What is Technology-based Economic Development?
Over the last several years, the U.S. economy has been undergoing a dramatic transformation as the nation moves to an economy driven by technology—through the creation of new industries and the application of technology in traditional industries. Competing in a global economy, regions must have an economic base composed of firms that constantly innovate and maximize the use of technology in the workplace. Technology-based economic development is the approach used to help create a climate where that new economic base can thrive.

What is Required for a Technology-based Economy?
Based on the experience of tech-based economies like Silicon Valley, Research Triangle, and Route 128, the following elements are required for a tech-based economy:

- **An intellectual infrastructure,** i.e. universities and public or private research laboratories that generate new knowledge and discoveries;
- **Mechanisms for transferring knowledge** from one individual to another or from one company to another;
- **Physical infrastructure** that includes high quality telecommunications systems and affordable high speed Internet connections;
- **Highly skilled technical workforce;** and
- Sources of risk **capital**.

What Approaches Can Be Employed to Develop These Elements?
Intellectual Infrastructure. Improving the intellectual infrastructure by strengthening higher education system R&D capacity, investing in higher education in areas of industrial relevance, and encouraging greater university-industry interaction.

Spillovers of Knowledge. Much of the success of Silicon Valley can be attributed to the success in transferring knowledge and technology from universities to the private sector and among companies. Spillovers of knowledge can be accomplished by identifying and removing barriers to the commercialization of university-developed technology, encouraging access to federal laboratories, and providing seed funding to industry associations and technology councils that promote communication among companies.

Physical Infrastructure. The competitiveness of an economy is increasingly dependent on its enabling infrastructure. While in the past this meant roads, bridges, rail and telephone access, today it includes proximity to airports, fiber optics networks, and high speed Internet access.

Technically-Skilled Workforce. Approaches that regions can take to ensure the availability of a technically skilled workforce include encouraging more students to enter science and engineering fields and providing training for workers in technology-based companies.

Capital. The availability of capital to support start-up and emerging companies is critical. Regions can address needs for capital by investing state funds in technology companies, using state funds to leverage private funds, helping companies access capital sources, and offering R&D tax incentives.

Want More Information on Tech-based Economic Development?
For the most comprehensive database of reports and studies on tech-based economic development, visit the TBED Resource Center, which SSTI has developed in partnership with the U.S. Department of Commerce.