, the first to be sited outside a federal laboratory or university. Noblis helps customers solve big data problems in areas ranging from molecular science, to cyber security, power grid analysis, and homeland security. Located in Danville's historic River District, the Noblis Center is directly connected by fiber commercially by a company named "Level 3" and redundantly by nDanville and Mid-Atlantic Broadband Communities Corporation networks to the firm's headquarters in Falls Church, Virginia.

BROADBAND DRIVEN DEVELOPMENT

Direct fiber connectivity to remote locations gives today's Danville a huge broadband advantage compared to the plight it suffered a decade ago. Businesses located in Danville can now experience faster data transmission connections with Northern Virginia sites than they could were they physically located in that area. As the vast majority of the world's internet traffic flows through network tiers and data centers located there, this positions Danville well to attract information technology companies needing connectivity to Northern Virginia. A former textile mill site served by high volume electricity infrastructure and broadband assets is currently being marketed by Danville as a data center site.



nDanville provides connectivity to the Cray supercomputer in the city's River District.

Internationally-based businesses recruited to Danville since its devastating loss of legacy industries are also well served by nDanville's fast internet connections. Taking advantage of nDanville's customized service symmetry, the local IKEA furniture plant is provided 50 Mbps upstream / 25 Mbps downstream internet connectivity to communicate with its headquarters in Sweden and its plants and stores around the world. EBI, a Polish mattress and sofa manufacturer and IKEA supplier, makes use of a 100 Mbps up / 50 Mbps down internet service. The Japanese Tobacco International plant uses an 18 Mbps up / 5 Mbps down internet connection. India-based Essel Propack uses a symmetrical 5 Mbps connection and the Canadian Bank Notes printing plant uses a symmetrical 30 Mbps internet service.

As currently configured, nDanville offers symmetrical business fiber connectivity of up to 10 Gbps and residential service of 78 Mbps down / 39 Mbps up. Residential connections can be upgraded to business service levels if needed. Danville can consequently make the same claims as any other "Gigabit City" about blazing speeds available on its fiber network. However, its experience to date suggests that local business need for nationally adored gigabit service has yet to materialize. The hospital, its biggest user, only needs 250 Mbps to send medical scan images between its clinic locations. It will likely be a much longer time coming for residential users to demand gigabit speeds. nDanville will be ready when its customers are.

nDanville has never been viewed as the city's economic development cure-all. Broadband is strategically integrated into the city's economic development program that also includes aggressive marketing, having shovel-ready industrial sites and buildings ready and utilities and transportation infrastructure in place, having a capable workforce and training programs, and having access to project financing and necessary incentives. Broadband is also integrated into the city's renaissance of its historic River District, currently the most active locale for entrepreneurial start-up business development and attraction of young, upwardly mobile professionals to Danville. Availability of robust broadband services from nDanville and commercial providers, coupled with high voltage

electric service, is making it possible for the city to redevelop a 90-acre textile manufacturing complex and market it as a data center location.

SUCCESS & LESSONS LEARNED

nDanville has succeeded on all fronts and has positioned Danville as a digitally connected community capable of supporting any high-tech or telecommunications business needing gigabit-plus broadband service. As of mid-2014, the city had invested \$15 million in nDanville. The broadband network has grown more slowly than had the city adopted a retail service model, but nDanville has managed to operate as a self-sufficient standalone enterprise fully funded through user fees without taxpayer or utility ratepayer subsidies, is entirely debt-free, and contributes \$300,000 annually to the city's General Fund.



International Industries Served

	Swedwood/IKEA: furniture manufacturer; 50 mbps down/25 up
	EBI: mattress and sofa manufacturer for IKEA; 100 mbps down/50 up
	Japanese Tobacco International (JTI): tobacco processor; 18 mbps down/ 5 up
	Essel Propack: manufacturer of plastic tubes; 5 mbps symmetrical
	Canadian Bank Note: driver's license manufacturer; 30 mbps symmetrical



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So, what can economic developers learn from nDanville's experience? At least five important points should be addressed. *First, determine the community's need for broadband.* A community lacking anything but dial-up internet service might choose to directly address the needs of residents. In Danville's case, private sector telephone and television providers were serving residential customers satisfactorily, but not adequately serving the city, the public schools, or the community's businesses. In choosing to install a fiber optic network, Danville focused its broadband efforts squarely serving its own needs and using broadband to promote its economic development. Another community might find a wireless network more suitable in meeting its needs.

Second, define the local government's role in meeting the community's need for broadband. The city or county's role might be severely restricted by state law. Some local governments permitted to get into the business, choose not to do so as a matter of philosophy. Cities like Danville with their own electric utilities have an advantage in deploying municipal broadband networks in having access to power poles and easements, right-of-ways, workforce resources, and equipment.

Third, select a suitable broadband business model. When allowed by law to do so, some communities choose to directly provide retail internet, telephone, and television services. Others adopt the open access business model and encourage private sector service providers to use the public broadband network, much as businesses use public streets to conduct commerce.

The "field of dreams" approach that assumes new businesses will flock to a community that has a broadband network is wishful thinking. Broadband is critically important but not the only tool in the economic developer's tool box.

Fourth, develop and strategically implement a plan of action. As with any other major endeavor, deploying a broadband network takes considerable time and money. It cannot be accomplished quickly. Danville chose to implement nDanville in a pay-as-you-go basis in three phases over more than a decade. Municipal and public school needs were addressed first and economic development needs led subsequent deployments.

Finally, leverage success. The "field of dreams" approach that assumes new businesses will flock to a community that has a broadband network is wishful thinking. Broadband is critically important but not the only tool in the economic developer's tool box. A fiber optic network like nDanville can also be used to serve municipal government and public school needs. nDanville enables connectivity to Danville's municipal office buildings and utility infrastructure, traffic signals, WiFi antennas, and smart meter/smart grid system.

nDanville has succeeded on all fronts in closing the digital divide. Danville is now a gigabit city connected to a bright new future over nDanville fiber. Not bad for an old mill town! 🌐

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