

**New Mexico First  
Background Report**

**Growing an Entrepreneurial Economy:  
Small and Emerging Business  
in New Mexico**

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## **Executive Summary**

### **The Importance of Small Business**

New Mexico has consistently ranked near the bottom of all states in terms of per capita income and many other economic welfare criteria. One reason for this ranking is the shortage of job opportunities for New Mexicans. In order to stimulate job opportunities, state and local officials have been enticing businesses to relocate to New Mexico. Another approach has been to grow new and existing businesses from within the state. Even with the efforts of both approaches, most businesses in New Mexico continue to be small, either family-run businesses or small corporations or partnerships that take advantage of small niches in limited geographical areas. The existence of so many small businesses indicates that an entrepreneurial spirit exists in New Mexico.

Entrepreneurs differ from other business oriented men and women in certain respects. Entrepreneurs are variously described as risk takers, market makers, innovators, organizers, and creators of value, profit, growth, uniqueness, and ownership. These are the men and women who start and run a business. They find that their informational needs differ substantially from those who are involved in non-entrepreneurial business functions. They require insights into, but not necessarily detailed knowledge of, many business functions, including marketing, finance, operations management, human resource management, accounting, and economics. In many cases, these individuals are likely to benefit from strategic alliances. They may lack human, financial, and other resources and may need to acquire resources from outside the company. The values of people who are involved in entrepreneurship often differ from the values of those who are not. They tend to value independence, flexibility, autonomy, and freedom from bureaucratic controls. Their companies are formed, operated, and controlled in a unique fashion, and, therefore, attempts to instill and nurture entrepreneurship must take these characteristics into account.

Research indicates that entrepreneurship can be a major force in creating jobs and reducing unemployment. In New Mexico 85% of all firms employ fewer than 20 employees. While this proportion is a little smaller than for the U.S., the percentage of paid employees and annual payroll for this size of firm is larger in New Mexico than the U.S. Further, data indicate that the small firms are growing firms. From 1999 to 2000 the number of employees in these small firms increased even though the number of firms declined.

When small businesses are discussed it must be realized that there are two types of small businesses. There are small mom and pop types of businesses that revolve around small retail outlets or hobbies. Then there are those businesses that are small because they are just starting out. These are the emerging business that, given the right conditions, will end up becoming large businesses. These businesses start out with new ideas, often technology-based, and are in the start-up phase of the business formulation

process. These companies employ a large percentage of the knowledge workers in the economy.

The intent of New Mexico First's background report, *Growing an Entrepreneurial Economy: Small and Emerging Business in New Mexico*, is to describe what it means to be entrepreneurial and the importance of fostering the entrepreneurial spirit as an economic development tool. Certain conditions must exist to increase the possibility that a small or emerging business will be successful. Does New Mexico have the culture, capital availability, work force characteristics, and assistance infrastructure that foster entrepreneurship?

## **Enabling Culture**

The purpose of this section is to characterize the business environment that is conducive to entrepreneurship. The discussion focuses on three topics: (1) attitudes toward entrepreneurship, (2) networks, and (3) infrastructure. Each section first examines the enabling culture in general and then concentrates on the situation in New Mexico.

If the enabling culture is supportive, entrepreneurs can be in a position to overcome difficulties that inhibit their formation and growth. Entrepreneurs are most likely to exist when individuals possess certain attitudes.

Those individuals who desire entrepreneurship roles are willing to take risks. If the culture of a state is characterized by high fear of risk, few members of the potential or existing work force may be inclined to engage in entrepreneurship. When a major proportion of the workforce is satisfied with working for a salary, there is less motivation to become involved in entrepreneurship. Those who believe that their needs are met through employment in other firms, governmental agencies, or nonprofit organizations tend to be so inclined.

Members of a community may have different perceptions of the desirability of an entrepreneurship career. On the one hand, they may view this undertaking as one that is demanding and with a high probability of failure. On the other, they can see entrepreneurship as exciting, financially rewarding, and self-fulfilling.

Networking, where individual companies ally themselves with other companies, trade groups, government agencies, financial institutions, individuals, or nonprofit organizations, can be one of the keys to entrepreneurial success. These alliances can be both formal and informal. Industry clusters form one basis for establishing relationships that can enable multiple firms to prosper.

Infrastructure is an integral ingredient of the enabling culture environment. Those states with the more promising infrastructures tend to offer the greatest potential for entrepreneurial operations.

Most observers agree that public policy formulators and administrators heavily impact business. The government regulates, taxes, and assists firms. In turn, the companies are responsible for compliance with the regulations for their enterprise and industry. There is some conflict, however, due to the entrepreneur's desire for independence and the rapidly advancing role of government in business.

Universities and other research facilities in some states have contributed substantially to the health of the entrepreneurship function. Research and development can result in opportunities for entrepreneurship. Colleges of business assist in the commercialization phase. A large number of universities provide programs in entrepreneurial education.

People are attracted to states that are desirable as a place to live, raise families, interact with others, and make a living. In fact, an enabling culture is a major ingredient for small and emerging business location decisions. Among the factors that are consequential in this regard are moderate crime and traffic congestion, high quality schools, minimal pollution levels, responsible government, favorable tax levels, climate, scenic attractions, cultural attractions, and sporting events. Improvements in the controllable attributes require a collective objective on the part of governmental agencies, educational institutions, private businesses, the communications media, and nonprofit organizations.

## **Capital**

According to a survey by Blade Consulting, the most common financing that small businesses use to get started are personal credit cards. Next in importance is asking for money from friends and family. Relatively few people starting a business seek institutional sources of capital, such as from banks, the Small Business Administration, "angel investors," or venture capitalists. Team-based entrepreneurs tend to seek these sources more frequently than do solo entrepreneurs. Nevertheless, institutional sources of capital can provide guidance and structure to the entrepreneur as the company is founded and grows.

How does New Mexico compare with other states in terms of financial resources to grow and sustain an entrepreneurial economy? It seems that New Mexico's financial capacity to support a growing entrepreneurial economy is improving. Venture Capital firms have increased their presence in the state as well as their investments. These firms are important in the formation and expansion of growth firms and growth industries. The presence of venture capital investments implies that there are opportunities for high returns for the investors in venture capital funds and is an indicator of a rapidly developing economy with many investment opportunities. Given New Mexico's abundance of scientists and engineers, the prospect of further venture capital investment in the state is good.

Should New Mexico worry only about attracting venture capital investment? No, especially considering that many of today's biggest and most successful businesses

started very small and with very modest resources. Furthermore, venture capital firms tend to avoid “pre-seed” financing that many small businesses need just to get started.

Small firm financing patterns tend to differ by firm size and stage of development. Very small firms rely much less on traditional financial institutions and more on owners’ loans and personal credit cards. Minority- and women-owned firms tend to use more nontraditional sources of financing than other small firms. Given that the structure of business in New Mexico indicates that the state has more very small firms, more minority-owned firms, and more women-owned firms than is generally the case in the rest of the United States, the evidence on financing patterns suggests that New Mexico should continue to develop access to financing for these types of firms. These financing sources are as likely to be from nontraditional sources as from traditional financial institutions.

### **The Entrepreneurial Workforce**

Access to talent is one of the greatest challenges facing entrepreneurs in both good and bad economies. Access to talent means finding and retaining quality people at all levels. Since entrepreneurial firms have relatively few tangible assets and few standard operating procedures, they rely primarily on the intelligence and resourcefulness of their workers and leaders. This section discusses the challenges facing entrepreneurs in accessing talent at the various phases of their organizational growth.

In the early stages of the business, entrepreneurs are not as likely to need people with highly developed management skills in functional areas (e.g., production, finance, human resources) as they will in the growth phase of the business. In the initial phase, a solo entrepreneur or an entrepreneurial team will typically assume all of the responsibilities for getting the venture financed and making it operational. However, the creative entrepreneur may lack particular skills, such as business planning or marketing, that are needed to secure resources. One of the biggest myths regarding entrepreneurs is that they have significant expertise and strong track records in their industries. Actually, most growth companies in their early stages are likely to have been started by amateurs with little background experience in the field. Thus, even in the earliest phases of the business, entrepreneurs need to have the ability to recognize what skills they can provide themselves, and what skills they can obtain from others.

As the new firm enters the growth phase, its owners will begin to departmentalize and will need to hire more specialists and administrative staff to meet the demands of the growing operation. At this stage, the entrepreneurs will need to have a well-trained and educated workforce from which to attract talent to their emergent business. This “talent challenge” is in part a result of a significant change in the economy, which has shifted toward knowledge-based work.

In addition to providing high quality basic education, a successful entrepreneurial environment also provides opportunities to develop specialized skills through extensive continuing education and training opportunities.

Lack of management skills has been noted as a key attribute of failed ventures. However, more recent thinking suggests that what entrepreneurs need is the ability to pull together individuals and teams that possess the requisite management skills to complement the entrepreneur's talents. The burgeoning entrepreneurship course offerings in the nation's business schools suggest the importance of management and team-building skills for emergent entrepreneurship. Many entrepreneurs have begun to seek the help of executive coaches to help lead small businesses across major hurdles. Mentoring has also been suggested as a promising method of developing entrepreneurs, though few studies exist on this aspect of entrepreneur development.

The success of small and entrepreneurial businesses in New Mexico will depend upon a well-educated, well-trained and diverse workforce, and will necessitate the building of a broad-scale entrepreneurial environment wherein aspiring entrepreneurs can access the talent, skills and other tools they need to start and grow their businesses successfully. New Mexico clearly has some established resources that can be aligned with new resources in the state's efforts to develop a successful entrepreneurial climate.

### **The Need for Business Assistance**

As noted in the first chapter, 85% of all firms in New Mexico have fewer than 20 employees. Some of the firms will stay small. Some of the firms will eventually become large businesses, developing products or technology to be used throughout the United States and the world.

What is most likely true of all of these small and emerging businesses is that they are being started and run by individuals who will need help at some time in running their businesses. Since these small and emerging businesses are so important to the economy of the state, and to nation as a whole, numerous organizations have been formed to assist these businesses to increase the possibility of success.

This section of the report first provides information on who are entrepreneurs and then outlines the types of assistance that could be made available to these entrepreneurs.

Individuals between the ages of 25 and 44 are responsible for 50% of the entrepreneurial activity in the U.S. Compared to other countries, the U.S. has more entrepreneurs between the ages of 45 and 64, accounting for 36% of entrepreneurial activity (vs. 22% globally). There are conflicting reports regarding the difference between men and women's entrepreneurial activity. In one study, men over the age of 18 were found to start businesses at twice the rate of women-- 8.1 per 100 versus 4.5 per 100, respectively. In a different report, in the U.S. overall women were starting businesses faster than men.

Minority-owned businesses tend to be smaller than average in the U.S. Ongoing research continues to address why women and minorities start relatively more businesses than others, but enjoy less success in growing their businesses or in attracting investment

dollars. Some explanations have been offered. First, women and minorities may not have the necessary managerial skills due to differing educational opportunities. Second, these self-starters may be more interested in “lifestyle” ventures than in “entrepreneurial” ventures. Third, some women and minorities may lack the background in engineering and science that can lead to starting entrepreneurial technology companies. Finally, because the existence of such large numbers of women- and minority-owned firms is relatively new, the emphasis by owners may be on simply getting the business started and providing some support for themselves and their families.

The diversity of the New Mexican population and of those likely to engage in entrepreneurship can provide a significant base for developing entrepreneurship within the state. This diversity presents challenges to those who want small businesses to succeed. Diversity of business ownership suggests a need for diverse sources of business assistance and access to that assistance.

Few owners of businesses have the knowledge and ability to manage and grow the business at all levels of development. Assistance may include, among other things, help in the development of a business idea, a good or service, a business plan, the organization of the business, and training of the owner and personnel. Not all businesses will need extensive help in all areas, but most businesses will need help in some areas.

Some small family-run businesses have an idea that is already developed, such as a neighborhood restaurant. In this case, the owners may need assistance in the actual set-up of the business. Some entrepreneurs may need more help in developing an idea. These entrepreneurs have invented a new technique or product. They need assistance in determining the potential of the idea, where it fits into the business setting and what needs to be done to develop the idea into a saleable product. This may require a research team that works closely with the inventor to determine the best possibilities for the idea.

All businesses should develop a business plan, if for nothing more than to articulate and focus on the mission of the business. There is no one accepted form of the business plan. Most web sites concentrating on assisting businesses have an outline that can be followed. One of the important ideas to remember is that the form of the business plan depends on the audience that will be reading it.

Few individuals have the knowledge and skills to be able to manage every aspect of a business. For an emerging business the idea person may not have any management ability at all. The level and extent of assistance will depend on the type of business under discussion.

As individuals go through their working life they learn from the advice of others. The need for a mentor or a connection with a group of individuals involved in the same type of work is very important when trying to run a small business. A network of individuals involved in the same types of businesses can provide a forum to discuss the general problems of running the business. Or another successful small business owner,

maybe retired, could become a mentor, providing the new entrepreneur with a confidential source of information and direction.

Most owners of small businesses spend enormous amounts of time running their businesses. It would be safe to say that they cannot take extensive amounts of time off to learn more about running the business. They do, however, need training. Seminars are already being offered by a number of existing organizations on a variety of topics.

There is no such person as the typical entrepreneur. Entrepreneurs have a variety of characteristics and are involved in a variety of business start-ups. This variety of characteristics and situations makes it particularly challenging to identify and provide the types of assistance required by these entrepreneurs. The next two chapters provide a list of the organizations in New Mexico that provide assistance to entrepreneurs and examples of practices from other states.

### **New Mexico—Historical Perspective and Existing Initiatives**

To the New Mexican who travels out of state, the infrastructure and financial resources enjoyed by more densely populated and affluent locales can seem overwhelming. The entire state of New Mexico contains fewer people than metropolitan Phoenix, Arizona. While this perspective should be kept in mind, New Mexico enjoys advantages that position it to benefit from the so-called “knowledge economy.” Whether the state can put together a cooperative effort to recognize and seize opportunities is an open question.

New Mexico’s natural resources and its isolation from major population centers have long played significant roles in shaping the business environment. Considerable economic activity in northwestern and southeastern New Mexico comes from extractive industries, and much of the federal government presence in New Mexico stems from the availability of open spaces for missile testing and other defense-related activities initiated during World War II and the Cold War. The state has been heavily involved in aerospace from the inception of that industry. Agriculture and other major commercial activity have tended to locate near the few significant sources of water.

This chapter provides a historical perspective to commerce in New Mexico and highlights some recent initiatives that support small and emerging businesses. Of particular importance is the discussion of industry clusters. Efforts to stimulate cluster development concentrate not on one company but on similar companies and their potential interactions. Unlike cluster development efforts in some locations around the country, not all the interest in clusters in New Mexico centers on high technology.

New Mexicans have access to an almost bewildering array of national, state, regional, county, and local agencies and private-sector groups and consultants involved in economic development, including support for small and emerging businesses. Despite numerous examples of individual groups’ effectiveness and ability to coordinate efforts, little evidence is available of their overall effectiveness as indicated by New Mexico’s

low ratings in many economic measures. Organizations and individuals have competing philosophies, focus, funding sources, perspectives, priorities, and goals, with the result that conflicts may arise.

New Mexico-specific organizations and resources are listed and grouped based on their mission as (1) Business Assistance Providers, (2) Business Associations/Alliances, (3) Business Information Resources, and (4) Sources of Capital. These groupings are intended as a rough guide—many organizations provide more than one service and could easily be categorized differently.

### **Examples from Other States**

Success stories from outside New Mexico reflect a favorable mix of structure and flexibility. Concerted efforts go into planning and coordinating, but much leeway is left open to seize unanticipated opportunities. Descriptions point to such recurring themes as:

- open networks of communication among entrepreneurs;
- recruiting of talented entrepreneurs to serve as mentors;
- formal recognition of the efforts of individuals;
- use of branding and logos for networks and alliances to create identity and a collective mentality;
- charismatic, high-profile leadership;
- entrepreneur-friendly government;
- the central role of universities, business incubators, and anchor companies as hubs for business development; organization of economic development programs (including attracting businesses from out of state) around the industry cluster concept;
- alliance-building among groups interested in economic development;
- access to seed capital and broadband telecommunications;
- the presence of large numbers of knowledge workers and management teams; and
- low crime rates and the existence of amenities that enhance quality of life.

This last section of the report provides examples of what is happening in different states. While some of the ideas may not work in New Mexico, they could certainly be the basis of discussion, and similar policies could be adapted to New Mexico

## Chapter 1

### The Importance of Small and Emerging Businesses

#### Introduction

New Mexico has consistently ranked near the bottom of all states in terms of per capita income and many other economic welfare criteria. One reason for this ranking is the shortage of job opportunities for New Mexicans. In order to stimulate job opportunities, state and local officials have been enticing businesses to relocate to New Mexico. These initiatives have been partially successful. It is particularly difficult to entice firms to relocate because of the lack of a qualified labor pool and large consumer markets and other perceived difficulties of operating in the state.

Another approach that is being used is to grow new and existing businesses from within the state. Even with the efforts of both approaches, most businesses in New Mexico are small, either family-run businesses or small corporations or partnerships that take advantage of small niches in limited geographical areas. The existence of so many small businesses indicates that there does exist an entrepreneurial spirit in New Mexico. Also, New Mexico may have strengths that are not being fully exploited.

The intent of this background report is to describe what it means to be entrepreneurial and the importance of fostering that entrepreneurial spirit as an economic development tool. Certain conditions must exist to increase the possibility that a small or emerging business will be successful. Does New Mexico have a culture that encourages entrepreneurship? Is the capital available for the creation of new companies and the expansion of existing companies? Is the workforce large enough and does it have the right composition in terms of educational level and skills to support an entrepreneurial economy? Is the infrastructure in existence to assist entrepreneurs in the formation of new companies? Are there barriers that make it difficult for individuals with new ideas to transform those ideas into a business?

State and local government officials have initiated numerous programs to foster economic growth. The question is whether these policies have supported small businesses adequately. Many other states have asked this same question. Some of their policies have been successful and some have not. A review of practices in other states may provide some ideas on how New Mexico could be successful in fostering this entrepreneurial spirit.

#### What is Entrepreneurship?

Entrepreneurs differ from other business men and women in certain respects. Entrepreneurs are variously described as risk takers, market makers, innovators, organizers, and creators of value, profit, growth, uniqueness, and ownership. These are the people who start a business instead of working for someone else. They find that their informational needs differ substantially from those who are involved in non-

entrepreneurial business functions. They require insights into, but not necessarily detailed knowledge of, many business functions, including marketing, finance, operations management, human resource management, accounting, and economics. In many cases, these individuals are likely to benefit from strategic alliances. They may lack human, financial, and other resources and may need to acquire resources from outside the company. The values of persons who are involved in entrepreneurship often differ from the values of those who are not. They tend to value independence, flexibility, autonomy, and freedom from bureaucratic controls. Their companies are formed, operated, and controlled in a unique fashion, and attempts to instill and nurture entrepreneurship must take these characteristics into account.

The working definition of entrepreneurship used for this background report comes from the Ewing Marion Kauffman Foundation. Entrepreneurship is

“a process through which individuals and groups pursue opportunity, leverage resources, and initiate change to create value.”

From this definition comes the definition of an entrepreneur.

“Thus, an entrepreneur is one who creates and manages change by pursuing opportunity, acting with passion and purpose, living proactively, and leveraging resources to create value.”

### **Why is Entrepreneurship Important?**

Those who are concerned with the prosperity of a nation, region, or state are aware that entrepreneurship is a vital element for growth. The following quotation sums up the contributions of this function:

“Entrepreneurship is the backbone of our economies and the mandate for the wealth of our nations. It is at the very core of our existence. It is, at once, the source of democratic stability and the wellspring of innovation. In the United States, small businesses are uniquely positioned to play this latter role. While large firms choose as their edict the maximization of shareholder wealth, small firms, without the specter of stock market activity and public and psychological vagaries, are able to look to the future, to innovate, and to excel. Entrepreneurs are not limited by the short term vision of profits for shareholders, but instead are empowered to look to the future and answer only to themselves and the new markets which they create. It is this uniqueness of entrepreneurship which we find so fascinating: Its ability to provide economic stability at the same time that it propels innovation.” (Carland & Carland, 1997).

Although the “entrepreneurial spirit” can exist in organizations of any size, the focus of this report is on small and emerging businesses.

## Job Creation

Research indicates that entrepreneurship can be a major force in creating jobs and reducing unemployment. This is one of the major reasons why state public policy formulators and administrators have devoted a high degree of attention to this function.

The majority of firms are small. Table 1-1 provides information on the number of firms by employment size for the United States and New Mexico. For the U.S. 89% of firms have fewer than 20 employees. The percentage for New Mexico is 85.1%. The number of firms employing more than 500 employees may seem large for New Mexico. The Census Bureau places a firm in that category if it employs individuals in New Mexico and has more than 500 employees nationwide. So if a firm employs 20 individuals in New Mexico and has 2000 employees nationwide, the firm is classified as employing more than 500 individuals.

<b>Employment Size of Enterprise</b>	<b>United States</b>		<b>New Mexico</b>	
	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>
All firms	5,657,774	100.0	35,333	100.0
No employees	703,837	12.4	4,049	11.5
1 to 9 employees	3,716,944	65.7	22,219	62.9
10 to 19 employees	616,064	10.9	3,774	10.7
<b>Subtotal 0-19 employees</b>	<b>5,036,845</b>	<b>89.0</b>	<b>30,042</b>	<b>85.1</b>
20 to 99 employees	518,258	9.1	3,108	8.8
100 to 499 employees	85,304	1.5	790	2.2
500 or more employees	17,367	.3	1,393	3.9
Source: U.S. Census Bureau				

While the percentage of firms with fewer than 20 employees is smaller for New Mexico than for the U.S., the percentage of paid employees in these firms is larger in New Mexico than for the U.S. Firms with fewer than 20 employees employ 22.4% of all paid employees in New Mexico. For the U.S., firms with fewer than 20 employees employ 17.9% of all paid employees. Table 1-2 provides information on the number and percent of paid employees by employment size of enterprise. Only 8 states have a higher percentage of paid employees employed by firms with less than 20 employees. Those states are Alaska, Idaho, Maine, Montana, North Dakota, South Dakota, Vermont and Wyoming.

<b>Table 1-2</b>				
<b>Number and Percent of Paid Employees</b>				
<b>All Industries by Employment Size of Enterprise – 2001</b>				
<b>Employment Size of Enterprise</b>	<b>United States</b>		<b>New Mexico</b>	
	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>
All firms	115,061,184	100.0	553,357	100.0
1 to 9 employees	12,328,094	10.7	74,312	13.4
10 to 19 employees	8,274,541	7.2	49,873	9.0
<b>Subtotal 1-19 employees</b>	<b>20,602,635</b>	<b>17.9</b>	<b>123,185</b>	<b>22.4</b>
20 to 99 employees	20,370,447	17.7	111,786	20.2
100 to 499 employees	16,410,367	14.3	84,472	15.3
500 or more employees	57,677,735	50.1	232,914	42.1
Source: U.S. Census Bureau				

The importance of small firms to New Mexico relative to the U.S. is further emphasized by the fact that the annual payroll for firms employing fewer than 20 employees is a larger percentage for New Mexico than the U.S. (see Table 1-3). For New Mexico the percentage of total payroll going to firms with fewer than 20 employees is 19.8 percent, and for the U.S. the percentage is 13.0 percent.

<b>Table 1-3</b>				
<b>Annual Payroll (\$1,000)</b>				
<b>All Industries by Employment Size of Enterprise – 2001</b>				
<b>Employment Size of Enterprise</b>	<b>United States</b>		<b>New Mexico</b>	
	<b>Annual Payroll</b>	<b>Percent</b>	<b>Annual Payroll</b>	<b>Percent</b>
All firms	3,889,086,323	100.0	14,823,245	100.0
No employees	34,289,996	.9	148,094	1.0
1 to 9 employees	232,572,634	6.0	1,627,109	11.0
10 to 19 employees	236,986,003	6.1	1,151,795	7.8
<b>Subtotal 0-19 employees</b>	<b>503,848,633</b>	<b>13.0</b>	<b>2,926,998</b>	<b>19.8</b>
20 to 99 employees	624,313,095	16.0	2,650,185	17.9
100 to 499 employees	539,384,914	13.9	2,199,515	14.8
500 or more employees	2,221,539,681	57.1	7,046,547	47.5
Source: U.S. Census Bureau				

Table 1-4 provides an indication of the growth in employment by size of enterprise. Employment in all sizes of firms grew in the U.S. from 1999 to 2000. For the U.S., the largest change in employment occurred in those firms with 1-4 employees. The second largest change in number occurred in those establishments with over 500 employees. The pattern is somewhat the same for New Mexico. The biggest changes in employment and the biggest percent changes in employment occurred in those enterprises employing 1-4 and 5-9 employees. Those establishments employing fewer than 20 employees were responsible for the majority of the change in employment during that

period of time. Those firms employing 20-99 employees and those having over 500 employees actually reduced employment.

<b>Table 1-4</b>				
<b>Change in Employment</b>				
<b>All Industries by Employment Size of Enterprise – 1999-2000</b>				
<b>Employment Size of Enterprise</b>	<b>United States</b>		<b>New Mexico</b>	
	<b>Change in # of Employees</b>	<b>Percent Change</b>	<b>Change in # of Employees</b>	<b>Percent Change</b>
All firms	3,359,419	3	8,316	2
1 to 4 employees	995,546	18	6,139	18
5 to 9 employees	336,984	5	1,729	4
10 to 19 employees	260,936	3	359	1
20 to 99 employees	500,328	3	-1,050	-1
100 to 499 employees	411,918	3	2,377	3
500 or more employees	853,707	2	-1,238	-1
Source: U.S. Census Bureau				

The change in employment by small firms is all the more surprising given that the number of firms employing small numbers of employees actually declined during the 1999 to 2000 time period. Table 1-5 provides information with regard to births and deaths of firms by establishment size. During this period the net change in establishments in all categories employing less than one hundred employees was negative.

Another employment-related benefit is that entrepreneurial activity usually entails innovation in the form of new products and processes, which can be significant growth engines for the economy and labor force. Often this takes place during times when corporate and public-sector jobs have been abolished through downsizing and displaced workers are seeking new sources of income. Hence, entrepreneurship can exert a stabilizing influence on the economy. Further, numerous employment opportunities arise for those who become involved in entrepreneurship because they perceive that their career goals cannot be achieved through large bureaucratic organizations or they have lost jobs due to downsizing.

There is considerable evidence that the entrepreneurial function contributes heavily to the creation of income and wealth. The economic benefits include advances in employment, wage levels, sales, profits, financial institution income, governmental revenues, and tax bases.

<b>Table 1-5</b>				
<b>Change in Number of Establishments</b>				
<b>All Industries by Employment Size of Enterprise – 1999-2000</b>				
<b>Employment Size of Enterprise</b>	<b>New Mexico</b>			
	Establishment Births	Establishment Deaths	Change in # of Establishments	Percent Change
All firms	4,450	4,480	-30	0
1 to 4 employees	2,746	2,828	-82	-1
5 to 9 employees	491	517	-26	0
10 to 19 employees	241	246	-5	0
20 to 99 employees	151	244	-93	-2
100 to 499 employees	178	104	74	4
500 or more employees	643	541	102	2
Source: U.S. Census Bureau				

### **New Economy Dynamics**

When small businesses are discussed it must be realized that there are two types of small businesses. There are small mom and pop types of businesses that revolve around small retail outlets or hobbies. Then there are those business that are small because they are just starting out. These are the emerging business that, given the right conditions, will end up being large businesses. These businesses start out with new ideas, often technology-based, and are in the start-up phase of the business formation process. These high technology companies employ a large percentage of the knowledge workers in the economy.

Many of the technology-based firms in existence today were founded by entrepreneurs. They may have been individuals who broke away from larger companies, laboratories or universities, or may just have been independent inventors. Much of this activity takes place when networks of would-be entrepreneurs interact with experienced entrepreneurs and managers, venture capitalists, technical experts, consultants, lawyers, and other specialists. Collaborations of this kind have been found to be effective as the people involved provide different types of expertise and other resources. The transactions and other communications between these parties frequently are conducted electronically, enabling the parties who are involved to take advantage of the efficiencies offered through this mode of communication.

### **Connection to the Global Economy**

A popular notion among members of the public is that companies that participate in the global economy are mainly large bureaucracies and that entrepreneurs often do not have the resources or knowledge to exert a presence in this field of operations. This is a misconception. In the past, entrepreneurs tended to avoid the pursuit of overseas opportunities because the domestic market was large enough to provide them with

adequate revenues, at least for the foreseeable future. But this situation has changed. The rate at which these businesses are entering the international sphere is accelerating rapidly.

Entrepreneurs have certain strengths that make them especially capable of competing in the global economy. These include flexible management styles, ability to adapt operations to the environment, lack of rigidity in decision-making, and ability to alter strategies and tactics quickly. Complexities are commonplace when a firm becomes involved in international business, but entrepreneurs are in an advantageous position to avoid or surmount many of the obstacles.

### **Summary**

This section has provided an introduction to the report by defining entrepreneurship and by providing a discussion as to why entrepreneurship is beneficial to the economy and, as a corollary, to the public at large. Small businesses play an important role in the economy of the State of New Mexico. Given the difficulties of bringing businesses to New Mexico, one of the possible strategies for the state is to grow its own. The question is how can this be done.

## Chapter 2

### Enabling Culture

#### Introduction

Under what conditions does entrepreneurship flourish? Can they be upgraded in New Mexico at reasonable cost and effort? These important questions deserve answers because they have a direct bearing on the economic well being of the state. This portion of the report focuses attention on these issues and attempts to pave the way for meaningful responses.

The purpose of this section is to characterize the enabling culture of entrepreneurship by describing the environment that is promising for the fulfillment of entrepreneurship opportunities. The discussion focuses on three topics: (1) attitudes toward entrepreneurship, (2) networks, and (3) infrastructure. Each section first examines the enabling culture in general and then concentrates on the situation in New Mexico.

If the enabling culture is supportive, entrepreneurs can be in a position to overcome difficulties that inhibit their formation and growth. But what kinds of difficulties can be anticipated? Table 2-1 sets forth the major problems experienced by small business as revealed by a national survey. The primary obstacles lie in sales/marketing, human resource management, general management, and production/operations management. It appears that the enabling culture should focus on these business functions.

<b>Classes of Problems</b>	<b>Number of Employees</b>		
	<b>0-4</b>	<b>5-19</b>	<b>20+</b>
Sales/Marketing	61.8	57.4	67.6
Human Resource Management	24.2	45.6	70.3
General Management	21.3	32.4	27.0
Production/Operations Management	18.0	27.9	37.8
Obtaining External Finance	12.4	13.2	2.7
Product Development	10.1	11.8	8.1
Regulatory Environment	7.9	11.8	8.1
Internal Financial Management	5.1	4.4	10.8
Export and Import	4.5	7.4	0.0
Organization Structure/Design	1.7	1.5	0.0
Economic Environment	0.6	0.0	0.0

Source: Xueli Huang & Alan Brown (1999), "An Analysis and Classification of Problems in Small Business," *International Small Business Journal* 18(1): 73-85.

## **Attitudes Toward Entrepreneurship**

Entrepreneurs are most likely to exist when individuals possess certain attitudes. This section provides an overview of the more salient attitudes and how they relate to current practices and opportunities for improving these processes in the interests of the public at large.

### *Risk Taking*

Some cultures are more supportive of individuals who have entrepreneurial qualities than are others. Historically, in the United States and many other developed countries, those that have followed the work ethic (labor hard to better yourself, leisure is akin to laziness, save your money, etc.) have generated advanced entrepreneurship industries and high standards of living.

Those individuals who desire entrepreneurship roles are willing to take risks, compared to many other segments of the population. This does not mean that they are unaware of risk, but that they are inclined to assume it in order to attain their goals. They are aware that risk tends to be high for those ventures that promise substantial financial reward. Further, when entrepreneurs find risk to be high they are often capable of inducing others to share the risk.

Research suggests that individuals with a high need for achievement tend to be more willing to incur risk than those without this need. These individuals are strongly impelled to make financial and social accomplishments in their life and often see entrepreneurship as a means to these ends. They focus more on potential rewards than on possible negative consequences.

If the culture of a state is characterized by high fear of risk, few members of the potential or existing workforce may be inclined to seek entrepreneurship positions. Individuals in the society, acting out of fear or desire to avoid obstacles and stress, will choose means of making a living that are relatively stable and reliable. In order to encourage entrepreneurship, it may be necessary to alter the public's perceptions regarding the significance of risk and the importance of potential rewards that may be associated with innovation and creativity.

Courageous individuals may perceive risk differently and perhaps are less intimidated by it. Perhaps entrepreneurs of average risk taking ability are able to assume high levels of risk simply because they view risk through a belief system that places a high value on courage. It could be that successful entrepreneurs tend to be courageous and capable risk managers whose abilities overcome what others might see as situations that should be avoided.

The behavior of companies in the state of New Mexico provides evidence of risk-taking tendencies. One related behavior is participation in the new economy, which emphasizes such factors as high productivity rates, "knowledge jobs," technology, and

services. Specifically, to what extent is New Mexico participating in the new economy? Table 2-2 suggests that the state fares well in some indexes, such as information technology professionals, job churning, online agriculture, scientists and engineers, and industry research and development investment, but lags in others, such as workforce education, manufacturing workforce education, export focus on manufacturing, foreign direct investment, initial public offerings, technology in schools, digital government, online manufacturing, broadband, and venture capital.

<b>Index</b>	<b>Rank Among the States</b>
Scientists and engineers	1
Online agriculture	4
Industry R & D investment	5
Information technology professionals	6
Job churning (number of start-ups and failures combined)	11
High tech jobs	15
Managerial/professional jobs	16
Patents	18
Commercial internet domain names	23
Workforce education	29
Broadband	31
Export focus of manufacturing	33
Initial public offerings	34
Technology in schools	38
Online manufacturers	38
Manufacturing workforce education	42
Gazelle jobs (in fast growing companies)	44
Venture capital	44
Digital government	48
Foreign direct investment	48
Source: Robert D. Atkinson (2002). <i>The 2002 State New Economy Index</i> . Washington, D.C., Progressive Policy Institute.	

It is difficult to generalize on the degree to which the population in New Mexico is prone to incur risk. The population is diverse with regard to income levels, age, location, length of residence, ethnicity, occupations, and many other characteristics. Although risk acceptance varies among different elements in the population, some generalizations are possible and are noted in the following paragraphs in this section.

There is evidence of entrepreneurial risk in New Mexico. Business turnover is relatively high, as the number of new employer firms is less than the number of business terminations. However, in some scientific fields, such as solar energy, microtechnology, optics, and IT, there are indicators of innovation and a desire to take on potentially risky

enterprises. New Mexico business starts historically outpace the U.S. average by approximately nine percent.

Many residents are employed in industries not characterized by substantial entrepreneurship. The leading publications, such as *Inc.* and *Enterprise* magazines, do not report a large number of successful new businesses operating in the state compared to others such as Arizona, Texas, and Nevada. Personal income levels are relatively low in New Mexico and moderate-income persons are less likely than those who are wealthier to take on possible financial loss. Further, some individuals who are considering start-ups may feel that their firms would be more successful in states with higher per capita purchasing power. Another negative factor is that some business leaders indicate that the business culture is not be strongly supportive of entrepreneurs.

#### *Satisfaction with Salaried Employment*

When a major proportion of the workforce is satisfied with working for a salary, there is less motivation to become involved in entrepreneurship. Those who believe that their needs are met through employment in other firms, governmental agencies, or nonprofit organizations tend to be so inclined. States characterized by this perception are not likely to witness significant entrepreneurial activity.

Of course, those who occupy salaried positions may find themselves to be unemployed, due to firing decisions or downsizing efforts. Some of these currently unemployed individuals will decide to form business ventures, perhaps as a temporary fill-in until they can secure employment or even as a long-term career choice.

In New Mexico, government is the largest single industry and is second only to all services sectors with respect to wage levels and number of jobs. Only 8.4 % of the labor force in New Mexico is self-employed as compared to 13.8% for the United States. In New Mexico, 68.5% of the workforce is in the employ of industry, while the figure for government is 22.7%. Only 0.4% are unpaid family workers. While these statistics are only indexes of entrepreneurship, they do suggest some degree of satisfaction with salaried employment.

Table 2-3 provides an overview of employment in New Mexico by industry. The major sectors are government, educational and health services, retail trade, professional and business services, leisure and hospitality, and construction. These are all characterized by large numbers of salaried positions, many of which carry high wages.

Another indicator of the satisfaction with salaried employment is the number of college students who seek salaried positions upon graduation. Surveys of business administration students in the state university system show a strong inclination in this direction. Many of the students view jobs with large corporations as offering higher salaries, opportunities for advancement, employment security, and prestige than do entrepreneurship opportunities. University placement centers witness more demand for jobs with large corporations than with smaller and startup enterprises.

<b>Table 2-3 2002 Wage and Salary Employment (000s) by Industry</b>	
<b>Industry</b>	<b>Employment (000s)</b>
Total	766.0
Natural Resources and Mining	13.9
Construction	45.7
Manufacturing	38.5
Wholesale Trade	22.6
Retail Trade	90.2
Transportation, Warehousing, & Utilities	22.7
Information	16.9
Financial Activities	33.7
Professional and Business Services	89.3
Education and Health Services	93.8
Leisure and Hospitality	80.1
Other Services	28.2
Government	190.5
Source: Robert Heiser (2003). <i>New Mexico Small Business Issues</i> . Las Cruces. NMSU.	

### *Fear vs. Passion*

Members of a community may have different perceptions of the desirability of an entrepreneurship career. On the one hand, they may view this undertaking as one that is very demanding and with a high probability of failure. On the other, they can see entrepreneurship as exciting, financially rewarding, and self-fulfilling. This is the fear versus passion dimension.

If numerous members of the community have a passion for this activity, it is likely to flourish. The opposite is true if fear generally prevails as the primary motivating (or de-motivating) factor. In a sense, this is related to the degree of optimism that prevails in the culture. The Survey Research Center at the University of Michigan has conducted research showing that optimistic individuals are more likely than their pessimistic counterparts to take on risk.

Those motivated by passion have certain characteristics. They are motivated to achieve and may study the business philosophies and practices of individuals who have been successful. Further, they may have role models they know personally. In addition, they are not fatalistic, believing that they can achieve if they do the right thing and work diligently.

Individuals who are successful tend to value competitiveness, wealth generation, and growth. These are values that are capable of inciting passion. Many choose to start their own business out of a burning desire, not because they have lost a job or have been demoted. Others start a business as a means of providing employment for friends,

relatives, and members of community groups who are out of work. Yet others have a desire to operate a business with members of their families. All of these are positive motivations.

Table 2-4 sets forth several indicators of the environment for entrepreneurship in New Mexico. It reveals a mixed picture. Business leaders tend to disagree or be neutral on whether the region celebrates the growth of companies, understands failure, and treats entrepreneurs and start-ups as full partners.

<b>Table 2-4</b>			
<b>Indicators of the Culture for Entrepreneurship in New Mexico</b>			
<b>Indicators of the environment</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>
The region celebrates growth of companies, not just the size of companies	37.5%	22.3%	40.2%
The business culture in the region understands failure as part of the learning and innovation process	39.1%	37.3%	22.6%
Business leaders treat entrepreneurs and start-ups as full partners in industry cooperation	52.7%	31.3%	16.0%
Source: Council on Competitiveness (2003). <i>Central New Mexico Regional Competitiveness Initiative</i> . Albuquerque, Council on Competitiveness.			

A content analysis, conducted by the faculty at New Mexico State University, of magazine and newspaper articles published in New Mexico did not reveal a large number of articles featuring entrepreneurship as compared to other states. Generally, such articles reflect the thinking of their readers, many of which are potential entrepreneurs. To date, enrollment in community college and four year college entrepreneurship courses, while adequate, have not been abundant. Conversations with Service Corps of Retired Executives (SCORE) members suggest that fear is often more potent than passion.

### **Networks: General and Specific**

This section considers networking, where individual companies ally themselves with other companies, trade groups, government agencies, financial institutions, individuals, or nonprofit organizations. These alliances can be both formal and informal, based upon a contract or upon a handshake. The entrepreneurs form networks that produce synergy and bring about results that would not be feasible if individual enterprises operated alone. These networks can allow the participants to acquire resources that they would not possess otherwise, at least without incurring large expenses and expending considerable effort.

Networking can be one of the keys for entrepreneurial success. The term alliance proactiveness refers to the extent to which an organization engages in identifying and responding to partnering opportunities. Some managers are very active in this regard, while others disregard it entirely, often because they are not aware of the advantages that

exist. Proactiveness normally leads to superior market-based performance and this effect is stronger and more long lasting for small firms and those who operate in unstable market environments where customer demand and competition fluctuate considerably. One of the problems that confront small firms is that they often make poor use of external information and expertise.

Industry clusters are important for networking purposes. These form the basis for establishing relationships that can enable multiple firms to prosper. Next Generation Economy, Inc. (NextGen), an economic development organization that emphasizes clusters, provides information on clusters formed for electronic systems/aerospace, optics, microsystems, biotech/biomed, information, technology, artisan manufacturing, and tourism. Santa Fe Development, Inc., provides information on clusters formed for informatics, biotechnology, publishing, new media, and medical practitioners.

Networks with specialists in appropriate fields can be of considerable value. The specialists include bankers, accountants, lawyers, future customers, consultants, friends, suppliers, and even competitors. Coordination with such sources is very important to the success of any enterprise. Clearly, for some tasks, such outside assistance is useful or even essential, because a particular expertise is needed.. The more effective entrepreneurs are generally aware of what outside assistance is needed and why they should pursue it.

There are many promising avenues for alliances. Research, technology, industrial, and science parks fall into this category. Entrepreneurs can convert research and development into new businesses and support and assist their firms.

A networking characteristic that helps promote entrepreneurship is a well-established cadre of inventors with new product ideas. Grow an economy requires a coordinated and carefully managed teamwork approach that involves both those who produce inventions and entrepreneurs who implement them. In turn, this type of collaboration has led to the formation of numerous profitable firms, particularly in high-technology industries. States with large numbers of inventors pose an attractive target for those with a desire to establish start-ups entities.

A common market feature is that similar business enterprises cluster in physical space. Industries cluster because entrepreneurs find it difficult to leverage the social ties for acquiring essential resources when they reside far from these resources. Large advertising agencies, for instance, often find it advantageous to locate on Madison Avenue and large banks on Wall Street. In these locations they can acquire the processes that are needed for effective operation.

Opportunities for high-technology entrepreneurship mirror the distribution of critical resources. This being the case, states with prolific populations of firms in industries that are highly sought out by entrepreneurs have an advantage in attracting new companies. Those parties who are involved in attempting to attract new start-ups to their states are well advised to concentrate on industries and technologies that are already flourishing there.

When industries are not well established in a geographic area, there are still means of generating a presence in these sectors. Application Service Providers (ASPs) are an innovative means for companies to outsource business functions by renting software as a service through the Internet. In turn, ASPs bring state-of-the-art technology within the reach of companies that have been denied access to such advances in the past due to their location. This provides options for entrepreneurs who desire to locate where the industry in question is only in the formative stages.

Networking opportunities have benefited from innovations in the scientific field. The state's national laboratories, for instance, have helped in founding in-state technical transfers to clusters of business that have developed in the high technology field.

An important networking segment is the group of parties that provide venture capital. Sometimes venture capital is seed money injected into a new company by investors who become part owners in exchange for the risks they assume. More often, venture capital sources prefer to invest in a company once it is off the ground, during its second or third round financings. Since these sources take risks, they expect commensurate returns. Capital is discussed further in Chapter 3.

It appears that at least a reasonable degree of networking exists in New Mexico, especially in the larger cities where many specialists and professionals are located. Chapter 6 provides a number of useful references and Internet links for networking possibilities. Wholesalers in the state have created useful networks by acting as links between various types of business. Some industry consultants and faculty have also been useful in this regard. Several SCORE branches have been active in establishing networking opportunities.

Various specialists, professionals, and other individuals and firms are available, as in the Small Business Development Centers and business incubators; and many entrepreneurs in the state seem to be utilizing these resources. Company owners and managers should be made aware of the advantages of this process and the dangers of neglecting this means of acquiring resources and acquiring competitive advantages that are not otherwise available.

There is some empirical evidence of the degree of networking that exists in the state. Table 2-5 presents research results from central New Mexico indicating the perceptions of business leaders in the region. The data reveal interaction between business and artists, across sectors, and with government, but suggest that gains could be made in this field.

New Mexico has a high number of scientists and engineers. Interactions between these types of individuals and the business community could be improved.

<b>Type of Interaction</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>
Artists and businesspeople frequently interact in the region	38.4%	33.0%	28.6%
People from different industry and economic sectors frequently interact in the region	40.2%	33.6%	23.2%
Local government institutions eagerly partner with the private sector to promote new business development	63.4%	20.5%	16.1%
Source: Council on Competitiveness (2003). <i>Central New Mexico Regional Competitiveness Initiative</i> . Albuquerque, Council on Competitiveness, 38.			

An indicator of the health of networking is the extent to which creativity exists among firms in the state. Table 2-6 presents creativity index ranks for selected cities in New Mexico and closely surrounding areas. The indexes are based on the measures of innovation, high technology, and number of potentially creative employees in each city. Thus they furnish an indirect indication of networking achievements. The ranks are used to compare other cities in the same population size range. It is apparent that Albuquerque, Las Cruces, and Santa Fe all rank high in creative potential.

### **Government Infrastructure**

Infrastructure is an integral ingredient of the enabling culture environment. Those states with the more promising infrastructures tend to offer the greatest potential for entrepreneurial operations.

Most observers agree that public policy formulators and administrators heavily impact business. Governmental bodies and entrepreneurs interact in a variety of ways, some of which change considerably over time. The government regulates, taxes, and assists these firms through various means. In turn, the companies are responsible for compliance with the regulations for their enterprise and industry. There is some conflict, however, due to the entrepreneur's desire for independence and the rapidly advancing role of government in business.

State laws regulate business activity for the benefit of companies and the welfare of the public. In turn, public policy in this country embodies the principle of guaranteed freedom to enter into and engage in business with some restrictions on the role of government on business operations. The economic doctrine emphasizes the importance of free competition.

<b>Table 2-6</b> <b>Ranks of New Mexico and Area Cities</b> <b>on the Creativity Index</b>	
<b>City</b>	<b>Index</b>
<b>Albuquerque, NM</b>	1*
<b>Santa Fe, NM</b>	1***
Tucson, AZ	3*
Colorado Springs, CO	6*
Fort Collins, CO	13**
<b>Las Cruces, NM</b>	24***
El Paso, TX	28*
Amarillo, TX	31***
Lubbock, TX	41***
Killeen, TX	60**
Odessa, TX	93***
Yuma, AZ	107***
Pueblo, CO	114***
Source: Richard Florida (2002). <i>The Rise of the Creative Class</i> . New York. Basic Books. *Signifies a region with a population of 500,000 to 1,000,000 **Signifies a region with a population of 250,000 to 500,000 ***Signifies a region with a population of less than 250,000	

State and local governmental agencies have produced numerous policies and procedures developed to support entrepreneurship both generally and in specific industries. The policies include macro-level policies such as economic stability, taxation, and regulations, and micro-level policies focusing upon advice, training, publicity, finance, technology transfer, market access, physical infrastructure, and creating an entrepreneurial culture. These efforts have been substantial, widespread, and often successful, although setbacks have resulted in some cases.

Governmental agencies should take steps to ensure that their efforts promote entrepreneurship. There are programs that were well intended but failed, or even worked at cross-purposes. For example, credit assistance programs in the form of interest subsidies affect the allocation of credit to targeted companies but sometimes at the cost of non-targeted ones.

Some governmental thrusts are devoted to building a deeper entrepreneurial culture. One form of this can be found in the school system. The state could have as a statement of intent something similar to “We want every young person to hear about business and enterprise in school; every college student to be made aware of the opportunities in business; and every teacher to be able to communicate the virtues and potential of business and enterprise.” The school system is in a position to instill values, perceptions, and attitudes and, as a result, can be a very influential agent.

Governmental regulation has developed to the point that it actually imposes hardships on many small companies. It should be remembered that regulation is often proposed and supported by those being regulated. Difficulties arise not only from the inevitable red tape and bureaucratic processes, but from the number of regulations and the number of agencies involved. Besides the problem of compliance, the owners of small businesses do not always know of all the regulations applicable to their situation. It may also be the case that regulations from one agency conflict with the regulations from another agency. Another problem can occur when two individuals from the same regulatory agency interpret the regulations differently. The small business owner is caught in the middle and may never be able to satisfy the requirements of the regulation. Government policies to make the process easier to deal with and understand are always welcome to businesses.

Assistance for entrepreneurship can take the form of tax reform. All businesses in New Mexico are responsible for paying gross receipt taxes, property taxes, employment-based taxes, and licenses and fees. If the business is a corporation, it must pay corporate taxes, and if the business is a sole proprietorship, partnership or limited liability company, the owners are responsible for personal income taxes. The tax structure can encourage or discourage entrepreneurship and is, therefore, a viable topic for discussion. Two previous New Mexico First Town Halls have dealt with New Mexico taxation so that area of inquiry is not treated in detail here.

There are numerous other ways in which state government can instill strength into entrepreneurship activity. For example, numerous public agencies have become involved in the sponsorship of business incubation programs. Chapter 7 provides relevant examples. These programs include steps to encourage participation on the part of entrepreneurs through such means as measures to protect the intellectual property of inventors and business firms. Other measures have been pursued by public agencies in the form of governance and incentive systems that are conducive to innovation among startup and young firms.

The government infrastructure in the state is diverse. New Mexico benefits from Small Business Development Centers in nineteen locations. These provide confidential assistance on business planning and financing, marketing, small business loans, computing, selling to the government, and technical problems. The state universities offer similar systems. In turn the state provides services that have been very beneficial to the formation of new firms. An example is the "In-Plant Training Program", which furnishes classroom and on-the-job training. This has enhanced the skills of workers and contributed to the development of a skilled labor pool to serve companies in some industries, such as in the electronics and the semi-conductor industries.

Economic development agencies at the state and local level have undertaken programs to help new and existing businesses and to induce businesses to locate within the state. These agencies have conducted research and engaged in promotion programs designed to achieve this end. Rivalry among states is very intense and careful

coordination with other agencies is necessary in order to stay apace with other states. Table 2-7 provides a review of incentives for new business development.

Government in New Mexico has made progress in reducing the burdens imposed on entrepreneurs and in assisting them to reach their goals. However, continued improvement is needed. Research has uncovered evidence of a negative view toward local and state government impact on business performance on the part of some business leaders.

### **University Infrastructure**

Universities in some states have contributed substantially to the health of the entrepreneurship function. One form of assistance is through university-sponsored business incubators. A business incubator is a facility that provides physical space, shared services and technical assistance to new businesses. The more successful of these are effective in accomplishing five tasks: (1) establishing clear measures for success, (2) providing entrepreneurial leadership, (3) developing and delivering useful services to member companies, (4) developing a rational new-company selection process, and (5) ensuring that member companies gain access to necessary human and financial resources. These tasks require collaborative efforts to ensure that they are implemented effectively.

Generally, university-based business incubators have been effective in promoting technology-based entrepreneurship, diversification of productive activities, and the generation and diffusion of innovation. Virtually all of the areas of science and technology have participated. One of the most valuable outputs of the incubators is professional advice and service tailored for specific industries. It appears that a strong case can be made for the development of university incubators that are tied to the economic priorities of the state and are well managed from both the technological and the business sides.

Research and development work on the part of university scientists can result in opportunities for entrepreneurship. Academic entrepreneurship can also take place when business and legal academics take direct roles in the commercialization of research. Various institutions have utilized faculty in university spin-off companies. Colleges of business have been directly involved in such areas as new product development, assessing “market pull”, software utilization, doing business online, supply chain management, labor requirements, marketing, finance, and operations management. Table 2-8 sets forth possible models for university entrepreneurship programs.

A large number of universities have focused on entrepreneurial education to encourage growth in this function through education, information, and persuasion. In some, students create and carry through to completion their own business plans, from product development to marketing and promotions. In others, students work with existing entrepreneurs, sometimes in internship programs and sometimes in outreach efforts.

**Table 2-7**  
**New Mexico Business Incentives**

**FUNDING SOURCES:**

- Business Bonds
- Film Investment Program
- Job Training Incentive Program
- Industrial Revenue Bonds
- New Mexico Private Equity Funds and Business Investments
- Private Activity Bonds for Manufacturing Facilities
- Real Property Business Loans
- Severance tax Permanent Fund/Participation Interests in Business Loans
- Severance Tax Permanent Fund/Purchases of SBA/FmHA Obligation
- Statewide Economic Development Finance Act
- Venture Capital Investment Program

**TAX BREAKS:**

- Ag-Production Tax Deductions and Exemptions
- Aircraft Refurbishing or Remodeling
- Child Care Corporate Income Tax Credit
- Community Development Incentive Act
- Cultural Property Preservation Tax Credit
- Gross Receipts and Compensating Tax Deduction for IRB Projects
- Inventory Tax Exemption
- Laboratory Partnerships with Small Business Tax Credit
- Rural Job Tax Credit
- Welfare to Work Tax Credit
- Microbrewery and Small Winery Preferential Tax Rate
- Business Facility Rehabilitation Tax Credit
- Renewable Energy Production Credit
- Film Production Tax Credit
- Filmmaker Gross Receipts Tax Deduction
- Aircraft Manufacturing Tax Deduction
- Investment Tax Credit for Manufacturers
- TEX/MEX Residents on US/MX Border Tax Exemption
- Aerospace Research and Development Tax Deduction
- Space Gross Receipts Tax Deduction
- Research and Development Gross Receipts Tax Deduction
- Rural Software Gross Receipts Tax Deduction
- Technology Jobs Tax Credit
- Web Hosting Gross Receipts Tax Deduction
- Call Center Capital Equipment Tax Credit
- Telemarketing Gross Receipts Tax Exemption
- Tribal Land Business Tax Credit

Source: *New Mexico Business Incentives* (2003). Santa Fe, Tax Information and Policy Office.

**Table 2-8**  
**Possible Models for University Entrepreneurship Programs**

- . Some grow organically (bottom-up) and some are mandated by the senior management of the university (top-down).
- . Some are run out of a specific school (engineering, medicine, business) and some are university-wide.
- . Some support research, while others focus only on teaching.
- . Some are designed for enrichment of the students while others are vocational.
- . Some have the explicit goal of stimulating the local economy.
- . Some include the technology transfer office while others do not.

Source: Tina Seelig (2003). *Fostering Entrepreneurship Education at the University*. Stanford University.

Many colleges of business administration offer courses in entrepreneurship, often coupled with internship opportunities. Colleges of engineering have also entered into this field. Some colleges of education are taking steps to prepare their graduates to teach entrepreneurship in public schools and to encourage their students to consider a career in this enterprise.

New Mexico receives useful inputs from institutions of higher learning. There are six public universities and a larger number of private institutions and community colleges that offer business education and related programs. Faculty members provide education and guidance to small firms through consulting and applied classroom exercises and research activities. Some become owners, contractors to, or employees of these enterprises.

Table 2-9 sets forth the results of a survey of the quality of the skills possessed by students graduating from the four-year universities in New Mexico. Employers in the state were asked to rank the institutions on a scale of one (poor) to five (excellent). The mean ratings appear in the table. It appears that the employers are most satisfied with the students preparation in areas such as integrity and honesty, reading skills, willingness to learn, and teamwork, but are less satisfied with leadership skills, writing skills, math skills and problem solving skills.

The universities have been very productive in the initial stages of knowledge creation but less productive in commercializing knowledge, and it has been reported that they could improve their performance in technology transfer. Distributive Education programs are offered to college students at New Mexico universities through a long-

established DECA network. These provide skills, networking capabilities, guidance, and motivation to students.

There is evidence that the public regards the higher education system favorably. However, regional training for entrepreneurs is not considered to be strong by many business leaders and it appears that further inroads could be made in this area in the future through increased development and expansion of centers for entrepreneurship and technical centers.

<b>Table 2-9 Evaluation of Student Skills, Graduates of the Four Year Universities</b>	
<b>Skills</b>	<b>Mean Ratings</b>
Integrity and Honesty	4.3
Reading Skills	4.1
Willingness to Learn	4.0
Teamwork	4.0
Positive Work Attitude	3.9
Responsibility	3.9
Computer Skills	3.9
Listening Skills	3.8
Decision-Making Skills	3.8
Creative Thinking	3.8
Problem Solving Skills	3.7
Math Skills	3.7
Writing Skills	3.6
Leadership Skills	3.6
Source: Council of University Presidents (1999). <i>Performance Effectiveness Report</i> . Albuquerque, NM. Research & Polling, Inc.	

### **Quality of Life**

Entrepreneurs are attracted to states that are desirable as a place to live, raise families, interact with others, and make a living. In fact, this is a major ingredient for small and emerging business location decisions. Among the factors that are consequential in this regard are moderate crime and traffic congestion, high quality schools, minimal pollution levels, responsible government, favorable tax levels, climate, scenic attractions, cultural attractions, sporting events, and many others. States that are attracting large numbers of entrepreneurs, such as Nevada, Georgia, and Florida, have attributed much of their success to the quality of life factor.

According to a variety of physical and social indicators, most localities in the state offer an agreeable quality of life,. New Mexico offers numerous scenic sites, recreation

possibilities, cultural opportunities, parks and forests, golf courses, hunting opportunities, museums, historical sites, fiestas, fairs and rodeos, bird watching sites, hiking areas, and other diversions. Corporate retreat facilities, an indicator of perceived quality of life on the part of business personnel, are in abundance.

There are some specifics that relate to the quality of life in the state. The mean travel time to work and the number of persons per square mile are significantly shorter than the U.S. average, suggesting opportunities for a more-relaxed lifestyle. The best performing cities, in terms of where jobs are created, include Las Cruces and Santa Fe. The UNM medical school is highly evaluated by accrediting organizations and is staffed by many eminent professionals. A variety of institutions of higher education are located in the state, and these offer cultural, sports, education, and recreation programs.

Improvements can be made, of course. Improvements in the educational systems, poverty levels, crime rates, unemployment levels, and other determinants of well-being can be useful. Much of this endeavor requires collaboration on the part of governmental agencies, educational institutions, private businesses, the communications media, and nonprofit organizations.

The quality of life, of course, means different things to different individuals. Studies of the preferences of potential and existing entrepreneurs, as to their preferences, could yield insights that would allow government and business in the state to create a more attractive quality of life for entrepreneurs.

## **Chapter 3**

### **Capital**

#### **Introduction**

A commonly cited problem with starting or growing a small business is a lack of capital. However, there are clear differences in funding needs between small businesses that are begun to support an individual or family and those whose aspirations are to grow larger. A study by Blade Consulting Group confirms this idea. The study reports that, of the people who were thinking about starting a business, those who were considering going into business by themselves have very modest expectations relative to those people who intend to go into business with one or more other people. According to the study, solo entrepreneurs expect startup costs to be about \$6,000, expect first-year income to be about \$25,000, and expect fifth-year income to be about \$90,000. Team-based entrepreneurs expected startup costs to be about \$20,000, first-year income to be \$50,000, and fifth-year income to be \$125,000. While not all team-based entrepreneurs have aspirations to grow their companies out of the “small firm” category, they clearly have higher expectations and thus greater funding needs.

Perhaps the best way of addressing capital concerns of the different kinds of small businesses is to consider their life cycle and the financing sources that companies tap into at different growth stages. Also, the financial markets have changed and evolved over time to facilitate the start, growth, and development of businesses. Therefore, it is useful to consider the stages of financing for a growing company.

#### **The Stages of Financing**

There are five commonly identified life cycle stages that companies go through, with each stage having its own type of financing and providers of capital. The first type of financing is seed financing that occurs in the development stage of the firm’s life. In this stage, research indicates that the primary sources of financing come from the entrepreneur’s own assets and from family and friends. The entrepreneur may even borrow extensively from personal credit cards to obtain the necessary funding to develop a product.

The next type of financing is startup financing. This category coincides with the startup stage of the venture’s life cycle. This financing is intended to take the newly formed venture from concept to actually being able to sell its product or service. Typically, the management team is in place, a business plan has been written, and the venture is even beginning to generate revenues. At this point, even though the firm is generating revenues, it should begin to think about seeking more formal venture investors. These investors include “angels” and venture capitalists. “Business angels” are wealthy individuals who typically act on an informal and private basis to provide funding for new businesses. They may act as individuals or as part of a larger group of angel investors. Many angels are themselves entrepreneurs who have already successfully

launched one or more businesses. Therefore, they understand the process that a new entrepreneur is going through. Angel investments are also sometimes considered “pre-venture capital” since many venture capital firms do not like to invest small sums of money to help a small business get started.

Venture capital firms are usually formed as limited partnerships where the limited partners contribute capital and professional managers act as the general partners. Venture capital firms (often known as VC firms, or just VC’s) tend to make larger investments than do angel investors. They also often take positions on the board of directors or even in the management of the firm. Therefore, VC’s often specialize in one or a few industries in which they have detailed knowledge.

The next type of financing is called “first round financing.” This type of financing coincides with the “survival” stage of a firm’s life. In this stage, revenues and cash flow are growing, but they may still be insufficient to cover the costs of entering new markets or other investments needed to compete. Financing at this stage may come from the company’s suppliers in the form of trade credit, federal, state, or local government assistance programs, or commercial banks, often with the assistance of the Small Business Administration (SBA). Venture capitalists also participate in first round financing.

Second round financing, or what is sometimes called expansion stage financing, accompanies the rapid growth stage of the firm’s life cycle. Here, business operations themselves will be providing positive cash flow, as will customers and suppliers, commercial banks, and investment banks. Investment banks are organizations that help companies issue both private and public debt and equity securities. They will help firms who want to issue common shares to the public for the first time in an initial public offering (IPO).

Finally, once a firm is more mature and its securities are already being traded in the financial markets, the firm may seek seasoned financing. This occurs when the company seeks additional debt or equity capital by issuing additional securities. The time it takes an entrepreneurial firm to reach maturity depends on many factors, including its operating characteristics, technology changes in its industry, and the management team. In this section of the report, the focus is on the earlier stages of financing, and understanding how New Mexico has fared with respect to financing of entrepreneurial companies.

### **New Mexico’s Venture Capital Experience**

In New Mexico, most businesses are small business. Recall the statistics given in the introduction of this report. A total of 96% of New Mexico firms have fewer than 500 employees and 85% have fewer than 20 employees. Small business accounts for approximately 58% of employment by employer firms. So, when small businesses begin, how do they obtain their initial financing?

According to the survey by Blade Consulting, the most common financing small businesses use to get started is a personal credit card. Next in importance is asking for money from friends and family. Relatively few people starting a business seek institutional sources of capital, such as from banks, the SBA, “angel investors,” or venture capitalists, although team-based entrepreneurs tend to seek these sources more frequently than do solo entrepreneurs. Nevertheless, institutional sources of capital can provide guidance and structure to the entrepreneur as the company is founded and grows.

How does New Mexico compare with other states in terms of financial resources to grow and sustain an entrepreneurial economy? The answer is “not very well, but getting better.” The 2002 New Economy Index ranks the “Innovation Capacity” of each state in the country. With respect to the financing component, the index focuses on venture capital (VC) as a percentage of gross state product. According to the index and using data from the year 2000, New Mexico ranked 44<sup>th</sup> among the 50 states. However, the 2003 Development Report Card for the States produced by the Corporation for Enterprise Development (CFED) ranks New Mexico 17<sup>th</sup> on venture capital investments (adjusted by the state’s employment). Therefore, it seems that New Mexico’s financial capacity to support a growing entrepreneurial economy is improving.

Why focus on venture capital when many small businesses, even successful growing businesses, start very small and with limited sources of financing? The answer may lie in the evolution of the capital markets over the years and the role that venture capitalists now play in providing financing to small firms. Venture capital firms are important in the formation and expansion of growth firms and growth industries. The presence of venture capital investments implies that there are opportunities for high returns for the investors in venture capital funds and is an indicator of a rapidly developing economy with many investment opportunities.

### **Venture Capital Data**

Table 3-1 presents background data on the total amount and number of deals (so-called “deal flow”) invested by the venture capital industry from 1995 through 2003 for the United States and through the third quarter of 2003 for New Mexico. The table shows a dramatic peak in venture capital activity in 2000 during the height of the boom in the Internet industry. Since then, venture capital investments have tailed off drastically. Interestingly, New Mexico’s best year for venture capital occurred in 2002, a fact that played into the CFED report card on New Mexico. In general, though, the table shows that New Mexico has received very little of the total VC investment in the United States.

Which states have been the main recipients of venture capital funding? VC funding is geographical in nature. The MoneyTree<sup>TM</sup> Survey categorizes VC investment into 19 regions in the United States. The top five areas plus Colorado and the Southwest US region are shown in Table 3-2. These top five regions account for two-thirds of all VC funding in 2003. The Southwest region, which includes New Mexico, Utah, Arizona, and Nevada, lags considerably behind other regions with just \$217.7 million in VC financing.

	<b>United States</b>		<b>New Mexico</b>	
<b>Year</b>	<b>Amount (\$ millions)</b>	<b>Deals</b>	<b>Amount (\$ millions)</b>	<b>Deals</b>
1995	\$7,669	1,885	\$4	2
1996	\$11,581	2,636	\$22	5
1997	\$14,928	3,210	\$27	3
1998	\$21,518	4,117	\$8	4
1999	\$54,962	5,640	\$12	6
2000	\$106,185	8,125	\$21	8
2001	\$40,717	4,631	\$14	4
2002	\$21,416	3,043	\$52	7
2003	\$18,187	2,715	N/A	N/A
2003 (Q1-Q3)	\$13,041	2,040	\$15	3

Source: PricewaterhouseCoopers/Thomson Venture Economics/National Venture Capital Association MoneyTree™ Survey ([www.pwcmoneytree.com](http://www.pwcmoneytree.com)).

<b>Rank</b>	<b>Region</b>	<b>Total invested (\$ millions)</b>	<b>Percent of 2003 Total Venture Capital</b>
1	Silicon Valley	\$5,868.2	32.3%
2	New England	\$2,764.4	15.2%
3	NY Metro	\$1,388.1	7.6%
4	Texas	\$1,165.9	6.4%
5	Southeast U.S.	\$1,100.0	6.1%
10	Colorado	\$ 620.9	3.4%
14	Southwest U.S.	\$ 217.7	1.2%

Source: PricewaterhouseCoopers/Thomson Venture Economics/National Venture Capital Association MoneyTree™ Survey ([www.pwcmoneytree.com](http://www.pwcmoneytree.com)).

What is it about the regions in Table 3-2 that attracts venture capital? One way of looking at this question is to focus on the industries attracting venture capital funds. Not surprisingly, technology-related and life sciences industries receive the bulk of venture capital financing. Table 3-3 shows the dollars invested, percent of total dollars, and number of deals of VC investment in various industries for 2003. While the ranking of VC funding by industry may change from year to year, it is clear that technology and life sciences receive the greatest amount of VC financing.

**Table 3-3  
Venture Capital Funding by Industry: 2003**

<b>Industry</b>	<b>Total (\$ millions)</b>	<b>% of total</b>	<b>Deals</b>
Software	\$3,634	20.0%	718
Biotechnology	\$3,372	18.5%	301
Telecommunications	\$2,041	11.2%	259
Networking and Equipment	\$1,666	9.2%	180
Medical Devices and Equipment	\$1,522	8.4%	211
Semiconductors	\$1,156	6.4%	141
IT Services	\$720	4.0%	148
Industrial/Energy	\$689	3.8%	121
Business Products and Services	\$641	3.5%	113
Media and Entertainment	\$635	3.5%	116
Computers and Peripherals	\$599	3.3%	105
Electronics/Instrumentation	\$495	2.7%	62
Financial Services	\$437	2.4%	70
Consumer Products and Services	\$218	1.2%	51
Healthcare Services	\$211	1.2%	59
Retailing/Distribution	\$100	0.6%	44
Undisclosed/Other	\$52	0.3%	16
<b>Grand Total</b>	<b>\$18,187</b>	<b>100.0%</b>	<b>2,715</b>

Source: PricewaterhouseCoopers/Thomson Venture Economics/National Venture Capital Association MoneyTree™ Survey ([www.pwcmoneytree.com](http://www.pwcmoneytree.com)).

Interestingly, both the New Economy Index and the CFED report card rank New Mexico No. 1 in the country in terms of Ph.D. scientists and engineers per capita. In fact, the CFED report card gives New Mexico a grade of “B” in the category “Innovation Assets.” The New Economy Index ranks New Mexico 7<sup>th</sup> among the 50 states in terms of “Innovation Capacity.” New Mexico’s innovation capability and increase in the availability of venture capital financing are reflected in the number of venture capital firms that now have offices in the state. Table 3-4 combines the lists of VC firms that currently have offices or have announced they will have offices in New Mexico as reported on the Los Alamos National Laboratories’ web site, the New Mexico Economic Development Department web site, the New Mexico State Investment Council (NMSIC) web site, and the NextGen web site.

The increased activity of venture capital firms may mean that more of the research and development activities of scientists and engineers are translating into more economic activity for the state. What has the state of New Mexico done and what have other organizations done to facilitate and encourage venture capital investment?

<b>Table 3-4</b>
<b>Venture Capital Firms and Funds Actively in or Soon to be in New Mexico</b>
Arch Venture Partners (office recently moved per NMSIC website)
Colorado Venture Management (CVM Equity Funds)
Murphree Venture Partners
New Mexico Private Investors
Red River Ventures
Santa Fe Equity Partners
Technology Funding
TD Origen Capital Fund
Tullis-Dickerson & Co., Inc.
Vestor Partners
Wasatch Venture Fund
Altira Technology IV
Blue Sage Capital
Flywheel I LP
International Venture Partners I
ITU Ventures West I
The Rio Grande Fund
Valley Ventures III
v Spring I
Academy Fund New Mexico
v Spring II
Verge I LP
Village Ventures
Source: Los Alamos National Labs web site ( <a href="http://www.lanl.gov">www.lanl.gov</a> ), New Mexico Economic Development Department web site ( <a href="http://www.eddd.state.nm.us">www.eddd.state.nm.us</a> ), New Mexico State Investment Council web site ( <a href="http://www.state.nm.us/nmsic">www.state.nm.us/nmsic</a> ), Next Generation Economy, Inc., ( <a href="http://www.nextgenclusters.net">www.nextgenclusters.net</a> ).

One program resides in the New Mexico State Investment Council office. The State Investment Council can invest in a venture capital fund as a limited partner. It provides investment capital, but does not make investment decisions. The general partner, i.e., the VC fund, must maintain an office in the state of New Mexico and it must target investments in New Mexico companies. As of the end of the 2002 fiscal year, there were 9 venture capital firms managing 13 funds participating in the New Mexico program, with NMSIC commitments totaling \$69.1 million.

How is the link made between entrepreneurs and venture capital firms? Technology Ventures Corporation (TVC), founded by Lockheed Martin, is a facilitator to help entrepreneurs develop their business models based on technologies developed at the national laboratories and obtain funding from sources across the country. TVC supports and helps sponsor the annual New Mexico Equity Capital Symposium, which showcases the state's finest prospects for technology-related business opportunities. According to

TVC, 32 of the 95 businesses that have presented at the Symposium have received funding.

Another way entrepreneurs connect with capital providers is through contact with “Angel Investors.” These are private investors with capital to invest in startup firms. For example, some angel investor groups host dinner meetings in which private investors, venture capitalists, and venture bankers meet to network and hear presentations from entrepreneurs about their business plans. New Mexico Private Investors (NMPI) and Coronado Ventures are two such groups that meet regularly, seeking to match good investment opportunities with capital.

### **Is Venture Capital the Only Financing Source to Consider?**

The discussion thus far in this section has revolved around venture capital financing of technology-related businesses. Should New Mexico worry only about attracting venture capital investment? Clearly not. One of the most popular, and perhaps most exaggerated, myth is that successful entrepreneurs start their companies with millions of dollars in venture capital. However, many of today’s largest and most successful businesses started small and with very modest resources. Sam Walton began Wal-Mart with \$5,000 of his own money. Bill Gates and Paul Allen did not use venture capital when they started Microsoft in 1975. Cisco Systems was started using the personal savings and borrowing of its two founders. *Rolling Stone* magazine started with just \$7,500. Waste Management, Inc. began with a single truck and \$500 a month in revenues. In fact, in one study of successful entrepreneurial growing companies, 26% started with less than \$5,000. Two out of three companies on the *Inc.* 500 list in 1996 started with less than \$50,000. The average initial funding of these companies was just \$25,000.

These anecdotes are supported by the data on VC funding as shown in Table 3-5. In 2003, less than 2% of total VC funding went for startup or seed capital. Therefore, it is clear that venture capitalists are not necessarily at the forefront of providing financing to companies that are at the beginning of their development. However, angel investors are. According to the University of New Hampshire’s Center for Venture Research, approximately 80 percent of angel investments in 2002 occurred in seed or first round investments.

What about other entrepreneurs who want to start a business or expand a business but aren’t attractive enough for either venture capital financing or angel investors? Some useful general information can be gleaned from several SBA studies. The first study is “Financing Patterns of Small Firms: Findings from the 1998 Survey of Small Business Finance” (hereafter, referred to as the “Financing Patterns” study). The second report is “Small Business and Micro Business Lending in the United States, 2002 Edition” (hereafter referred to as the “Micro Lending” report). Third, a brief review of the report “Women in Business: 2001” is given, followed by a short description of the findings of the report “Minorities in Business: 2001.”

<b>Stage of Development</b>	<b>Total (\$ millions)</b>	<b>% of total</b>	<b>Deals</b>
Startup/seed	\$354.3	1.9%	166
Early	\$3,322.2	18.3%	716
Expansion	\$9,854.4	54.2%	1,339
Later	\$4,655.9	25.6%	494
<b>Total</b>	<b>\$18,186.9</b>	<b>100.0%</b>	<b>2,715</b>
Source: PricewaterhouseCoopers/Thomson Venture Economics/National Venture Capital Association MoneyTree™ Survey ( <a href="http://www.pwcmoneytree.com">www.pwcmoneytree.com</a> ).			

The Financing Patterns report uses data collected by the third national survey conducted by the Board of Governors of the Federal Reserve System in 1998. It is the most comprehensive database of small firms' use of credit and financial services and includes data from about 3,500 nationally representative firms with fewer than 500 employees. The full report contains 450 tables. The Micro Lending study provides data on small and micro business loans to small firms and on the banks that serve them. The data for this report are taken from reports banks submit to their regulatory agencies – call reports for June 2002 and Community Reinvestment Act (CRA) reports for 2001. The data are available by size of loan and not by size of business. Small business loans are defined as business loans less than \$1 million and micro loans are defined as loans smaller than \$100,000. Because of the extremely detailed nature of the reports, only a broad characterization of these patterns of finance is presented and related to the structure of business in New Mexico discussed earlier in this report.

### **Financing Patterns: All Small Firms**

Over 80% of the small businesses included in the Financing Patterns survey used some kind of credit and had outstanding debt as of the end of 1998. In terms of the kinds of credit used by those firms using financing, personal credit cards ranked highest, used by 46% of those firms utilizing financing. Business credits cards ranked next, used by 34%. Next most popular was lines of credit, used by 28% of firms using credit.

Banks were the most popular suppliers of credit to small firms accounting for 38% of firms using credit. Owners' loans were next most popular at 14% followed closely by finance companies at 13% of credit-using small firms. Small corporations seem to borrow more from their owners because some 30% of small corporate owners extended credit to their own firm.

Many small firms use some kind of financing, but fully 47% of small firms had no outstanding debt in terms of traditional loans and 25% had just one loan outstanding. Therefore, small firms tend to limit the scope of their debt usage. For the outstanding debt of small firms, mortgage loans accounted for the largest share at 31% followed by lines of credit with 30% of debt outstanding.

The percentage of small firms using credit increases with firm size. A total of 70% of firms with no employees use credit, while over 99% of firms with more than 100 employees use credit. The sources of credit also vary by size. Only 22% of firms with no employees used credit from depository institutions, while 78% of firms with over 100 employees used depository institutions. Furthermore, as firm size increased, small firms tend to use fewer owners' loans and personal credit cards as sources of credit.

In general, and as reflected in the report on startup costs of new ventures, very small firms tend to use credit cards and owners' loans more heavily than do larger small firms. This may reflect a shortage of credit sources for very small firms, but it may also reflect the fact that credit cards and owner loans are preferred because of their convenience and simplicity of use. To be fair, more rigorous study and analysis on the demand and supply of credit in the small firm market is required before drawing definitive conclusions about whether any shortage of credit exists for small firms.

### **Micro Lending**

In 2001, with the U.S. economy relatively weak, small business lending by banks showed only very modest increases. Micro loans (less than \$100,000) grew only 1.7%, whereas loans in the \$100,000 to \$250,000 category grew 4.9%, and loans in the \$250,000 to \$1,000,000 category grew 7.04%. While the dollar amount of micro loans grew only slightly, the number of loans extended grew by 45%. According to the SBA report, the primary reason for the dramatic increase in number of micro loans was the promotion of small business credit cards by major banks and finance companies. The SBA study was able to identify banks with significant small business credit card operations. The six largest banks with these operations accounted for 69% of the total number and just 12.5% of the dollar value of micro loans from all banks in June 2002. The average loan in these portfolios amounted to just \$2,500. The Micro Lending study also provides a list of what it calls "small business friendly" banks based on the data reported in call reports and CRA reports. In New Mexico, these banks include both large bank holding companies and smaller community banks. However, by research design, the study does not report on banks that participate in the SBA's preferred or certified lenders' programs. These banks should also be considered "small business friendly."

The SBA's micro-loan program provides short-term loans of up to \$35,000 to small businesses and not-for-profit child-care centers for working capital or the purchase of inventory, supplies, furniture, fixtures, machinery and/or equipment. The SBA makes or guarantees a loan to an intermediary who, in turn, makes the micro loan to the applicant. The intermediaries are specially designated lenders that are non-profit organizations with experience in lending and technical assistance.

The North Central New Mexico Economic Development District manages two micro-loan programs. NCNMEDD began making loans to small business in 1985 with funds from the Economic Development Administration (EDA), the EDA Revolving Loan Fund (EDA RLF), and have added funds from the Department of Energy through the

Regional Development Corporation (TCR RLF). The EDA RLF began in 1985 and serves clients in Rio Arriba, Taos, Mora, Colfax, San Miguel, and Sandoval Counties. Regulations require a match of every EDA dollar with two dollars of private capital and to create or retain at least one job for every \$25,000 of federal dollars lent. The TCR RLF fund serves clients in Los Alamos, Santa Fe, and Rio Arriba counties and was initiated to mitigate the impact of layoffs at Los Alamos National Laboratory in 1995. These funds must be matched dollar for dollar with private capital and must create or retain at least one job for every \$25,000 of federal funds lent.

ACCION New Mexico is an independent nonprofit organization that increases access to business credit, makes loans, and provides training, which enable emerging entrepreneurs to realize their dreams and be catalysts for positive economic and social change. Founded in 1994, ACCION New Mexico has issued more than 2,500 micro loans totaling \$8.3 million to support the start-up or growth of over 1,500 micro enterprises in more than 95 New Mexico communities (including pueblos and colonias). ACCION clients report that their enterprises have created and/or sustained an estimated 2,400 jobs in New Mexico. In 2002, 90% of the 425 loans disbursed by ACCION were issued to low-income, minority, and/or women entrepreneurs.

The New Mexico Community Development Loan Fund is a private, nonprofit, alternative source of loans and technical assistance for small business owners and nonprofit organizations. Since its founding in 1989, the Loan Fund has provided 570 loans throughout the state totaling \$16.9 million, which have helped create or preserve approximately 3000 jobs.

The Certified Development Company (CDC) 504 loan program is a long-term SBA financing tool for economic development within a community. The 504 program provides growing businesses with long-term, fixed-rate financing for major fixed assets, such as land and buildings. A CDC is a nonprofit corporation set up to contribute to the economic development of its community. CDCs work with the SBA and private-sector lenders to provide financing to small businesses. New Mexico's CDC is Enchantment Land Certified Development Company (ELCDC), which, in its almost 12-year history has assisted several thousand New Mexico businesses of all sizes in obtaining financing and technical assistance from micro lenders, loan funds, venture capitalists and other sources, including its own 504 program. ELCDC's SBA 504 loan program has helped finance over 445 small businesses through September 2003. The Wall Street Journal reports that nationwide, the program tends to be underutilized and that about \$1.34 billion in potential 504 loan money was left unused in fiscal year 2003.

### **Minorities in Business: 2001**

Minority-owned and Hispanic-origin small firms tended to use credit less often than the full sample of firms. Only 77% of these firms used some type of credit compared to 83% for all small firms. Like all small firms, personal credit cards, business credit cards, and lines of credit were the most frequently used types of credit, with 46%, 29%,

and 20%, respectively. Commercial banks were the most popular source of credit, used by 27% of minority-owned and Hispanic-origin small firms. But this figure was less than that for all small firms at 38%.

The uses of institutional and non-institutional sources of credit were quite different for minority-owned and Hispanic-origin firms as compared with all small firms. While 12% of all small business obtained credit from non-financial institutions, about 16% of minority- and Hispanic-owned firms used these sources. However, little difference was noted in the use of personal credit cards and owners' loans.

In terms of the frequency of credit use, minority-owned and Hispanic-origin firms used traditional loans less often, with 77% having either one loan or no loans; 72% of all small firms had one loan or no loans. Consistent with the evidence for all firms, small minority-owned and Hispanic-origin firms' use of credit increased with firm size, although it increased at a faster rate than for all small firms.

### **Women in Business: 2001**

In general, small women-owned firms' use of credit mirrored that of small minority-owned firms. Whereas 83% of all small firms used some type of credit, just 78% of women-owned firms did so. Just 46% of women-owned firms used some types of traditional loans compared to 55% for all small firms. And, almost 70% used non-traditional sources, such as owners' loans, personal credit cards, or business credit cards.

Women-owned businesses used financial institutions less than did all small firms. Only 28% of women-owned businesses used credit from banks compared with 38% for all small firms. Just 10% of women-owned businesses obtained credit from finance companies compared with 13% for all small firms.

As was the case with all small firms and minority firms, credit usage increased for women-owned firms as firm size increased. However, in the category of 100-499 employees, the use of credit was much lower than for all small firms and minority firms. Just 57% of women-owned firms in this largest small firm category used credit compared with 77% for all small firms.

### **Conclusion**

This brief overview of financing patterns of small firms shows that financing patterns differ by firm size and for different groups of small firms. Very small firms rely much less on traditional financial institutions and more on sources from non-traditional sources such as owners' loans and personal credit cards. Minority- and women-owned firms were found to have used more nontraditional sources of financing than all small firms. Given that the structure of business in New Mexico includes a heavy concentration of these firms, the evidence on financing patterns suggests that New Mexico should continue to develop access to financing for very small, minority-owned, and women-owned firms. A recent example of such a financing source was reported in the New

Mexico Business Weekly (December 18, 2003), in which the New Mexico Small Business Investment Corp. committed \$2.5 million to ACCION New Mexico (matched with \$833,000 by ACCION) resulting in a micro-loan pool of \$3.3 million available to small businesses in the state.

Another intriguing possibility for developing financing sources is the Community Development Venture Capital Alliance. According to its web site, CDVCA uses the tools of venture capital to create jobs, entrepreneurial capacity, and wealth to advance the livelihoods of low income people and the economies of distressed communities. Given that many small communities in New Mexico fit this description, the concept of the CDVCA may be worth exploring.

## Chapter 4

### The Entrepreneurial Workforce

#### Introduction

The four most important issues for entrepreneurs are: (1) access to talent, (2) access to capital, (3) having the required networks, and (4) the existence of an infrastructure to support entrepreneurial activity. Access to talent is one of the greatest challenges facing entrepreneurs in both good and bad economies. (Access to capital, networks, and infrastructure are discussed further elsewhere in this report.) Access to talent means finding and retaining quality people at all levels. Since entrepreneurial firms have few tangible assets and few standard operating procedures compared with more established firms, they rely primarily on the “intelligence and resourcefulness” of their workers and leaders. This section discusses the challenges for entrepreneurs in accessing talent in the workforce at the various phases of their organizational growth.

#### Stages of New Firms

In the early stages of the business, entrepreneurs are not as likely to need people with “highly developed” management skills in functional areas (e.g., production, finance, human resources) as they will in the growth phase of the business. In the initial phase, a solo entrepreneur or an entrepreneurial team will typically assume all of the responsibilities for getting the venture financed and making it operational. However, it may be that the creative entrepreneur lacks a particular skill, such as business planning or marketing, that may be helpful in securing resources. Thus, even in the earliest phases of the business, entrepreneurs need to have the ability to recognize what skills they can provide themselves and what skills they can obtain from others.

It was noted earlier in this report that New Mexico ranks first nationally in the number of scientists and engineers as a percentage of the total workforce. However, this has not led to significant entrepreneurial activity in the state, in part, perhaps, because of the degree of satisfaction among scientists and engineers with their current jobs. This lack of scientific-based entrepreneurial activity might also reflect a lack of training and development. Although those who receive training are more likely to start new businesses and more likely to succeed at growing their businesses, one of the biggest myths regarding entrepreneurs is that they have significant expertise and strong track records in their industries. Actually, most growth companies in their early stages are as likely to have been started by amateurs with little background experience in the field. According to researcher Amar Bhidé, 40% of the *Inc.* 500 founders had no previous experience in the industry before they entered, many had no work experience at all, and over one-third were out of work when they began their companies.

As the new firm enters the growth phase, its owners will begin to departmentalize and need to hire more specialists and administrative staff to meet the demands of the

growing operation. At this stage, the entrepreneur needs to have a well-trained and educated workforce from which to attract talent to their emergent business. This “talent challenge” is in part a result of a significant structural change in the economy, which has shifted towards knowledge-based work. In fact, leading high technology growth areas are characterized by concentrations of knowledge workers *and* an ability to attract and maintain these workers. Quality of life, which is discussed in Chapter 2, is an important factor in attracting talented workers to New Mexico. But education is the key factor in developing a workforce with the necessary talent to help generate a successful entrepreneurial environment within the state.

## **Workforce Education**

The success of small businesses and entrepreneurship depends upon the availability of an educated and trained workforce. A 2002 report by the U.S. Small Business Administration states that there is almost universal agreement that public school systems are not meeting the needs of small businesses in providing basic literacy, math and problem-solving skills to labor force entrants, though these workers do have good computer and Internet skills. In addition, the report cites a need for economics education and skills training for careers in small business at the college level. Across the U.S. the increased popularity of entrepreneurship and small business courses suggests that some of these higher-level educational issues are being addressed. Most small firms, according to the SBA report, cite the ability to obtain skilled labor at reasonable rates as a problem they encounter.

But while education is very important in developing successful entrepreneurs, educational performance in New Mexico is lagging behind national averages in some key areas. According to the New Mexico State Department of Education, fewer than half (48.5%) of NM’s high school graduates in 2001 applied to 4-year post-secondary institutions and about 20% applied to 2-year institutions. Also, New Mexico has a high school drop out rate of 6%, better than only four other U.S. states in the survey (with Louisiana being the highest at 9.2%).

In preparation for college, New Mexico’s high school students tend to take a different entrance exam depending upon whether they are more likely to attend college out-of-state or in-state. Few New Mexico high school graduates (14% last year) take the SAT exam, which is widely used at top-tier institutions of higher education outside New Mexico. However, their average score was higher than the national average on both the math and verbal portions of the exam. A much higher proportion of New Mexico’s graduating high school seniors (62%) took the ACT than did seniors nationally (40%), in part because this exam is more widely accepted by New Mexico’s higher education institutions. New Mexico seniors had an average composite ACT score of 19.9 (out of a total possible 36), which was just slightly lower than the U.S. average composite score of 20.8. However, the firm that develops and administers the exam, ACT, Inc., indicates that like students across the U.S., about a quarter of New Mexico’s testing seniors are unprepared for college math and science. New Mexico also scored below the national average in all achievement categories assessed by the state—math, science, reading and

writing. According to the Corporation for Enterprise Development's (CFED) "Development Report Card" on New Mexico's human resource development capacity, the state ranks between 34<sup>th</sup> and 46<sup>th</sup> on the various factors measured, including basic educational skills proficiency, college attainment, high school completion and attainment.

One of the primary challenges for small and emerging businesses in New Mexico is the availability of workforce talent that possesses the basic education, skills and competencies to add value to these firms, particularly in their growth phases. Interestingly, states with similar educational challenges at the K-12 level have sustained economic development by leveraging other aspects of the state economy. For example, Colorado's K-12 educational system was recently graded a 'D' in *Education Week's* study on education quality. Although the state subsequently appropriated more funding for K-12 education, the factors deemed more important to its economic development were the funding for higher education (substantially greater than the national average), the ability to attract and retain thousands of knowledge workers—in part due to these workers' perceptions of a high quality of life in Colorado, and the high level of research and development resulting from the concentration of federal defense and space facilities. Thus, for New Mexico, improvements in K-12 education may only be one part of the workforce solution for small and emerging businesses.

### **Management Skills**

In addition to providing high quality basic education, a successful entrepreneurial environment also provides opportunities for would-be entrepreneurs and for workers at-large to develop requisite skills through extensive continuing education and training opportunities.

One of the skills that entrepreneurs need in order to access human resource talent is leveraging their social capital—the connections they have with others in their various social networks. Social capital helps to open doors for entrepreneurs, especially in gaining access to venture capitalists, potential customers, mentors, and others. Most entrepreneurs start companies in business sectors where they have some contacts and existing expertise, and most companies are started by entrepreneurial teams, rather than by individuals. Thus the ability to leverage accumulated social capital is important in helping entrepreneurs to get their businesses "off the ground." The discussion of networking in Chapter 2 illustrates the significance for entrepreneurs of developing social capital.

In addition to being skilled at leveraging their social capital to gain access to resources, entrepreneurs need other types of skills to run their businesses once they have gained that access. According to the Small Business Administration's online e-business institute, needed attributes include "guts, brains and capital." "Guts" refers to the entrepreneurial instinct, and the dedication needed to achieve set goals. "Brains" refers not only to scholastic achievement, but also to the "working knowledge about the business you plan to start *before you start it.*" Further, "Common sense combined with

appropriate experience is the necessary brainpower. Prudence, follow through and attention to detail are very important.”

Social skills are another requirement for entrepreneurial success. A recent review of the research on social skills and entrepreneurship identified four specific social skills as being most related to entrepreneurs’ success: social perception, impression management, persuasion and influence, and social adaptability. The authors also state that many research findings support the observation that entrepreneurs of successful companies engage in more communication with others, and in more effective communication, than do those whose companies fail.

Lack of management skills has been noted as a key attribute of failed ventures. However, more recent thinking suggests that what entrepreneurs need is the ability to pull together individuals and teams that possess the requisite management skills to complement the entrepreneur’s talents. The burgeoning entrepreneurship course offerings in the nation’s business schools suggest the importance of management skills for emergent entrepreneurship. According to the Ewing Marion Kauffman Foundation, more than 1,500 colleges in the U.S. offered some type of entrepreneurship classes in 2000 compared to 450 in 1997. While there is an ongoing debate regarding whether essential entrepreneurial skills can be taught, the head of the Kauffman Foundation believes that the failure rate among new ventures would be reduced if the entrepreneur’s drive were coupled with “nuts-and-bolts” financial and management planning. To this end, many entrepreneurs have begun to seek the help of executive coaches to help lead small businesses across major hurdles such as significant growth or launching an initial public offering. Mentoring has also been suggested as a promising method of developing entrepreneurs, though few studies exist on this aspect of entrepreneur development.

### **Education, Training and Development in New Mexico**

The foregoing discussion points to the importance of educational talent and training in both the workforce and entrepreneurs for the development of a successful entrepreneurial environment in New Mexico. There exist numerous opportunities within the state for individuals to develop technical and management skills. In addition to the basic higher educational opportunities provided by universities across the state, additional opportunities are being provided and developed in the area of entrepreneurship. In addition, various technology institutes and other avenues of learning exist within the state.

As referred to above, entrepreneurship has become a popular area of study at the nation’s colleges and universities. According to “Innovation U,” the extensive 2002 report by the Southern Growth Policies Board, universities have a key role to play in future regional economic development. For example, the report emphasized the increased importance of industry-university partnerships to encourage, stimulate, and develop new ideas into economic realities, including tying graduate education more closely to such industry partnerships. Currently, an example of linking graduate education to industry is the use of MBA student consulting teams. Such teams can help small and emerging

businesses with the formulation of business, strategic or marketing plans, marketing research, or even with such operational issues as web-site development or producing an information system program. More broadly, universities can provide more technical assistance and outreach to established companies.

The exemplary institutions in the study were also involved in various aspects of entrepreneurial development. These universities furnished not only entrepreneurial coursework, but also gave students the opportunity to major in entrepreneurship. These academic programs tended to include both technical and business students, and to have both classroom and experiential components. Further, these institutions included outreach components to community-based entrepreneurs. Many of the education and training opportunities catered to the needs of key state-based businesses, and also targeted programs for economic development officials. Many of these opportunities were delivered on a decentralized basis (for example, through extension or distance education).

While technology-based assistance is available from a number of sources (SBDCs, the various business incubators, etc.), New Mexico is currently the home of several specifically targeted, technology-based efforts to support education and training for entrepreneurship. One such program is the Technology Commercialization Office of Los Alamos National Laboratories, which has nationally competitive MBA internships for graduate students to learn about high-tech startups and about the commercialization of new technologies. Sandia provides technical assistance to small and emerging businesses in New Mexico. Technology Ventures Corporation provides some entrepreneurial training. NextGen recently announced the Entrepreneurial Leadership Excelerator, an entrepreneurial mentoring program that is the first of its kind in New Mexico. The Science & Technology Corporation @ UNM, the Technology Transfer Support Group at New Mexico Tech, and the proposed Arrowhead Center at New Mexico State University are centers that facilitate entrepreneurship and small business development and growth.

In addition, both the University of New Mexico and New Mexico State have centers that aim to serve small business and entrepreneurship in New Mexico. The Small Business Institute of the Anderson School of Management at the University of New Mexico provides direct consulting services to small businesses. The Entrepreneurship Center in the College of Business & Economics at New Mexico State focuses on encouraging New Mexico students to take entrepreneurship courses, and provides opportunities for directed learning experiences with business enterprises. Further, a key goal of the Entrepreneurship Center is to inspire the entrepreneurial spirit among K-16 students in New Mexico.

## **Summary**

The success of small and entrepreneurial businesses in New Mexico will depend upon a well-educated, well-trained and diverse workforce, and will necessitate the building of a broad scale entrepreneurial environment wherein aspiring entrepreneurs can access the talent, skills and other tools they need to start and grow their businesses

successfully. New Mexico clearly has some established resources that can be aligned with new resources in the state's efforts to develop a successful entrepreneurial climate.

## Chapter 5

### The Need for Business Assistance

#### Introduction

As was noted in the first chapter, 85% of all firms in New Mexico have fewer than 20 employees. Some will stay small. Others will eventually become large, developing products or technology to be used throughout the United States and the world.

What is most likely true of all of these small and emerging enterprises is that they are being started and run by individuals who will need help at some time in operating their businesses. It was noted in Chapter 1 that there were 3,591 establishment deaths from 1999 to 2000. These establishment deaths occurred for many reasons, including a lack of business acumen by the owners in one or more areas of business. To offset these establishment deaths there were 3,478 establishment births during the same period. Many of these births will not make it past the first year of existence unless they have some form of business assistance.

Entrepreneurs are quite diverse and, thus, require diverse paths to obtaining business assistance. Since these small and emerging businesses are so important to the economy of the state, and to nation as a whole, numerous organizations have been formed to assist them to increase the possibility of success. This section of the report first provides information on who are entrepreneurs and then outlines the types of assistance that could be made available to these entrepreneurs.

#### Who is the Entrepreneur?

Individuals between the ages of 25 and 44 are responsible for 50% of the entrepreneurial activity in the U.S. Compared to other countries the U.S. has more entrepreneurs between the ages of 45 and 64, accounting for 36% of entrepreneurial activity (vs. 22% globally). Both income and education are associated with entrepreneurial activity. Those with higher incomes are more likely to be involved with starting firms, as are those with higher levels of formal education. Entrepreneurship is also now gaining popularity among high school-age students in the U.S., with polls showing that two-thirds of high school students have an interest in starting a business.

There are conflicting reports regarding the difference between men and women's entrepreneurial activity. In one study, men over the age of 18 were found to start businesses at twice the rate of women-- 8.1 per 100 versus 4.5 per 100, respectively. In a different report, in the U.S. overall women were starting businesses faster than men. Further, women-owned businesses grew at an average rate of 16% during the 1990s, while total U.S. businesses grew by only 6%. However, women found it harder to access venture capital and to grow their businesses. Currently in the U.S. there is one female entrepreneur for every 1.5 male entrepreneurs. In the 18-24-age bracket, men are three times more likely than women to start or grow a business.

In 2002, according to the Center for Women's Business Research (CWBR), there were an estimated 46,030 majority-owned, privately held, women-owned businesses in New Mexico. This represented 33% of all privately held firms in New Mexico. In the U.S. 46% of all privately held businesses are owned by women. From 1997-2002, New Mexico ranked 17<sup>th</sup> among the 50 states and Washington, D.C. in the growth of women-owned firms, 5<sup>th</sup> in employment growth, and 5<sup>th</sup> in sales growth in these firms.

Although New Mexico has one of the fastest growth rates for women-owned businesses, anecdotal reports suggest that many of these business owners believe their financial interests are not being served due to a lack of support from financial institutions. Some major financial institutions across the U.S. provide financial services tailored to women business owners. Banks in New Mexico have started to pay more attention to women business owners.

African-Americans are 50% more likely to start firms than whites. A report released by the Kauffman Foundation on minorities and venture capital found that investments in minority business enterprises resulted in healthy returns that were equal to, or higher than, traditional investments by mainstream venture capitalists. In the late 1990s, minority-owned firms grew more rapidly than businesses in general (7%). African American-owned firms grew by more than 26%, while Hispanic-owned firms grew by 30%. However, the rate of growth (measured by business receipts) is slower for African American firms (33% compared to 40% overall in the U.S.) while Hispanic-owned businesses exceed the national rate (49%).

Minority-owned businesses tend to be smaller than average in the U.S., where 5% of all U.S. firms had receipts over \$1 million, but only 1% of African American-owned firms and 2% of Hispanic-owned firms achieved that level. Ongoing research continues to address why women and minorities start relatively more businesses than others but enjoy less success in growing their businesses or in attracting investment dollars. Some explanations have been offered. First, women and minorities may not have the necessary managerial skills due to differing educational opportunities. Second, these self-starters may be more interested in "lifestyle" ventures than in "entrepreneurial" ventures. (The term "lifestyle ventures" refers to business starts based upon the owner's desire to support him/herself, or to support a hobby.) Further, many women choose to start their own businesses to better balance work and family life, rather than to get rich. Third, some women and minorities may lack the background in engineering and science that can lead to starting entrepreneurial technology companies. Finally, because the existence of such large numbers of women- and minority-owned firms is relatively new, the emphasis by the owners may be on simply getting the business started and providing some support for themselves and their families.

While only limited data exist on entrepreneurship within the American Indian population of New Mexico, a recent study by the New Mexico Indian Reservation Economic Study Group details the extent to which reservation-based enterprises contribute to the state economy. For example, in 1999 the Study Group found that non-

gaming reservation-based enterprises impacted the general state funds by over \$40 million.

Importantly, education significantly predicts emerging entrepreneurship, particularly for African-Americans and Hispanics. About 26 of every 100 African-American men, and 20 of every 100 Hispanic men with some graduate education report efforts to start a new business. This compares to 10 of every 100 white men with some graduate education. Hispanic women are about as likely to attempt to start a business as are white women, but less likely than African-American women.

In sum, the diversity of the New Mexican population and of those likely to engage in entrepreneurship can provide a significant base for developing entrepreneurship within the state. According to the U.S. Small Business Administration's report on small business and entrepreneurship in the 21<sup>st</sup> century, "[h]eterogeneity, diversity, and complexity will continue to be the hallmarks of the small business sector." This diversity presents challenges to those who want small businesses to succeed. Diversity of business ownership suggests a need for diverse sources of business assistance and access to that assistance.

### **Types of Assistance Needed**

Few owners of businesses have the knowledge and ability to manage and grow the business at all levels of development. Needed assistance may include, among other things, help in the development of a business idea, a good or service, a business plan, the organization of the business, and training of the owner and personnel. Not all firms will need extensive help in all areas, but most businesses will require help in some areas.

#### *Idea to Commercialization*

All small businesses start with an idea. Some small family-run businesses start out with an interest in a hobby or the development of an expertise as an employee in a similar business. Other small businesses come into existence because of an invention or development of a better way of doing things. Each of these types of small businesses needs a different level of assistance in the development of the business idea.

Some small family-run businesses have an idea that is already developed, such as a neighborhood restaurant. In this case, the owners may need assistance in the actual set-up of the business. Most small businesses operators learn by doing. They are not aware of all the many problems that may arise when running a business. This increases the probability that something may happen that would jeopardize success. The owners need to be aware of all rules and regulations, the minimum amount and types of employees to be hired, and the sources of materials needed to provide the product.

On the other hand, some entrepreneurs may need more help in developing an idea. These entrepreneurs have invented a new technique but may not have a real idea of how

the invention can be turned a product, or, if there are options, what the best one happens to be.

These entrepreneurs need a different type of assistance at this stage of development. They need assistance in determining the potential of the idea, where it fits into the business setting and what needs to be done to develop the idea into a saleable product. This may require a research team that works closely with the inventor to determine the best possibilities for the idea. This research team should not only include business people but technical personnel.

It may also be the case that the idea is in a rough stage and needs to be developed. In this instance assistance may need to take a physical form. Development space may be needed to improve and refine the product. This is where business incubators come into play. They provide a space for the fledgling business to develop the idea, plan the development of the business and to actually start the business.

To commercialize the idea, the business owner will usually need financing. As was noted in a Chapter 3, there are various types of financing needed at different stages of the development of the business. Business owners may need assistance in identifying and contacting these different types of financing sources.

### *Business Plans*

All businesses should develop a business plan, if nothing more than to articulate and focus on the mission of the business. There is no one accepted form of the business plan. Most web sites concentrating on assisting businesses have an outline that can be followed. One of the important ideas to remember is that the form of the business plan depends on the audience that will be reading it.

The business plan for a small family-run business will most likely be used to obtain financing for day-to-day operations or an expansion of the business. The majority of revenues of the firm may come at particular times during the month or the year while the expenses occur on a weekly basis. The business plan concentrates on the cash flow over a specific time period, usually a year, indicating the ability to pay back any financing obtained. Cash flow and profit statements are also used to indicate the ability to pay back loans for an expansion of the business.

The business plan may take another form if the entrepreneur is trying to develop an idea that will eventually become a good or service in the market. Both venture capitalists and angel investors desire a document that emphasizes “market pull,” the probability that the idea will have a place in the market. A detailed market analysis will be one of the main ingredients of the plan. Cash flow and profit and loss statements will be difficult to construct because the idea has not yet become a good or service.

As the emerging business begins to market its good or service, the business plan will need to be changed to be used for the next step in financing. This business plan will

be similar to the business plan mentioned above in the sense that projected cash flows and profit and loss statements become more important. This plan will also specify the growth plans for the business and the subsequent effects on the financial statements.

The business plan can also be an internal document for the use of the employees. In this case it emphasizes the vision and mission statements and conveys to the employees what the business is all about. It lists the goals and objectives of the firm in relation to the mission. It tells the middle managers and line employees what is expected of them in the accomplishment of that mission.

### *Management Ability and Management Teams*

Few individuals have the knowledge and skills to be able to manage every aspect of a business. For an emerging business the idea person may not have any management ability at all. The level and extent of assistance will depend on the type of business under discussion.

For the family-run business the different functions may be fairly simple. Marketing may consist of ads in the newspaper and yellow pages. The accounting function may be simple bookkeeping entries and filing relatively simple tax forms. Financing is accomplished through the use of a business credit card. Inventory analysis may consist of being aware of the goods that are selling well and those that are not. Scheduling of employees may be as simple as determining when each member of the family is available for work. However, there is always room for improvement. A review of day-to-day operations by an experienced manager or a team of experts may indicate many ways for the business to generate more profits.

For an emerging business that intends to eventually grow into a large business the needs may be entirely different. More elaborate marketing, accounting, financial and management plans may be necessary. It may be the case that one or more of these functions will be so crucial to the success of the business that individuals expert in each of the areas should be made available to the entrepreneur. It is possible that the entrepreneur does not really know how to run the business. It would be necessary to assemble an entire management team to bring the idea to commercialization.

### *Mentoring and Training*

As individuals go through their working life they learn from the advice of others. Each job has different skill and behavior requirements. Those that are most successful learn the proper way of doing things very quickly. They listen and observe and, hopefully, find one person who will take the time and energy to guide them through the working day.

The need for a mentor or a connection with a group of individuals involved in the same type of work is even more important when trying to run a small business. All small business owners have problems. They need to be looking for new techniques for running

the business, new suppliers of their inputs or intermediate goods, and new outlets for their products. A network of individuals involved in the same types of businesses could provide a forum to discuss the general problems of running the business.

It may be difficult for an owner to talk publicly about specific problems in the business. They may be embarrassed that they cannot solve the problem themselves or do not want to give out information they think may be used by competitors. In this case another successful small business owner, maybe retired, could become a mentor, providing the new entrepreneur with a confidential source of information and direction.

Most owners of small businesses spend enormous amounts of time running their businesses. It would be safe to say that they cannot take extensive amounts of time off to learn more. They do, however, need training. They need a rudimentary understanding of all the parts of the business. They need to know the governmental rules and regulations pertaining to the business. They need to be aware of the changing business environment.

### **Summary**

There is no such person as the typical entrepreneur. Entrepreneurs have diverse characteristics and are involved in a variety of business start-ups. This mix of characteristics and situations makes it particularly challenging to identify and provide the types of assistance required by these entrepreneurs. The next two chapters provide a list of the organizations in New Mexico that provide assistance to entrepreneurs and examples of practices from other states.

## Chapter 6

### New Mexico—Historical Perspective and Existing Initiatives

#### Introduction

To the New Mexican who travels out of state, the infrastructure and financial resources enjoyed by more densely populated and affluent locales can seem overwhelming. The entire state of New Mexico contains fewer people than metropolitan Phoenix, Arizona. While this perspective should be kept in mind, New Mexico enjoys advantages that position it to benefit from the so-called “knowledge economy.” Whether the state can put together a cooperative effort to recognize and seize opportunities is an open question.

New Mexico’s natural resources and its isolation from major population centers have long played significant roles in shaping the business environment. Considerable economic activity in northwestern and southeastern New Mexico comes from extractive industries, and much of the federal government presence in New Mexico stems from the availability of open spaces for missile testing and other defense-related activities initiated during World War II and the Cold War. The state has been heavily involved in aerospace from the inception of that industry. Agriculture and other major commercial activity have tended to locate near the few significant sources of water.

One special attribute of New Mexico is its great Native American population. Tribal governments differ from other American governmental entities in that they are authorized not only to govern but to also conduct business. With this come significant competitive advantages available to tribally owned businesses, many of which are seeking partners to enhance their capabilities and leverage those advantages. For instance, the U.S. Small Business Administration 8(a) Business Development Program presents unique opportunities for tribally owned businesses to compete in the American economy and access Federal procurement dollars.

This chapter highlights additional information specific to New Mexico. While the list of organizations provided here may give the impression that there are more than adequate efforts underway to address the state’s weaknesses, there is little evidence that these efforts as a whole have been effective. Chapter 7 provides examples from other states where observers have attempted to identify success factors.

#### Historical Perspective

Risk-taking in the commercial arena in New Mexico has a long history. Petroglyphs reveal evidence of travelers from cultures to which some of the state’s modern indigenous artisans trace their roots. The arrival of the Spanish, especially with the 1598 Oñate expedition, marked the beginning of caravan trade along the Rio Grande corridor. Some 200 years later, the Santa Fe Trail brought east-west mercantile traffic to the region. Support for the intrepid merchant-entrepreneurs of those times consisted

largely of military outposts and escorts intended to provide physical protection along the way.

William Parish, former Dean of UNM's College of Business Administration (now Anderson Schools), compares the traders on the Santa Fe Trail to traveling merchants of ancient and medieval times. "Capital was footloose and fancy free" on the Santa Fe Trail, he writes in *The Charles Ifield Company*, a chronicle of "the rise and decline of mercantile capitalism" in New Mexico. That capital consisted mainly of mules, oxen, "Murphy" wagons, and merchandise, all of which were moveable. Because of the territory's isolation, entrepreneurial merchants from the eastern U.S. in the early 1800s, having mortgaged their property back home to make the trip, found it unprofitable to remain long in New Mexico. As a result, they rarely set up shop but tried to sell their goods as quickly as possible to the handful of local businesses in Santa Fe who served as wholesalers. Even the wholesalers tended to fail or, if successful, returned "home" when they had accumulated enough money to retire to the east.

Parish writes that a surge in mercantile enterprise occurred in the mid-1800s with the arrival of talented and industrious German Jewish immigrants in New Mexico. These merchants, in an early example of "networking" as discussed in Chapter 2 of this report, established relationships with large specialized industries in the east and made it economically feasible to supply those industries across the vast stretches of sparsely populated land. The New Mexico wholesalers took in goods from small specialists—farmers, loggers, trappers, and others—and moved them in significant quantities to the large buyers in return for monetary exchange, which was scarce in remote New Mexico. (The beginnings of federal spending in New Mexico were also present, as the Army units at Forts Craig, Defiance, Wingate, and Union served as major customers of the wholesale enterprises.) The major industrial businesses did not move to New Mexico because they demanded large nearby markets for their output.

The construction of railroads and improved highways ended the wholesalers' unique role in bridging the gap between New Mexico's small suppliers and large businesses far away. The routing of the railroad through Albuquerque and Las Vegas also shifted the center of economic activity away from Santa Fe for the first time. Despite a number of homegrown success stories like the Maloof Companies of Albuquerque, New Mexico has remained relatively sparsely populated and heavily dependent on government spending. Despite the obvious presence of bold risk takers throughout its history, it is not clear that New Mexico's historical development has produced an entrepreneurial environment that is conducive to commercializing its innovative human resources.

## **Recent Events**

*The Wall Street Journal* (February 22, 2000) quotes the *Four Corners Business Journal's* Hugh LeVrier as saying, "Anytime that you have government dominating the economic climate, you're not in a progressive business climate." The same article quotes Chris Amenson of SBS Technologies, who mentions as barriers to business New

Mexico's personal income taxes and legal prohibition against reissuance of its own stock a public company has bought back. Nevertheless, an unprecedented level of activity by individuals and organizations suggests a renewed interest in exploiting New Mexico's comparative advantages in such areas as artisanship and high technology.

In July 2003, Santa Fe hosted the Western regional meeting of the Association of University Technology Managers conference, "Innovative Approaches to Technology Transfer." In January 2004, the Albuquerque City Council announced initiatives to establish two small business incubators and to structure an economic development ordinance that would permit the City to provide economic development assistance to businesses. Similar efforts elsewhere reflect establishment of economic development ordinances to work around the state constitution's anti-donation clause under the Local Economic Development Act of 1994. (The anti-donation clause prohibits governmental units from giving anything of value to private businesses or individuals.) Also in January, New Mexico Private Investors and Technology Ventures Corporation sponsored the Power of Angel Investing Seminar.

In September 2003, the Governor's Summit on Economic Development featured several speakers, including Ernesto Sirolli, whose disillusionment in the 1970s with policy-driven, top-down efforts to stimulate economic development led him to an innovative new people-centered way to bring out and nurture the entrepreneurial passion residing in an area's residents. As he describes in his book, *Ripples from the Zambezi* (New Society Publishers, 2<sup>nd</sup> ed., 2003), an "Enterprise Facilitator" (1) listens passively and confidentially to potential entrepreneurs as they express their dreams, (2) identifies those with true passion, and (3) assists committed entrepreneurs in procuring needed skills and resources.

Following Sirolli's appearance at the Summit in September, interested individuals and groups, including the Public Service Company of New Mexico, the New Mexico Industrial Development Executives Association, Next Generation Economy, Inc. (NextGen), and the Small Business Development Centers, worked to sponsor Enterprise Facilitation workshops in Belen, Carlsbad, Gallup, Silver City, and Taos. The Economic Development Department posted on its web site extensive information on Enterprise Facilitation in connection with EDD's request for statements of interest and qualifications from individual communities, groups of communities, or multi-county areas between 15,000 and 50,000 population to undertake Enterprise Facilitation Demonstration projects in New Mexico. EDD has investigated the process and its successes in rural areas. Operations in Montana, Oregon and Kansas were observed that were similar to many New Mexico communities.

EDD notes that Enterprise Facilitation does not conflict with traditional economic development initiatives and is not intended to replace existing programs. This program maximizes the efforts of traditional revitalization programs by referring clients to local resources. It encourages local business retention and expansion rather than recruiting businesses to relocate.

While Sirolli concentrates on rural areas, Carnegie Mellon University Professor of Regional Economic Development Richard Florida emphasizes the “creative class” of scientists, engineers, architects, designers, artists, musicians, and other creative individuals and communities of individuals in urban areas. In August 2003, NextGen hosted Florida for a discussion of New Mexico’s “new” economy. In his book, *The Rise of the Creative Class* (Basic Books, 2002), Florida argues that centers of the creative class are more likely to be the economic winners of the future. Therefore, he says, creative centers like Albuquerque and Santa Fe should invest in initiatives that promote a broad diversity of creative activity, including research and development, education, arts, music, and culture. Conversely, they should de-emphasize what he calls “creeping generic” like sports stadiums, shopping malls, chain restaurants, and similar ventures that contribute nothing to the authenticity and originality of the area.

### **Industry Clusters**

The National Governors Association report on entrepreneurial growth points out that companies in related industries tend to cluster together. For instance, the automobile industry cluster in Detroit includes not only the automakers but also businesses that support that industry. Efforts to stimulate cluster development concentrate not on one company but on similar companies and their potential interactions. Unlike cluster development efforts in some locations around the country, not all the interest in clusters in New Mexico centers around high technology.

Although economic development efforts in New Mexico appropriately include attempts to attract businesses from outside the state (e.g., the Economic Development Partnership), there is renewed emphasis on nurturing startups and existing businesses inside the state. Albuquerque Economic Development and some other organizations actively engage in both approaches. Santa Fe Economic Development, Inc., and NextGen are two organizations that feature the cluster approach. By emphasizing naturally existing advantages and expertise in the state, the cluster concept can complement both thrusts.

While the benefits of clusters are obviously not limited to small or home-grown companies, clustering enables entrepreneurs to specialize and tap into particular industries and to form networking relationships with mentors and other entrepreneurs. Clusters tend to have a low level of vertical integration, which reduces barriers to entry. Angels and venture capitalists often look favorably on clusters as generators of deal flow. The cluster concept can also be useful in rural areas, where research and development can bring new, often environmentally friendly, products and processes (and therefore new, higher-paying jobs) to dairy, other agricultural production, oil and gas, and other natural resource-based industry concentrations. However R&D is used, it is important to pay attention to the marketability of the technology. In economic development parlance, “technology push” must be reconciled with “market pull.”

What constitutes a cluster is in the eye of the beholder. Different observers identify different clusters and subclusters when they analyze the economic activity in

New Mexico or any region. A detailed [analysis](#) of 17 clusters (aerospace, agricultural production, back office operations, biotechnology, computers and computer applications, dairy, electronic equipment manufacturing, food processing, maquiladora, metal works, oil and oil refining, optical and photonics technology, plastic mold injection, recreation equipment manufacturing, software development, and telecommunications) identified by agencies in New Mexico as drawing on the state's comparative strengths is available on the NMSU Center for Economic Development Research and Assistance website. The Council on Competitiveness, using data from the Harvard Institute for Strategy and Competitiveness Cluster Mapping Project, lists nine clusters in central New Mexico: education and knowledge creation, information technology, heavy construction services, entertainment, analytical instruments, jewelry and precious metals, medical devices, lighting and electrical equipment, and aerospace engines. Clusters on NextGen's website are reasonably representative of those that appear on multiple lists.

### *Biotech/Biomed*

New Mexico's biotechnology and biomedical cluster has grown steadily for more than ten years and covers everything from pharmaceuticals and medical technology manufacturing to bioinformatics. Albuquerque Technical Vocational Institute offers a program with a two-year associate's degree to support the growth of New Mexico's biotech companies. In addition to a significant number of companies, cluster components include the UNM Health Sciences Center, Sandia National Laboratories, Los Alamos National Laboratory, the [National Center for Genome Resources](#) in Santa Fe, the Lovelace Respiratory Research Institute, and the New Mexico Biotechnology and Biomedical Association.

### *Electronic Systems/Aerospace*

Activities include computer chip and silicon wafer manufacturing, as well as production of components and electronics assembly. In addition to small and large companies operating in New Mexico, cluster components include the Professional Aerospace Contractors Association, UNM's [Center for High Technology Materials](#), the UNM School of Engineering, and specialized training programs at TVI.

### *Information Technology*

This cluster unites supercomputing, informatics, data mining, graphics animation and visualization, geospatial information, environmental software, educational technologies, multimedia, Internet technologies, cyber-security and encryption and networking technologies. In addition to a large number of companies, the cluster embraces the New Mexico Information Technology and Software Association, the [Center for High Performance Computing](#) at UNM, the national labs, the Santa Fe Institute, and TVI. The information science cluster ("Info Mesa") and the Santa Fe Institute are described in Ed Regis's book, *The Info Mesa: Science, Business, and New Age Alchemy on the Santa Fe Plateau* (W. W. Norton & Co., 2003).

## *Microsystems*

*New Mexico Business Weekly* reported in March 2003 that information supplied by NextGen and others led to New Mexico's elevation to a No. 3 ranking among the top ten hot spots for "small tech" by *Small Times* magazine. Small tech includes microelectromechanical systems (MEMS) and nanotechnology (molecular- and atomic-level technology). Long known for work in microsystems, Sandia seeks to advance the state of the art through its [Microsystems and Engineering Sciences Applications \(MESA\)](#) project. Sandia and Los Alamos are combining efforts in creating the [Center for Integrated Nanotechnologies](#), a collaborative user facility. The [Manufacturing Training and Technology Center](#) and other research and teaching facilities at UNM, NMSU, and TVI partner with other cluster components.

## *Optics*

The optics industry cluster has evolved from government contractors to companies that design, develop, and manufacture optics systems and components for both the public and private sector. Opportunities in the future, says New Mexico optics entrepreneur Paul Shirley, will be in precision measurement because process controls and tools are increasingly dependent on optics technology. Optics will also play a major role in microsystems and nanotechnology. Cluster components include small and large companies, the [Air Force Research Laboratory Phillips Research Site](#), the [Alliance for Photonic Technology](#), the [High Energy Laser Systems Test Facility](#) at White Sands Missile Range, and leading research and educational programs in optical science and photonics (a combination of electronics and optics) at UNM.

## *Artisan Manufacturing*

NextGen points out that New Mexico has a long and rich creative tradition that flourishes today with an estimated 20,000 artisans producing such crafts as jewelry, pottery, furniture, and textiles. The state's artisans have been the subject of special promotions at Bloomingdale's and the fabled Dallas Market Center. State Department of Tourism visitor surveys show that arts and crafts are a major reason people visit New Mexico. The artisan-manufacturing cluster in central New Mexico has a number of large operations, but typically producers are one- to three-person shops. The dominant segments are jewelry, furniture, pottery and clothing, but creativity is unlimited. The segment also embraces such diverse crafts as guitar making, ceramic tiles, leatherwork, wrought iron and even hand-crafted sinks and light fixtures. In 1999, studies by Regional Financial Associates found that employment in New Mexico artisan manufacturing had risen dramatically over the last decade, while jobs in the same segment had declined nationally. The number of companies had quadrupled in the state from about 100 in 1990 to about 400 in 1999. Jewelry is easily the cluster's largest segment. Albuquerque also has more than 40 furniture designers and nearly as many manufacturers. Pottery and textiles have the deepest roots of all in New Mexico. Pueblo artisans produce ceramics in both traditional and modern designs, some Hispanic potters work in micaceous clay, and

other artisans create contemporary forms. Like pottery, textiles (including weavers and clothing manufacturers) are both an industry and a cottage craft.

## **Organizations and Other Resources Involved With Small and Emerging Business**

New Mexicans have access to an almost bewildering array of national, state, regional, county, and local agencies and private-sector groups and consultants involved in economic development, including support for small and emerging businesses. While there are advantages to having many diverse resources, the sheer number and variety of such organizations raise questions about their ability to work together with efficiency and harmony. Despite numerous examples of individual groups' effectiveness and ability to coordinate efforts, little evidence is available of their overall effectiveness as indicated by New Mexico's low ratings in many economic measures. Organizations and individuals have competing philosophies, focus, funding sources, perspectives, priorities, and goals, with the result that conflicts may arise.

The EDD web site lists several groups under "[Other Resource Website Links](#)." These and some additional resources and links appear below. Several of the descriptions come from EDD's site. Most of the local organizations around the state are not listed individually but are accessible from such collective links below as "Communities in New Mexico" and "New Mexico Small Business Development Centers."

New Mexico-specific organizations and resources are grouped below based on their mission as (1) Business Assistance Providers, (2) Business Associations/Alliances, (3) Business Information Resources, and (4) Sources of Capital. These groupings are intended as a rough guide—many organizations provide more than one service and could easily be categorized differently. It is hoped that there are no serious misclassifications. Hyperlinks to the web sites of the organizations and resources listed below are provided in Appendix A of this report.

### **New Mexico-Specific Organizations and Resources**

#### *Business Assistance Providers*

- [Genesis Center at Arrowhead Research Park, NMSU](#): Designed to house small, technology based start-up companies that will assist economic development in Las Cruces and New Mexico. A major function is to spin technology out of the university and channel it into the marketplace.
- [Job Training Incentive Program \(JTIP\)](#): An aggressive program that may fund up to 50 percent in urban areas--and 65 percent in rural--of the salaries for six months of new employees hired for on-the-job training.
- [Los Alamos National Laboratory Technology Commercialization Office](#): Works to identify, mature, and commercialize laboratory technologies and offers a range of technical and business services to help regional

businesses and entrepreneurs.

- [Manufacturing Extension Partnership](#): Part of a nationwide network of technical, manufacturing, and business specialists linked together by the Department of Commerce, National Institute of Standards and Technology (NIST). New Mexico MEP is a non-profit service available to all manufacturers in the state to help them compete more effectively in the global marketplace. Benefits include improved efficiency, elimination of waste, international certifications, integration into global supply chains, and networking New Mexico businesses with the resources they need to become more profitable.
- [New Mexico Colleges, Community Colleges & Universities](#): In addition to their research activities, most have entrepreneurship centers and/or courses, libraries and other resources for assisting small and emerging business. Links in Appendix A under this item provide access to individual campuses.
- [New Mexico High Tech Job Forum](#): A free service linking skilled individuals looking for employment or freelance work with New Mexico technology companies and industry partners seeking qualified personnel to support New Mexico's economic development.
- [New Mexico 9000](#): A partnership between the Economic Development Department, Los Alamos National Laboratory, Sandia National Laboratories and Honeywell Federal Manufacturing established New Mexico 9000, providing businesses with technical assistance to achieve ISO 9001:2000 compliance/certification at an affordable cost.
- [New Mexico Small Business Development Centers](#): Provide confidential assistance with business planning, marketing, financing, international trade and locating other forms of assistance. Government procurement can be a major source of revenue for small businesses, especially in New Mexico, with its many city, state, and federal government offices, military facilities, and national laboratories. The NMSBDCs cooperate with a variety of state and federal programs to provide procurement assistance.
- [New Mexico Technet](#): Founded in 1984, Technet was charged with linking the national laboratories, state government, the universities, and the private sector with a high capacity fiber optic network and introducing applications that demonstrated the value of this technology. This created a communications- and technology-based environment to foster economic development, education, and research throughout the state. Contributing to the growth of New Mexico business is a major cornerstone of Technet. Working with businesses and economic development organizations, Technet strives to educate and support deployment of technology-based

applications throughout New Mexico.

- [New Mexico Technology Assets Program \(TAP\)](#): Volunteer group of business, university and government mentors for high-technology entrepreneurs.
- [Next Generation Economy, Inc. \(NextGen\)](#): An economic development organization focusing on clusters, NextGen works to understand the strengths within each of the clusters unique to central New Mexico and match them with emerging global and national trends in the marketplace. NextGen performs research and makes the information available to the business, financial, and educational components of the community. Selected clusters of interest to NextGen are described in Chapter 6. The organization is active in networking through such vehicles as conferences and web-based applications (e.g., see [NextJob New Mexico](#).) In March 2004, NextGen sponsored the 2004 Class of the Entrepreneurial Leadership Excelerator, an intensive leadership mentoring program.
- [NextJob New Mexico](#): A web application created by NextGen to help employers and job seekers find each other while helping New Mexico get to know its workforce better. The system will match up jobs to job seekers based on skill sets instead of just resumes. The interaction of these groups on the site provides data from which labor market reports can be generated. The reports are designed for use by training and educational institutions, economic development agencies, employers, job seekers, and many other members of our community.
- NMSU [Center for Economic Development Research and Assistance](#): Located in the College of Business Administration and Economics at New Mexico State, CEDRA is dedicated to providing business and economics research and consultation to both the public and private sectors.
- NMSU [Physical Science Laboratory](#): PSL, originally created to provide scientific and engineering expertise to White Sands Missile Range, seeks to build on expertise to transform the workforce and marketplace by developing strategic initiatives through major business segments and spin-off opportunities.
- [Public Service Company of New Mexico \(PNM\) Entrepreneurial Leadership Awards Program](#): Program to recognize the accomplishments of New Mexico's most successful women- and minority-owned microenterprises.
- [Quality Center for Business at San Juan College](#): The QCB is an integrated approach to assisting Farmington area businesses, industry and organizations with staff or management training; assistance in business

planning and technical support; space and office support for growing companies; and the economic development of San Juan County. San Juan College sponsors, or actively participates in, four major programs, all located on-site at the QCB.

- [Regional Development Corporation](#): A Department of Energy Community Reuse Organization (CRO). RDC's work plan is leading to the development of an economically diverse regional economy where thoughtful and cooperative planning results in an environment that nurtures business and entrepreneurial development. RDC creates collaborative platforms for stakeholders to achieve economic development. Initiatives include Connect Rio Arriba, NMBizSites, SATOP, and the Economic Development Clearinghouse.
- [Rural Payday](#): Helps New Mexico's smaller cities and towns prepare to meet the needs of today's information- and technology-based businesses.
- [Sandia National Laboratories Small Business Assistance Program](#): Technical and business assistance services to New Mexico's small businesses (generally defined as any with 500 employees or fewer).
- [Sandia Science & Technology Park](#): A 200-acre "technology community" adjacent to Sandia National Laboratories. Facilities include microelectronics development, robotic manufacturing science and engineering, and advanced manufacturing processes labs.
- [Santa Fe Business Incubator \(SFBI\)](#): Formed to assist emerging businesses in Santa Fe. Supports new and growing businesses under one roof, offering a wide range of business training, support programs, flexible leases, and shared equipment in a professional working environment.
- [Santa Fe Economic Development, Inc.](#): Interested in cluster approach to "economic gardening" of local entrepreneurial enterprises.
- [Science & Technology Corporation, UNM](#): Nonprofit corporation formed and owned by the University of New Mexico to protect and transfer its faculty inventions to the commercial marketplace. Licenses and creates start-up companies based on innovative technology developed at UNM, including optics, microfluidics, and high performance materials as well as therapeutics, diagnostics, medical devices, and drug discovery tools.
- [Service Corps of Retired Executives \(SCORE\)—New Mexico](#): "Counselors to America's Small Business." A nonprofit association dedicated to entrepreneur education and the formation, growth and success of small business.

- [Space Alliance Technology Outreach Program \(SATOP\)](#): A free service, administered by the [Regional Development Corporation](#) (a Department of Energy Community Reuse Organization (CRO)) and supported by NASA, designed to provide engineering assistance and to speed the transfer of space technology to the private sector.
- [Technology Ventures Corporation](#): Serves as a bridge between the public and private sectors for the commercialization of technologies developed at Department of Energy national laboratories, specifically Sandia National Laboratories, and assists in the expansion of existing businesses. TVC's tenth annual Equity Capital Symposium (ECS) will be May 11-12, 2004. The New Mexico ECS presents technology-rich business opportunities available for commercialization.
- [U.S. Department of Agriculture Rural Development New Mexico Resources](#): Includes the Rural Business-Cooperative Service (RBS), which works in partnership with the private sector and community-based organizations to provide financial assistance and business planning. RBS helps fund projects that create or preserve quality jobs and/or promote a clean rural environment.
- [U.S. Small Business Administration New Mexico Resources](#): Homepage for the Albuquerque District Office has extensive information and links. In fiscal year 2003 the SBA in New Mexico issued 513 loans valued at \$86 million. The 8(a) Business Development Program is described at [www.sba.gov/8abd/](http://www.sba.gov/8abd/). The 7(a) loan program has experienced recent funding interruptions. The 504 loan program is described at [www.sba.gov/financing/sbaload/cdc504.html](http://www.sba.gov/financing/sbaload/cdc504.html).

#### *Business Associations/Alliances*

- [American Marketing Association—New Mexico Chapter](#): Holds monthly networking luncheons in Albuquerque. Provides a mechanism by which marketing professionals can connect with other marketers in the world to share information and network.
- [Association of Commerce and Industry](#): Statewide legislative advocate of business interests; accredited by U.S. Chamber of Commerce to serve as the State Chamber.
- [BUILD New Mexico](#): A not-for-profit economic development company that facilitates, promotes, and creates jobs for the unionized construction industry.
- [Chambers of Commerce](#): Often the first stop for local business knowledge and contacts. Link in Appendix A provides access to local chambers.

- [CreateAbq](#): Citizens for the Cultivation of Creative Enterprise. An arts-focused group working toward creative economic development of Albuquerque. Interested in the Richard Florida approach described in this chapter to reframe the public and private discourse on economic development by focusing on the role of creative communities and quality of place as the keys to prosperity.
- [Economic Development Partnership](#): Not intended to nurture emerging businesses from within New Mexico but involved in economic development. Created in 2003 to focus solely on recruiting new businesses to New Mexico. Headquartered in Albuquerque.
- [Economic Forum](#): The mission of the Economic Forum is to organize and work with the most effective combination of local and state leadership from business, government, and educational institutions, for the purpose of achieving objectives that will improve the economic welfare of Albuquerque, Bernalillo County, and New Mexico.
- [High Tech Consortium of Southern New Mexico](#): Organized in 2001 to make southern New Mexico a regional technology leader in the short term and a national center of technical excellence in the long term.
- [Hydrogen Technology Project \(HyTeP\)](#) and the [New Mexico Hydrogen Business Council](#): New Mexico's hydrogen-related economic development initiative.
- [Innoventure](#) at NMSU: Annual competition designed to impact and accelerate economic and entrepreneurial educational opportunities for the citizens of New Mexico.
- [Leadership New Mexico](#): A nonprofit, 501(c)(3), tax-exempt organization founded to identify current and emerging leaders throughout New Mexico, enhance their leadership skills, and deepen their knowledge of the challenges and opportunities facing the state.
- [Metro New Mexico Development Alliance](#): Effort of Albuquerque, Belen, Los Alamos, Los Lunas, Rio Rancho and Santa Fe to help businesses start up, expand, or relocate to the metro area.
- [New Mexico Arts](#): Rural New Mexico's Arts Entrepreneurs.
- [New Mexico Biotechnology and Biomedical Association \(NMBBA\)](#): Represents a diversity of 100 medical-device, -diagnostic, -bioinformatic, and "-pharma" companies with 400 participants and 130 members from throughout the state.

- [New Mexico Entrepreneurs Association \(NMEA\)](#): An organization “run by entrepreneurs for entrepreneurs,” with programs focused on insights, tools, and solutions for leading a business to success. NMEA meets the second Wednesday of every month, primarily in Albuquerque, with every fourth month’s meeting in Santa Fe.
- [New Mexico Industrial Development Executives Association \(NMIDEA\)](#): Organized to promote New Mexico's economic growth through focused advocacy of economic development issues, providing networking, professional development, education and training opportunities for its members. Anyone responsible for or interested in the stimulation of new employment and new income in New Mexico is eligible for membership
- [New Mexico Information Technology & Software Association \(NMITSA\)](#): NMITSA leads, unites, promotes and impacts the Information Technology & Software industries to stimulate significant business growth in New Mexico. Provides business networking venues for stimulating business opportunities, sharing ideas and stimulating business growth. Also offers local educational and development opportunities at the executive, managerial and technical workforce levels.
- [New Mexico Internet Professionals Association \(NMIPA\)](#): Provides a forum where those in all areas of the Internet industry can exchange knowledge and ideas.
- [New Mexico Optics Industry Association \(NMOIA\)](#): Dedicated to bringing together optics-related businesses, institutions, and professionals to foster the growth of this industry in New Mexico.
- [Professional Aerospace Contractors Association \(PACA\)](#): A nonprofit organization formed to promote relationships between the aerospace industry and government agencies in New Mexico. PACA is evolving to include more commercial interests. Holds monthly luncheon meetings at Kirtland AFB.

### *Business Information Resources*

- [Communities in New Mexico](#): Links in Appendix A under this site provide access to information on numerous cities and towns around New Mexico, including economic development and small and emerging business resources.
- [Council on Competitiveness Central New Mexico Regional Competitive Initiative](#): Recent analysis of central New Mexico’s innovation assets and economic strengths and weaknesses. Sample comment included in report: “New Mexico—a great place to live, but you wouldn’t want to start a

business here.” Located in Washington D.C., the Council on Competitiveness consists of corporate CEOs, university presidents, and labor leaders from throughout the nation. The goal of the Council is to increase U.S. economic competitiveness and security through national and regional innovation.

- [Governor’s Summit on Economic Development](#): Conference held in September 2003.
- [New Mexico Economic Development Department \(EDD\)](#): As part of its mission, EDD hosts the single most extensive web site devoted to doing business in New Mexico.
- [New Mexico Fact Book](#): Sourcebook for New Mexico on clusters, tax policy and initiatives, workforce, transportation, agriculture, natural resources, manufacturing, technology, research, utilities, energy, telecommunications, quality of life, and the economy.
- [New Mexico First](#): A statewide, non-profit, non-partisan membership organization that brings together a broad cross section of citizens to address important public policy issues facing all New Mexicans. New Mexico First seeks to be a “catalyst for positive action in New Mexico.” Its mission is to effect positive change by addressing fundamental policy issues through the Town Hall process, creating a statewide network of informed and caring citizens, and leading New Mexicans to take action.
- [New Mexico Indian Reservation Economic Study Group](#): Consortium of business, academic, journalist, and public and private research organizations to analyze the economic and fiscal relationship between Indian reservations in New Mexico and the State economy and revenue system.
- [New Mexico Rural Development Response Council](#): Formed in 1992 to assist rural communities in capacity building. Recognizing that many public and private organizations are already providing services to rural New Mexicans, the New Mexico Rural Development Response Council's role has been broadly defined to complement, reinforce, and enhance these efforts by serving as a facilitator, expeditor, convener, coordinator, and, where appropriate, initiator. Its principal job has been to build working relationships among public, private, and tribal groups and to develop resources networks that address rural concerns (from Wayne Gyulai, writing in *Economic Development Review*, Summer 1996).
- NMSU [Bureau of Business Research](#): Provides business and economics research and consultation to both the public and private sectors.

- [Senator Jeff Bingaman’s Small Business Resource Guide](#): Catalog of resources for small and emerging businesses in New Mexico.
- [Think New Mexico](#): A results-oriented, not-for-profit think tank headquartered in Santa Fe. Think New Mexico does not subscribe to any particular ideology but attempts to promote workable solutions to problems, especially those that place New Mexico at or near the bottom of many national rankings.
- [UNM Bureau of Business and Economic Research](#): Conducts economic and demographic research and analysis for the State of New Mexico.

### *Sources of Capital*

- [ACCION-New Mexico](#): Access to business credit and training for entrepreneurs. Known for “microlending.” Information on ACCION’s capital activities in New Mexico appears in Chapter 3.
- [Coronado Ventures Forum](#): Founded in 1994 to educate New Mexico investors and entrepreneurs on the process of early-stage, private equity funding, and to provide a gathering point for these two groups to come together and network.
- [Enchantment Land Certified Development Company](#): For small businesses in need of financing for fixed assets such as land, buildings and equipment, ELCDC helps companies access SBA 504 loan programs.
- [McCune Charitable Foundation](#): Not a source of capital for businesses or individuals but provides grants to qualified 501(c)(3) nonprofit organizations, Indian tribes, public schools, and governmental agencies for community-based, community-driven projects that enrich the cultural life, health, education, environment, and spiritual life of the citizens of New Mexico. Preference is given to organizations that operate programs in Santa Fe or northern New Mexico. The Foundation is involved in the Sirolli Enterprise Facilitation initiative described earlier.
- [New Mexico Community Development Loan Fund](#): A private, non-profit organization formed in 1989 by members of the New Mexico Council of Churches to address poverty in New Mexico. It provides loans, training, and technical assistance to business owners and non-profit organizations throughout New Mexico. Interest rates and payment schedules are worked out on a case-by-case basis. All loans require collateral. A key attribute of Loan Fund clients is that their enterprises provide social benefits.
- [New Mexico Private Investors](#): An affiliation of accredited private investors and venture capital companies working together to invest in

companies with world class potential from technology based on patented/proprietary products or processes. Ideally, the valuation of such companies should have the potential to exceed \$100 million in five years.

- [New Mexico Small Business Investment Corporation](#): A state-chartered entity in which \$10 million has been invested from the state's Severance Tax Permanent Fund to address capital gaps in New Mexico. Funds are to be invested in preferred stock of small businesses in New Mexico. The SBIC was broadened in the 2003 Legislature to move these funds into the marketplace using both equity and debt by partnering with other financial investors.
- [New Mexico State Investment Council](#): The Council has several investment programs. Of particular relevance to this report is the New Mexico Venture Capital Program. The SIC invests in private equity through limited partnerships. As a limited partner, the SIC is a silent investor, providing investment capital but not making investment decisions. The general partners of the limited partnerships are responsible for choosing and monitoring individual companies for investments. The SIC has investments in several private equity funds that must maintain offices in the State and are required to target investments in New Mexico companies.
- [North Central Economic New Mexico Development District](#): The NCNMEDD manages two micro loan programs with funds provided by the Economic Development Administration's Revolving Loan Fund (EDA RLF) and the Department of Energy's Regional Development Corporation (TCR RLF).
- [WESST, the Women's Economic Self-Sufficiency Team](#): A non-profit organization that facilitates the startup and growth of women- and minority-owned businesses. Provides training and mentoring to entrepreneurs and also operates a micro-loan fund. Headquartered in Albuquerque, WESST Corp has regional offices in Farmington, Las Cruces, Roswell, Santa Fe, and Taos.

#### **Non-New Mexico Organizations and Resources (in alphabetical order)**

- [Association for Enterprise Opportunity \(AEO\)](#): A national association of organizations committed to microenterprise development; provides its members with a forum, information, and a voice to promote enterprise opportunity for people and communities with limited access to economic resources.
- [Association of University Research Parks \(AURP\)](#): Organization supporting research/science parks and technology incubators. Provides

resources for technology transfer, commercialization, and building economic development in communities through technology. Members include Science & Technology Corporation at UNM and Sandia Science & Technology Park.

- [Association of University Technology Managers](#): A nonprofit association of more than 3,200 technology managers and business executives who manage intellectual property. AUTM's members represent over 300 universities, research institutions, teaching hospitals and a similar number of companies and government organizations.
- [Capital Connection](#): Venture capital firms that have invested in companies in the southwest.
- [Community Development Venture Capital Alliance \(CDVCA\)](#): Promotes use of the tools of venture capital to create jobs, entrepreneurial capacity, and wealth to advance the livelihoods of low-income people and the economies of distressed communities.
- [Corporation for Enterprise Development \(CFED\)](#): Emphasizes “asset building” in low-income communities. Web site contains an interesting state-by-state “report card.”
- [Edward Lowe Foundation—Building Entrepreneurial Communities](#): “One or two entrepreneurs can shine in any community, but they do not make an entrepreneurial community. To have a strong entrepreneurial community, numerous threads must be woven together, including public policy that supports entrepreneurship, people, money, technology, customers, transportation, a supportive environment and services. As more threads are woven together, the community's strength and resource base grows.” This site provides detailed recommendations.
- [Enterprise Development Website](#): Lists and rates electronic resources related to enterprise creation, business incubators, and self employment initiatives.
- [Entrepreneurs' Help Page](#): Web site that distributes basic information on legal, financial, and management issues that commonly affect people who are starting businesses.
- [Entrepreneur Lifetips Quiz](#)—Online quiz to see if you have the “entrepreneurial spirit.”
- [Innovation U—New University Roles in a Knowledge Economy](#): An extensive study of the 21<sup>st</sup> Century economic development role of the university by the Southern Technology Council and Southern Growth

Policies Board. A guide for policymakers and university officials, this report contains case studies on 12 universities that are doing a particularly good job of building alliances with industry and playing active roles in the economic development of their regions.

- [International Economic Development Council \(IEDC\)](#): Created through the merger of the Council for Urban Economic Development (CUED) and the American Economic Development Council (AEDC), IEDC is the largest membership organization serving economic developers and the economic development profession.
- [Kauffman Center for Entrepreneurial Leadership Clearinghouse on Entrepreneurship Education \(CELCEE\)](#): Provides abstracts of materials on entrepreneurship education at all levels. The database primarily covers material from 1996 to the present and is updated weekly. CELCEE also publishes digests on entrepreneurship education and houses a [collection of links](#) to organizations dealing with entrepreneurship and entrepreneurship education.
- [Kauffman Foundation](#): A major player on the entrepreneurship scene, the Ewing Marion Kauffman Foundation works with partners to encourage entrepreneurship across America and improve the education of children and youth. The Foundation concentrates its operations and grant making on entrepreneurship and education.
- [Kauffman Foundation's EntreWorld](#): A fairly comprehensive information portal for entrepreneurs.
- [Library of Congress Entrepreneur's Reference Guide to Small Business Information](#): An online resource.
- [NASA Small Business Innovation Research \(SBIR\)/Small Business Technology Transfer \(STTR\)](#): Opportunities for small, high technology companies and research institutions to participate in Federal Government sponsored research and development efforts in key technology areas.
- [National Business Incubation Association \(NBIA\)](#): Organization to advance business incubation and entrepreneurship. Composed primarily of incubator developers and managers. Provides training and a clearinghouse for information on incubator management and development and on tools for assisting emerging businesses. Web site provides list of best practices for business incubators.
- [National Dialogue on Entrepreneurship](#): Started in summer of 2003 under a grant from the Ewing Marion Kauffman Foundation to improve awareness of the value of entrepreneurship.

- [National Governors Association Entrepreneurship Resources](#): An online repository of information and links.
- [National Institute of Standards and Technology \(NIST\)](#): Advanced Technology Program provides grants to accelerate development of high-risk technologies that hold significant commercial promise.
- [Reconnecting America](#): Formed to link transportation networks and the communities they serve.
- [Sirolli Institute](#) (International Enterprise Facilitation, Inc.): An approach to assisting entrepreneurs that has received recent attention in New Mexico with Ernesto Sirolli's appearance at the September 2003 Governor's Summit on Economic Development. Additional information appears under "Recent Events" in this chapter.
- [Small Business Innovation Research \(SBIR\)/Small Business Technology Transfer \(STTR\) Programs](#): New Mexico ranked 22<sup>nd</sup> in total STTR dollars in 2002.
- [Small Business Investment Company \(SBIC\) Program](#): A public-private partnership to provide a larger capital base to entrepreneurs by adding private capital to SBA-guaranteed funds.
- [Small Business Survival Committee](#): Works to influence legislation and policies that help to create a favorable and productive environment for small businesses and entrepreneurship. By educating policymakers, legislators, the media and the public about the critical role that small businesses play in the economy--and how government actions can positively or negatively affect the small business community--SBSC strives to establish a solid public policy foundation upon which entrepreneurial activity and small businesses can survive and flourish.
- [Small Office Home Office \(SOHO\)](#): Organization for small office professionals. See an inspirational account of the experiences of a New Mexico entrepreneur in the field of international trade at [www.soho.org/Technology\\_Articles/Women\\_On\\_the\\_Web.htm](http://www.soho.org/Technology_Articles/Women_On_the_Web.htm).
- [U.S. General Services Administration \(GSA\)](#): For businesses interested in learning how to sell to the government.
- [Veterans Corporation](#): Created by the Veterans Entrepreneurship and Small Business Development Act of 1999 to provide access to capital, training, and resources to U.S. veteran business owners and veterans starting their own businesses. Tied to New Mexico by House Joint

Memorial 85 of 2003, which asks the New Mexico Veterans' Service Commission to present a plan to the legislature for veteran-owned small business development.

## Chapter 7

### Examples from Other States

#### Introduction

Success stories from outside New Mexico reflect a favorable mix of structure and flexibility. While government can be a facilitator by making the business climate more attractive, the emergence of a powerful economic phenomenon like California's Silicon Valley is the result not of a grand strategy but of an entrepreneurial mindset and "collective objective." Concerted efforts go into planning and coordinating, but a great deal of leeway is left open to seize unanticipated opportunities.

Observers point to such recurring themes as open networks of communication among entrepreneurs; recruiting of talented entrepreneurs to serve as mentors; formal recognition of the efforts of individuals; use of branding and logos for networks and alliances to create identity and a collective mentality; charismatic, high-profile leadership; entrepreneur-friendly government; the central role of universities, business incubators, and anchor companies as hubs for business development; organization of economic development programs (including attracting businesses from out of state) around the industry cluster concept; alliance-building among groups interested in economic development; access to seed capital and broadband telecommunications; the presence of large numbers of knowledge workers and management teams; and low crime and amenities that enhance quality of life. Government bureaucracy and inflexibility conflict with entrepreneurs' desire for speed. High crime rates, poor transportation planning, and low-quality K-12 education make areas unattractive to the very participants whose presence is needed to move the economy to a new level.

#### Success Stories

Below are some examples of successful or promising initiatives from outside New Mexico. It should be kept in mind, of course, that numerous examples of excellence already exist within New Mexico. Los Alamos National Laboratory was recognized as a leader in technology transfer practices and regional economic development in a recent Department of Commerce report, "Role of Federal Laboratories in Building Tech-led Economic Development: A Look at Best Practices." Los Alamos is one of nine institutions recognized because of several innovative and successful programs. Sandia National Laboratories received the 2003 Excellence in Technology Transfer award from the Association of University Research Parks. The October 27, 2003, *Albuquerque Journal* quoted Bill Drohan, Executive Director of the AURP, as saying, "Sandia serves as a model in the United States for bringing technology from a research and development institution to the marketplace." Both labs have extensive experience in research, education, training, and technology commercialization.

### *IC2 Institute, Austin, TX*

The formation of a strong local network culture among entrepreneurs played a key role in Austin's development as a high-technology hot spot. The National Commission on Entrepreneurship reports that much of the credit for Austin's transformation is due to George Kozmetsky and his IC2 Institute. Kozmetsky first came to Austin in 1966 to serve as Dean of the Graduate School of Business at the University of Texas. He later served as one of the co-founders of Teledyne, Inc. When Kozmetsky arrived, Austin's economy relied almost exclusively on state government and the university. He launched a think tank and idea laboratory that became IC2 (innovation, creativity, and capital). IC2 is involved in technology transfer, business incubator development, and network facilitation. Kozmetsky helped to recruit the private-sector research consortium [Microelectronics and Computer Technology Corporation](#) to Austin. IC2 created the [Austin Technology Incubator](#) to assist technology start-ups in a highly networked environment. IC2 also created an angel network that became [CN Group](#). This began by providing investor-to-entrepreneur introduction services, educational programs, venture capital conferences, and networks of experts and advisors offering a comprehensive range of business services. It now offers management expertise at the CEO and Board of Directors levels. Programs include the Texas Equity Capital Conference, Southern Bio Summit, Southwest Equity Capital Summit, Southwest Bio Venture Conference & Symposium and quarterly Texas Investors receptions.

Though somewhat humbled by the information technology downturn, Austin appears to owe much of its success to networking organizations, along with visionary leadership, role models like Michael Dell, neutral brokers like IC2, and its quality of life (music scene, recreational activities, etc.).

Until its economic leaps in the 80s and 90s, Austin was comparable to Albuquerque in size. Austin enjoyed a number of coups in attracting major companies, and these were helpful in establishing a foundation for the computer business. Today, in addition to networking, two key thrusts are cluster facilitation and workforce development. The largest cluster is based on the computer industry, but there is an increased interest in biotechnology. Observers attribute Austin's explosive growth to such things as deliberate efforts to create partnerships among business, government, the university, and not-for-profit organizations; making the University of Texas the "centerpiece" of research and economic development plans; and a bold, audacious approach to seizing opportunities.

Statewide, in terms of states' new economy measures, Texas ranks in the top five on jobs in fast-growing "gazelle" companies as a percentage of total jobs and on use of digital technologies in state government. Observers point to a lack of statewide coordination of economic development organizations and initiatives.

### *Massachusetts Technology Development Corporation (MTDC)*

MTDC is one of the oldest and most successful examples of direct investing by a state agency. It usually expects a return on its equity investment in five to

seven years. Private investor partners typically furnish two to five times the amount of capital provided by MTDC.

The organization provides management assistance to first-time entrepreneurs in high-tech enterprises, including reviews and critiques of business plans, advice on strategies to attract private funds, and referrals to sources of capital. MTDC's model is hard for other states to emulate, partly because of the difficulty of attracting and retaining expert fund managers in the public sector where compensation is much lower than in the private sector.

### *Georgia Research Alliance*

The GRA is a public-private partnership among six public and private universities, the business community, and the state. Its Eminent Scholars Program has recruited more than 40 renowned scientists to Georgia to serve in endowed chairs and to lead programs in research and development. The emphasis is primarily on advanced communications and biosciences.

GRA has set up technology incubators that allow emerging companies to tap into the R&D resources of host universities while refining the commercial potential of the technologies under development. So far, some 125 companies have "graduated" from the university-hosted incubators coordinated by the Alliance.

### *Stanford Technology Ventures Program*

Stanford University, aided by its reputation and proximity to Silicon Valley, has considerable experience in university-supported entrepreneurial support. The University's experience suggests benefits from identification of a champion or charismatic leader to direct an entrepreneurship education program. It stresses the need for idea developers to have access to an effective and helpful commercialization office on campus to facilitate intellectual property protection and licensing. Stanford addresses the need for coordination and communication through its [Stanford Entrepreneurship Network](#), which provides a forum to tie all the university's entrepreneurship-related programs together through regular meetings, a web portal, and quarterly educational and networking events for the entire entrepreneurship community.

### *North Carolina Research Triangle Park*

North Carolina's Research Triangle, home to the [Research Triangle Park \(RTP\)](#), was originally defined by three cities and three universities: [Raleigh](#), home of [North Carolina State University](#); [Durham](#), home of [Duke University](#); and [Chapel Hill](#), home of the [University of North Carolina](#). The Research Triangle Park hosts such companies and organizations as [Biogen](#), [Cisco Systems](#), [Covance Biotechnology Services](#), [DuPont](#), [Ericsson](#), [GlaxoSmithKline](#), [IBM](#), [Motorola](#), [Larscom, Inc.](#), [Nortel](#), [Reichhold, Inc.](#), [Troxler Labs](#) and the [US EPA](#).

The National Commission on Entrepreneurship attributes the success of the Research Triangle to (1) maintenance of focus on core mission of providing mentoring and networking opportunities to local entrepreneurs (thereby resisting temptations to branch out into other initiatives such as serving as a source of finance and lobbying for entrepreneurial interests), (2) support from local service providers (attorneys, accountants, etc.), (3) programs designed and conducted by and for entrepreneurs (mentoring, idea evaluation, business plan development, roundtables, seminars, etc.), (4) program-driven financing sources (exclusive reliance on private, as opposed to government, financing), (5) dedicated early champions who provided immediate credibility to development efforts, (6) a tradition of cooperation enhanced by formation of an organizing committee that consisted of representatives from chambers of commerce, businesses, and universities, and (7) a willingness to experiment with new ideas to nurture entrepreneurship.

The [Council for Entrepreneurial Development](#) (CED) was founded in 1984 to stimulate the creation and growth of high impact companies in the greater Research Triangle area. CED provides programs and services in four major areas: [education](#), [capital formation](#), [mentoring](#), and [communications](#).

#### *Connecticut Innovations, Inc.*

CI is a venture capital corporation initially capitalized with bonding from the state but subsequently financed through returns on its equity investments. It has invested more than \$133 million in state businesses since 1995. CI typically invests between \$50,000 and \$1 million in any given enterprise; the business entity must raise matching funds. CI may accept a proprietary technology as collateral.

CI typically deals in equity and seeks return commensurate with risk. It has a clearinghouse for high-technology information and resources and maintains a complete listing of educational programs and services and state and federal resources to help commercialize ideas. Its [Critical Technologies Program](#) encourages collaboration between the University of Connecticut and the private sector and furnishes royalty-based, market-driven capital to the university for collaborative high-technology research and development that leads to marketable products or processes.

#### *Other Examples of Government and University Practices*

The state of Washington has streamlined small business licensing through its Unified Business Identifier and Master License Service programs and one-stop access to services through its website, [access.wa.gov](http://access.wa.gov). Missouri provides a particularly extensive guide ([www.ded.mo.gov/business/pdfs/startuppacket.pdf](http://www.ded.mo.gov/business/pdfs/startuppacket.pdf)) and other services ([www.ded.mo.gov/business/startabusiness/](http://www.ded.mo.gov/business/startabusiness/)) to small and emerging businesses.

With regard to university participation, The Southern Growth Policies Board reports on 12 detailed case studies of how universities and their business incubators and research parks such as Purdue's [Discovery Park](#) have made a substantial positive

difference in local and regional economies. The authors of the report note a number of characteristics and best practices.

- University presidents with experience in starting a company, industry research, and/or partnering activities, and eager to champion economic development in addition to maintaining traditional academic excellence on campus.
- A high level of industry-sponsored research.
- Customer friendliness of policies and practices, including intellectual property policies and assistance.
- Research parks contiguous to campus with space and services for small or emerging businesses.
- Technology business incubation services and facilities run by or strongly linked to universities.
- Linking graduate education and industry research relationships.
- Availability of pre-seed, proof-of-concept funding to develop research-based innovations.
- Outreach to established industrial companies through such mechanisms as statewide, state-subsidized technical assistance services through a network of regional university offices; operational networking with colleges of engineering; and ties to the federal Manufacturing Extension Partnership.
- University connections to community-based venture funds.
- Education and training aligned with key state-based industries.
- Reducing the “brain drain” to encourage students to remain in the state.
  - Extensive use of internships and co-ops, especially in-state.
  - Career fairs and web-based services to give state-based enterprises a first look at graduating students.
  - Career service discounts to state-based companies.
- Formal partnerships with economic development organizations.
  - Hosting or operating under contract various state technology programs.
  - Participating in local and state technology councils.
  - Training economic development professionals.
  - Conducting economic development policy studies.
- Rewards to faculty for participation in economic development efforts.
- Large, continuing, state-supported research grants that require faculty/industry partnering and emphasize involvement of smaller, technology-based companies.

## **What’s Going On in Neighboring States**

### *Arizona*

Arizona ranks second in the nation in number of jobs in fast-growing “gazelle” companies as a percentage of total jobs. It is aggressively pursuing opportunities to develop and commercialize technology, particularly in biomedicine and life science. The emphasis at this point appears to be on establishing a research base as a first step. Arizona’s interest in “developing a critical mass in knowledge-based and discovery-based research” can be viewed as an effort to develop what, to a significant extent, New Mexico

already has. Touting its cutting-edge initiatives in a 13-page advertising section in a recent issue of *Forbes*, the state cited construction, with \$46 million provided by the City of Phoenix, of a state-of-the-art facility for the Translational Genomics Research Institute (TGen). Tgen plans to use information from the human genome to identify causes of diseases like Parkinson's Alzheimer's, melanoma, various forms of cancer, and diabetes. In the interest of collaboration, the presidents of all three public universities sit on Tgen's board of directors.

Pointing out that Tgen is only a part of a growing bioscience R&D infrastructure that aspires to world-class research corridor status, Arizona prides itself on "a rare collaboration among private business, state and local government, and the state's three public universities." The hope is that this infrastructure will produce a host of start-up companies. Meanwhile, the state is trying to attract other companies who want to be part of the resulting industry cluster or clusters.

Efforts are underway to allow Arizona's universities to receive compensation other than up-front licensing fees and royalties—the state's constitution prohibits them from holding equity positions in companies that commercialize their technologies. This situation could change this year.

The ad also expresses satisfaction with the foresight of Arizona voters, university officials, government leaders, and business leaders, who have "begun to put aside short-term considerations in favor of long-term economic development goals." The central long-term consideration was education, which Governor Janet Napolitano cited as the "foundation for a sophisticated economy." Four years ago, voters approved Proposition 301, which created a sales tax of six-tenths of one percent over 20 years for K-12 classroom improvements and for a state pool of research funds for the three public universities. The three universities were studied as a unit to identify their shared research strengths. The results pointed to neuro-sciences, bioengineering, and cancer research but noted that the state lacked adequate research facilities to maximize those strengths. The legislature, despite struggling with record budget deficits, passed a research infrastructure bill that sets aside \$440 million for such facilities. Other areas of development include nanotechnology and information technology, and optics. ASU has hired a number of high-profile leaders in commercialization of technology.

Observing that universities have been too passive in technology transfer, an ASU official reports that the university is now aggressively mining its research portfolio, proactively looking for scientists, and connecting them with entrepreneurs and venture capitalists. Arizona Technology Enterprises transfers technologies invented at ASU to the private sector by mining university research, pursuing patents, negotiating licenses, and marketing inventions. According to the *Chronicle of Higher Education*, ASU's Office of Technology Collaborations & Licensing (now Arizona Technology Enterprises) ranked in the top ten nationally in the number of inventions disclosed per \$1-million spending on research, number of start-up companies formed per \$10-million spending on research, and number of U.S. patent applications filed per \$1-million spending on research

Arizona is also actively seeking to expand trade with Mexico and to attract Canadian and European companies who wish to access Mexico as a market and as a manufacturing site. In addition, the state is seeking to leverage its tourism industry to attract affluent visitors who are in a position to make major business decisions. To this end, a number of new spas, resorts, and conference facilities are opening this year.

### *Colorado*

The Morrison Institute for Public Policy notes that, between 1940 and 1980, Colorado made the transition from a resource-based economy to an economy based on “high-value-added” business. Defense-related industries were instrumental in this transition, with the addition of the Air Force Academy, the North American Defense Command, the Consolidated Space Operation Center, and the Air Force and U.S. Space Commands. These facilities helped to form the basis for growth in manufacturing, particularly in electronics, aerospace, and other high-technology areas and assisted in attracting related businesses to the state. By 1991, the state was heavily involved in economic development, allocating some \$67 million per year toward the effort. Expenditures on higher education and infrastructure (such as the Denver International Airport) also increased. All this served as a foundation for rapid growth toward the end of the century.

Although Colorado’s tax burden is generally lower than those in New Mexico and Arizona, the Morrison Institute report downplays the role of taxes in the success of Colorado. While Colorado’s K-12 education is typically not highly regarded, the state has still been able to attract large numbers of highly educated people to its workforce from out of state. Per-capita spending on higher education is relatively high and this appears to have contributed to the high concentration of high tech workers and to achievements in research. Colorado ranks at or near the top in National Science Foundation R&D funding per dollar of gross state product.

## APPENDICES

## Appendix A

### Hyperlinks to Resources Described in Chapter 6

#### New Mexico-Specific Organizations and Resources

- ACCION-New Mexico: [www.accionnm.org](http://www.accionnm.org)
- American Marketing Association: [www.nmama.org](http://www.nmama.org) . Networking luncheons: [www.nmama.org/events.htm](http://www.nmama.org/events.htm) .
- Association of Commerce and Industry: [www.aci.nm.org](http://www.aci.nm.org)
- BUILD New Mexico: [www.buildnewmexico.org](http://www.buildnewmexico.org)
- Chambers of Commerce:  
[www.newmexico.org/visitor/chambers.html](http://www.newmexico.org/visitor/chambers.html)
- Communities in New Mexico:  
[www.edd.state.nm.us/COMMUNITIES](http://www.edd.state.nm.us/COMMUNITIES)
- Coronado Ventures Forum: [cvf-nm.org/about/index.htm](http://cvf-nm.org/about/index.htm)
- Council on Competitiveness Central New Mexico Regional Competitive Initiative:  
[www.compete.org/docs/pdf/CNM\\_Regional\\_Innovation\\_Assessment.pdf](http://www.compete.org/docs/pdf/CNM_Regional_Innovation_Assessment.pdf)
- CreateAbq: [www.createabq.org](http://www.createabq.org) .
- Economic Development Partnership:  
[www.edd.state.nm.us/EDPART/aboutedpart.html](http://www.edd.state.nm.us/EDPART/aboutedpart.html)
- Economic Forum: [abec.unm.edu/Economic\\_Forum/EFHome.htm](http://abec.unm.edu/Economic_Forum/EFHome.htm)
- Enchantment Land Certified Development Company:  
[www.elcdc.com](http://www.elcdc.com), [www.nadco.org](http://www.nadco.org), [www.sba.gov/gopher/Local-Information/Certified-Development-Companies/cdcnm.txt](http://www.sba.gov/gopher/Local-Information/Certified-Development-Companies/cdcnm.txt)
- Genesis Center at Arrowhead Research Park, NMSU:  
[www.nmsu.edu/Research/genesis.htm](http://www.nmsu.edu/Research/genesis.htm)
- Governor's Summit on Economic Development:  
[www.nmsummit.com](http://www.nmsummit.com)

- High Tech Consortium of Southern New Mexico: [www.hightechnm.org](http://www.hightechnm.org)
- Hydrogen Technology Project (HyTeP): [www.hytep.org](http://www.hytep.org) . New Mexico Hydrogen Business Council: [www.NMHBC.org](http://www.NMHBC.org)
- Innoventure at NMSU: [www.innovation.nmsu.edu/index.html](http://www.innovation.nmsu.edu/index.html)
- Job Training Incentive Program (JTIP): [www.nmtraining.com](http://www.nmtraining.com)
- Leadership New Mexico: [www.leadershipnm.org](http://www.leadershipnm.org)
- Los Alamos National Laboratory: [www.lanl.gov/partnerships/resources.htm](http://www.lanl.gov/partnerships/resources.htm) . Also see [www.lanl.gov/partnerships/entrep\\_resources.html](http://www.lanl.gov/partnerships/entrep_resources.html) for an extensive list of entrepreneurial resources and [www.la-rp.org](http://www.la-rp.org) for information on the Los Alamos Research Park.
- Manufacturing Extension Partnership: [www.newmexicomep.org](http://www.newmexicomep.org)
- McCune Charitable Foundation: [www.nmmccune.org](http://www.nmmccune.org)
- Metro New Mexico Development Alliance: [www.nmsitesearch.com](http://www.nmsitesearch.com)
- New Mexico Arts: [www.nmarts.org](http://www.nmarts.org) . Also see [www.nmarts.org/pdf/summer%202001%20newsletter%20txt.pdf](http://www.nmarts.org/pdf/summer%202001%20newsletter%20txt.pdf) for information on Partnership/Arts Enterprise Projects (PAEP).
- New Mexico Biotechnology and Biomedical Association (NMBBA): [www.nmbio.org](http://www.nmbio.org)
- New Mexico Colleges, Community Colleges & Universities: [www.univsource.com/nm.htm](http://www.univsource.com/nm.htm) ; A few examples of university-affiliated initiatives: NMSU Entrepreneurship Center: [cbae.nmsu.edu/mgt/e-ctr/](http://cbae.nmsu.edu/mgt/e-ctr/); UNM entrepreneurship initiative: [www.unm.edu/news/03-07-28/entrepreneurship.htm](http://www.unm.edu/news/03-07-28/entrepreneurship.htm); San Juan College Quality Center for Business: [www.sjc.cc.nm.us/QCB/](http://www.sjc.cc.nm.us/QCB/); TVI Workforce Training Center ([www.tvi.edu/wtc](http://www.tvi.edu/wtc)).
- New Mexico Community Development Loan Fund: [www.nmcldf.org](http://www.nmcldf.org).

- New Mexico Economic Development Department (EDD): [www.edd.state.nm.us](http://www.edd.state.nm.us)
- New Mexico Entrepreneurs Association: [www.nmeaonline.org](http://www.nmeaonline.org)
- *New Mexico Fact Book*: [www.edd.state.nm.us/RESEARCH/FACTBOOK/index.php?sec=about&sub=nmfast](http://www.edd.state.nm.us/RESEARCH/FACTBOOK/index.php?sec=about&sub=nmfast)
- New Mexico First: [www.nmfirst.org](http://www.nmfirst.org)
- New Mexico High Tech Job Forum: [www.nmtechjobs.org](http://www.nmtechjobs.org)
- New Mexico Indian Reservation Economic Study Group: [www.sandiapueblo.nsn.us/sandia/gaming/car\\_res\\_enterprises.html](http://www.sandiapueblo.nsn.us/sandia/gaming/car_res_enterprises.html)
- New Mexico Industrial Development Executives Association (NMIDEA): [www.nmidea.org](http://www.nmidea.org)
- New Mexico Information Technology & Software Association (NMITSa): [www.nmitsa.org](http://www.nmitsa.org)
- New Mexico Internet Professionals Association (NMIPA): [www.nmipa.org](http://www.nmipa.org)
- New Mexico 9000: [www.goNM.biz](http://www.goNM.biz)
- New Mexico Optics Association: [www.nmoia.org](http://www.nmoia.org)
- New Mexico Private Investors: [www.nmprivateinvestors.com](http://www.nmprivateinvestors.com)
- New Mexico Rural Development Response Council: [www.ruraldevelopemntnm.org](http://www.ruraldevelopemntnm.org)
- New Mexico Small Business Development Centers: [www.nmsbdc.org](http://www.nmsbdc.org) . See also ([www.bplans.com/sb/index.cfm?a=state&s=nm](http://www.bplans.com/sb/index.cfm?a=state&s=nm) and NMSBDC's extensive listing of federal government and national organizations with ties to small business at [www.nmsbdc.org/other\\_resources.html](http://www.nmsbdc.org/other_resources.html)).
- New Mexico Small Business Investment Corporation: [www.edd.state.nm.us/PROGRAMS/pr\\_invest.html](http://www.edd.state.nm.us/PROGRAMS/pr_invest.html)

- New Mexico State Investment Council: [www.state.nm.us/nmsic/](http://www.state.nm.us/nmsic/)
- New Mexico Technet: [www.technet.nm.org/index.html](http://www.technet.nm.org/index.html)
- New Mexico Technology Assets Program (TAP): [www.edd.state.nm.us/TECHNO/TAP/act.html](http://www.edd.state.nm.us/TECHNO/TAP/act.html)
- NextGen: [www.nextgenclusters.net](http://www.nextgenclusters.net)
- NextJob New Mexico: [www.nextjobnm.com](http://www.nextjobnm.com)
- NMSU Center for Economic Development Research and Assistance: [cedra.nmsu.edu](http://cedra.nmsu.edu)
- NMSU Bureau of Business Research: [bbrs.nmsu.edu](http://bbrs.nmsu.edu)
- NMSU Physical Science Laboratory: [www.psl.nmsu.edu](http://www.psl.nmsu.edu)
- North Central New Mexico Economic Development District: [www.ncnmedd.com/smallbizloans.html](http://www.ncnmedd.com/smallbizloans.html)
- Professional Aerospace Contractors Association (PACA): [www.swcp.com/paca/](http://www.swcp.com/paca/)
- Public Service Company of New Mexico (PNM) Entrepreneurial Leadership Awards Program: [www.pnm.com/wesst/awards.htm](http://www.pnm.com/wesst/awards.htm)
- Quality Center for Business at San Juan College: [www.sanjuancollege.edu/QCB/](http://www.sanjuancollege.edu/QCB/)
- Regional Development Corporation: [www.rdcnm.org](http://www.rdcnm.org), [www.spacetechnolutions.com](http://www.spacetechnolutions.com), [www.e-plaza.org](http://www.e-plaza.org).
- Rural Payday: [www.ruralpayday.com](http://www.ruralpayday.com)
- Sandia National Laboratories Small Business Assistance Program: [www.sandia.gov/partnerships/smallbusinessprograms/NM/NMcontent.htm](http://www.sandia.gov/partnerships/smallbusinessprograms/NM/NMcontent.htm)
- Sandia Science & Technology Park: [www.sstp.org](http://www.sstp.org)
- Santa Fe Business Incubator (SFBI): [www.sfbi.net](http://www.sfbi.net)
- Santa Fe Economic Development, Inc.: [www.sfedi.org](http://www.sfedi.org)

- Service Corps of Retired Executives (SCORE)--New Mexico: [www.score.org/findscore/localinks.html](http://www.score.org/findscore/localinks.html)
- Senator Jeff Bingaman's Small Business Resource Guide: [www.senate.gov/~bingaman/sb/html/nm\\_resources.html](http://www.senate.gov/~bingaman/sb/html/nm_resources.html)
- Space Alliance Technology Outreach Program (SATOP): [www.spacetechnologies.com/index.asp](http://www.spacetechnologies.com/index.asp) . Regional Development Corporation: [www.rdenm.org](http://www.rdenm.org)
- Science & Technology Corporation, UNM: [stc.unm.edu](http://stc.unm.edu)
- Technology Ventures Corporation: [www.techventures.org](http://www.techventures.org)
- Think New Mexico: [www.thinknewmexico.org](http://www.thinknewmexico.org)
- Tri-Area Association for Economic Development (TRADE New Mexico): [www.tradenm.org/directory/1c.html](http://www.tradenm.org/directory/1c.html)
- UNM Bureau of Business and Economic Research: [www.unm.edu/~bber/](http://www.unm.edu/~bber/)
- U.S. Department of Agriculture Rural Development New Mexico Resources: [www.rurdev.usda.gov/nm/](http://www.rurdev.usda.gov/nm/)
- U.S. Small Business Administration New Mexico Resources: [www.sba.gov/regions/states/nm/](http://www.sba.gov/regions/states/nm/) . The 8(a) Business Development Program is described at [www.sba.gov/8abd/](http://www.sba.gov/8abd/). The 7(a) loan program has experienced recent funding interruptions. The 504 loan program is described at [www.sba.gov/financing/sbaload/cdc504.html](http://www.sba.gov/financing/sbaload/cdc504.html).
- WESST: [www.wesst.org](http://www.wesst.org)

### **Other Organizations and Resources**

- Association for Enterprise Opportunity (AEO): [www.microenterpriseworks.org](http://www.microenterpriseworks.org)
- Association of University Research Parks (AURP): [www.aurp.org](http://www.aurp.org)
- Association of University Technology Managers: [www.autm.net](http://www.autm.net)
- Capital Connection: [www.capital-connection.com/azvcinvest.html](http://www.capital-connection.com/azvcinvest.html)

- Community Development Venture Capital Alliance (CDVCA): [www.cdvca.org](http://www.cdvca.org)
- Corporation for Enterprise Development (CFED): [www.cfed.org](http://www.cfed.org)
- Edward Lowe Foundation—Building Entrepreneurial Communities: [edwardlowe.org/build1.shtml](http://edwardlowe.org/build1.shtml)
- Enterprise Development Website: [www.enterweb.org/incubtor.htm](http://www.enterweb.org/incubtor.htm)
- Entrepreneurs' Help Page: [www.tannedfeet.com](http://www.tannedfeet.com)
- Entrepreneur Lifetips Quiz: [entrepreneur.lifetips.com/RscBigBrain\\_q.asp?BB=412&BBQ\\_ID=1](http://entrepreneur.lifetips.com/RscBigBrain_q.asp?BB=412&BBQ_ID=1)
- Innovation U: [www.southern.org/pubs/innovationU/InnovationU.pdf](http://www.southern.org/pubs/innovationU/InnovationU.pdf)
- International Economic Development Council (IEDC): [www.iedconline.org/EDNow.html](http://www.iedconline.org/EDNow.html)
- Kauffman Center for Entrepreneurial Leadership Clearinghouse on Entrepreneurship Education (CELCEE): [www.celcee.edu](http://www.celcee.edu) . Also see [www.celcee.edu/links/](http://www.celcee.edu/links/)
- Kauffman Foundation: [www.emkf.org](http://www.emkf.org)
- Kauffman Foundation's EntreWorld: [www.entreworld.org](http://www.entreworld.org)
- Library of Congress Entrepreneur's Reference Guide to Small Business Information: [www.loc.gov/rr/business/guide/guide2.html](http://www.loc.gov/rr/business/guide/guide2.html)
- NASA Small Business Innovation Research (SBIR)/Small Business Technology Transfer (SBTT) (more on SBIR/SBTT below): [sbir.gsfc.nasa.gov/SBIR/SBIR.html](http://sbir.gsfc.nasa.gov/SBIR/SBIR.html)
- National Business Incubation Association (NBIA): [www.nbia.org](http://www.nbia.org)
- National Dialogue on Entrepreneurship: [www.publicforuminstitute.org/nde](http://www.publicforuminstitute.org/nde)

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## EXECUTIVE SUMMARY

### THIRTY-SECOND NEW MEXICO FIRST TOWN HALL: “GROWING AN ENTREPRENEURIAL ECONOMY: SMALL AND EMERGING BUSINESS IN NEW MEXICO”

Las Cruces, New Mexico • April 15 -17, 2004

The Town Hall reached consensus on a vision for the state’s entrepreneurial economy and on recommendations for achieving and maintaining that economy.

**The Vision:** New Mexico will be a nationally recognized example of business and capital growth by creating a vibrant small and emerging business culture with demonstrated and repeated entrepreneurial success. This vision relies on the premise that private industry is best suited to making decisions concerning business growth and wealth creation.

Numerous barriers to entrepreneurship were cited by the Town Hall, including:

- the uneven quality of K-12 education and its lack of emphasis on entrepreneurial skills, loss of educated and trained New Mexicans to other states, and problematic access to training in job skills and business development training;
- limited financial resources and gaps in our mix of capital sources; in fact, a significant challenge to spawning growth ventures in New Mexico is lack of exposure to investment capital;
- infrastructure barriers, especially in rural areas, such as lack of availability and access to transportation, communications, utilities and energy systems;
- cost and availability of health and business liability insurance for small business owners;
- limiting or defeatist attitudes, a risk-averse culture, a dislike of change and a reluctance to share information.

The Town Hall agreed that economic development happens in the private sector and can be supported by government. Certain nongovernmental entities can focus on growing certain businesses with high economic potential. Business clusters can be organic and evolve naturally; they are often the results of core competencies. Clusters with entrepreneurial potential include high technology, agriculture, publishing, filmmaking and media (including digital media), artisan manufacturing, tourism, aviation/aerospace, and energy.

The public-private partnership is an important piece of the economic development landscape in New Mexico. Public/private sector partnerships are most effective when there are clearly delineated roles for each sector. The role of the public sector should be to provide appropriate tax policy, infrastructure development, workforce training, and access to other publicly provided incentives and resources to foster entrepreneurship and business development.

#### **Four major priorities were identified by the Town Hall.**

**Priority #1: increased collaboration** among current and/or new support centers. In conjunction with New Mexico’s Small Business Development Centers (SBDCs) and the New Mexico Economic Development Department, a state-funded, statewide certification program for business incubation should be established. Ways must be found to eliminate the “information glut” by organizing, packaging and marketing information on available resources and services for emerging and small businesses. SBDCs or similar entities could simplify and funnel information and coordinate networking opportunities between businesses. Resources should be steered to recruit small business owners to mentor other small business owners and/or interns by providing relevant, hands-on guidance. These resources can be found among chambers, university branches, community colleges and SBDCs.

**Priority #2: taxes.** New Mexico’s tax code should be rewritten to reduce its complexity and to remove conflicts. Uniform application of the tax laws should be ensured through better education of small businesses; fair and equitable enforcement of tax laws should be ensured. For example, the pyramiding of gross receipts taxes on services could be removed and tax credits could be granted on investments in small and emerging businesses to encourage more angel investment. Investments in New Mexico’s small businesses should be exempted from capital gains tax, and greater incentives should be provided for investments in rural small businesses. Tax breaks should be given for companies that invest in intellectual capital, e.g., employee education. New Mexico tax requirements

should be compared with other states and revised to provide incentives to small and emerging business. Public-sector contracting needs to have an in-state preference and a level playing field.

**Priority #3: streamline the regulatory process.** Common-sense practices should be implemented to reduce time inefficiencies and red tape. A one-stop shop should be established for small businesses within existing agencies. Particular agency employees should be designated to shepherd entrepreneurs through required processes. The state small business ombudsman should coordinate with those agency employees. Quality training with a particular emphasis on customer service and performance measures should be provided for all staff.

**Priority #4: help small businesses obtain affordable healthcare and liability insurance.** The Town Hall recommends that a market-driven healthcare/insurance system be created for small businesses that recognizes the complexity of the overall existing healthcare system. The decoupling of healthcare coverage from sources of employment to encourage employee mobility should be explored.

**The Town Hall also suggested:**

- developing a public relations campaign and channeling success stories to the media promoting focus on measurable outcomes (e.g., wealth creation);
- diversifying and maximizing investment performance on state funds by enabling PERA and the Educational Retirement Board to target industry standard allocations in alternative asset classes such as venture capital, micro-lending and other types of private equity and debt;
- direct flight access to key markets including San Jose, California, and Austin, Texas;
- injecting innovation and technology into government entities that assist small and emerging businesses;
- encouraging local communities to take primary responsibility for their own broadband implementation;
- supporting community programs that cultivate entrepreneurial skills in youth, such as Junior Achievement, 4-H, and DECA;
- learning lessons about entrepreneurial infrastructure Research Triangle Park, San Diego, Austin or other appropriate models;
- filling gaps in education and training resources, access to capital, debt, and equity, and directing services through for-profit and non-profit/governmental organizations;
- modifying the university mindset regarding economic development and entrepreneurial/small business support; and
- adopting the National Governors Association's recommendations.

Long-range tasks identified by the Town Hall included marketing to inform the public about services provided to small and emerging businesses; improving agency and organization services through a consumer orientation; focusing on the capital community, in addition to entrepreneurs, as the "customer," and implementing E-Mercado New Mexico as the business information resource of New Mexico.

Signs that progress is being made toward an entrepreneurial economy could include the following:

- number of jobs created, reduced unemployment, higher per capita income;
- more business startups, new/renewed business licenses, fewer business failures;
- successful public stock offerings;
- churn rate;
- companies backed by venture capital or corporate capital;
- improved rankings on national studies; and
- expanded tax revenues.

Progress will be demonstrated by positive changes in metrics that are cooperatively identified, defined and agreed upon by Town Hall members and other service providers. The Economic Development Department should act as facilitator for compiling and sharing data and broadly communicating the results. This will demonstrate to the people of New Mexico, the nation and beyond that our state is a leader in the generation, growth and sustainability of successful small and emerging businesses.

**THIRTY-SECOND NEW MEXICO FIRST TOWN HALL**

**“Growing an Entrepreneurial Economy:  
Small and Emerging Business in New Mexico”**

**Las Cruces, New Mexico • April 15 -17, 2004**

**The Vision:** New Mexico will be a nationally recognized example of business and capital growth by creating a vibrant small and emerging business culture with demonstrated and repeated entrepreneurial success. This vision relies on the premise that private industry is best suited to making decisions concerning business growth and wealth creation.

Elements of this success include:

- an educated workforce with access to specific skill training and business formation preparation,
- a business-friendly regulatory climate,
- a multilingual, multicultural, multinational and diversified entrepreneurial atmosphere that values wealth creation,
- business access to capital and to assistance in translating ideas to marketplace results, and
- strong networks linking capital, talent, innovation, education and resources.

There are currently barriers which impede realizing this vision:

- The current educational system needs to foster increased development of entrepreneurial skills and emphasizes these skills in teachers’ professional development.
- We need to retain more educated and trained New Mexicans because the loss of skilled individuals (brain drain) is a barrier to business development.
- Skills gaps and limiting attitudes hinder employees and business owners.

- Job skills and management training are often available but unknown and sometimes difficult to access for small and emerging businesses, particularly in smaller communities.
- The uneven quality of K-12 education, inadequate basic skills, and insufficient collaboration among and between higher education and business are also problems.
- A significant challenge to spawning growth ventures in New Mexico is lack of exposure to investment capital. Financial resources are limited, and there are gaps in our mix of capital sources.
- While government is not the primary source of capital, government could stimulate entrepreneurship through enlightened tax strategies.
- Infrastructure barriers, especially in rural areas, include the lack of availability and access to transportation, communications (e.g., telephony, Internet and broadband), utilities and energy systems (water, wastewater, solid waste, gas and electric).
- Government barriers could be reduced by increasing the knowledge and support by policy makers of the issues that small businesses face, including complex, overlapping and conflicting regulations, and restrictive and burdensome tax structures.
- Current state and local economic development agencies may emphasize recruitment rather than start-ups.
- There is also a lack of knowledge of the diverse resources available; in fact, many business people do not even know what questions to ask.
- Cost and availability of health and business liability insurance are limiting factors for the small business owners of the state.
- Attitude is a barrier to an entrepreneurial economy in New Mexico because of self-defeatist attitudes and a risk-averse culture.
- A sense that the economic pie is finite precludes focus on expanding the economy.
- There is also a resistance to change and a reluctance to ask for help or share information.

- Pockets of power exist in New Mexico; there is a fear of political repercussion if we break out of parochial thinking.
- In addition, there is an over-reliance on government funding instead of using government dollars to leverage private opportunity.
- Some kinds of small and emerging businesses may face different barriers. For example, businesses located on tribal lands often do not have needed start-up capital and access to markets.
- There are differences between geographic regions and between rural and urban areas.

Economic development happens in the private sector and can be supported by government. Certain nongovernmental entities in New Mexico, driving policy, can act strategically and focus on growing certain kinds of high economic potential businesses that are market-driven, giving these businesses special attention and encouragement. Public and private sector partnerships are most effective when there are clearly delineated roles for each sector. Business clusters can be organic and evolve naturally; they are often the results of core competencies. Clusters with entrepreneurial potential include, but are not limited to, high technology, agriculture, publishing, filmmaking and media (including digital media), artisan manufacturing, tourism, aviation/aerospace, and energy.

The public-private partnership is an important piece of the economic development landscape in New Mexico. The role of the public sector should be to provide appropriate tax policy, infrastructure development, workforce training, and access to other publicly provided incentives and resources to foster entrepreneurship and business development.

Four major priorities were identified by the Town Hall.

One priority for creating an entrepreneurial economy that benefits small and emerging businesses must be increased collaboration among current and/or new support centers. In conjunction with New Mexico's Small Business Development Centers (SBDCs) and the New Mexico Economic Development Department a state-funded, statewide certification program for business incubation should be established for the purposes of assuring the quality of business incubation programs in New Mexico, based on the best practices of more than 700 such programs nationwide; helping to determine

the feasibility and advisability of business incubators in local New Mexico communities; and ensuring that New Mexico business incubators produce the successful economic development outcomes and return on investment to New Mexico that incubators are known for worldwide. The success of any business incubator program is dependent on local community involvement, local support and leveraging of public and private resources. The state certification program for business incubation is designed to complement those efforts and assure their success.

Ways must be found to eliminate the “information glut” by organizing, packaging and marketing information on available resources and services for emerging and small businesses. SBDCs or similar entities could simplify and funnel information (e.g., publish a multi-lingual, interactive database of regulatory issues and how-to’s) and coordinate value-added linking and networking opportunities between businesses. Resources should be steered to identify and recruit small business owners to mentor other small business owners and/or interns by providing relevant, hands-on teaching, guidance, and action. These resources can be found among local entities such as chambers, university branches, community colleges and SBDCs -- a place to go for hands-on help. More local staff, who understand the needs of those already ‘on the ground’, is needed to benefit small and emerging businesses.

Another priority identified by the Town Hall was taxes. New Mexico’s tax system should be restructured to be more business-friendly. The tax code should be rewritten to reduce its complexity and to remove conflicting parts of the statutes to eliminate vagueness. Uniform application of the tax laws should be ensured through better education of small businesses; fair and equitable enforcement of tax laws should be ensured. For example, the pyramiding of gross receipts taxes on services could be removed and tax credits could be granted on investments in small and emerging businesses to encourage more angel investment. Investments in New Mexico’s small businesses should be exempted from capital gains tax, and greater incentives should be provided for investments in rural small businesses. Tax breaks should be given for companies that invest in intellectual capital, e.g., employee education. New Mexico tax requirements should be compared with other states and revised to provide incentives to

small and emerging business. Public-sector contracting needs to have an in-state preference and a level playing field.

Another priority is to streamline the regulatory process, and common-sense practices should be implemented to reduce time inefficiencies and red tape. A one-stop shop should be established for small businesses within existing agencies. Particular agency employees should be designated to shepherd entrepreneurs through required processes. The state small business ombudsman should coordinate with those agency employees to expedite the solving of problems and provide recommendations to improve processes. Existing processes along with desired processes should be mapped, analyzed and acted upon. Quality training (such as the Quality New Mexico approach) with a particular emphasis on customer service and performance measures should be provided for all staff.

A fourth priority is finding ways to help small businesses obtain affordable healthcare and liability insurance. The Town Hall recommends that a market driven healthcare/insurance system be created for small businesses that recognizes the complexity of the overall existing healthcare system. The decoupling of healthcare coverage from sources of employment to encourage employee mobility should be explored.

Other priorities include developing a public relations campaign and channeling success stories to the media promoting focus on measurable outcomes (e.g., wealth creation). As part of the state's fiduciary responsibility to diversify and maximize investment performance on state funds, the legislature should enable PERA and the Educational Retirement Board to target industry standard allocations in alternative asset classes such as venture capital, micro-lending and other types of private equity and debt. Direct flight access to key markets including San Jose, California, and Austin, Texas should be provided. Innovation and technology must be and will be injected into government entities that assist small and emerging businesses. Information technology needs to go hand-in-hand with new business development from the initial stages of business creation. In addition, technology must be injected into the schools, rural areas, private sector, and start-ups. Local communities must take primary responsibility for their own broadband implementation such as recognizing broadband as being separate

from “telecom utility.” Community programs should be offered and supported that cultivate entrepreneurial skills in youth, such as Junior Achievement, 4-H, and DECA. New Mexico’s entrepreneurial infrastructure should be mapped and compared to the lessons learned from the historical development models of Research Triangle Park, San Diego, Austin or other appropriate models. Gaps should be filled in education and training resources, access to capital, debt, and equity, and services should be directed through for-profit and non-profit/governmental organizations. Work needs to be done to modify the university mindset regarding economic development and entrepreneurial/small business support and to provide incentives for faculty/administration to participate business activities or business communities. The National Governors Associations recommendations should be adopted (“A Governor’s Guide to Strengthening State Entrepreneurship Policy” ISBN 1-55877-364-9).

Some long-range ideas suggested by the Town Hall include:

- Funding should be available to support marketing efforts to inform the public about services provided to small and emerging businesses.
- Existing agencies and organizations could improve services to small and emerging businesses by:
  - Becoming measurably more consumer oriented;
  - Encouraging service organizations to provide a wide mix of products to the small and emerging business marketplace;
  - Focusing on the capital community, in addition to entrepreneurs, as the “customer”;
  - Implementing E-Mercado New Mexico as a business information resource of New Mexico; and
  - Reading this Town Hall document and supporting materials.
- All service providers should collaborate to identify and select value added activities that state and local governments might provide to foster business and capital growth.

As examples of the activity described above, we encourage staff of service providers to assist and educate entrepreneurs by conducting needs assessments, holding entrepreneur

fairs, and mentoring. All agencies and organizations need to collaborate, communicate and partner with each other.

Signs that progress is being made toward an entrepreneurial economy could include the following:

- number of jobs created, reduced unemployment, higher per capita income;
- more business startups, new/renewed business licenses, fewer business failures;
- successful public stock offerings;
- churn rate;
- companies backed by venture capital or corporate capital;
- improved rankings on national studies; and
- expanded tax revenues.

Benchmarks will also include a publicly traded company birthed in New Mexico with market cap exceeding \$500 million, eight New Mexico companies in the Inc. 500 list, the opening of the first office of a venture leasing bank, and a private sector/government job ratio exceeding 80/20.

In addition, new indicators of business activity need to be developed, including an indicator of the multiplier effect and a statewide assessment methodology for determining entrepreneurial success. A benchmark assessment against the Milken Institute and market results could be made.

Progress will be demonstrated by positive changes in metrics that are cooperatively identified, defined and agreed upon by Town Hall members and other service providers. The Economic Development Department should act as facilitator for compiling and sharing data and broadly communicating the results. This will demonstrate to the people of New Mexico, the nation and beyond that our state is a leader in the generation, growth and sustainability of successful small and emerging businesses.

## **Conclusion**

New Mexico's future lies in the hands of more than 30,000 small businesses with fewer than 20 employees.

The 125 participants of this Town Hall spent two days identifying issues and recommending solutions that will position New Mexico as a major player in the new entrepreneurial economy. It is now up to all New Mexico's citizens to work towards this common goal.