

Regional Innovation Acceleration Network

The network of venture development organizations driving America's economy—**SMARTER. FASTER. FORWARD.**

Venture Development Organization Profile

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Technology 2020

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Innovation & Entrepreneurship...

Building Our Region One Job at a Time

\$305,000,000 Total Economic Impact

\$152,522,086 Total Payroll

\$61,925 Average Salary

\$2,463 Total Employment

"Innovation is the central issue in economic prosperity." —Michael Porter

Overview

Technology 2020 is a public-private partnership whose mission is to grow new businesses and high quality jobs by capitalizing on the unique technology resources of the Tennessee Valley Corridor and to advance the region's reputation as a nationally recognized center of technology-based entrepreneurship.

Technology 2020 was created in 1995 by donations from Bell South, U.S. Department of Energy, Lockheed Martin and others to help diversify the economy in the Oak Ridge market from an economy that was heavily reliant on federal programs to one that had a significant base of commercial activities. The original concept was to create an organization that could help to leverage the technologies created in the laboratory environment and university environment and build a larger commercial base.

One of the interesting components of Technology 2020 is that since its formation in 1995, the organization has continued to expand its geographic service area. Today, the organization covers the Tennessee Valley Corridor from the northern part of Alabama up to Southeastern Kentucky and over to Western Carolina, an expansion of activities that now covers parts of four states. The expansion was the result of the vision of a local U.S. Congressman from Chattanooga, Zach Wamp, who believed in order for the region to economically prosper, there must be collaboration and connectivity. His vision about the economic benefit of connecting the Corridor led him to reach out to Western Carolina, Southeastern Kentucky, and Northern Alabama and build a coalition with the

delegation to foster collaboration among various regions. This collaborative mindset has enabled Technology 2020 to expand its service delivery and build strong partnerships with industry, research entities, academic institutions, and other economic development organizations across the region, thereby strengthening the entire Tennessee Valley Corridor.

However, it is important to note that Technology 2020 recognizes that there is significant work left to be done to improve the economy of the region. Technology 2020 views economic development within the region as a three legged stool. The first leg of the stool is ideas upon which a business can be based. This is an asset the region has a wealth of due to the significant research assets located within the region. The second leg is comprised of capital assets that are applied to funding early stage business development. While these assets have improved in the region over the past ten years, additional financing is still needed to meet demand. The third leg of the stool is human capital. Technology 2020 firmly believes that if a good idea is paired with the right individuals, money will flow. This, unfortunately, is considered to be the largest gap in the region at this time, and, as a result, is where Technology 2020 focuses significant attention.

This constant re-examination of the evolving regional needs has led to the organization's mission statement also evolving over the past 15 years. Early on, the organization's mission focused on supporting entrepreneurial development around emerging internet technologies and assisting high growth or tech based companies. Today, the organization is more focused on aggressively helping to create companies in the region. This in turn requires a significant effort to develop access to financial capital and human capital, which in turn means that the organization needs to morph from being solely part of the not-for-profit world into a hybrid organization that includes for-profit components. That being said, while the organization is experimenting with a number of new initiatives, its core mission remains the same—to leverage the unique assets in the region to increase the number of high growth companies and subsequently the number of higher than average paying jobs.

As the mission has continued to evolve, management at Technology 2020 has focused on long-term financial self-sufficiency. A predecessor organization with a similar mission failed in the late 1980s, in part, because it did not pay sufficient attention to its cash flow. This lesson has had a significant impact on Technology 2020's approach to financial management. It is important to note that Technology 2020 receives no State or Federal support for general operations, only for specific initiatives over the years. As a result, Technology 2020 has employed three principal strategies to help ensure that the organization's entrepreneurial support systems are sustainable:

- The organization has a profits interest in two venture funds that Technology 2020 helped establish. The two venture funds have approximately \$50 million under management, which ultimately will be invested in 15 – 20 companies. As the portfolio companies in these funds achieve exits, and once all investment capital is returned to the funds' investors, Technology 2020 plans to direct its share of any profits to an endowment.

- The organization has expanded its client assistance offerings provided through the Center for Entrepreneurial Growth. For instance, as solid relationships with CEG clients develop, opportunities often arise for additional involvement by Technology 2020's staff that requires a deeper involvement. In these instances, Technology 2020 enters into fee-for-service client services agreements with the firms, and helps with deeper engagements in areas such as strategic partnerships or M&A activity. Gains realized from these deeper engagements also are reserved for Technology 2020's long-term self-sufficiency.
- Finally, the organization has developed its own business, Digital Crossing Networks LLC, a co-location data center operation located in downtown Knoxville whose majority interest is held by Technology 2020's for-profit subsidiary. The data center was created originally as an economic development project to help fulfill the unmet IT needs of the region in the late 1990s. It has since become an economic development engine in its own right as it works with regional companies as well as attracts companies from other regions. This business serves as an economic asset in the region as well as providing financial returns for the future sustainability of Technology 2020.

Since inception in 1995, Technology 2020 has assisted more than 387 innovative companies, helped create more than 2,463 jobs with an average salary of \$61,925 and a total payroll impact of \$152 million. As a result Technology 2020's activities have created a total economic impact of \$305 million. Possibly even more important than their sizeable economic impact, Technology 2020's success also has helped prove that technology-based economic development initiatives can be successful in predominately rural areas of the United States, based on a model in which meaningful partnerships are established with leading research institutions in the region's service area.

VDO Programs and Services

Business Support/Assistance



Center for Entrepreneurial Growth (CEG): In 2001, Technology 2020 established its signature entrepreneurial support program called the Center for Entrepreneurial Growth (CEG) in partnership with the Oak Ridge National Laboratory. The genesis for the partnership was to create a program that would help identify commercially viable intellectual property, and provide local entrepreneurs with the skills needed to create successful, sustainable local companies. The CEG developed its Client Development Model as a framework to guide the entrepreneur in building a business that could attract investment funding. The foundation of the model is a series of milestone-based growth stages that prioritize the business development activities in a customized strategic plan for each company. In line with the theory that what one accomplishes through one's own efforts is a measure of effectiveness and what one accomplishes through others is a measure of leadership, Technology 2020 believes that what others do outside the company to substantiate its efforts is a measure of success. For Technology 2020, company successes are termed "validations," and they take the form of customer sales, partnerships, attracting worthy employees and advisors, and of course, funding.

In addition to the Client Development Model led by staff of Technology 2020, the CEG team also established a Business Mentor Council to enlist the experience of successful entrepreneurs in the region. They also developed and deliver a CEG training curricula, which is tailored to specific growth stages that client companies must navigate.

The CEG program is available to entrepreneurs located throughout the Tennessee Valley Corridor as Technology 2020 has expanded the program across the region in partnerships with:

- The Oak Ridge National Laboratory - Oak Ridge, TN
- The University of Tennessee Research Foundation - Knoxville, TN
- Kentucky Highlands Investment Corporation - London, KY
- Buncombe County and Asheville-Buncombe Technical Community College - Asheville, NC
- National Institute for Hometown Security - Somerset, KY

The CEG program strives to foster an entrepreneurial climate throughout the region, and works to identify new technologies with commercial potential, improve the region's access to R&D resources, and provide networking opportunities for the entrepreneurial endeavors.

Business Incubators: Technology 2020 owns, operates, and/or supports seven technology incubators located through the Tennessee Valley Corridor. Support is defined as contracting with the incubator entity to deliver its CEG Program. Five of the incubators are located in the Knoxville-Oak Ridge area. Technology 2020 also supports an incubator located in Asheville, North Carolina at the Asheville-Buncombe Technical Community College, and an incubator located at the Kentucky Highlands Investment Corporation in London, Kentucky.

Technology 2020 believes that the successes of all seven incubators are grounded in the fact that none of them are purely real-estate plays; but instead, offer the robust entrepreneurial business assistance services of the CEG program. By providing a supportive entrepreneurial environment, including access to counselors and coaches, the success rate of the client companies rises significantly.

Technology 2020 also admits that owning and operating the amount of real estate that it does comes with a significant degree of risk. While they have been successful raising funds from a variety of sources to build the facilities, it is much more difficult to find operational support once an incubator is up and running. However, the maintenance of the building, particularly as they age, can be a significant cost to the operation. So much so that they advise: if an organization has to borrow money to build or rehab a building, Technology 2020 management would recommend against entering into the venture. Typical cash-flow scenarios are just not feasible in the long-term for the vast majority of those situations.

Financial Capital

Technology 2020 has devoted significant energy and attention to establish capital sources for technology companies at many different stages of development, which in

turn have helped combat the region's reputation as a "flyover zone" for venture capital investments. Below is an overview of the organization's activities in this area.



Pathway Lending, formerly Southeast Community Capital: Pathway lending was initially formed in 1999 as Technology 2020 Finance Corporation, a subsidiary of Technology 2020, to provide capital to local businesses creating technologies from the Oak Ridge National Laboratory. In May 2001, the organization was certified by the U.S. Treasury Department as a Community Development Financial Institution (CDFI). In 2005, Technology 2020 opted to spin-out the fund when it became large enough that the capital needs could no longer be supported by the organization. As an independent entity, Pathway Lending expanded its mission to increase access to capital for small businesses in Tennessee that were unable to access traditional sources of financing. Originally headquartered in Oak Ridge, Pathway Lending now has offices across the state and headquarters in Nashville. In the years since its inception, Pathway Lending has grown to control over \$27 million in assets. As of June 1, 2010, it had made more than 450 loans to over 350 companies totaling more than \$40 million. The result is creation of more than 1,500 new jobs while retaining another 3,200 jobs in Tennessee.



The Southern Appalachian Fund (SAF): SAF was established by Technology 2020 and Kentucky Highlands Investment Corporation in 2003 as one of the nation's first New Markets Venture Capital Companies (NMVC). The \$12.5 million venture capital fund has provided equity capital and operational assistance to early stage companies located in low income census tracts in Tennessee, Kentucky, and the Appalachian counties of Georgia, Alabama, and Mississippi.

The Fund's mission is to generate market-rate returns for its investors while promoting shared and sustainable business growth and wealth creation throughout its target region. The Fund was established to invest in companies with strong management teams, high growth potential, and defensible market positions. The Fund managers have added value to the Fund's portfolio companies through operational assistance, active board participation, and mentoring.

At this time, the Southern Appalachian Fund is fully invested and is not seeking new investment opportunities. While SAF has not yet achieved complete liquidity from its portfolio investments, it has realized a 2X return on invested capital for the investments from which the fund has achieved liquidity. In addition, the eight companies in which the fund has invested increased their total employment by almost 300% (137 new jobs) between 2004 and 2010, which is particularly remarkable in light of the economic conditions in the later years of the decade and the fact that all of the fund's portfolio companies are located in low-income areas of central and southern Appalachia. The

average annual wage across all jobs within the fund's portfolio is in excess of \$50,000/year, which is substantially higher than the average salary in Appalachia and in the Technology 2020 service area.



Meritus Ventures, L.P. (Meritus): Meritus was established by Technology 2020 and Kentucky Highlands Investment Corporation in 2006 as the nation's first Rural Business Investment Company (RBIC). Meritus is a \$36.4 million venture capital fund formed to make equity investments in private, expansion-stage companies in predominantly rural areas in Central and Southern Appalachia. In addition, Meritus provides operational assistance to portfolio companies and prospective portfolio companies funded in part by a grant from USDA, with administrative oversight by the U.S. Small Business Administration (SBA).

The Fund's roster of investors includes a number of banks and several private financial institutions, including member institutions of the Farm Credit System, several large foundations, a number of high net worth individuals, and regional stakeholders such as the University of Kentucky, the Appalachian Regional Commission, and the Tennessee Valley Authority. In addition, the fund is partially capitalized via the sale of debentures guaranteed by USDA.

The Fund's mission is to generate market-rate returns for its investors while promoting shared and sustainable business growth and wealth creation throughout its target region. The Fund invests \$250,000 - \$2,500,000 in companies with strong management teams, high growth potential, and defensible competitive advantages. The Fund managers also add value to the Fund's portfolio companies through operational assistance, active board participation, and mentoring.

By the end of 2010, Meritus Ventures had invested more than \$12 million in six companies. Meritus has not achieved liquidity from any of its investments and is continuing to seek additional investment opportunities. In an exceptionally difficult economic environment, the fund's portfolio companies, all of which are located in rural areas in central and southern Appalachia, have experienced a net increase in jobs, with average annual salaries in excess of \$62,000/year across all jobs and all companies.

There are several things that stand out collectively regarding the last two funds. The role that Technology 2020 played at the time of fund formation was part application writer, part public relations expert, both with governmental entities and private sector investors, part cheerleader, and overall catalyst. Interestingly, while Technology 2020 assisted with capital raising and in the organization of the funds, once the funds were formed and became operational, Technology 2020 assumed a passive role. As stated previously, Technology 2020 has a profits interest in the two venture funds but has no role in governance or investment decision making, recognizing the divergence of roles and missions between non-profit economic development and for-profit venture capital investing. Technology 2020 strongly believes that these funds must be pure venture

capital. With that said, it is the intention of everyone involved with the funds that a purpose of the risk capital is to create a double bottom line—generating a return for the investors while also creating jobs for the region.

Networking



Technology 2020 also serves as the host for the Innovation Valley Technology Council. The association's more than 250 member companies represent a broad and diverse set of technologies as well as range in business sizes. The Council provides educational opportunities for its members, as well as the region at large, that help to facilitate the flow of knowledge and sharing of experiences.

Moving the Needle

Technology 2020 has been able to help create an environment that encourages entrepreneurship. While the organization does not lay claim that the culture has been successfully changed in its entirety, they do feel that they have had an impact on moving it forward. This has primarily been accomplished by Technology 2020's perseverance in building value-added partnerships, particularly with the large research institutions, such as Oak Ridge National Labs. This in turn has helped to bridge the cultural divide that was very prevalent in the region just ten years ago. Technology 2020's President, Mike Cuddy, states, "What we've done for 15 years is walk across the bridge into Knoxville and create programs and relationships. Up and down the valley we spend time talking and building partnerships." These relationships in turn have led to capital formation for the region, the identification and growth of technology companies, and catalyzed the cooperation between the government and private sector, all of which foster economic growth.

Organization

Technology 2020's staff of 16 employees is heavily focused on seasoned business and financial talent in order to deliver the level of sophisticated services to the technology entrepreneurs they work with through the CEG and its risk capital programs. The organization believes that it must be staffed with entrepreneurial people who have a passion for the good fight, because it is hard work. It has also learned that at times Chinese walls are required within an organization as complex as Technology 2020, and that managers need the freedom to make independent decisions in order for the entire organization to prosper. For instance, within Technology 2020 at any given time staff are serving as counselors and advocates for start-up clients. There are also, however, in-house loan officers and venture investors, who have the independence to make their own credit and investment decisions regarding, sometimes involving the same start-up or young companies. It has taken several years to establish this business model, and while there are still occasional tensions regarding particular clients and investments, this approach has become an absolutely critical component of Technology 2020's organizational success.

The organization has a very active community-based Board of Directors, comprised of 32 members representing the major research institutions, industry, banks, economic development organizations, as well as numerous successful entrepreneurs. The range,

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breadth, and diversity of its board provide strong leadership to the operations of the organization. However, it is also recognized that the governance and oversight of the organization is best left to a smaller, sub-set of the board, the Executive Committee.

Finally, one of the unique features of Technology 2020 is the breadth of value-added partnerships it has formed since its creation. They view these partnerships as key to Technology 2020's successes. Over the years, Technology 2020 has successfully identified opportunities to establish key partnerships with a host of federal agencies, local governments, universities, laboratories, and private sector companies in the Tennessee Valley Corridor. These partnerships have helped create Technology 2020's comprehensive entrepreneurial support system. These and other new partnerships are anticipated to help sustain the organization in the years to come.

Summary of Key Success Factors

There are a number of key success factors that have enabled Technology 2020 to achieve its level of success. First, the organization's mission is community based, and therefore widely supported and viewed as adding value to the region. Technology 2020 firmly believes that the region has to win, not just a few individuals.

Secondly, Technology 2020 believes that any organization, to be sustainable, has to be financially successful. Venture development organizations enjoy a tax exempt status because of their mission. However, if the organization is not financially prudent, it is not going to survive. The organization will not be able to earn the respect of its sponsors, and therefore will not be able to continue to deliver on its mission. Therefore, venture development organizations need to develop a business model that creates a surplus of revenue to be able to reinvest in its programs prudently. Specifically, Technology 2020 has been able to integrate non-profit and for-profit activity in an effective manner. While Technology 2020 is a 501c3 tax exempt entity, it has formed two for-profit entities in collaboration with Kentucky Highlands to establish venture capital funds in the region, has created 509(a)(6) supporting organizations under its umbrella to manage an array of lending programs, and even has its own for-profit subsidiary, through which it manages its majority interest in the multi-million dollar data center operation in downtown Knoxville, Digital Crossing Networks. All of this works because it believes that its non-profit designation is a tax status, not a business strategy.

Finally, a key element to Technology 2020's successes has been the partnerships it has built with many of the region's most significant institutions. The Center for Entrepreneurial Growth program, its signature business assistance program, for instance, was established in partnership with the Oak Ridge National Laboratory (ORNL) in 2001, and has been replicated since through partnerships with the University of Tennessee Research Foundation, with Kentucky Highlands Investment Corporation, and with Asheville-Buncombe Technical Community College. Technology 2020's entry into the access-to-capital arena was supported with grants from the Appalachian Regional Commission, and a multi-year partnership with the Bechtel Jacobs Development Company, a U.S. Department of Energy contractor. In addition, Technology 2020 is the owner, has the contract to operate and manage, or supports seven technology-focused business incubators in the Tennessee Valley Corridor, in partnership with numerous local municipalities, economic development corporations, and others.