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## **Forming Regional Technology Councils: A Strategy for Community and Economic Development**

by Brent D. Hales, Ph.D., Charles Weir, and Julia Cannon<sup>1</sup>

### **Introduction**

Information technology (IT) has the potential to be a great enabler but only when accessible and when communities understand its potential in development efforts (Korsching, Hipple, & Abbott 2000). Sustainability in technology-based economic development (TBED) efforts requires that communities establish defined goals, means of achieving those goals, and plans for creating representative task forces to address community needs (Caristi 2000). The goal of regional technology councils (RTCs) is to champion TBED at the local and regional levels. RTCs are of special importance to community and economic development professionals, especially in rural and underserved areas, because they act as advocates for change in the regions they serve. This paper examines the role of technology-based community and economic development—especially the role of RTCs—in this effort. Five existing RTCs are examined to explore what makes them effective.

Technology-based economic development (TBED) is defined as “efforts that grow wealth by seeking to create, retain, expand, attract, or transform highly competitive enterprises that produce technology-related goods and services or use technology to enhance the value of goods and services they produce” (Mississippi Technology Alliance 2002). In most cases, TBED is not a narrowly defined concept. Rather, TBED recognizes that technology has the potential to positively impact all sectors of a regional economy, not just the IT sector. Technology is the driving force for change in today’s society (Hudson 1997) and its effects are far-reaching.

In this paper, technology is defined as “applying a systematic technique, method or approach to solve a problem.” (Tech Web 2004). The *TechEncyclopedia* notes that the current use of the term most often refers to, but is not limited to, some use of computers or computer applications. This paper does not place rigid guidelines on what technology is; rather, it focuses on ways to use technology to promote community and economic development.

Many strategies can use technology to promote community and economic development. These include the diffusion of technology from early adopters to a wider audience of users (Rogers 1995), the creation of demand for technology through formal and informal educational campaigns, and the organization of entities with direct interests in technology to form development clusters or collaborative working groups. The adoption/diffusion thesis has received considerable attention in recent research (Burt 1999; Fliegel and Korsching 2001; Lasley, Padgitt, and Hanson 2001; Valente and Davis 1999). Much technology adoption is passive because it is market driven or driven by the private sector (Korsching and El-Ghamrini 2000). In other instances, the public sector takes more active stances in creating technology-based development strategies (Hales 2003; Van Wart, Rahm, and Sanders 2000). RTCs are mainly efforts to build public/private partnerships to leverage the interests of both public and private sectors for the benefit of the region.

A list of RTCs and URLs is available at [www.IIRA.org](http://www.IIRA.org).

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<sup>1</sup> Brent D. Hales, Ph.D., is the Director of the Center for Community and Economic Development at Delta State University, Cleveland, MS; Charles Weir is the Vice President for Community Services at Mississippi Technology Alliance in Ridgeland, MS; and Julia Cannon is a graduate of the Master’s of Science in Community Development program at Delta State University, Cleveland, MS.

## Structure and Function of Technology Councils

Regional technology councils assemble, energize, and empower those individuals and entities interested in pursuing technology-based economic development in their community or region. RTCs promote the development, growth, and recognition of a community/region by creating mutually beneficial linkages among the technology industry, governmental, educational, and nonprofit sectors.

In addition, RTCs promote an innovation-driven entrepreneurial economy that helps a community or region move ahead or progress in the development of knowledge and technology applications. RTCs promote resource- or asset-based development by building on existing technologies and encouraging the adoption of new technologies.

Another important role RTCs fill is as policy advocates by expending significant time and energy on promoting, celebrating, and leveraging successful applications of technology. RTCs focus on policy advocacy by increasing the resources of the government to make informed policy decisions that support tax credits, funds for research and development, and other policies beneficial to technology-based companies. Specific examples are provided in the case studies below.

RTCs typically are membership-based, independently funded organizations with science- and technology-based economic development as their primary goal, often with one or more technology cluster focus areas (Mississippi Technology Alliance 2002). RTCs can be formed as part of a chamber of commerce, regional development initiative, or interstate initiative. RTCs should include members

from the public and private sectors but are arguably most effective when a majority of the governing board is from the private sector. This is because of the rapid change in technology and the public sector's track record of rigidity, inability, or unwillingness to adopt unproven technological innovations until the technologies are used on a wide basis (Schreck and Hipple 2000).

RTCs offer many benefits and services to members, including educational and informational services, networking opportunities, seminars, conferences, marketing services, and technical and legal services (Connecticut Technology Council 2005; Los Angeles Regional Technology Council 2005; Western Slope Technology Council 2005). Successful technology councils such as the 20-year old Pittsburgh Technology Council, the Northern Virginia Technology Council, the New Jersey Technology Council, and the Arizona Technology Council drive much of the technology adoption in their respective regions.

According to Phil Hardwick (2005), Coordinator of the Capacity Development Initiatives at the John C. Stennis Institute of Government at Mississippi State University, RTCs provide another dynamic way for public and private entities to partner for promotion and utilization of technology in community and economic development efforts. While some RTCs are in their beginning stages, many RTCs throughout the United States have existed for over 20 years. Thus, there is a pool of experience and insights to be tapped as new RTCs are formed and evolve. The following represents a series of case studies on the structure, function, and potential impacts that RTCs may have on a region.

## Case Studies of Regional Technology Councils

The **Louisiana Technology Council (LTC)** was formed in the early 1990s to build a technology component in the Louisiana economy. This move was deemed important and necessary by its founders to move the region into the 21st century. LTC's website ([www.ltc-la.org/](http://www.ltc-la.org/)) noted that the founders believed that if they did not form a technology council, then they would likely suffer further economic and social stagnation in the region. Consequently, the LTC, formerly known as the New Orleans Technology Council, was created in early 1994: "The primary mission of the Louisiana Technology Council (LTC) is to assist with the technological development of individuals and

member organizations by providing programs, events, organizational support and other value added services that contribute to their competitiveness and growth" (LTC 2005). Since 2002, LTC has experienced considerable growth and conducts regional and national homeland security seminars; recognizes innovation in education, application, and creation of technology; and has developed a Proof of Concept Fund. This fund provides seed capital (up to \$10,000) to professors for prototype development, testing, and patent acquisition. LTC created the Women in Technology program, designed to promote greater participation of women in technology.

According to Executive Director, Mark Lewis, LTC “views itself as a facilitator rather than developer.” LTC coordinates with economic development associations to assist in recruiting and development. It encourages IT firms to collaborate on projects thereby creating a paradigm shift away from competition to collaboration on technology issues.

The **Connecticut Technology Council** (CTC) was formed in 1994 as an offshoot of the chambers of commerce in Hartford and New Haven, Connecticut. According to CTC President Matthew Nemerson, CTC grew rapidly during the dot com boom of the mid- to late-1990s. It grew to a membership of 400 entities, with a mailing list of 6,000 to 7,000. Its principal issues include impacting state public policy, increasing tax credits for technology-based companies, mentoring, networking, and providing services such as insurance (e.g., health, life, and dental). As a sustaining entity, CTC is a facilitator that helps private and public entities develop innovative partnerships, streams development revenue from private and public sources, and provides members with opportunities to expand their operations and outreach. This is accomplished through technology expos, statewide innovation fairs, recognition for new and existing businesses with excellence in technology development, and technology-based training on diverse topics. Future directions of CTC include the following:

- Continued growth in the membership of the organization
- Increased relevancy for the organization, its members, and TBED
- Alliances with other trade organizations and entities
- Growth in technology-based companies
- Retention of existing Connecticut-based companies
- Attainment of more capital for technology-based research and development, particularly for nondefense-based projects
- Infrastructure development

Another successful RTC is the **Pittsburgh Technology Council** (PTC). Formed more than 20 years ago, PTC is one of the oldest and most successful RTCs in the country and is a model for existing and emerging RTCs. PTC has more than 1,400 member firms, with an outreach territory of 13 counties in southwestern Pennsylvania. Each year it offers a wide variety of programs to promote TBED in the region, with member benefits that include the following:

- Passes to exhibitor shows or conferences
- Discounted exhibitor space
- Free or reduced rates on registrations
- Access to health insurance
- Tuition discount program
- Public policy advocacy
- Workforce education

The PTC also produces numerous publications, including *TEQ*, a news magazine designed to promote technology in the PTC region, and the *State of the Industry Report*, an *Annual Report*, and reports or press releases that can be accessed on its website ([www.pghtech.org/](http://www.pghtech.org/)).

Mississippi has several local and state technology councils that use various strategies in their development efforts. For example, the **Mississippi Technology Alliance’s** (MTA) development strategy is to create technology clusters. Technology clusters emerge from entire economies based on a set of technologies. MTA focuses on the following subareas:

- General Technology Industries
- Communications & Information Technology (Remote Sensing/Geomatics and Wireless)
- Advanced Materials (Polymers and Nanotechnology)
- Transportation (Aerospace, Automotive, Logistics, and Ship Building)
- Life Sciences (Agriculture, Biotechnology, Forest Products, Marine Science, Pharmaceuticals, and Healthcare)

MTA works with communities, regions, and the state to develop resource-based development through technology. MTA promotes the use of existing resources for development and encourages development from within the focus area in addition to recruiting outside interests. According to MTA’s (2005) website ([www.technologyalliance.ms/](http://www.technologyalliance.ms/)), MTA is currently focusing on the following:

- Supporting entrepreneurs and manufacturers through the Manufacturing Partnership Team

- Nurturing small businesses through the Mississippi Technology Alliance Innovation Center
- Supporting Mississippi's fastest growing industries such as the Communication Information Technology Organization (CIT.MS) and the Polymer Cluster Organization
- Searching for renewable energy opportunities through the Mississippi Alternative Energy Enterprise
- Investing in academic achievement by hosting the U.S. Academic Decathlon
- Sharing Mississippi's good news through *Point Innovation*

In contrast to the well-established RTCs, there are also emerging technology councils. One such example is the **Mississippi Delta Technology Council (MDTC)**, formally organized in 2002. With a membership of over 150 organizations, MDTC is quickly positioning itself as a leader in TBED in the 19-county Delta region largely as a result of its involvement in three major projects. The first is the creation of a web portal for the Delta region ([www.mississippidelta.org](http://www.mississippidelta.org)). This effort is taking place in conjunction with local, regional, state, and national partners in an effort to make it the jumping off point for "All Things Delta." MDTC and its partners expect the web portal to be used to attract businesses by demonstrating the use of technology in the region.

The second initiative is the Delta Business and Technology Exposition (DBTE). The event showcases how technology

is being used in the Delta region and promotes the development of partnerships, clusters, and new business opportunities. This event is held in conjunction with Delta Council Day, the largest gathering of officials, educators, nonprofits, and businesses in the region.

The final initiative is the Certified Technology Communities (CTC) program. The CTC program is designed to identify the infrastructure, resources, partnerships, opportunities, and avenues for development in a community. This knowledge is used to develop community-specific technology-based economic development plans, to guide workforce and government training programs, and to create opportunities for resource enhancement. This is by far the most aggressive development initiative underway in the region and is being adopted by the Mississippi Development Authority and the Mississippi Technology Alliance for application in the rest of the State of Mississippi.

While MDTC is an emerging organization, it shares the potential with much larger and established groups as advocates for technology-based development. It too has encountered hurdles in its development, including a historically poor and underserved region. Until 2001, broadband was not available in the Delta region outside of governmental organizations or large corporations that were able to self-fund the development of local area networks. With the emergence of MDTC, the market recognition of a viable business opportunity for service in the region, and the rise in entrepreneurs focused on the development and delivery of technology in the region, the Mississippi Delta is quickly closing the gap of the rural/urban digital divide. Programs such as the CTC program will further increase the ability of MDTC to take a facilitator or advocate role for TBED in the region.

### Mechanisms of Successful Regional Technology Councils

In examining RTCs, four "**tions**" have been identified to increase RTCs' potential for outreach and success. The first is **promotion**. Promotion increases the likelihood that a group's proposed activities will succeed and positively impact the region. Promotion increases the RTCs' visibility and encourages participation by entities that may not have been participating or fully participating. Promotion also increases the stakes for success or failure by increasing the public attention to the organization. This increased pressure and public notoriety may actually increase the participation of RTCs' members to ensure the activities' success.

The second "tion" is **documentation**. When groups attempt to move forward, they must understand where

they have been. Documentation will provide a base of knowledge to ascertain the impact of the group's efforts. All of the RTCs examined document meetings with general minutes, pictures, and reflections by the group and with the publication of annual reports. Financial activities are also closely monitored and documented to ensure sound fiscal practice.

Documentation leads directly into the third "tion"—**evaluation**. Evaluation enables the organization to periodically examine its effectiveness in addressing the needs of the region with its resources. Evaluation has the potential to refocus the RTC and provide direction for future change. Several RTCs, including MDTC and LTC, noted that

they consistently evaluated performance and involvement through regular meetings of the board of directors and by completing an annual evaluation/strategic planning session. Members also examined their activities during the past year and assessed the outcomes of these events. Documentation collected was reviewed annually and used to determine how the needs of the regions were addressed and if local resources were used in those efforts.

Evaluation forced the groups to closely examine whether their efforts were reflective of the region and whether the RTCs had strayed from their missions and goals or the strategies outlined to meet those missions. These benchmarks provided a template for structuring the RTCs' future activities, allowed the groups to build on

past successes and learn from their struggles, thereby decreasing the likelihood of repeating past mistakes.

The final "tion" is **celebration**. Especially during the initial years of the RTCs examined, it was extremely important that the RTCs' activities and projects be promoted and celebrated after the fact. Celebrations were both formal and informal and ranged from recognizing the efforts of group members at council meetings to formal awards ceremonies. One especially important form of celebration was to use the media to showcase the efforts of the group. The RTCs examined made consistent and effective use of the media to celebrate the successes of the RTCs and their individual members. As RTCs grow and mature, the importance of celebration may become more ritualized and routine but will remain highly significant.

## Conclusions

Technology-based community and economic development has the potential to help focus the development efforts of many regions. RTCs offer the potential for technology-based firms of all sizes to have a voice in the technology development in a region. Further research on the effectiveness of technology-based community and economic development, specifically RTCs, is needed. While little formal evaluation of these types of development efforts exists, the effects RTCs have on regions around the country are readily seen as in the cases of the councils noted above. RTCs provide a formal voice for change—especially in underserved rural populations—and help make local needs known to local resources. RTCs also create partnerships and encourage holistic, representative participation in the development process.

RTCs provide a base for developing a region or community. They also assist in the adoption and diffusion of technologies by providing a means for "promoting, celebrating, and leveraging" those technologies already existing in the region (Burt 1999; Fliegel and Korsching 2001; Lasley et al. 2001; Rogers 1995; Valente and Davis 1999). They work to create opportunity by exposing the resources in a region and encourage development by enhancing the collective and individual resource networks. RTCs also help communities or regions take a more active stance in development efforts (Korsching and El-Ghamrini 2000). In sum, RTCs provide community and economic development professionals with another tool to help transform their regions to more effectively participate in the modern global economy.

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