


**XXIV IASP WORLD CONFERENCE ON
SCIENCE AND TECHNOLOGY PARKS 2007**

Contact Information

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Title of the Paper: | Creative Communities – Fueling the Culture of Innovation |
| Session for which the Steering Committee has selected the abstract submitted prior to this paper: | Plenary 2 |
| Length of the paper: | 5,754 |
| Author & Paper Presenter's Name: | Mr. Santanu Banerjee |
| Co-Authors' Names: | Mr. Bob Whalen, Mr. Joe Bezerra |
| Author's E-mail: | banerjees@yahoo.com |
| Organisation: | City of Clovis, Technopolis Clovis Core Committee |
| Address: | 2141 Decatur Avenue Clovis, California USA 93611 |
| Phone: | 559-298-5710 |
| Fax (optional): | 559-298-0074 |
| I confirm my ability to present my paper in English <u>YES</u> | |
| By submitting my Full Paper I authorise the Conference Organisers to publish it in the Conference Proceedings (if the Paper is approved by the Steering Committee). | |
| Date | <u>February 28, 2007</u> |
| Signature | <u></u> |

NOTES:

1. The title of this paper is changed from what was submitted in the abstract (Creative Jobs and Creative Companies – Key Factors for Growth and Competitiveness)
2. The abstract was originally submitted for Parallel 2 session, but IASP steering committee requested that instead the paper be submitted for Plenary Session 2.

Creative Communities – Fueling the Culture of Innovation

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Executive Summary

Creative people, art, research, and technology are a few of the fundamental and overlapping ingredients of a culture of innovation. A creative society and culture of innovation are not born overnight; they are formed by a complex non-linear process that involves the interplay of several socio-economic and socio-cultural factors in which collaborative work is very important. There is no well trodden path to success, but in an economically mature and successful society, indicators of its success can be traced back to the society's heritage, traditions, instincts, accepted norms, core values and cultural mix. With a background of art and technology, and creative people, a society has potentials that lead to the path of innovation and subsequent economic growth, locally as well as globally. The process has begun in the city of Clovis, where citizens, businesses and the government collaborate to create an innovative technology hub, "Clovis Technopolis."

Introduction

Henry Ford said, "I could use a hundred people who don't know there is such a word as impossible."

Ford's quote relies on the very fact that behind the success of any drive toward innovation, there are people who first believed in the success of the outcome. The broadness of the term "Culture of Innovation" is enormous and carries profound significance. Creative people, art, research, and technology are a few of the fundamental ingredients of a culture of innovation; they are overlapping rather than distinct components. The word "technology" originates from *technologia* in Greek — which means *techne*, craft or art, and *logia*, word or thought. A creative society and culture of innovation are not born overnight; they are formed by a complex non-linear process that involves the interplay of several socio-economic and socio-cultural factors, where the collaborative work of communities (citizens), networks and aligned institutions (including governments) plays a very important role. In an economically mature and successful society, indicators of its success can be traced back to the society's heritage, traditions, instincts, accepted norms, core values and cultural mix. When a society's background involves art and technology, and its people are creative, it has natural potentials that may lead to the path of innovation and subsequent economic growth, which continues in a cyclical pattern.

This is not too far off course from what the citizens of Clovis,ⁱ located in California's central San Joaquin Valley, said to themselves as they looked at key elements of economic growth in the competitive world in which they live in today. The key potential of a community lies within the core values which are protected and nurtured by the community. In 2005 the citizens and the local government approved an initiative to convert Clovis into an innovative technology hub. A diverse group of citizens became engaged in and started fueling the process of transforming the city into a technopolis. Technopolis is a term coined from *technology* and the suffix *polis*, which means city in Greek.ⁱⁱ The citizens committee is named after the dream they are pursuing: Technopolis Clovis Core Committee, TC³ for short.

Innovation and technological spirit goes a long way back in the city's history. Clovis and its residents have long embraced technology and walked on the path of innovative discoveries; the cultural background of the community has consistently provided a favorable environment for innovations and innovators. In the 18th century, a significant engineering feat was accomplished by building a flume that stretched 42 miles from the mountains to the valley floor. It was the third largest flume in the world allowing timber to travel 42 miles to the City of Clovis.ⁱⁱⁱ

We can draw an analogy with the present, where the lumber is information and flumes can be considered "information infrastructure." In the past few years, a much more intense set of initiatives have been used to uncover the positive potential the community possesses. Today, citizens realize that Clovis has the key

components—creative thinking, art, technology, community spirit, culture and a cooperative local government—to fuse together to transform Clovis into an innovative technology hub, making a significant impact in the regional and national economy.

Successful technopoles throughout the world all share common and basic fundamental elements such as creative jobs, innovative people and companies that nurture a culture of innovation. At the same time, each one is also uniquely reflective of its community values and goals. While Clovis initiatives principally focus on the technopolis, its nature and culture would be impossible to comprehend without at least a cursory understanding of the heritage and diversity of the California economy, the City of Clovis, and the immediate surrounding region, the San Joaquin Valley.

California is a nation-state economy with highly developed physical and political infrastructures. As a standalone country, it would rank fifth in the world in gross national product, and accounts for 13% of the United States' total economic output. It is the nation's leading exporting state and regularly exceeds its proportionate share of the nation's exports. Today, its leading economic engines include but are not limited to high technology, entertainment, agriculture, tourism, and business and finance. The market share of each of these economic drivers varies widely by region. California is highly urbanized with two major population regions located in the northern and southern part of the state. However, in recent years the Valley has experienced the state's most rapid population growth.

The Valley is the bread basket of the state and nation and arguably the world. California is the leading agricultural state in the United States with the value of its agricultural production exceeding that of the next two leading states combined. Through the ingenuity and willingness of its farmers and ranchers to adopt and implement innovative cutting edge technology, California's agribusiness industry has become the most diverse and highly developed in the world. For purposes of this paper the definition of agriculture shall include the technologies associated with the production, processing, transportation, and marketing of food and fiber as well as those that ensure food safety and environmental balance.

Clovis is a unique city. It has a deep and ongoing respect for its cultural heritage and tradition, a true appreciation for entrepreneurial innovation, and a genuine tolerance for divergent viewpoints and attitudes. It is located midway between the state's major population centers of Los Angeles and San Francisco, in the midst of the most rapidly growing area in California, and at the foot of the Sierra Nevada mountain range. Its heritage, like that of most Valley communities, is rural and agrarian.

However, unlike most Valley communities that have experienced any meaningful growth and economic development success, it is not a "highway city" (driven by proximity to a major transportation corridor). Its success has always been, and continues to be, driven by the innovative entrepreneurial spirit introduced by its early pioneers who valued both thriving commerce and a certain quality of life. The city's eminence in the region is so well known that it has come to be known as the "Clovis Way of Life." It is the definition of a technopolis hub. The balance of this paper quantifies the essentials for a competitive Clovis Technopolis.

Economics of creativity, innovation and growth

When it comes to the term "innovation," one generally thinks of the act of beginning or introducing something new; a new and unusual idea, thing or novelty. In the domain of problem-solution, "creativity" can be defined as the identification of problems or needs culminating in the generation of ideas; "innovation" can be defined as idea selection and implementation. As a knowledge-intensive society and organization evolves, the significance of creativity in relation to the accumulation of knowledge (by means of *research*) and its application (in the form of *innovations*) becomes ever more important. Art and

Technology often receive the major considerations as disciplines when selecting an idea for development and commercialization.

The economy in the twentieth and current century relies on knowledge-base, networking, continuous learning and innovation. While growth might once have come from traditional resources such as raw materials, natural resources, trade, factories, business establishments and distribution networks, Richard Florida, Hirst Professor of Public Policy at George Mason University, points out that growth was formerly led by business organizations and its leaders.

However, over recent decades an epic revolution has put growth in the hands of people, whom he calls “bohemians” with diverse and unusual dress, speech, hygiene, work hours, and other practices. These “bizarre mavericks operating at the bohemian fringe” are now “at the very heart of the process of innovation,” fueling a core creative class “in science and engineering, architecture and design, education, arts, music, and entertainment,” and “creative professionals in business and finance, law, healthcare and related fields.” He estimates that in the United States almost one third of workers fall into this class. Growth comes from changing processes. The muses of creativity favor change—“individuality, self-expression, acceptance of difference, and the desire for rich multidimensional experiences”—much more than “the homogeneity, conformity, and ‘fitting in’ that defined the organizational age.”^{iv}

The author’s opinion is that the overall effect of “creativity” is collective. To elaborate, an individual artistic creation or intellectual insight admired for its striking creativity matters little to economic growth. Instead, most of the innovations that matter are the tiny ones made to the millions of procedures and methods we use. Changing these procedures does not require free-spirited self-expression. Instead, it is quite natural for people to constantly think about tiny changes to their procedures, which is also appropriately reflected in the lines of Julia Fletcher Carney’s (1824-1908) poetry “Little drops of water, little grains of sand, make the mighty ocean and the pleasant land...”

In fact, we imagine many more changes than we can afford to pursue, and believe that what we lack is not suggestions for change, but better ways to identify the most promising suggestions and selection of right people for implementation of strategy. If the world around us has become more creative, it is primarily because our social institutions are doing a better job of identifying promising practices and assigning tasks to those people who can best implement them.

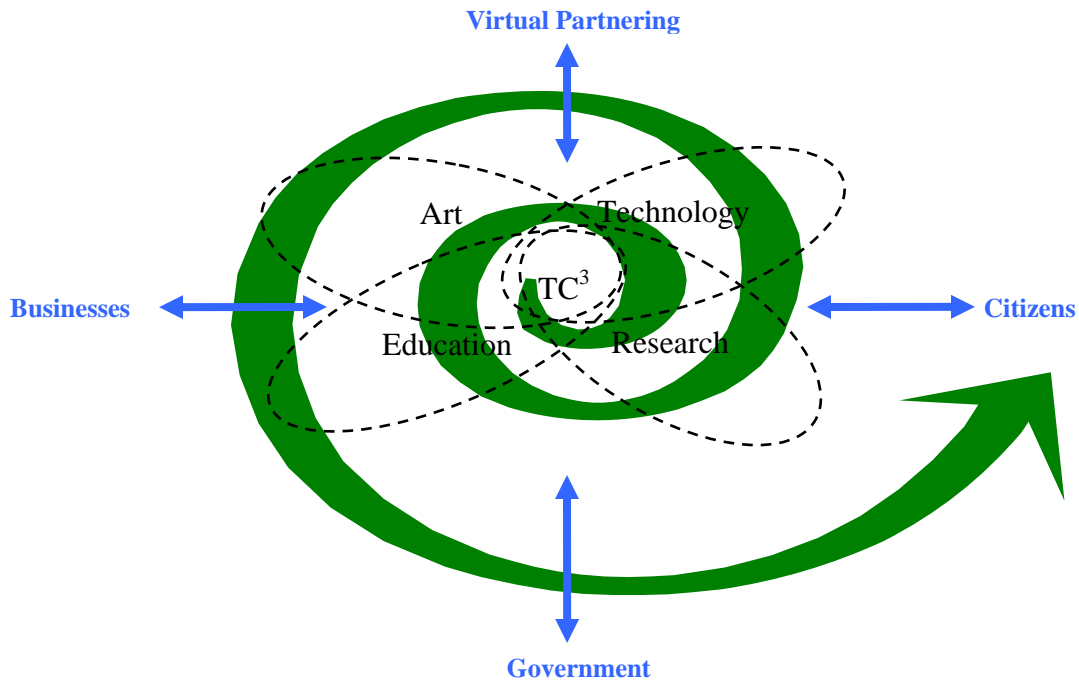
It is the opinion of the authors of this paper that creativity is indeed a collective process. Ideas were presented, discussed, modified, accepted or rejected in a self-perpetuating cyclical process. As the members of TC³ have realized, it is not just one amazing idea that Clovis needs as a panacea, but many of them pitching their values into the maw of transformation to collectively achieve the desired outcomes.

It is hypothetically analogous to the Hindu mythical story, “Samudra Manthan,” which literally means “the churning of the ocean.”^v As the story goes, the ocean was churned by good and evil to bring about a decisive end to a long standing war in search of “Amrita,” the nectar of immortality. After an enormous struggle that lasted for decades, they went through a series of outcomes that were disastrous, but finally succeeded in achieving “Amrita” that eventually led to the victory of good over evil. The moral of this story is: *to achieve something great, it may take time, there may be obstacles and negative outcomes, but persistence and good will eventually pay off.*

A real and recent example is Sophia Antipolis^{vi} in France, a technopolis which took 28 years to craft and transform after the inception of the original initiatives. In the heart of the plateau of Biot, Valbonne, Vallauris, Antibes, a vast undeveloped area of nearly 10,000 hectares—the area selected for building Sophia—can accommodate overall development and innovative scientific urban planning on a scale with the plateau. It was in this pristine location that Pierre Laffitte and others created the technological core of

Sophia Antipolis, which encompasses the entire city. The development of Sophia Antipolis is similar to that of Clovis: the technological core engine is being created and fueled by a group of dedicated citizens driving the idea.

**Economic Development spin-off from partnership and collaboration:
A Clovis Vision ^{vii}**



Art and technology, partnering and collaborating

To make innovation successful, art and technology as disciplines in general terms, require a collaborative relationship. People working on any innovative initiative must reach across individual disciplinary boundaries rather than throwing challenges at each other. As noted, the word *techne* means art/craft; when one does technology, one does a form of art, which means that creativity and innovation bloom in the soil of art and technology.

When it is an issue of individuals along with ideas collaborating for a common goal, we may ask ourselves a few questions: When artists and technologists collaborate, who is in control? Who makes decisions? Should technologists support the artists or should they be equal partners?

In 1968, Harold Cohen, a painter and professor in the visual arts department at University of California, San Diego, demonstrated AARON,^{viii} the pioneering automatic art-creating computer program at the landmark exhibition in London called Cybernetic Serendipity. It was a major public demonstration of cutting-edge collaboration between art and technology. People hailed the new “infant,” who could draw only in black and white at that time, as a signal that autonomous machine-originated creativity was set to challenge notions about the uniqueness of human creativity. Since then AARON has grown up: he is nearly forty years old and capable of drawing in color and more complex figurative compositions. It is

interesting, however, to note that his human creator does not claim that what the program does is “creative.”

The term creativity generally indicates a property or attribute that is somehow related to an entity, which is fundamentally natural, organic and biological in origin. In case of a computer program, the productions indeed can be astonishing, but the credit for creativity naturally goes to its innovators, i.e., the people who actually designed and wrote the program. The word “creative” could be used to refer to the ability of the individual—human right now, program potentially—to move forward, to develop, to introduce new material. These imprecise terms give a flavor to the word, not a definition. “Creativity” properly attaches to continuous change, not to single events. There is no doubt that AARON has gone through significant transformation and enhancement, but the agency of change and development has been the people, not AARON.

While it is interesting to note that AARON is now a better “painter,” more importantly, Cohen is a better artist. Today, the world of art and technology has changed remarkably since those early beginnings: there is much more diversity in the new generation of digital creations. What was then conceived of as “computer art,” where the control of the creative process and the making of artifacts belonged to the machine, has given way to new processes of working both with digital technology and with other people. This compound collaboration can be described as Co-Creativity,^{ix} where the collaborator may be human, may be a computer, or may be both. This is a highly active notion in Clovis Technopolis vision, where field experts discuss the potential use of technology concepts in agriculture, such as the use of retina scanning technology in dairy farm to keep track of cattle, and using robotics for precise and efficient planting of tomatoes.

Case study of iPod, a conquest of art and technology

In 2001, Apple^x (in Silicon Valley, California, about 150 miles away from Clovis) launched a small music-storage device in the hope that this portable, lightweight, technological widget with lots of memory would be well received. The iPod was revolutionary because it was manageable, could easily be slipped in a shirt pocket, could offer hours of personally-chosen music, and, in subsequent editions, could even offer movies and other downloadable entertainment. The iPod was designed as a consumer product; the Apple iPod team researched and put creative innovations to work on very simple basic features necessary to appeal to the average user:

- Size
- Appearance
- Weight
- Battery/Battery Life
- Memory Storage
- Compatibility with other computer systems
- Ease of use

Individually, an iPod feature may be emulated by a competitor’s product, but collectively iPod has overtaken its competitors and the people have widely, even wildly, accepted it.

***Creative people behind innovative product:
The Talent Story of the iPod***^{xi}

For a revolutionary product such as iPod, it can be easily assumed that it was an entire team of individuals brainstorming to build the strategy and lay the foundation for the iPod's success. But in fact there was one person without whom none of this would have been possible—the true founder of the iPod, Tony Fadell.

In the late 1990s, Fadell began working on a business strategy that would revolutionize digital music hardware and software by combining the two together into one powerful platform. It is important to note, however, that Apple wasn't the first company to hear about his idea. Fadell shopped the idea around to several companies, including RealNetworks and his previous employer, Phillips. None of them jumped on it as fast and as hard as Apple. In fact, the project received the undivided attention and vision of Apple founder and CEO Steve Jobs. The project was completed in less than six months, a production record for Apple.

“This is the project that's going to remold Apple,” Fadell predicted in early 2001. “Ten years from now, it's going to be a music business, not a computer business.” And he was close. In 2007, the firm changed its name from Apple Computer to Apple Inc. and the company consistently ploughs through the field of diversification with the latest innovative addition to its product line: the iPhone.^{xii}

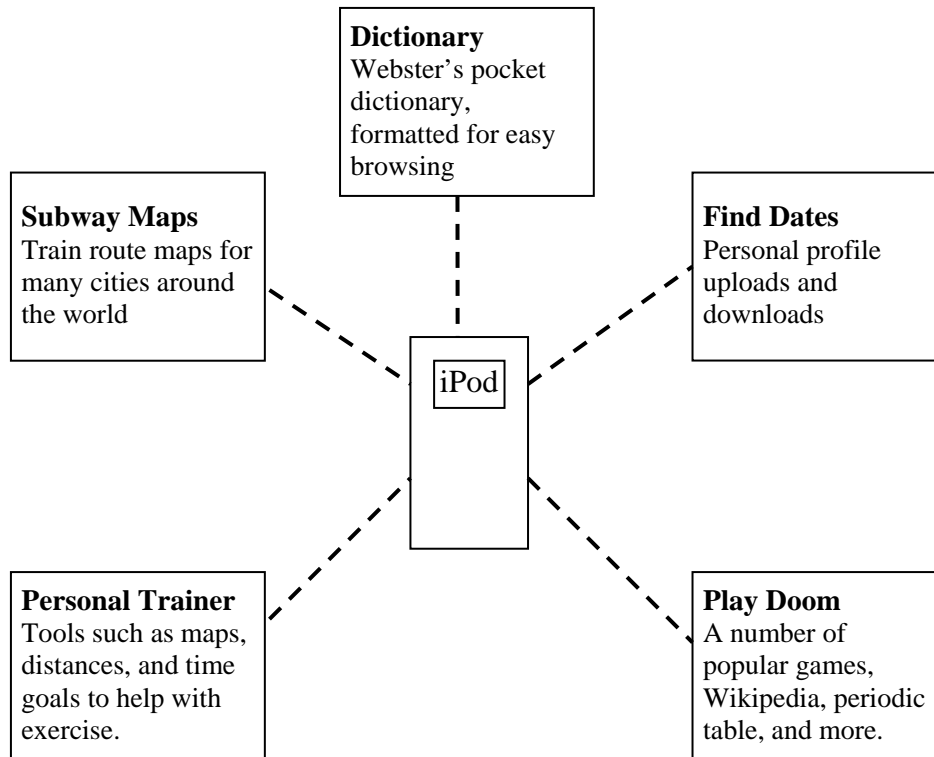
***Where innovation changes the quality of life:
Georgia College and State University's iPod Story***^{xiii}

When Apple Computer introduced the iPod in 2001, it was seen by many as no more than a little boombox. Critics said the “toy” had no place in higher education. Randall Thursby, who was at that time the University System of Georgia's Vice Chancellor for Information and Instructional Technology, saw more. He began using his iPod to turn long hours of commute time between home and office into productive work time by catching up on paperwork his assistant had turned into audio files. After realizing a tremendous change in the management of his workload, Thursby began to imagine the impact the device could have in an educational setting. He contacted Jim Wolfgang at Georgia College and State University (GCSU) to begin a dialogue about how iPods might be used in the academic environment. They discussed ideas to add value to academics as well as enhance the total educational experience for students.

In the fall of 2005, the iColony was launched, a virtual learning community within GCSU. These iPod initiatives led to the creation of the iDreamers, a group of innovative and creative faculty and staff on campus who have developed a wide range of ideas and plans for the future. The list grows as rapidly as anyone's iTunes library. Georgia College started out with a well planned and solid foundation. This foundation allows members to continue to build while learning from ever-changing and evermore demanding needs. Faculty and students are able to enjoy their successes in the arena where technology meets liberal arts—spawning new and innovative ways to teach and learn.

The graphic below illustrates a few of the varied uses of the iPod. It should be noted that these uses were not proposed by Apple, but instead were spontaneously developed by a creative user community.

Creative uses of iPod^{xiv}



Road-map to success

The history of scientific and technical discovery teaches us the human race is poor in independent thinking and creative imagination. Even when the external and scientific requirements for the birth of an idea have long been there, it generally needs an external stimulus to make it actually happen; man has, so to speak, to stumble right up against the thing before the right idea comes.

—Albert Einstein

Take a minute to draw in your mind a picture of your ideal home as you would have drawn it as a five- or six-year-old. Do it quickly. Don't think too hard. Just draw it.

That is one of the exercises that Jonathan Feinstein, a professor of economics at the Yale School of Management, assigns his students in the course, "The Practice and Management of Creativity and Innovation." Feinstein, whose book, *The Nature of Creative Development*,^{xv} says that nine out of ten people will produce the same picture: a square box with a triangular peaked roof, four windows, and a door in the center. More often than not, the similarities even extend to the semicircular sun with rays extending from the right hand corner of the picture.

While humans have a tendency to follow the trodden path, it is no longer sufficient to follow the well-trodden path. In 1961 Mel Rhodes^{xvi} researched extensively for a unifying definition of creativity and discovered that its definitions are not mutually exclusive; they overlap and intertwine. He claims that the

content of the definitions form four strands and each strand has a unique identity. From further research, Rhodes concluded that creativity definitions existed in the 4Ps:

- PERSON—identification of the characteristics of the creative person
- PROCESS—the components of creativity
- PRODUCT—the outcome of creativity
- PRESS—the qualities of the environment that nurture creativity

The route to, and indeed the root of, success now lies in the ability to seek creative and innovative solutions. Unlocking the creative potential can be achieved through a three-pronged approach:

1. Understanding of Rhodes' 4Ps approach to creativity
2. Appreciating differing styles of creativity
3. Effectively utilizing people, tools and processes to obtain the innovative edge

In regards to the process of transformation of the economy of a region or state or nation, the challenge, both region-specific and general, are readily apparent. Transformation of any entity is a painful and challenging exercise but the end result is worth the effort. The following are challenges encountered in developing the concept development plan for the Clovis Technopolis and other initiatives (e.g., innovative strategy initiatives in Canada^{xvii}):

1. Resistance to innovation, prejudices and public perception
2. Lack of financing
3. Finding support (public and private)
4. Environmental and social factors
5. Policies, rules and bureaucracy
6. Lack of international marketing support
7. Attracting the right talent
8. Maintaining organizational momentum
9. Responding to business practicalities

Some of these challenges and their impact on stimulating creativity are discussed in the following section.

Adapt and progress

Change is not progress if you loose your core—C. S. Lewis^{xviii}

We have said that transformation of economy and formation of a culture of innovation is a cyclical process. However, as communities prepare for the process of transforming the culture and economics, they face this question—will such change be good? This is what the TC³ member-citizens of the City of Clovis thought about while giving birth to a technopolis.

Experience with the Clovis initiative suggests that the answer to such a question is dependent upon the analysis performed before diving into the process. Will the community be healthy regardless of whether its objectives are met, or is the community trying to transform itself in order to survive and protect itself against global competition? What type of commitment is the community willing to make to move towards a technopolis? Is it willing to go through a long gestation period and birth pains before the concept and plan ever becomes a reality? What about the messiness of creating and then developing a technopolis and the discipline required giving the idea a chance to grow into a mature industry? Does the community understand that there are associated risks and there could be both progress and setbacks before the

technopolis is able to become self-sustaining? Finally, there is the question of whether the transformation initiative is a natural progression of the community that is consistent with its core values, or is it, rather, an artificial implantation, or a mere veneer?

There are no off-the-shelf answers to these questions. Each community and society is unique. An effort to research and analyze the culture, habits and heritage of a community often provides clues leading to answers. Recent experience shows that the following items are important to understand when it comes to building a technopolis in Clovis:

- ***Community legacy***

Each community has its own legacy, a reliable road map of the direction the community has been traveling since its inception. An understanding of the significant events and characters that have shaped a community helps to discern what course was set for the community and whether a Technopolis is consistent with such a course.

- ***Partnering with businesses***

The first stage of building a partnership is the identification of companies within the community that are embracing innovation or developing new solutions to old problems. The preferences, criticisms, and suggestions from these companies' skilled workers and decision makers are important pieces to evaluate. Involving private and public sector business in the economic transformation process helps build longstanding, committed and healthy partnerships, a key factor for technopolis to succeed and sustain.

- ***Education and knowledge retention***

The spirit of innovation and the ideas of becoming a technopolis need to be embraced by educational systems, including students that serve the community. Finding the cause of the "brain drain" that reduces the pool of knowledge workers and weakens the local economy is very important and corresponding measures need to be adopted to mitigate the causes. A technopolis and an innovative society can not be formed unless "creative people" are retained in the community.

- ***Community conversations***

The group that discusses the concept of technopolis balances well when it includes community leaders, lawmakers, academics, entrepreneurs and members of professional disciplines. Leaders of service clubs, religious centers, and entertainment and food industries also bring value to the table. All participating in the process must be encouraged to express their opinions about embracing a technopolis and not be afraid to say "no." While transformation can occur by government (i.e., city council) sanction, a citizen-driven, organic approach serves as a most valuable catalyst.

- ***Open approach***

The process of creating a community technopolis is a challenging one, and a technopolis may not in fact be a good fit for a community. For Clovis, a city that has established core values through what is known as "the Clovis Way of Life," the idea of change may appear to be threatening. The creation of a technopolis, with its influx of people, new institutions and businesses, will most certainly change a community. Will the process leave the community in worse shape than when it began? The challenge lies in making positive change while retaining core values. The process may be helped by use of consultants, experienced in technopolis development, who may offer new approaches that can assist a community in its assessment. In addition, valuable lessons can be learned from successes and failures of similar initiatives. Not only is this hard and tedious work, but it must be understood that there is no guaranteed formula for success.

- ***Implementation and commitment***

If the concept of a technopolis does make sense to the community, plans can be made for the implementation. Commitment is a key component in the whole equation. Setbacks do come and critics try to tear down what has been built. During those tough times, a hasty and reactive step can spoil the whole dream. Just as one does not abandon a child during times when it is difficult to envision the day the child becomes a mature adult, building a technopolis requires shelter and protection from those who doubt its fruition. With respect to Clovis, the community did not need the technopolis merely for the survival of the community, but rather its development is a natural outcome of growth to maturity.

Creativity, competitiveness, and the global economy

A collectively shared community-based attitude focused on a culture of change and lifelong learning is the fundamental principle necessary for a region to successfully achieve and sustain regional global competitiveness and a destination-point identity in the “new economy.” Recognition by the community that the only constant in such a model is change, and that change, in and of itself, properly managed, is a positive factor that perpetuates the attraction of innovation as well as core economic development and a highly educated and motivated professional workforce. Creativity, innovation, and tolerance for new and divergent ideas and people must not only be encouraged but nourished and celebrated by all relevant stakeholders.

A successful global economic development community is perpetually in a state of total quality management review, assessing and evaluating its changing strengths, limitations, and human and natural resources against its long-term strategic goals, competition, and changing technology and marketplace demand. It is, by its very nature, aggressively competitive, innovative, and in a permanent state of oscillation. Driven by an intrinsic desire to maximize and balance progressive quality development with the preservation of resident quality-of-life and livable space issues, it is ever vigilant of its strategic “tipping points.”

Technology-driven economic development communities are often initially overwhelmed by resource priorities centered on the development of a qualified professional and technical workforce and employment opportunities. Obviously, neither can exist without the other for any sustained period. The experiences from Clovis initiatives suggest that people are the key to success. Municipal incentives such as infrastructure development, business startup and expansion assistance, and, in some cases, short-term tax relief can be important influencing factors that encourage development. However, such incentives alone are generally more enticing to low-tech industries than high-tech companies. Cutting edge technology-driven enterprises demand a highly trained and educated workforce. Such enterprises are also cognizant of community amenities that assist or hinder employee retention and attraction efforts. Therefore, we can not emphasize enough that in addition to addressing a shared vision and positive attitude toward a culture of change and lifelong learning, municipalities seriously interested in technopolis-oriented economic development must also assess, enhance, encourage, and provide for a community environment that facilitates community-based sustainable quality-of-life amenities such as:

- A vibrant downtown with a variety of markets and shopping center facilities
- An abundance of municipal parks, public open space, and tree-lined streets and center medians
- An abundant range of affordable housing
- Excellent K-14 school system that includes access to quality community colleges and further higher educations^{xix}
- Four-year universities engaged in research as well as undergraduate and graduate education
- Availability of quality medical care
- A diversity of religious and/or personal centering opportunities
- Health centers and recreational facilities

- Facilities presenting excellent cultural programs such as symphonies, chamber music, opera, lectures, art galleries, and theaters offering classical and contemporary performances

Nurturing a culture of innovation

The term “innovation” associates to something that was previously not known or done, creative, ingenious, innovative, inventive, original, different, fresh, newfangled, unfamiliar, and unprecedented. All of these phrases and terms help define innovation, yet none of them necessarily suggests that nurturing a culture of innovation requires a total and/or absolute shift away from one’s natural assets. This is an important concept to keep in mind when considering whether Clovis, California should or should not invest in pursuing the Clovis Technopolis.

Clovis’ founding fathers and their descendents proved to be extremely innovative individuals for their respective times. Their mastery of identifying opportunities and overcoming obstacles allowed them to leverage the region’s natural resources against their own individual innovative and entrepreneurial spirits to overcome period challenges. They obviously chose to proactively address related risks. Individual successes led to personal accomplishment while collective successes led to the region’s early economic development and the general prosperity we enjoy today.

Fundamental challenge confronted and mastered by the city’s early leaders are the same ones confronting current leaders. It is a question of identifying and weighing realistic opportunities and expectations against obstacles, risks, and rewards. Early entrepreneurs such as the City’s namesake, Clovis Cole, chose to aggressively pursue opportunities and address challenges head-on. He amassed an extensive wheat farming operation of 50,000 acres, which he was able to mechanically harvest through the combined use of large synchronized teams of horses that pulled huge ground driven mechanical harvesters. He was so successful that he became known as the “Wheat King of the United States.” While Mr. Cole certainly personally benefited directly from his success, so did other entrepreneurs who seized their opportunity to establish companies that provided Mr. Cole and others like him with the goods, services and technologies they needed to remain competitive in their changing world.

Our world seems much larger and much more complex than Mr. Cole’s, but the very elements of globalization that cause it to appear so also provide new and exciting opportunities for today’s entrepreneurs and those who will provide the goods, services, and technologies needed to remain competitive today and in tomorrow’s world. For the City of Clovis (or any city which finds itself asking similar questions) to nurture a culture of innovation, it must identify and articulate its natural resources and competitive advantages, then affirm its institutional commitments to support and promote those concepts and activities. High expectations usually result in high achievements while low expectations rarely attain any level of personal or collective success.

Conclusion

It is every community's objective to grow economically and be successful. When a community recognizes its people, their creative background and technology mindset, and has soft infrastructure of attitude and attains a critical proportion of those ingredients, it becomes ready for the process of an organic fusion for economic transformation. The process has begun in Clovis, where the citizens drive the Clovis Technopolis dream, an initiative for becoming a vibrant, innovative technology hub in California's Central Valley. The uniqueness of the initiative does not lie in "what Clovis has and others don't" but in "what Clovis wants to do but others don't."

The Clovis vision of a technology hub is more than the creation of a technology industrial park and increasing the number of technology businesses. The vision extends to the creation of a "Petri dish" that nurtures and helps creative people implement innovative ideas, where the city will be knowledge-based and revenue producing, and will provide a sustainable quality of life that includes a healthy, safe, culturally wholesome and refreshing home and work environment. The Technopolis Initiative and the people behind it believe in sharing information, looking to others involved in knowledge-based endeavors, and learning from and helping others locally as well as globally through partnerships and collaboration. Clovis is a work in progress. Clovis is a transformation happening daily. It is a relentless effort leading to an organic, blossoming technopolis, an ever-changing "Clovis Way" that retains its core in the midst of transformation.

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