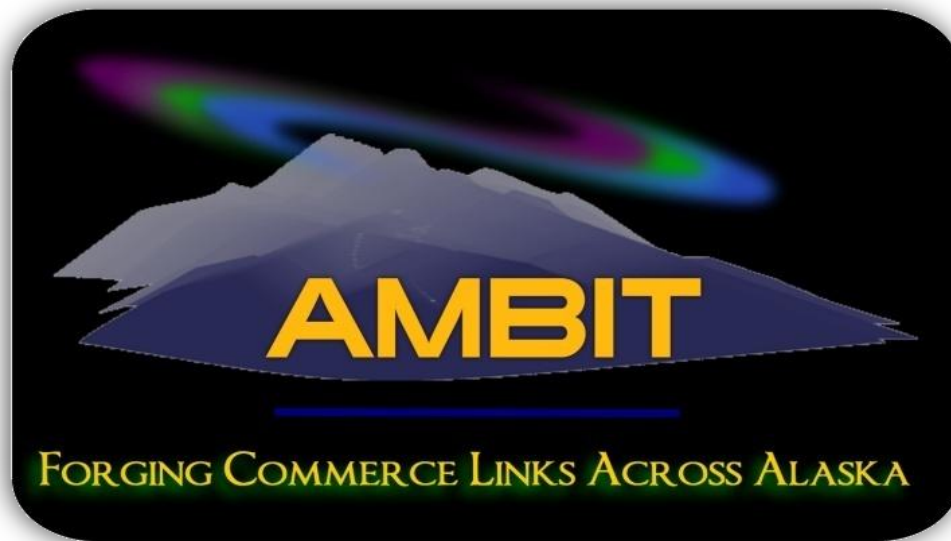


AMBIT PROGRAM, INC.



# AMBIT Venture Capital Program

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A Feasibility Study and Program Recommendation Provided by Thomas Myers  
of the AMBIT Program, Inc  
Working Draft Revision #001

**Created by the AMBIT Project Management Division**

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Contact: Tom Myers

701 Sesame Street, Suite 200

Anchorage Alaska 99503

Telephone: 907.279.2637

Fax: 907.279.2638

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## Part 1 – Breadth

### *Introduction*

The state of Alaska like most other states faces three significant problems when it comes to economic development through the creation of private for-profit business. These three problems are as simple and complicated as ensuring that businesses have the money necessary to create, run and attain profit, the management expertise necessary to properly run a business and thirdly the ability to attain customers and get their product to market. The most important of these problems for the state of Alaska and the businesses that start up and operate here is access to capital. The reasons for this being the most significant problem are many, not least of all that many investors were badly impacted in the mid 1980's by a wide range of investments that lost a significant amount of money totaling in the hundreds of millions. This happened to not only individual investors but institutional investors as well. When investment opportunities began to turn around in the late 1990's most of the available investment capital had already fled the state. The state of Alaska itself with the creation and management of the oil revenues inside of the permanent fund, still invests less than 1% of the \$40.3 billion capital fund within the boundaries of the state of Alaska in non-resource extraction projects.

There have been efforts in the past to create incentives and opportunities for venture capital and entrepreneurs or established businesses to link up and meet the needs of both parties. For a number of reasons these programs were unsuccessful and again stem from the loss of capital in the 1980's and the reluctance of out-of-state investors to put their capital in such a remote area where it seems that the capital is utilized in an unmanaged and 'wild west' environment. They have little ability to reach out and touch entities that their capital would be invested; the few venture capital acquisitions that have occurred in Alaska in the last 15 years have all sought to relocate the funded entity to the lower 48, and nearer to the actual investors. The University of Alaska has sought to create entrepreneurial programs and channels for investors to become connected with start-up businesses based upon university sponsored research but every attempt has failed. One of the significant factors in this failure is due to the requirement of the universities overhead (the current rate of which is at 43%) that is always taken out before anyone is able to use the capital. Other states have experienced similar problems with running programs like this through a university structure and have significantly moved venture capital and entrepreneurial activities out of the universities control or reach. [See examples from Pennsylvania, New York, Florida, Texas and Utah]

To create a program that meets the venture capital needs of Alaska and holds within it the opportunities for funding sources to be aggregated from the private sector, the state, and federal governments, research must go back to the beginning of economic to provide an understanding of economics, economic development and how capital impacts the business community. There must be a common understanding of the roles of government, venture capital and the businesses that use it. There must be an understanding of why businesses exist, how entrepreneurs make decisions for the start up of a business and why that is important for a state's economy and how a governmental entity can enhance this system.

Larry Miller, in the book 'Barbarian to bureaucrats' stated that:

Reasonable men adapt themselves to their environment; unreasonable men try to adapt their environment to themselves. Thus all progress is the result of the efforts of unreasonable men. - GEORGE BERNARD SHAW

No one can possibly achieve any real and lasting success or "get rich" in business by being a conformist. -J. PAUL GETTY

The history of civilizations and corporations reveals a common pattern. Both are formed by the creative force of one person or a small group of people. These founders possess a vision. An idea that is exciting and unique—often one that others thought impossible to achieve. An idea that eventually mobilizes others.

It is the role of the Prophet to develop the idea, the vision of the future. By doing so, he stimulates the energy and creativity of those who follow.

In our materialistic world it is easy to forget that creativity is a spiritual event. The emergence of something new goes beyond sight, touch, and cost-benefit analysis. Nothing is more material than the grandeur of civilizations, but it begins with creative spirit. Oswald Spengler in *The Decline of the West* recognized this:

A culture is born in the moment when a great soul awakens out of the proto-spirituality of ever-childish humanity.... But its living existence, that sequence of great epochs which define and display the stages of fulfillment, is an inner passionate struggle to maintain the Idea against the powers of Chaos without and the unconscious muttering deep-down within.... The aim once attained —the idea, the entire content of inner possibilities, fulfilled and made externally actual—the Culture suddenly hardens, it mortifies, its blood congeals, its force breaks \_ down, and it becomes Civilization.

### ***The Entrepreneur***

So we understand from Miller that civilizations and corporations are the result of the interaction of people with “entrepreneurs” and the civilization that grows up around them, and because of their interactions, they create pure economics. In fact the role of the entrepreneur and his impact on society is as old as that first person who decided that an animal burned in a prairie fire tastes better than one that is raw and trades part of that animal to his cohabitants for other food, stuffs, shelter or weapons; thus creating an economy based on a single idea. However, because of this, economy force others to create “products” of their own so that they have something to trade in order to acquire the products of their peers. Soon this economy grows out of the individual’s ability to control and then civilization must find a way to manage and enhance the ability for producers to create products and then distribute them to those who desire to acquire them. As that economy grows it presents both opportunities and challenges.

William Miller, in the book ‘The creative edge’, explains that from the very beginning civilizations have sought to manage both production and distribution of goods, and this has led to greater and greater challenges as populations increase and products are diversified to meet the ever expanding needs of the civilization.

The Chinese have a poignant way of communicating "crisis": two symbols are written, the top meaning "danger" and the bottom meaning "opportunity." Crises serve to awaken our inner resources as individuals or organizations, giving us the means to take advantage of the opportunities—if we are strong enough to use them that way.

We often don't take action until our environment pushes us to do so; today, our organizations are definitely being pushed to be more creative now, by a wide variety of forces. The challenge to our organizations is to foster all seven arenas of creativity, putting new ideas into action. This challenge is not a "nice idea," or a "liberal, humanistic dream"— it's a hard, cold necessity. The challenge to all of us is to contribute to our organizations' effectiveness in meeting the following conditions now and in the future.

What is your relationship to each of these challenges?

The globalization of national economies. We operate in a "global village" economy. More than ever before, we need rapid anticipation and appreciation of what is happening in world events—the religious and political movements in the Middle East, the buying habits of the Japanese, the international politics of raw materials, even the "import and export of unemployment." Our challenge is to develop innovative practices of economic collaboration for mutual benefit; "them-versus-us" doesn't work within "village" economics.

The competitive environment. After a period of shock from the new success of foreign competition in the 1970s and early 1980s, American business seems to be renewing its drive in technological innovation, updating outmoded management practices, and in some cases making policies to serve stakeholders rather than just stockholders. Our challenge is to develop innovative products and production methods and to market with new approaches to an "ex-change of value(s)" (perhaps a true definition of "economics").

The pace of technological evolution. Electronics is but one field in which rapid technological advances make products obsolete within a year or two. We live in a world impacted by developments in remote sensing from space; disease-resistant crops; gene splicing; fuel cells;; medical lasers, advanced ceramics, alloys, and composites; "smart" | membranes; computer-aided design, engineering, and manufacturing; expert systems and artificial intelligence; cellular radio communications; optical computing; nutritional treatment of disease; and so on. Our challenge is to be more than just reactive or ever responsive, but to be proactive in choosing and valuing what we give birth to technologically.

A century ago, fewer than 10% of the American labor force were doing information work; now more than 50% may be engaged in it. The actual production, extraction, and growing of things now soaks up less than a quarter of human resources.

Information is a new type of resource, more like a flame than an object. With objects, like an apple, if we take some away, eventually nothing is left; with a flame, we can light a thousand candles and they all have flames, including the original. In the same way information is expandable, diffusive, transportable, and shareable. Yet we still often operate with a vocabulary and with management systems based on producing objects, not flames. Our challenge is to learn new ways to foster creativity for flames/information, and new ways to manage and account for the products/services we produce (especially since information may be considered less valuable when it is shared).

New and shifting social values/ demographics. Since the 1960s we have been in a period in which seemingly sudden discontinuities with past trends continue to emerge. Examples of these discontinuities include: the 1973 oil embargo; the opening of United States-China relations; the movement to self-responsibility and preventative medicine; the political, social, and environmental protests of the 1960s; and so on. Each shift alters the field of business opportunities, government policy, and social life-style. Our challenge is to develop flexible, innovative plans and responses across a variety of possible future scenarios.

Changes in labor force values. That today's work force has a different mix of personal and work values is not news. Many have cheered the fact; many have bemoaned it. Our challenge is to develop appropriate ways of leading, more than just "managing," the gold collar (professional), white-collar, and blue-collar work force—and perhaps to challenge the notion that there is any difference.

Health, life-style, and stress awareness. In 1900 only 4 percent of the American population was over sixty-five, and the top four causes of death were the acute, infectious diseases (diphtheria, cholera, smallpox, and typhoid). In 1983, 11 percent of the population was over sixty-five and the top four causes of death were vascular (heart attack, etc.), cancer, diabetes, and cirrhosis of the liver. The most noteworthy aspect of this second list is that, according to the U.S. Centers for Disease Control in Atlanta, 75 percent of the incidence of these diseases is brought about by our life-styles. This self-destructive approach to life is intricately linked with our work climates, our technologies, our attitudes towards stress, and our values. Our challenge is to develop the willingness and ability to use our talents collectively, in harmony with ourselves and with each other; the current lack of harmony can be healed for the benefit and profit of all with the renewed exercise of our creative powers.

Human survival prosperity issues. In 1953, President Dwight D. Eisenhower said,

Every gun that is made, every warship launched, every rocket fired signifies, in the final sense, a theft from those who hunger and are not fed, those who are cold are not clothed. This world in arms is not spending money alone. It is spending the sweat of its laborers, the genius of its scientists, the hopes of its children... This is not a way of life at all in any true sense. Under the cloud of threatening war, it is humanity hanging from a cross of iron.

Our challenge is to develop an economics of value that resonates with our hearts, not just our minds and pocketbooks and to conduct our business planning proactively to bring about the world our hearts desire, rather than "planning" reactively to a future seemingly out of our control.

These are the challenges that move me. They are the ones that give me concern. Global problems are but local problems reproduced too many times. Whether it's in my job or your job, I believe that what we produce and how we produce it—even in small, entrepreneurial businesses go a long way to make or break the solutions we need.

### ***Global Commerce (Keynesian vs. Austrian)***

So now we have a become global economy where an entrepreneur in the United States may be developing a product specifically targeted at a consumer in Asia and have little or no market for his product in the local economy. This means that it takes governmental entities to establish trade relationships between countries for that entrepreneur to create his product and get it to his targeted market. So global markets create global problems, but those problems cannot all be solved at the global level; in order for an entrepreneur in Alaska to develop and sell a product in South Korea they must compete with entrepreneurs in Russia, Brazil and New Zealand. For example a local bottled water producer that is creating a product with Alaskan Glacial water has identified a strong potential market in a South Korean grocery store chain. The cache of Alaska's purity is only one of the sales factors that the buyer will consider when purchasing the bottled water. This must be balanced against the availability of bottled water from Russia which has its own claim to glaciers and purity at a price substantially less than water shipped from Alaska. So part of the question becomes what can the state of Alaska do to enhance the ability of the entrepreneur to run his business and sell his product to his target market.

There are two main schools of thought on economics; the Austrian (based on the word Austere rather than on the country) believes that the entrepreneur or business man must be able to compete without government help or interference of any kind. The other school of thought is the Keynesian, which says that an ever increasing role for government in the production and distribution of goods is a positive thing due to the increasing complexities of production and distribution into a world-wide market that is controlled through governmental decision, subsidy, investment, treaty and taxation.

Allan Coddington, explained Keynesian economics in his book 'The Search for First Principles':

#### **3. Liquidity preference and loanable funds**

In discussing the relationship between the work of Keynes and of Hicks, there is a third individual who must make an appearance sooner or later. That individual is Sir Dennis Robertson. There are at least two reasons why he should be brought into the picture. First, of those who were critical of the monetary theory of Keynes's *General Theory*, Robertson's (1940) critique was perhaps the most penetrating and certainly the most lucid.<sup>7</sup> Second, the analytical basis of Robertson's critical response to Keynes's theory of money and interest is practically identical with the analytical basis of Hicks's sympathetic response. Thus, we have the intriguing state of affairs, as regards the monetary and interest theory of the *General Theory*, that Hicks and Robertson agreed with one another as far as any purely *analytical* questions were concerned, and yet disagreed quite fundamentally in their overall assessment of the merit of the theoretical developments involved.

We shall consider next the analytical issues, first as presented by Hicks, and then as presented by Robertson. It will emerge that Hicks and Robertson agreed that Keynes's liquidity preference theory of interest differs from the 'classical' loanable funds approach not by virtue of its *substance*, but only as a matter of analytical procedure. In all this we adopt the usual convention that there is a plane of discourse on which it makes sense to talk of 'the' rate of interest.

Hicks expounded the equivalence of liquidity preference and loanable funds approaches to the theory of interest in a very clear but necessarily condensed form in the *Economic Journal* review of 1936; this interpretation was present, although peripherally, in 'Mr. Keynes and the "Classics"' (1937). The fullest expression, by Hicks, of this interpretation, is to be found in Chapter XII of *Value and Capital* (1946, pp. 153-162). Here Hicks adopts a general equilibrium framework, and shows that it can make no difference of substance which price is associated, in the model, with which market (including among our list of 'markets' one for the holding of money). Once it is admitted that each trader faces a budget constraint<sup>8</sup> it must be conceded that not all markets are independent of one another. Thus, once we have embarked on *general* equilibrium theory, it makes very little sense to speak, for example, of 'the price of widgets being determined in the market for widgets'. Rather, in so far as one can give any causal interpretation of a general equilibrium model (and the more fastidious practitioners of the art would avoid doing so) it would be that the vector of relative prices is determined by the whole configuration of parameters (this is precisely what the reduced-form equations tell us, reading them 'from right to left'). Thus, whether we eliminate the money equation (as in the 'classical' approach) or the borrowing and lending ('loanable funds') equation (as in the Keynesian approach) is entirely a matter of analytical procedure: that is, it is at most a matter of convenience. All this would appear platitudinous to a general equilibrium theorist, but to someone trained in the Marshallian tradition of partial equilibrium analysis it goes against the grain. The disposition dies hard to think of each price as determined in the market in which the good in question is traded. Accordingly, controversy about whether the rate of interest is determined in the market for 'loanable funds' (by borrowing and lending) or in the money market (by 'liquidity preference') was rife in the late 1930s and beyond, despite the existence of a well-articulated framework in which the controversy could be shown to depend on a false dichotomy: to involve the setting up of a misguided opposition of views which can be very readily reconciled with one another. But, before *Value and Capital*, how much interest was there in England (outside the London School of Economics) in the work of Walras? To the extent that British economists of this period were either unaware of, or uninterested in, the economic theory of Walras, we may attribute some of the pointlessness and inconclusiveness of this controversy to a state of intellectual insularity.

So it becomes very clear in Keynesian economics that the government needs to play a significant role in value and capital in order to compete with other states in a nation, and in the world-wide economy. But how much interference is good and at what point does it become detrimental not only to the entrepreneur but to the very economy that provides the funding for the government to exist. The Austrian school of thought says that the lesser the amount of interference by the government in economic issues the better. But in a world-wide economy where states and federal governments consistently and empirically create subsidization for their own economies how can an entrepreneur or businessman in Alaska compete against a similar person in China. In China the state will fund the majority of the capital necessary to create and run the business and then develop an enhanced environment for it to be nurtured and grown to the point where external businesses cannot compete with it inside of China or in the greater international market.

In each region of the world labor has a value, and for each region that value is determined by the maturity of the local economy and the ability of the individual. Money outside of those currencies are tied to the gold standard and are based upon that value of labor. So the greater the amount of governmental interference the lower the value of the labor and thus the lower the value of the currency. Ludwig V. Mises, explains this in his book 'Human Action':

### 3. Human Labor as a Means



The employment of the physiological functions and manifestations of human life as a means is called labor. The display of the potentialities of human energy and vital processes which the man whose life they manifest does not use for the attainment of external ends different from the mere running of these processes and from the physiological role they play in the biological consummation of his own vital economy, is not labor; it is simply life. Man works in using his forces and abilities as a means for the removal of uneasiness and in substituting purposeful exploitation of his vital energy for the spontaneous and carefree discharge of his faculties and nerve tensions. Labor is a means, not an end in itself.

Every individual has only a limited quantity of energy to expend, and every unit of labor can only bring about a limited effect. Otherwise human labor would be available in abundance; it would not be scarce and it would not be considered as a means for the removal of uneasiness and economized as such.

In a world in which labor is economized only on account of its being available in a quantity insufficient to attain all ends for which it can be used as a means, the supply of labor available would be equal to the whole quantity of labor which all men together are able to expend. In such a world everybody would be eager to work until he had completely exhausted his momentary capacity to work. The time which is not required for recreation and restoration of the capacity to work, used up by previous working, would be entirely devoted to work. Every non-utilization of the full capacity to work would be deemed a loss. Through the performance of more work one would have increased one's well-being. That a part of the available potential remained unused would be appraised as a forfeiture of well-being not compensated by any corresponding increase in well-being. The very idea of laziness would be unknown. Nobody would think: I could possibly do this or that; but it is not worthwhile; it does not pay; I prefer my leisure. Everybody would consider his whole capacity to work as a supply of factors of production which he would be anxious to utilize completely. Even a chance of the smallest increase in well-being would be considered a sufficient incentive to work more if it happened that at the instant no more profitable use could be made of the quantity of labor concerned.

#### 4. Economic Calculation and the Market

The quantitative treatment of economic problems must not be confused with the quantitative methods applied in dealing with the problems of the external universe of physical and chemical events. The distinctive mark of economic calculation is that it is neither based upon nor related to anything which could be characterized as measurement.

A process of measurement consists in the establishment of the numerical relation of an object with regard to another object, viz., the unit of the measurement. The ultimate source of measurement is that of spatial dimensions. With the aid of the unit defined in reference to extension one measures energy and potentiality, the power of a thing to bring about changes in other things and relations, and the passing of time. A pointer-reading is directly indicative of a spatial relation and only indirectly of other quantities. The assumption underlying measurement is the immutability of the unit. The unit of length is the rock upon which all measurement is based. It is assumed that man cannot help considering it immutable.

The last decades have witnessed a revolution in the traditional epistemological setting of physics, chemistry, and mathematics. We are on the eve of innovations whose scope cannot be foreseen. It may be that the coming generations of physicists will have to face problems in some way similar to those with which praxeology must deal. Perhaps they will be forced to drop the idea that there is something unaffected by cosmic changes which the observer can use as a standard of measurement. But however that may come, the logical structure of the measurement of earthly entities in the macroscopic or molar field of physics will not alter. Measurement in the orbit of microscopic physics too is made with meter scales, micrometers, spectrographs—ultimately with the gross sense organs of man, the observer and experimenter, who himself is molar. It cannot free itself from Euclidian geometry and from the notion of an unchangeable standard.

There are monetary units and there are measurable physical units of various economic goods and of many—but not of all—services bought and sold. But the exchange ratios which we have to deal with are permanently fluctuating. There is nothing constant and invariable in them. They defy any attempt to measure them. They are not facts in the sense in which a physicist calls the establishment of the weight of a quantity of copper a fact. They are historical events, expressive of what happened once at a definite instant and under definite circumstances. The same numerical exchange ratio may appear again, but it is by no means certain whether this will really happen and, if it happens, the question is open whether this identical result was the outcome of preservation of the same circumstances or of a return to them rather than the outcome of the interplay of a very different constellation of price-determining factors. Numbers applied by acting man in economic calculation do not refer to quantities measured but to exchange ratios as they are expected—on the basis of understanding—to be realized on the markets of the future to which alone all acting is directed and which alone counts for acting man.

We are not dealing at this point of our investigation with the problem of a "quantitative science of economics," but with the analysis of the mental processes performed by acting man in applying quantitative distinctions when planning conduct. As action is always directed toward influencing a future state of affairs, economic calculation always deals with the future. As far as it takes past events and exchange ratios of the past into consideration, it does so only for the sake of an arrangement of future action.

The task which acting man wants to achieve by economic calculation is to establish the outcome of acting by contrasting input and output. Economic calculation is either an estimate of the expected outcome of future action or the establishment of the outcome of past action. But the latter does not serve merely historical and didactic aims. Its practical meaning is to show how much one is free to consume without impairing the future capacity to produce. It is with regard to this problem that the fundamental notions of economic calculation—capital and income, profit and loss, spending and saving, cost and yield—are developed. The practical employment of these notions and of all notions derived from them is inseparably linked with the operation of a market in which goods and services of all orders are exchanged against a universally used medium of exchange, viz., money. They would be merely academic, without any relevance for acting within a world with a different structure of action.

He who wants to provide for the satisfaction of future needs must correctly anticipate these needs. If he fails in this understanding of the future, his provision will prove less satisfactory or totally futile. There is no such thing as an abstract saving that could provide for all classes of want-satisfaction and would be neutral with regard to changes occurring in conditions and valuations. Originary interest can therefore in the changing economy never appear in a pure unalloyed form. It is only in the imaginary construction of the evenly rotating economy that the mere passing of time matures originary interest; in the passage of time and with the progress of the process of production more and more value accrues, as it were, to the complementary factors of production; with the termination of the process of production the lapse of time has generated in the price of the product the full quota of originary interest. In the changing economy during the period of production there also arise synchronously other changes in valuations. Some goods are valued higher than previously, some lower. These alterations are the source from which entrepreneurial profits and losses stem. Only those entrepreneurs who in their planning have correctly anticipated the future state of the market are in a position to reap, in selling the products, an excess over the costs of production (inclusive of net originary interest) expended. An entrepreneur who has failed in his speculative understanding of the future can sell his products, if at all, only at prices which do not cover completely his expenditures plus originary interest on the capital invested. Like entrepreneurial profit and loss, interest is not a price, but a magnitude which is to be disengaged by a particular mode of computation from the price of the products of successful business operations. The gross difference between the price at which a commodity is sold and the costs expended in its production (exclusive of interest on the capital invested) was called profit in the terminology of British classical economics.<sup>5</sup> Modern economics conceives this magnitude as a complex of catallactically disparate items. The excess of gross receipts over expenditures which the classical economists called profit includes the price for the entrepreneur's own labor employed in the process of production, interest on the

capital invested, and finally entrepreneurial profit proper. If such an excess has not been reaped at all in the sale of the products, the entrepreneur not only fails to get profit proper, he receives neither an equivalent for the market value of the labor he has contributed nor interest on the capital invested.

### 3. The Price Premium as a Component of the Gross Market Rate of Interest

Money is neutral if the cash-induced changes in the monetary unit's purchasing power affect at the same time and to the same extent the prices of all commodities and services. With neutral money, a neutral rate of interest would be conceivable, provided there were no deferred payments. If there are deferred payments and if we disregard the entrepreneurial position of the creditor and the ensuing entrepreneurial component in the gross rate of interest, we must furthermore assume that the eventuality of future changes in purchasing power is taken into account in stipulating the terms of the contract. The principal is to be multiplied periodically by the index number and thus to be increased or decreased in accordance with the changes that have come to pass in purchasing power. With the adjustment of the principal, the amount from which the rate of interest is to be calculated changes too. Thus, this rate is a neutral rate of interest.

With neutral money, neutralization of the rate of interest could also be attained by another stipulation, provided the parties are in a position to anticipate correctly the future changes in purchasing power. They could stipulate a gross rate of interest containing an allowance for such changes, a percentile addendum to, or subtrahendum from, the rate of ordinary interest. We may call this allowance the—positive or negative—price premium. In the case of a quickly progressing deflation, the negative price premium could not only swallow the whole rate of ordinary interest, but even reverse the gross rate into a minus quantity, an amount charged to the creditor's account. If the price premium is correctly calculated, neither the creditor's nor the debtor's position is affected by intervening changes in purchasing power. The rate of interest is neutral.

However, all these assumptions are not only imaginary, they cannot even hypothetically be thought of without contradiction. In the changing economy, the rate of interest can never be neutral. In the changing economy, there is no uniform rate of ordinary interest; there only prevails a tendency toward the establishment of such uniformity. Before the final state of ordinary interest is attained, new changes in the data emerge which divert anew the movement of interest rates toward a new final state. Where everything is unceasingly in flux, no neutral rate of interest can be established,

In the world of reality all prices are fluctuating and acting men are forced to take full account of these changes. Entrepreneurs embark upon business ventures and capitalists change their investments only because they anticipate such changes and want to profit from them. The market economy is essentially characterized as a social system in which there prevails an incessant urge toward improvement. The most provident and enterprising individuals are driven to earn profit by readjusting again and again the arrangement of production activities so as to fill in the best possible way the needs of the consumers, both those needs of which the consumers themselves are already aware and those latent needs of the satisfaction of which they have not yet thought themselves. These speculative ventures of the promoters revolutionize afresh each day the structure of prices and thereby also the height of the gross market rate of interest.

He who expects a rise in certain prices enters the loan market as a borrower and is ready to allow a higher gross rate of interest than he would allow if he were to expect a less momentous rise in prices or no rise at all. On the other hand, the lender, if he himself expects a rise in prices, grants loans only if the gross rate is higher than it would be under a state of the market in which less momentous or no upward changes in prices are anticipated. The borrower is not deterred by a higher rate if his project seems to offer such good chances that it can afford higher costs. The lender would abstain from lending and would himself enter the market as an entrepreneur and bidder for commodities and services if the gross rate of interest were not to compensate him for the profits he could reap this way. The expectation of rising prices thus has the tendency to make the gross rate of interest rise, while the

expectation of dropping prices makes it drop. If the expected changes in the price structure concern only a limited group of commodities and services, and are counterbalanced by the expectation of an opposite change in the prices of other goods, as is the case in the absence of changes in the money relation, the two opposite trends by and large counterpoise each other. But if the money relation is sensibly altered and a general rise or fall in the prices of all commodities and services is expected, one tendency carries on. A positive or negative price premium emerges in all deals concerning deferred payments.<sup>3</sup>

The role of the price premium in the changing economy is different from that we ascribed to it in the hypothetical and unrealizable scheme developed above. It can never entirely remove, even as far as credit operations alone are concerned, the effects of changes in the money relation; it can never make interest rates neutral. It cannot alter the fact that money is essentially equipped with a driving force of its own. Even if all actors were to know correctly and completely the quantitative data concerning the changes in the supply of money (in the broader sense) in the whole economic system, the dates on which such changes were to occur and what individuals were to be first affected by them, they would not be in a position to know beforehand whether and to what extent the demand for money for cash holding would change and in what temporal sequence and to what extent the prices of the various commodities would change. The price premium could counterpoise the effects of changes in the money relation upon the substantial importance and the economic significance of credit contracts only if its appearance were to precede the occurrence of the price changes generated by the alteration in the money relation. It would have to be the result of a reasoning by virtue of which the actors try to compute in advance the date and the extent of such price changes with regard to all commodities and services which directly or indirectly count for their own state of satisfaction.

However, such computations cannot be established because their performance would require a perfect knowledge of future conditions and valuations. The emergence of the price premium is not the product of an arithmetical operation which could provide reliable knowledge and eliminate the uncertainty concerning the future. It is the outcome of the promoters' understanding of the future and their calculations based on such an understanding. It comes into existence step by step as soon as first a few and then successively more and more actors become aware of the fact that the market is faced with cash-induced changes in the money relation and consequently with a trend oriented in a definite direction. Only when people begin to buy or to sell in order to take advantage of this trend, does the price premium come into existence.

It is necessary to realize that the price premium is the outgrowth of speculations anticipating changes in the money relation. What induces it, in the case of the expectation that an inflationary trend will keep on going, is already the first sign of that phenomenon which later, when it becomes general, is called "flight into real values" and finally produces the crack-up boom and the crash of the monetary system concerned. As in every case of the understanding of future developments, it is possible that the speculators may err, that the inflationary or deflationary movement will be stopped or slowed ^down, and that prices will differ from what they expected.

### ***Combining Keynesian and Austrian Economics***

So Mises, believes that the government must be kept out of the management of economics, away from the currency and have no negative impacts on business what so ever. But we are left with the question of whether or not this stand point is viable in a world economy. We discussed earlier that governments will act to support business entities within their borders at the expense of the tax payer in order to sell goods and services, thereby jobs are created in order to provide a necessary level of employment to 90% of the employable population. Governments must do this in order to compete against other governments who have differing abilities and resources for the creation and distribution of goods and services. If the world economy was a pure Austrian economy where entrepreneurs and businesses would engage in competition against their peers regardless of governments, than no governmental interference would be necessary in order for them to compete. Their success would be based solely on their intellect, operations and ability to produce. We know however that pure economics does not even exist within small localities let alone countries or the world-wide

market. Therefore governments must be engaged; the question then becomes at what level should they be engaged and what point does their engagement become detrimental to their own existence and actually negate the beneficial aspects that they can provide.

So we have determined that a mix of the two schools of thought must exist between Austrian and Keynesian economics in order for entrepreneurs and businesses to flourish, for innovation of new products and services to take place and for the enhancement of each regions economic base. Therefore it is the role of government to provide an environment in which entrepreneurs and business owners can flourish in order to drive business and innovation for the greatest amount of economic impact possible. But how do we find that balance where the government can assist without becoming so intrusive to where innovation is stifled. Lundstedt and Colglazer, discuss how to achieve this balance in their book 'Managing Innovation'.

Just where the public goods aspect of innovation and the private goods aspect actually meet or overlap is a quite difficult question. It is particularly difficult when it comes to the developmental aspects of innovation. There is a good deal in the remark, attributed, I think, to Edison, that an invention is 1 percent inspiration and 99 percent perspiration. Disapproval of plagiarism is an indication that most societies regard ideas as property, at least when expressed in terms of an original document. Plagiarism, however, is defined in terms of words, usually in written language. Oddly enough, a person whose ideas are stolen by others feels rather flattered by this. Here again, the motivation of self-esteem and contributing to the general welfare may be quite significant. A very important question which is of particular political significance at the moment is whether the state should create a grants economy for inventors, particularly inventors of theories, ideas, methodologies, and so on, which do not usually fall under the patent law. The National Science Foundation and the government laboratories, both social inventions, are examples of a grants economy, presumably based on the principle that new ideas and scientific discoveries are public goods which, once discovered, are the property of all and cannot be protected by anything like a patent law. In this case, therefore, direct subsidy is the best means of assuring an adequate supply of such public goods. In its early days, science was mainly supported by a private grants economy, from the rich or from endowed institutions like universities. Now it is moving increasingly into the public grants economy simply because of its increasing scale and expense, although private foundations still play a significant role. A very interesting question is whether government laboratories, like Los Alamos, have not actually perverted science toward human destruction.

The state, after all, is basically a threat system. It supports itself by threatening its own citizens into making them pay taxes or by extracting resources out of them by creating money, by which it can draw resources from the public by inflation. It is not surprising, therefore, that test, particularly sovereign states; devote a good deal of their resources to threats against foreigners, as well as against their own cities. Innovation that is directly state supported, therefore, may be ex-cited to go in large part to the threat system. The National Science Foundation is an exception to this because of a tradition that proposals r research in science should be judged largely by peers—that is, by I low scientists. There is a certain danger in this that the subcultures I science may become too narrow and isolated from the general public id that hostility will develop between science and the rest of society, which could severely curtail the grants that society is willing to make i limit the rate of development of science itself. Just where the public goods aspect of innovation and the private goods aspect actually meet or overlap is a quite difficult question. It is particularly difficult when it comes to the developmental aspects of innovation. There is a good deal in the remark, attributed, I think, to Edison, that an invention is 1 percent inspiration and 99 percent perspiration.

Certainly the translation of ideas into actual methods of production may involve much more human activity than having the ideas in the first place. Just how much development should be publicly supported and how much is satisfactorily dealt with in the private sector is a question to which there is certainly no easy answer.

In looking at the policy implications of these considerations, what is easy to overlook is that grants to society from the innovators may easily be more important in determining the rate of innovation and the success of innovation than grants from society to the innovators. A society which is infused with a spirit of ennui and disillusionment, in which the integrative aspects of the grants economy languishes because nobody really loves anything or anybody very much, may very well stagnate no matter what legislative incentives, tax remissions, and public and private grants are applied. This is perhaps the "supply side economics" of innovation. It has been much neglected in research on the problem, partly, no doubt, because it is very difficult to study. Just what creates a spirit of generosity, outgoingness, self-sacrifice, and pride in achievements of others is very little understood. It is certainly easy for a society to slide down into a kind of mean-minded, penny-pinching, ungrateful, self-centeredness that may be much more destructive to creative innovation than any defects in the patent system, the tax laws, or even government subsidies. One worries whether our own society is falling into this kind of threat to innovation that may be much more psycho logical than it is economic.

### *Definitions and Scope*

Broadly speaking, what we are setting out to explore in this chapter is innovation, particularly technological innovation, in its various ramifications. Economists define an innovation as the first commercial application of a new or improved process or product.<sup>1</sup> Nowadays we would extend this definition to include a system such as the supermarket, time-shared computer, satellite communication, etc. In this context, there are, of course, also social innovations of the most important consequences, but I cannot possibly cover so broad a topic herein. The innovative process consists of two distinct stages:

1. Conception or invention
2. Subsequent commercialization or exploitation

Thus the economist would point out that the invention by itself is not an economic good; it is only by commercialization that it becomes one.

Whereas the former task is that of the inventor, the latter role falls to the entrepreneur. Fundamentally, entrepreneurship is the process whereby people, money, markets, production facilities, and knowledge are brought together to create a commercial enterprise which did not exist before. Doing so does not have to embody an invention; it can simply be the founding of a new dry-cleaning establishment on a block which did not have one but where a need existed, or a new plant by a corporation using existing technology. If invention is involved, the importance of the entrepreneurial activity is even greater, because inventive novelty implies new risk<sup>2</sup> and completes an innovation.

1. The entrepreneur, particularly the technological innovator, functions best in an atmosphere of freedom, in a decentralized system. It is probably also true that this grass-roots innovation is the best method for most social innovation too. Certainly, large government-sponsored programs of specific national importance have been successfully implemented through the private sector firms in the past (World War II synthetic rubber, the atomic bomb, the space program), but for these to succeed in the world market under the pressure of competitive forces, the action of the "invisible hand" is infinitely more effective. It is very doubtful whether the currently fashionable concept of technology assessment has any real long-range value, as studies of the past (such as by Professor Rosenberg, or by Professor Hughes) have demonstrated. On the other hand, it is absolutely necessary, in view of the speed with which science and technology change, to develop greater technical literacy among the

general public and to communicate honestly with them about the scientific work that is being done, while at the same time improving our engineering education generally.

2. The entrepreneur, whether individual or corporate, requires an external climate marked to the maximum degree by steadiness of course in the society around him, although he usually is prepared to cope with a reasonable degree of surprises. However, the perils of the entrepreneur's career itself in a competitive world are amply able to provide him with surprises, so that he doesn't need any additional burdens from governments or segments of society acting through government.

3. Technological innovation has been *the* major driving force for the growth of the American economy for a very long time. As Charles Schultze has put it:

The final virtue of market-like arrangements that I wish to stress is their potential ability to direct innovation into socially desirable directions. While the formal economic theory of the market emphasizes its ability to get the most out of existing resources and technology, what is more important is its apparent capacity to stimulate and take advantage of advancing technology. Living standards in modern Western countries are, by orders of magnitude, superior to those of the early seventeenth century. Had the triumph of the market meant only a more efficient use of the technologies and resources then available, the gains in living standards would have been minuscule by comparison. What made the difference was the stimulation and harnessing of new technologies and resources.<sup>60</sup>

What Schultze does not say is that this market triumph, occurring only in Western countries, did not therefore arise in the ancient civilizations of the East, where the idea of progress did not exist, and which to this day have living standards far below those in the West, so that the social milieu is after all the decisive factor. This feedback ability of the American economy, if not stifled, is its greatest strength, because it is self-correcting. Thus, the real priority belongs to technological innovation. It is government's job to set the course and then get out of the way! If there are no foreign "surprises," the developing national consensus as described above might permit a gradual improvement in our national condition during the 1980s.

The driving force behind technological innovation is money—the lure of making it. For the individual, that motivation is extremely clear, even though, of course, there are other motivations as well (desire for independence, hope of peer group esteem, etc.). For the corporation to innovate, given the problems I have described, there is no better recipe than a profitable business. A good profit record engenders a willingness to take risks, and risk-taking lies behind all innovation. Similarly, Professor Mansfield<sup>62</sup> points out that the higher social than private rate of return for innovation cannot efficiently be addressed by direct government intervention, but rather by improving the profit-making climate for innovation.

### ***Escaping Taxation for Capital Pooling***

One of the terms that Lundstedt and Colglazer use over and over is the word 'profit'. For some, the idea of profit is antithetical to the functions of government however, as most communist countries began to realize in the 1980's and 1990's, without profit there is no incentive, without incentive, labor functions at a minimal level and seeks only to subsist for a basic existence. "Lowly profit" as Benjamin Franklin rightly identified when assisting to write the constitution of the United States of America would be a driving force behind the growth of the United States as the most powerful economic entity in the world. The goal of the founding fathers was to create that environment for business success that had been squelched by the king of England who had proposed an arbitrary tax on the colonies equal to 6% of gross earnings. This is the amount of taxation we fought a war to get away from, however taxes according to Winston Churchill are the price we pay for a civilized society; so where is the balance?

Many states utilize a portion of their taxation to create pools of capital that are then available to the business community. Alaska is in a far better position as its constitution mandated that mineral rights and all natural resources are held in joint trust by the citizens of the state; and due to this a large amount of capital that has been acquired through natural resource, all Alaskans can. The permanent fund was established to help offset the high cost of living that Alaskans face due to its remoteness and the associated transportation costs. However, it was designed to also be an investment vehicle to earn income for Alaskans and was set up in an investment structure where proper financial decisions could be made on the investments the fund undertakes. One of the caveats that were written into the management structure of the permanent fund was to insure that at least some of this capital was invested in projects inside of the state of Alaska. A 5% allotment of the permanent fund was supposed to be targeted if possible at investments within the state, but this capital allotment has never been utilized. Instead the full value is invested elsewhere and Alaska receives no more benefit than the annual PFD check; no jobs are created, no companies founded and no products developed.

Since no projects are funded in the state of Alaska through processes that are managed by the state and very few receive venture capital from private investors whether within or outside of the state of Alaska economic development, job growth, and a diversification of the corporate and tax base is stymied. Most investment opportunities that are targeted by venture capital are based upon internal financial decisions that show the return on investment of a specific company without the determination of how it affects the broader regional economy. Lawrence Gitman, explains how a financial value for a company is set and shows how future values are projected in order for a venture capital firm to make an investment.

Financial values and decisions can be assessed by using either future value or present value techniques. Although these techniques will result in the same decisions, they view the decision differently. Future value techniques typically measure cash flows at the end of a project's life. Present value techniques measure cash flows at the start of a project's life (time zero). Future value is cash you will receive at a given future date, and present value is just like cash in hand today.

A time line can be used to depict the cash flows associated with a given investment. It is a horizontal line on which time zero appears at the leftmost end and future periods are marked from left to right. A line covering five periods (in this case, years) is given in Figure 4.1. The cash flow occurring at time zero and that at the end of each year are shown above the line; the negative values represent cash outflows (\$10,000 at time zero) and the positive values represent cash inflows (\$3,000 inflow at the end of year 1, \$5,000 inflow at the end of year 2, and so on).

Because money has a time value, all of the cash flows associated with an investment, such as those in Figure 4.1, must be measured at the same point in time. Typically, that point is either the end or the beginning of the investment's life. The future value technique uses compounding to find the future value of each cash flow at the end of the investment's life and then sums these values to find the investment's future value. This approach is depicted above the time line in Figure 4.2. The figure shows that the future value of each cash flow is measured at the end of the investment's 5-year life. Alternatively, the present value technique uses discounting to find the present value of each cash flow at time zero and then sums these values to find the investment's value today. Application of this approach is depicted below the time line in Figure 4.2.

The meaning and mechanics of compounding to find future value and of discounting to find present value are covered in this chapter. Although future value and present value result in the same decisions, financial managers—because they make decisions at time zero—tend to rely primarily on present value techniques.

Risk Defined



In the most basic sense, risk is the chance of financial loss. Assets having greater chances of loss are viewed as more risky than those with lesser chances of loss. More formally, the term risk is used interchangeably with uncertainty to refer to the variability of returns associated with a given asset. A \$1,000 government bond that guarantees its holder \$100 interest after 30 days has no risk, because there is no variability associated with the return. A \$1,000 investment in a firm's common stock, which over the same period may earn anywhere from \$0 to \$200, is very risky because of the high variability of its return. The more nearly certain the return from an asset, the less variability and therefore the less risk.

Some risks directly affect both financial managers and shareholders. Table 5.1 briefly describes the common sources of risk that affect both firms and their shareholders. As you can see, business risk and financial risk are more firm-specific and therefore are of greatest interest to financial managers. Interest rate, liquidity, and market risks are more shareholder-specific and therefore are of greatest interest to stockholders. Event, exchange rate, purchasing-power, and tax risk directly affect both firms and shareholders.

### Return Defined

Obviously, if we are going to assess risk on the basis of variability of return, we need to be certain we know what return is and how to measure it. The return is the total gain or loss experienced on an investment over a given period of time. It is commonly measured as cash distributions during the period plus the change in value, expressed as a percentage of the beginning-of-period investment value.

**Firm-Specific Risks** Business risk. The chance that the firm will be unable to cover its operating costs. Level is driven by the firm's revenue stability and the structure of its operating costs (fixed vs. variable).

Financial risk. The chance that the firm will be unable to cover its financial obligations. Level is driven by the predictability of the firm's operating cash flows and its fixed-cost financial obligations.

Interest rate risk. The chance that changes in interest rates will adversely affect the value of an investment. Most investments lose value when the interest rate rises and increase in value when it falls.

Liquidity risk. The chance that an investment cannot be easily liquidated at a reasonable price. Liquidity is significantly affected by the size and depth of the market in which an investment is customarily traded.

Market risk. The chance that the value of an investment will decline because of market factors that are independent of the investment (such as economic, political, and social events). In general, the more a given investment's value responds to the market, the greater its risk; and the less it responds, the smaller its risk.

Event risk. The chance that a totally unexpected event will have a significant effect on the value of the firm or a specific investment. These infrequent events, such as government-mandated withdrawal of a popular prescription drug, typically affect only a small group of firms or investments.

Exchange rate risk. The exposure of future expected cash flows to fluctuations in the currency exchange rate. The greater the chance of undesirable exchange rate fluctuations, the greater the risk of the cash flows and therefore the lower the value of the firm or investment.

Purchasing-power risk. The chance that changing price levels caused by inflation or deflation in the economy will adversely affect the firm's or investment's cash flows and value. Typically, firms or investments with cash flows that move with general price levels have a low purchasing-power risk, and those with cash flows that do not move with general price levels have high purchasing-power risk.

**Tax risk.** The chance that unfavorable changes in tax laws will occur. Firms and investments with values that are sensitive to tax law changes are most risky.

Investment returns vary both over time and between different types of investments. By averaging historical returns over a long period of time, it is possible to eliminate the impact of market and other types of risk. This enables the financial decision makers to focus on the differences in return that are attributable primarily to the types of investment. Table 5.2 shows the average annual rates of return for a number of popular security investments (and inflation) over the 75-year period January 1, 1926, through December 31, 2000. Each rate represents the average annual rate of return an investor would have realized had he or she purchased the investment on January 1, 1926, and sold it on December 31, 2000. You can see that significant differences exist between the average annual rates of return realized on the various types of stocks, bonds, and bills shown. Later in this chapter, we will see how these differences in return can be linked to differences in the risk of each of these investments.

The cost of capital is the rate of return that a firm must earn on the projects in which it invests to maintain the market value of its stock. It can also be thought of as the rate of return required by the market suppliers of capital to attract their funds to the firm. If risk is held constant, projects with a rate of return above the cost of capital will increase the value of the firm, and projects with a rate of return below the cost of capital will decrease the value of the firm.

The cost of capital is an extremely important financial concept. It acts as a major link between the firm's long-term investment decisions (discussed in Part 3) and the wealth of the owners as determined by investors in the marketplace. It is in effect the "magic number" that is used to decide whether a proposed corporate investment will increase or decrease the firm's stock price. Clearly, only those investments that are expected to increase stock price ( $NPV > \$0$ , or  $IRR > \text{cost of capital}$ ) would be recommended. Because of its key role in financial decision making, the importance of the cost of capital cannot be overemphasized.

#### Some Key Assumptions

The cost of capital is a dynamic concept affected by a variety of economic and firm-specific factors. To isolate the basic structure of the cost of capital, we make some key assumptions relative to risk and taxes:

1. Business risk—the risk to the firm of being unable to cover operating costs— is assumed to be unchanged. This assumption means that the firm's acceptance of a given project does not affect its ability to meet operating costs.
2. Financial risk—the risk to the firm of being unable to cover required financial obligations (interest, lease payments, preferred stock dividends)—is assumed to be unchanged. This assumption means that projects are financed in such a way that the firm's ability to meet required financing costs is unchanged.
3. After-tax costs are considered relevant. In other words, the cost of capital is measured on an after-tax basis. This assumption is consistent with the framework used to make capital budgeting decisions.

The cost of capital is estimated at any given point in time. It reflects the expected average future cost of funds over the long run. Although firms typically raise money in lumps, the cost of capital should reflect the interrelatedness of financing activities. For example, if a firm raises funds with debt (borrowing) today, it is likely that some form of equity, such as common stock, will have to be used the next time it needs funds. Most firms attempt to maintain a desired optimal mix of debt and equity financing. This mix is commonly called a target capital structure—a topic that will be addressed in Chapter 11. Here, it is sufficient to say that although firms raise money in lumps, they tend toward some desired mix of financing.

To capture the interrelatedness of financing assuming the presence of a target capital structure, we need to look at the overall cost of capital rather than the cost of the specific source of funds used to finance a given expenditure.

A firm is currently faced with an investment opportunity. Assume the following:

Best project available today

Cost= \$100,000

Life = 20 years

IRR = 7%

Cost of least-cost financing source available Debt = 6%

Because it can earn 7% on the investment of funds costing only 6%, the firm undertakes the opportunity. Imagine that 1 week later a new investment opportunity is available:

Best project available 1 week later

Cost = \$100,000

Life = 20 years

IRR= 12%

Cost of least-cost financing source available

Equity= 14%

In this instance, the firm rejects the opportunity, because the 14% financing cost is greater than the 12% expected return.

Were the firm's actions in the best interests of its owners? No; it accepted a project yielding a 7% return and rejected one with a 12% return. Clearly, there should be a better way, and there is: The firm can use a combined cost, which over the long run will yield better decisions. By weighting the cost of each source of financing by its target proportion in the firm's capital structure, the firm can obtain a weighted average cost that reflects the interrelationship of financing decisions. Assuming that a 50-50 mix of debt and equity is targeted, the weighted average cost here would be 10%  $[(0.5 \times 6\% \text{ debt}) + (0.50 \times 14\% \text{ equity})]$ . With this cost, the first opportunity would have been rejected (7% IRR < 10% weighted average cost), and the second would have been accepted (12% IRR > 10% weighted average cost). Such an outcome would clearly be more desirable.

#### The Cost of Specific Sources of Capital

This chapter focuses on finding the costs of specific sources of capital and combining them to determine the weighted average cost of capital. Our concern is only with the long-term sources of funds available to a business firm, because

Although not every firm will use all of these methods of financing each firm is expected to have funds from some of these sources in its capital structure.

The specific cost of each source of financing is the after-tax cost of obtaining the financing today, not the historically based cost reflected by the existing financing on the firm's books. Techniques for determining the

specific cost of each source of long-term funds are presented on the following pages. Although these techniques tend to develop precisely calculated values, the resulting values are at best rough approximations because of the numerous assumptions and forecasts that underlie them. Although we round calculated costs to the nearest 0.1 percent throughout this chapter, it is not unusual for practicing financial managers to use costs rounded to the nearest 1 percent because these values are merely estimates.

Leverage involves the use of fixed costs to magnify returns. Its use in the capital structure of the firm has the potential to increase its return and risk. Leverage and capital structure are closely related concepts that are linked to capital budgeting decisions through the cost of capital. These concepts can be used to minimize the firm's cost of capital and maximize its owners' wealth. This chapter discusses leverage and capital-structure concepts and techniques and how the firm can use them to create the best capital structure.

Leverage results from the use of fixed-cost assets or funds to magnify returns to the firm's owners. Generally, increases in leverage result in increased return and risk, whereas decreases in leverage result in decreased return and risk. The amount of leverage in the firm's capital structure—the mix of long-term debt and equity maintained by the firm—can significantly affect its value by affecting return and risk. Unlike some causes of risk, management has almost complete control over the risk introduced through the use of leverage. Because of its effect on value, the financial manager must understand how to measure and evaluate leverage, particularly when making capital structure decisions.

The three basic types of leverage can best be defined with reference to the firm's income statement, as shown in the general income statement format in Table 11.1.

Operating leverage is concerned with the relationship between the firm's sales revenue and its earnings before interest and taxes, or EBIT. (EBIT is a descriptive label for operating profits.)

Financial leverage is concerned with the relationship between the firm's EBIT and its common stock earnings per share (EPS).

Total leverage is concerned with the relationship between the firm's sales revenue and EPS.

## ***Assessing the Entrepreneur***

Therefore at length Gitman explains the risks, the cost of capital and the expected returns necessary for an investor to make a decision on whether or not they will place money with an individual firm. A state funded capital pool would have to follow these kinds of processes as well however they also need to determine the impact to the economy and the impact to regional business. For each region there are a number of specific factors that can be determined prior to investment to assess whether or not an endeavor has a higher or lower chance of success. These factors are of course tied to the costs of goods, transportation, distance to market, the availability of resources, the labor pool, and the ability to acquire capital.

Most entrepreneurs and small businesses make internal investment decisions based on calculations that are often contained within their own mind but often are not documented on paper. Even venture capital firms sometimes make investment decisions based on 'gut feelings' or the idea that the project will impact the greater good. If an individual or firm is risking their own money on decisions such as these it is their right to do so. But for capital pools that contain multiple investors or that are funded by a state, the investment decisions must be accomplished through a process that eliminates as much risk as possible while targeting the greatest amount of return; and in order to do that all aspects of a potential investment must be documented and analyzed. Gilbert Gordon and Israel Pressman discuss this process in their text 'Quantitative Decision Making for Business'.

In a sense, selecting utility values for a decision maker is similar to developing a measure for temperature. If we are told that the temperature is 30° in the room, we must also know whether that figure is given in terms of Fahrenheit or Centigrade. Both of these temperature scales were developed by defining two points, such as the boiling and freezing points of water and making all other measurements relative to those points. The utility values will be chosen in the same way as in the case with temperature and will depend mainly on which scale we set up.

Let us examine what might be utility measures for three different decision makers, A, B, and C. The graph of utility versus monetary value for each individual is shown in Figure 5.3.1. Notice that all three curves intersect at two points: the utility of \$0 is 0 and the utility of \$10,000 is 100. We have arbitrarily selected these two points as reference points; other values are referenced to these. Earnings are indicated as a positive (+) value and losses as a negative (-) value. Thus, using zero as a reference point, all losses will have negative utility values. The utility values of 0 and 100 are truly arbitrary. We could have used, for example, 1,000 and 2,000, but zero for \$0 and 100 for the highest gain (\$10,000, our case) seems convenient.

Notice the different pattern of the curves for the three decision makers, A, B, C. These differences are related to the different attitudes toward earnings up to \$10,000. It will be shown that A can be called a risk-averse, B can be called a risk-neutral, and C can be called a risk-taker. The slope of the utility curve will indicate which tendency an individual has.

Consider decision maker B. Each additional \$1,000 of income increases his utility by an equal amount. For example, earning \$1,000 yields a utility of 10. Earning an additional \$1,000 (i.e., going from \$1,000 to \$2,000) also yields an additional 10 units of utility (i.e., the utility goes from 10 to 20). The same is true for increases up to \$10,000. This type of individual will be termed risk-neutral.

A different attitude occurs for decision maker A. Small incomes have high utility, but additional incomes always bring smaller increases in utility. The first \$1,000 income has utility of approximately 44. The utility of a \$2,000 income is 60. The additional \$1,000 of income has increased this utility by only  $60 - 44 = 16$  units. This is smaller than the 44-unit increase for the initial \$1,000 income. Decision maker A is called a risk-averse, since larger amounts yield for him smaller gains in utility and he will not be anxious to take the risk to get these larger amounts.

The reverse is true for decision maker C. Each additional dollar of income always increases his utility by larger and larger amounts. He will thus take more risk to gain these larger values and is called a risk-seeker.

In general, the greater the increase in utility that is achieved through an outcome, the greater is the willingness to take risk to achieve it. This will be more clearly seen when we consider the procedures for computing utility functions for decision makers.

### ***Focusing on Broader Economic Impacts***

So the decision in Gordon and Pressman's scenario is based upon the utility of money in order to determine if an investment should be made and what size that investment should be, but are all types of investors equal? The answer of course is surely not, as with any decision making process each individual inside of that process (especially if risking their own money) holds agendas and biases that may or may not be in the best interest of the organization acquiring the capital. In fact there are many potential investors who seek to provide venture capital with the sole purpose of failure for the organization that they are investing in, in order that they might seize control of the organization for their sole profit or cut it up into smaller saleable pieces in order to create a return on investment for their investment only (these actions are known as predatory lending practices). In the venture capital industry it is widely recognized that only one out every ten investments is successful in the format of the organization that the investment was targeted for.

Five others are statistically going to fail but the value of the intellectual property garnered from that failed organization is worth more than the investment. The last four will either be parted out or scrapped and a complete loss taken at times on the investment. Knowing this many venture capital firms target companies to invest in that are made up of that middle ground because the ability to invest in and turn their money for a profit is far easier than sticking with that one potential company that will make it through to very high success.

Taking all of this into account a new paradigm for investments must be created where the investment decisions are based upon getting as many of the ventures to a successful end as possible. Only then will an investment system have the greatest amount of positive impact for the investors, the companies that are invested and the broader economy. In order to reach this paradigm we have to imagine the impacts that could be had for creating a system where investments are targeted for the return on investment and the broader economic impacts that can be created. Duncan Reekie, explains in his book 'Entrepreneurs and Liberty' how this could be accomplished if bias and individual agendas can be removed from the investment decision making process.

Suppose all transactors are neither thieves nor philanthropists, that is all trades are voluntary on both sides. Then anyone who plans to acquire more of something must also plan to give up something in exchange. Moreover, the market values of the two commodities must be identical (since he is neither thief nor philanthropist). His source of funds for purchasing is the market price of what he plans to give up multiplied by its quantity (for example, one hour of labour times the hourly wage rate). A source of funds is obviously essential unless the economy is in a barter state.

For any individual then, his planned uses of funds must exactly offset his planned sources of funds. So for any one individual the following equation of intentions holds:

$$p_1 Aq_1 + p_2 Aq_2 + p_3 Aq_3 + \dots + p_i Aq_i + Aq_m = 0$$

where there are  $i$  goods in the economy, each with a relevant price,  $p$ ?. In any given period an individual either plans to keep his stock of goods unchanged or plans to increase or decrease his stocks of all or some goods. If  $Aq$  is positive he has a planned excess demand, if negative a planned negative excess demand, or, what is the same thing, a planned excess supply. In addition to the  $i$  goods there is the further commodity,  $m$ , or money with a price of unity.  $Aq_m$  can also be positive, negative or zero. Finally, since he is neither thief nor philanthropist, the positive  $Aq$ s times their respective  $p$ s must equal the negative  $Aq$ s times their  $p$ s. Sources of funds must equal uses of funds. So if there is as much as one planned excess demand there must be a corresponding planned excess supply to enable the equation to sum to zero. The goods can range from cars to labour to TV sets or to bonds (i.e. the borrowing or lending of money by the sale or purchase of IOUs or certificates of indebtedness).

Now suppose there are  $K$  transactors in the economy then a similar equation could be set up for each as in Table 2.1. Since the sum of each row is zero, the sum of the final column is zero—that is Say's Law. The sum of all planned market excess demands, over all

Table 2.1

Good 1	Good 2	Good $i$	Money
Transactor 1	$p_1$	$+ p_1 Aq_{i.1} + Aq_{m.1}$	$Aq_{1.1} + p_2 Aq_{2.1} = 0$
Transactor 2	$p_1$	$+ p_1 Aq_{i.2} + Aq_{m.2}$	$Aq_{1.2} + p_2 Aq_{2.2} = 0$

$$\text{Transactor } K \quad p_1 Aq_{1.K} + p_2 Aq_{2.K} + p_i Aq_{i.K} + Aq_{m.K} = 0 \quad .$$

Planned market excess demands

$$P_1 Q_1 + P_2 Q_2 + P_i Q_i + Q_m = 0$$

goods, including money, is zero. It is not the flip slogan 'supply creates its own demand'. For that to be true each column would add to zero. But if we add transactor I's planned excess demand for good 1 to transactor 2's down to transactor A's a figure of  $P_1 Q_1$  will be arrived at.  $P_1 Q_1$  could be positive, negative or zero, as could  $P_2 Q_2$  and so on. No single market's planned excess demand need necessarily sum to zero.

Say's Law holds no matter what the price. The table must sum to zero irrespective of the levels of  $P_i$  to  $P_i$ . In the special case where each and every market is in equilibrium then no planned excess demand exists anywhere. This, however, only holds for one particular series of prices and is the special case known as general equilibrium (GE). Say's Law holds in GE, but it holds at all other price combinations as well. In GE the prices ruling are such that each column sums to zero. When GE does not hold, Say's Law states that if one market has a price above the GE level, then planned negative excess demand in that market exists. In which case, in at least one other market, the price must be below the GE level for there to be a compensating planned excess demand.

In the ordinary case the price of the good in the market for which there is a planned excess supply would fall, and that of the good for which there is a planned excess demand would rise. GE would be restored and all plans would again be carried out. Economies do not always return to GE, however.

So Reekie explains that as entrepreneurs attain investment they create products and put them into the market and the demand for that product is high; then the value of the investment increases along with the demand for the product that is determined by the price of the product to a point where prices set that can negatively affect demand; and thus inhibit the return on investment, but as long as the price remains low enough to drive general equilibrium then the investment will produce a return on investment. Add to this the potential impacts to the broader economy and it becomes an opportunity that can be taken up for more than just the initial return on investment. But at what level should an investment be made, especially in the utilization of multi-stakeholder capital funding; should the group determining the investment size focus on a minimal investment that will produce a small return on investment and mitigate financial risk, should they seek a middle ground between returns and risk, or should they allocate an amount of funding where they can be reasonably sure that the project will finish with a successful outcome? The answer of course is that each individual project and its potential impacts are different, and the decisions that the investment size must be weighed against the possible projected returns. Anderson, Sweeney and Thomas in their text 'Quantitative Methods for Business Decisions' give an example of how this decision could possibly be made using an example of a construction project.

In words, the expected value of a decision alternative is the sum of weighted payoffs for the decision alternative. The weight for a payoff is the probability of the associated state of nature and therefore the probability that the payoff will occur. Let us return to the PDC problem to see how the expected value approach can be applied.

PDC is very optimistic about the potential for the luxury high-rise condominium complex. Suppose that this optimism has been translated into an initial subjective probability assessment of 0.8 that market acceptance will be high ( $s^1$ ) and a corresponding probability of 0.2 that market acceptance will be low ( $s^2$ ). Thus,  $P(s_i) = 0.8$  and

$P(S^2) = 0.2$ . Using the payoff values in Table 4.1 and equation (4.4), we compute the expected value for each of the three decision alternatives as follows:

$$EV(d^1) = 0.8(8) + 0.2(7) = 7.8$$

$$EV(d^2) = 0.8(14) + 0.2(5) = 12.2$$

$$EV(d^3) = 0.8(20) + 0.2(-9) = 14.2$$

Thus, using the expected value approach, we find that the large condominium complex, with an expected value of \$14.2 million, is the recommended decision.

The calculations required to identify the decision alternative with the best expected value can be conveniently carried out on a decision tree. Figure 4.2 shows the decision tree for the PDC problem with state-of-nature branch probabilities. Working backward through the decision tree, we first compute the expected value at each state-of-nature node. That is, at each state-of-nature node, we weight each possible payoff by its chance of occurrence. By doing so, we obtain the expected values for nodes 2, 3, and 4, as shown in Figure 4.3.

Since the decision maker controls the branch leaving decision node 1 and since we are trying to maximize the expected profit, the best decision branch at node 1 is  $d_3$ . Thus, the decision tree analysis leads to a recommendation of  $d_3$  with an expected value of \$14 million. Note that this is the same recommendation obtained with the expected value approach in conjunction with the payoff table.

Other decision problems may be substantially more complex than the PDC problem, but if there are a reasonable number of decision alternatives and states of nature, you can use the decision tree approach outlined here. First, draw a decision tree consisting of decision and state-of-nature nodes and branches that describe the sequential nature of the problem. If you use the expected value approach the next step is to determine the probabilities for each of the state-of-nature branches and compute the expected value at each state-of-nature node. Then select the decision branch leading to the state-of-nature node with the best expected value. The decision alternative associated with this branch is the recommended decision. The QM in Action article on decision analysis and the selection of home mortgages describes how the decision analysis approach can be used to help home buyers select the best type of mortgage.

### ***Government Entities = Poor Investment Strategies***

But is it the government's role to make decisions on what investments are good investments or bad investments? Is it the government's role to determine what projects should be funded and what projects should not? Is the government without bias? Is the government without individuals who have self interests that could affect the decision making process for proper investments? Could a government create and manage such a system without having political posturing and favoritism enter into the equation? The answers to these questions are obvious; the government may be able to conduct investments in projects in a systematic way that removes predatory practices from taking place and accumulate enough capital from the masses to provide significant funding for potential projects and even implement some of those projects without negative consequences, but eventually the combination of politics and money will cause strife, consternation and a myriad of problems that are not easily dealt with.

As we have seen in the recent past with Fannie Mae and Freddie Mac, government entities do not make proper investment decisions. These programs were established to help lower income and help individuals qualify for mortgages in order for them to attain the American dream of home ownership. However, these organizations began to see themselves more as philanthropic entities than organizations that were supposed to turn a slight profit in order to reinvest the following year. Unfortunately what we have seen is gross mismanagement and poor investment decisions



that created a significant recession in the US economy. However, 1/3 of all mortgages were written underneath these governmental organizations and then the taxpayer was stuck with the cost of keeping them alive, or they would face a greater recession or possibly a depression. It is clear that establishing an investment fund that is under the direct control of the government and the politicians that make up that government is not optimal; otherwise the government would seek to create a planned economy where the investment choices are determined and given to those who support the status quo and the political establishment. Therefore a state of equilibrium must be found where the government can aggregate capital to be invested while keeping the political establishment from having a decision making role in how the investments are made. The investments must be made based upon what goods and services are demanded by the market and where entrepreneurs and business owners seek to fulfill market needs. Edwin Dolan, in his book 'The Foundations of Modern Austrian Economics' explains what happens when the forces of the market are undermined and the competitive nature of the market removed.

The capital structure of society is an aggregate of capital combinations, but only in a state of general equilibrium can the capital goods belonging to different firms be regarded as additive, when they stand to each other in a relationship of complementarity. It is, however, a type of complementarity different from that governing capital goods within the same capital combination. We have to distinguish between the planned complementarity of the latter, the result of entrepreneurial choice and decision, and the unplanned complementarity of capital resources at various stages of production, which is an outcome of the operation of the market process.

The capital structure of society is never completely integrated. The competitive nature of the market process entails incoherence of plans and limits the coherence of the resulting order. A tendency toward the integration of the structure does exist. Capital goods that do not fit into any existing combination are useless to their owners, are "not really capital," and will soon be scrapped. "Holes" in the existing complementarity pattern, on the other hand, must cause price-cost differences and thus call for their elimination. But expectations of early change in the present situation may impede the process of adjustment, and even when this does not happen, the forces of adjustment themselves may be overtaken by other forces.

As Dolan theorizes, the capital structure of society is never fully integrated but instead driven by market demand; if goods and services are created that the market does not desire, the investment is completely at risk. This has been seen in the past as planned economies such as in the former Soviet Union, where the government determined how many of an individual product would be made and what the price would be to the consumer; this of course led to products and services being pushed that the market did not call for and individuals did not want to buy, and led to the eventual collapse of their entire economy. Only when investment decisions take into account the market forces directed at a product or service, can a proper investment decision be made. Governments have shown themselves incapable of making proper investment decisions.

Understanding the driving factors that create a market for products and services is essential for the determination of what a good investment looks like; and it is also important for governments seeking to create economic development and an economic base in a region to keep as much capital in the local economy for as long as possible in order to generate economic impact. Outside of taxation a dollar spent in the economy will return approximately \$1.30 that \$1.30 reinvested returns \$1.67 and so on and so on and so on. The amount of times a dollar can be circulated in a local economy prior to taxation determines the amount of economic impact and growth that an investment can achieve. Campbell and Skinner, in their book 'Adam Smith' explain this philosophy to discuss why Austrian economists seek to keep taxation low and money circulating in an economy.

Perhaps the logic of the process can be best represented by artificially splitting up the activities involved. Suppose at the beginning of the time period in question, that the major capitalist groups possess the total net receipts earned from the sale of products in the previous period, and that the undertakers engaged in agriculture open by transmitting the total rent due to the proprietors of land, for the use of that factor. The income thus provided will enable the proprietors to make the necessary purchases of consumption (and investment) goods in the current period, thus contributing to reduce the stocks of such goods with which the undertakers and merchants began the period. Secondly, assume that the undertakers engaged in both sectors, together with the merchant groups transmit to wage-labor the content of the wages fund, thus providing this socio-economic class with an income which can be used in the current period. Thirdly, the undertakers in agriculture and manufactures make purchases of consumption and investment goods from each other through the medium of retail and wholesale merchants thus generating a series of expenditures linking the two sectors. Finally the process of circulation may be seen to be completed by the purchases made by individual undertakers within their own sectors. Once again these purchases will include consumption and investment goods, thus contributing still further to reduce the stocks of conic modifies which were available for sale when the period under examination began.

Given these points, the working of the system can be seen to involve a series of flows whereby income is exchanged for commodities in such a way as to generate a series of withdrawals from the 'circulating' capital of society. As Smith pointed out, the consumption goods thus withdrawn from the existing stock may be entirely used up within the current period, or used to increase the stock 'reserved for immediate consumption' or to replace the more durable goods (e.g. clothes) which had reached the end of their life in the course of the same period. Similarly, the undertakers as a result of their purchases, will add to their stocks of raw materials and/or their fixed capital, or replace the machines which lead finally worn out in the current period. Looked at in this way, the 'circular flow' may be seen to involve a certain level of purchases which takes goods from the market but which is at the same time matched by a continuous process of replacement by virtue of the productive activity which is currently carried on.

While this vision of the economic process is important in its own right, Smith also used it to demonstrate the importance of a wide range of economic problems as well as the interconnections which exist between them. The first and most obvious problem in the context of the exchange economy is that of price and its determinants. In handling this problem, Smith assumed the existence of what he called 'ordinary' or 'average' rates of wages, profit, and rent; rates of return which may be said to prevail within any given society or neighborhood during any given time period (such as a year). These rates of return determine the natural or supply price of any commodity, defined by Smith as that amount which is 'neither more nor less than what is sufficient to pay the rent of the land, the wages of the laborer, and the profits of the stock' according to their prevailing and natural rates. By contrast, market price is now defined as that price which may prevail at any given point in time, being regulated by 'the proportion between they quantity which is actually brought to market, and the demand of those who are willing to pay the natural price of the commodity. The two prices are interrelated in that in a competitive situation any divergence between them will cause the rates of return accruing to factors to rise if above or fall below their 'natural' rates, thus generating an inflow or outflow of resources to or from the employment affected with consequent effects on the supply of the commodity. In short the natural price of commodities emerges as the equilibrium or 'central' price,' to which the paces of all commodities are continually gravitating.

### ***Measurement Through Job Creation***

So the amount of money circulating in a regional economy drives the market price of a product or service to an equilibrium level to where the seller is able to make a profit and the buyer is satisfied with the value of their purchase. As stated before this drives the determination of whether an investment will create a significant return but it can't be

pushed enough, it is the idea that capital availability is tied directly to market demand which impacts the local economy through dollar circulation to determine value and price. Without capital market needs economies go unfulfilled and dollars are less likely to be circulated in an economy; although the Austrians belief that this risk should be born solely by the investors and the producers it is naive to believe in this day and age that they would be able to compete without government capital and intercession. The question remains what does return on investment look like in a scenario where outcomes must be accounted for on both the behalf of the entrepreneur and the state, each of whom has different desires and impacts. The entrepreneur seeks the growth of the business, to hire more employees, to increase the bottom line, and to increase his or her personal worth. The state seeks to have an increase in its business tax base, an increase to the capital funds bottom line, and an increase in the number of people with well paying jobs that again increase the personal tax base. So people and jobs are an important factor for both parties and a ROI can then be calculated with a Human Resource factor and should possibly be part of the decision on whether or not to invest.

The calculation of the return on investment in HRD begins with the basic model illustrated above, where a potentially complicated process can be simplified with sequential steps. The ROI process model provides a systematic approach to ROI calculations. A step-by-step approach keeps the process manageable so that users can tackle one issue at a time. The model also emphasizes that this is a logical, systematic process which flows from one step to another. Applying the model provides consistency from one ROI calculation to another. Each step of the model is briefly described in this chapter.

#### PRELIMINARY EVALUATION INFORMATION

Several pieces of the evaluation puzzle must be explained when developing the evaluation plan for an ROI calculation. Four specific elements are important to evaluation success and are outlined in the next section.

##### Evaluation Purposes

Although evaluation is usually undertaken to improve the E IRD process, several distinct purposes can be identified. Evaluation is planned to:

- determine if a program is accomplishing its objectives,
- identify the strengths and weaknesses in the HRD process,
- determine the cost/benefit analysis of an HRD program,
- assist in marketing HRD programs in the future,
- determine if the program was appropriate for the target audience, and
- establish a database, which can assist in making decisions about the programs.

Although there are other purposes of evaluation, these are the most important ones. ~ Evaluation purposes should be considered prior to developing the evaluation plan because the purposes will often determine the scope of the evaluation, the types of instruments used, and the type of data collected. For example, when an ROI calculation is planned, one of the purposes would be to compare the cost and benefits of the program. This purpose has implications for the type of data collected (hard data), type of data collection method (performance monitoring), type of analysis (thorough), and the communication medium for results (formal evaluation report). For most programs, multiple evaluation purposes are pursued.

It is important to evaluate a potential venture from a human resource perspective, but other factor need to be assessed just the same. A baseline must be established and then a venture firm must track the impacts that happen after change is made. So ROI in a human resources perspective can be calculated using the established baseline and determining the bottom line of the organization in regards to increases or decreases as investments are made into the system. On a broader scale of the state, we can see the number of people that are employed and the number that are unemployed. We can also see the level of employment that people are at and the income that they are deriving from that employment. We can set a baseline on a local and regional level and then use that baseline to help determine if an investment into that market (through providing capital to entrepreneurial projects) has an effect on employment numbers, level of employment, and the ability of the employed to provide an ROI to the state in the form of taxes on that new or enhanced wage. On a micro-scale this could be seen very easily in a small rural village if an entrepreneur started a successful business and began hiring their neighbors to fill positions as the business grows due to access to capital. As an example: if the village had 100 employable people and there were 25 employable people who could not find work (25% unemployment is average across rural Alaska) and the entrepreneur opens shop and employs himself, family members, and friends; each person that he hires increases employment 1% in the village.

Alaska is full of innovators; it is necessary for survival in this harsh and sometimes cruel environment. There are many businesses that can thrive in rural Alaska even with the limiting factors of location and environment. But we have done a poor job of assisting those innovators so that they can become successful. And access to risk capital is the biggest stumbling block in the way of innovation. Christensen and Raynor discuss the problems inherent with access to capital for most innovators.

Getting funded is an obsession for most innovators with a great idea; as a result, most research about raising capital has focused on how to get it. For corporate entrepreneurs, writers often describe the capital budgeting process as a cumbersome bureaucracy and recommend that innovators find a well-placed "champion" in the hierarchy who can work the system of numbers and politics in order to get funding. For start-ups seeking venture capital, much advice is focused on structuring deals that do not give away too much control, while still allowing them to benefit from the networks and acumen that venture capital firms offer.

Although this advice is useful, it skirts an issue that we think is potentially more important: The type of money that corporate executives provide to new-growth businesses and the type of capital that managers of those businesses accept represent fundamental early choices when launching a new-growth business. These are critical fork-in-the-road decisions, because the type and amount of money that managers accept define the investor expectations that they'll have to meet. Those expectations then heavily influence the types of markets and channels that the venture can and cannot target. Because the process of securing funding forces many potentially disruptive ideas to get shaped instead as sustaining innovations that target large and obvious markets, the very process of getting the money to start a venture actually sends many of them on a march toward failure.

We have concluded that the best money during the nascent years of a business is patient for growth but impatient for profit. Our purpose in this chapter is to help corporate executives understand why this type of money tends to facilitate success, and to see how the other category of capital—which is impatient for growth but patient for profit—is likely to condemn innovators to a death march if it is invested at early stages. We also hope this chapter will help those who bankroll new businesses understand the forces that make their money good or bad for nurturing growth.

The most commonly used theories about good and bad money for new-growth ventures have been based on attributes rather than circumstances. Probably the most common attribute-based categorization is venture capital versus corporate capital. Other categories include public versus private capital, and friends and family versus professionally managed money. None of these categorization schemes supports a theory that can reliably predict whose money will best help new ventures to succeed. Sometimes money from each of these categories proves to be a boon, and sometimes it becomes the kiss of death.

We've already demonstrated why the money that funds a newgrowth business needs to be patient for growth. Competing against nonconsumption and moving disruptively up-market are critical elements of a successful new-growth strategy—and yet by definition, these disruptive markets are going to be small for a time. The only way that a venture can instantly become big is for existing users of a high-volume product to be enticed to switch en masse to the new enterprise's product. This is the province of sustaining innovation, and start-ups rarely can win a sustaining-innovation battle. Money should be impatient for growth in later-stage, deliberate-strategy circumstances, after a winning strategy for the new business has emerged.

Money needs to be impatient for profit to accelerate a disruptive venture's initial emergent strategy process. When new ventures are expected to generate profit relatively quickly, management is forced to test as quickly as possible the assumption that customers will be happy to pay a profitable price for the product—that is, to see if whether real products create enough real value for which customers will pay real money. If a venture's management can keep returning to the corporate treasury to fund continuing losses, managers can postpone this critical test and pursue the wrong strategy for a long time. Expectations of early profit also help a venture's managers to keep fixed costs low. A business model that can make money at low costs per unit is a crucial strategic asset in both new-market and low-end disruptive strategies, because the cost structure determines the type of customers that are and are not attractive. The lower it can start, the greater its upside. And finally, early profitability protects a growth venture from cutbacks when the corporate bottom line turns sour.

In the following sections we describe in more detail how good money becomes bad. We recount this process from the point of view of corporate investors, with the hope that this telling of the story will help managers who are seeking funding to know good and bad money when they see it, and to understand the consequences of accepting each type. We hope also that venture capital investors and the entrepreneurs whom they fund will be able to see in these accounts parallel implications for their own operations. Bad money can come from venture and corporate investors—as can good money.

Those working to build disruptive growth businesses within established corporations sometimes look longingly at the green grass on the other side of the corporate fence, where innovators who build independent start-ups not only can avoid the encumbrances of corporate bureaucracy but also have the freedom to fund their ideas with venture capital. The belief that venture capitalists can fund start-ups much more effectively than corporate capitalists is so pervasive, in fact, that the venture capital investment arms of many corporations refuse to participate in a deal unless an independent venture capital firm will co-invest.

We would argue, however, that the corporate-versus-venture distinction isn't nearly as important as the willingness or inability to be patient for growth. Just like Honda, most successful venture capital firms had precious little capital to invest at the outset. The lack of money conferred on their ventures a superior capability in the emergent strategy process. When venture capitalists become burdened with lots of money, however, many of them seem to behave as corporate capitalists do in stages 3, 4, and 5 of the growth-gap spiral.

In the late 1990s venture investors plowed huge sums of capital into very early-stage companies, conferring extraordinary valuations upon them. Why would people with so much experience have done something so foolish as to invest all of that money in companies before they had products and customers? The answer is that they had to make investments of this size. Their small, early-stage investments had been so successful in the past

that investors had shoveled massive amounts of capital into their new funds, expecting that they would be able to earn comparable rates of return on much larger amounts of money. The venture firms had not increased their number of partners in proportion to the increase in the assets that they were committed to invest. As a consequence, the partners simply could not be bothered with making little \$2 million to \$5 million early-stage investments of the very sort that had led to their initial success. Their values had changed. They had to demand that the ventures they invested in must become very big, very fast, just like their corporate counterparts.

And just like their corporate counterparts, these funds then went through steps 3, 4, and 5 that were described at the beginning of this chapter. These venture funds weren't victims of the bubble—the collapse in valuations that occurred between 2000 and 2002. In many ways they were the cause of it. They had moved up-market into the magnitudes of investment that normally are meted out in later deliberate strategy stages, but the early-stage companies in which they continued to invest were in a circumstance that needed a different type of capital and a different process of strategy. The paucity of early-stage capital that continues to prevent many entrepreneurs with great disruptive growth ideas from getting funding as of the writing of this book is in many ways the result of so many venture capital funds being in their equivalent of step 5 of the death spiral—retrenching and focusing all of their money and attention to fix prior businesses. We often have been asked whether it is a good idea or bad idea for corporations to set up corporate venture capital groups to fund the creation of new growth businesses. We answer that this is the wrong question: They have their categories wrong. Few corporate venture funds have been successful or long-lived; but the reason is not that they are "corporate" or that they are "venture." When these funds fail to foster successful growth businesses, it is most often because they invested in sustaining rather than disruptive innovations or in modular solutions when interdependence was required. And very often, the investments fail because the corporate context from which the capital came was impatient for growth and perversely patient for profitability.

### ***Understanding Business Development***

This about that last line: *"very often, the investments fail because the corporate context from which the capital came was impatient for growth and perversely patient for profitability"*. This means that the organization that funded the venture was being driven by a strong need for quick growth so that the share price of the stock could be leveraged and possibly sold and that they did not care if the organization that they funded ever became profitable! Most venture capital organizations require 5X growth in three years and 10X growth in five years, but the average time period that it takes for a start-up organization to reach profitability is 5-7 years. Venture firms just can't wait that long for the return on their investment to come in the form of earnings on that investment. The stress and strain that this scenario puts on the organization receiving capital is often more than they can bear. This makes the "one successful investment out of ten" for the venture firm a self fulfilling prophecy.

So the role of government from a combined Keynesian and Austrian perspective would be that the government create the environment in which innovative businesses can flourish on both a local and international stage and then provide the access to risk capital necessary for entrepreneurs to get started and grow, with of course some moderate monitoring to ensure there is no malfeasance, and then remove themselves from the picture. This is what the government is supposed to do according to Thomas Dye.

Today the government of the United States is fully committed to preserving economic prosperity and using fiscal and monetary policies to try to offset the effects of inflation and recession (see Box 6-1, Achieving Economic Stability"). This much of Keynesian economics is contained in the Employment Act of 1946, which specifically pledges the federal government to promote maximum employment, production, and purchasing power."

The act created the Council of Economic Advisers (CEA) to Develop and recommend to the president national economic policies." The CEA is composed of three economists, appointed by the president, and a staff of analysts

who collect data on the economy and advise the president on what to do to offset cycles of inflation or recession. The act also requires the president to submit to Congress an annual economic report assessing the state of the economy and recommending economic legislation.

### ***Transition to Depth***

But didn't we already prove that having the government positioned as that entity that provides, monitors, and disperses capital is a bad thing? How then can a program be set up that can accomplish the task of getting venture capital into the hands of entrepreneurs? What have other states done in order to solve this problem?

The next section of this paper will analyze the programs that have been created by other states to solve the access to capital problem. There have been many attempts at making entrepreneurship a vital part of a state's economy and some programs have been more successful than others. We will look at the successes and failures to determine what style of system will work for Alaska and then examine best practices in order to build that program.

## Part II – Depth

### *Existence of Venture Capital*

Whereas Part I of this study on statewide economics gave the reader an overview of general economic models and both the differentiating and congruent needs of private sector and public sector economics, Part II goes into depth on the topic of venture capital funds, their impact on local and state wide economies, their potential to do great things, and their potential for disastrous consequence. It delves into the efficacy of university participation, discusses the need and methodologies for retaining businesses and their benefits within the state, and the essential need to understand the difference between a State-Run venture capital entity, versus a State-Supported venture capital entity. It also provides several examples of working models in both categories, and concludes with a survey of optimum practices that can be adapted and modified to meet the needs of Alaska's economic necessities.

The advantage of venture capital investment is "Time To Market"; an entrepreneur or business can obtain access to the capital required to expand their business and obtain market share before another entity beats them to it. Venture capital is not a loan that needs to be repaid; rather, venture capitalists (VCs) invest their money in exchange for equity (an ownership share) in a company. VCs gain profit only when a business obtains positive cash flow and issues dividends, is acquired by another company, or "goes public," that is, when its shares can be publicly traded on a stock exchange. The disadvantage of using VC is that an entrepreneur or business is no longer the sole owner of a company and may lose control. Moreover, a VC may move a company towards an Initial Public Offering (IPO) of publicly traded shares faster than might be best for the long-term health of the business.

VC's have many different structures for how they acquire funds to be invested. Sometimes money being invested in a VC is institutional money, other times it is their own VC funds, a VC could be state funded, a VC could also be funded through a university, and finally very wealthy investors could invest a small portion of their net worth into a VC. VC entities have a responsibility to their investors to place the fund's money where the fund management believes it has the best chance of having the largest return on investment. VCs traditionally handle very risky investment however, and many of them never get that home run return on investment they worked for. There are many instances of VCs closing their doors with their investors losing their entire investment. So the first rule for an entrepreneur approaching a VC is to understand why a VC exists in the first place. It isn't there for a social economic goal or for any altruistic reason.

Venture capital has existed in many different forms under many different styles of management and can possess both extremely beneficial and extremely devastating economic effects. Different styles of management means different operating methodologies and, in turn, can produce entities whose focus is to improve entire economies or entities whose focus is to improve their own individual economic standing. Though not always mutually exclusive, these disparities of purpose are often at odds with each other.

There is an incredible number of varying operational infrastructures exhibited by venture capital entities in the United States, all of which can contain both positive and negative impacts on the economic condition of their states. There are state-run, university-run, and typical venture capital firms that are built upon a combination of years of practice and stagnant rules of governance. The overall effects of venture capital on economies range from extremely good to extremely bad. The inconsistent nature of venture capital entities only highlights the need for a more comprehensive, evolved VC structure to provide consistent, sustainable, and scalable growth; this growth needs to benefit state economies, the federal government, local economies, investors, and entrepreneurs.

The focus of successful, highly evolved venture capital entities should be to strive to form and orchestrate a complex



network of professionals including scientists, engineers, project managers, financial experts, small business development centers, experienced state agencies, and other field specific specialists, all working in concert to assist in the successful multifaceted return on investment for all individuals and entities involved. Because of the variations in operation it can be very difficult to understand what funding opportunities exist and how to approach them as an entrepreneur or business. Evolved venture capital entities need to become more aware of both the business and VC markets within their own states because, as Billingsley points out, “There’s an enormous amount of money being invested by states out there and not a lot of people know about it.”

(Billingsley, 2009)

Everybody’s budgets are being cut, says Jim Jaffe, president and CEO of the National Association of Seed and Venture Funds (NASVF). And what we’re also finding is that there’s an enormous interest in job creation. It’s a dilemma to spend now or later.

At least 30 U.S. states have committed a total of \$2.37 billion in investment capital for programs that encourage the growth of companies ranging from pre-seed to later stage, according to a March 2008 report by the NASVF. Some of the largest programs include: New Mexico, \$536 million; Texas, \$290 million; Ohio, \$212 million; Michigan, \$204 million; and Pennsylvania, \$68 million, according to the NASVF.

There is no consistent investment strategy from one state to the next, says Jaffe. Some hire a fund manager, some make direct equity investments into companies, and others distribute funding to a variety of economic development organizations in the state, or a combination of the above.

Regardless, There’s an enormous amount of money being invested by states out there and not a lot of people know about it, says Jaffe.

State officials hope that a percentage of equity investments will lead to substantial growth, mergers, acquisitions and job creation in their region. The return on investment is then put back into economic development coffers.

Since the 1980s, the Pennsylvania legislature has supported the Ben Franklin Technology Partners (BFTP), a statewide economic development network that helps startups with capital, product development, filling out management teams and assessing the strategic value of products.

Pennsylvania has been very deliberate in providing a lot of resources to seed and early stage companies, says John Sider, director of venture investments for the Pennsylvania Department of Community & Economic Development. We’re unusual in the fact that we’ve been doing it a long time and both sides of the aisle are supportive.

The program seeks to grow companies in the areas of information technology, biotechnology, nanotechnology, electronics, communications, advanced manufacturing, advanced materials and alternative energy.

A recent impact study shows BFTP has returned \$3.50 for each \$1 spent and created thousands of high-wage jobs in the state.

In 2001, the state also launched a program to anchor venture capital funds locally. It provides some of the startup capital for funds. The fund managers, in turn, do not have to invest in strictly Pennsylvania-based companies, but they do need to achieve a four times return on investment for the state.

What we want to do is organically grow venture capital funds in Pennsylvania, says Sider, adding the state is trying to address the capital needs of companies at every stage of their growth curve. And the thing we want people to know is that risk capital is abundant in Pennsylvania.

The Michigan Pre-Seed Capital Fund receives money from the state's \$109 million 21st Century Jobs Fund. The latter was created in 2006 to invest in research and development, university technology transfer and early stage companies. In addition, the state's \$95 million Venture Michigan Fund is being used to anchor venture capital funds and fund managers in the state.

Target growth industries include life sciences, alternative energy, advanced automotive, manufacturing and materials the category SenSound falls into and homeland security and defense.

The state is ready and willing to listen and we've got to take a risk at some point, says LeAnn Auer, executive director of the Michigan Venture Capital Association, adding the state's flailing auto industry makes these investments even more timely.

It has already boosted the entrepreneurial industry here, she says. Ten years ago we didn't see that type of activity.

New Mexico invests in venture capital funds that commit a certain amount of money to local startups and have an office in the state; co-invests into New Mexico companies; and provides guaranteed loans at no interest and a 25 percent tax credit to film projects being shot in the state.

Some of its target growth industries include film production, renewable energies, life sciences and aerospace. But the state does not limit its options.

New Mexico is sector agnostic, says Greg Kulka, director of private equity and economically targeted investment for the New Mexico State Investment Council. We are here to help New Mexico companies grow. The state has certain competitive advantages, so we're also trying to grow companies in those areas.

The impact of this "evolved" type of venture capital, which is roughly a third of the size of the total private equity sector, has brought about significant economic benefits to the US. For companies financed by venture capital, the \$1.5 trillion in revenues and 8.7 million jobs tied to these businesses in 2000 grew to \$2.1 trillion in revenues and 10 million workers in 2005, representing 16.6% of the US gross domestic product (GDP) and 9% of the nation's private sector employment, despite the fact that venture investment itself represents only 0.2% of the national GDP. In fact, between 2003 and 2005 these companies consistently outperformed their peers in both revenue and employment growth rates, with the latter increasing by 4.1% compared to a national 1.3%, and the former rising by more than 11% compared to a national 8.5%. Venture capital plays a particularly significant role in the economic health of a number of individual states, with nearly 2.3 million jobs and \$500 billion in revenue tied to venture capital-backed companies headquartered in California alone.

In Texas there has been a recent decline in venture capital for start-ups and the economy is suffering because of it. Texas has always been known for its entrepreneurial spirit; in the past century, its citizens have employed that spirit to develop Texas' prominence in the energy and aerospace industries and, more recently, in the semiconductor and information technology industries. Entrepreneurs built successful companies like Dell Computer, Compaq Computer, Brinker International (Chili's Restaurants), and Whole Foods Markets. In each of these instances, the visionary founders achieved success because they had more than great ideas; they had access to appropriate venture capital.

Texas now faces a challenge that will have repercussions on their economy and their workforce for decades to come. Despite their entrepreneurial culture, vast research and development capabilities, and their wealth of talented human capital, Texas has a woefully inadequate amount of start-up capital to take advantage of the investment opportunities that exist within the state's borders.

As pointed out by the National Association of Seed and Venture Funds (NASVF), the value venture capital firms can bring to a state when money is reinvested in the state is huge. Jobs can be created, a state's economy can be greatly benefited, and the overall standard of living is improved within a state. If venture capital is organized correctly the benefits may go beyond economic and job creation benefits for a state, and actually can help improve access to services such as affordable health care, that otherwise would not be available. It is a complete societal change if venture capital can enhance the standard of living within a state; this means providing enough economic value to a region that all commercialized and service oriented businesses can be positively affected.

The Colorado Venture Capital Authority is a good example of a venture capital entity helping to provide funds for a health care facility, whilst also providing jobs and increasing income for the state's economy, the local economy, and individual entrepreneurs.

(Fletcher, 2006)

SmartCare Family Medical Centers, which operates retail health care centers, has a preliminary deal to lease space within several Wal-Mart Supercenters in Arizona, Colorado and Nevada.

SmartCare, based in Greenwood Village, Colo., is independently owned and recently received funding that included money from the Colorado Venture Capital Authority.

SmartCare will design, build and operate the medical centers in Wal-Mart stores. Specific locations will be identified soon, SmartCare officials said.

The centers are scheduled to open during the third and fourth quarters of 2006.

"SmartCare Centers are relevant to every community that can benefit from greater access to quality medical care for everyday needs," Lawrence Hay, chief executive of SmartCare, said in a press release. "Locating within Wal-Mart stores will give those communities consumer-driven, no-appointment-necessary health care services."

SmartCare Clinics Inc. launched an aggressive plan to move medical care into retail stores nationwide, providing convenient, low-cost health care patients can get while shopping for a gallon of milk.

The company, founded in 2004, plans to open 1,000 centers in groceries, pharmacies and other retail stores nationwide over the next three to five years. Its first centers are set to open in Kerr Drug stores in Charlotte, S.C., in August.

The centers are small, taking up 250 to 500 square feet in a store.

SmartCare, however, is entering a crowded field of companies racing to sign exclusive contracts deals with the country's largest drug stores, grocery chains and mass merchandisers.

Bentonville, Ark.-based Wal-Mart Stores Inc. (NYSE:WAL) said the deal with SmartCare will help its customers.

"Wal-Mart serves as a community hub for thousands of people who can benefit from more convenient access points to quality health care," said Amee Chande, a spokeswoman for Wal-Mart. "We are pleased to invite SmartCare into our stores to meet the basic and preventive health needs of local communities and Wal-Mart customers."

### ***Need for Better Evaluation Methodologies and Professional Expertise***

Improving access to capital is important to the growth of a state and its economy. Private venture firms, to improve growth, will often bring many experienced professionals together before investing in companies. Conventional wisdom says they engage in this practice to better screen potential investments. More eyes, the thinking goes, yield better investments. When investments are obvious winners, venture capitalists don't need second opinions, nor would they want to share their returns. Likewise, when investments are obvious duds, they can reject them without consulting professionals.

It's the ventures with unclear prospects that induce a venture capitalist to seek out many outside experienced professionals that all take stake in the venture. Thus they end up sharing the investment by utilizing these outside experts. In doing so this lets venture firms share risk and diversify their portfolios; banding together also gives them a stronger bargaining position vis-a-vis the companies in which they invest.

Having multiple parties involved is a prospect that many venture firms would avoid because of the potential profit reductions, however the addition of many professionals will yield higher success rates and, thus, overall higher profits. The question is not if more professionals should be integrated into a venture firm, it is how to effectively utilize them to produce higher success rates among ventures.

In venture capital entities that utilize public monies, and therefore are wanting to have multifaceted returns that include capital returns to the state and private investors, job creation, increased tax base, and successfully diversified economies, these higher success rates can be achieved by having concrete operating methodologies combined with vast professional experience to make complex informed decisions, thus nurturing many of the businesses that would otherwise be deemed "ifly" into successful producing entities that further expand the state's economy.

Consistent internal growth, with the addition of vast professional experience for a venture capital entity is important to maintaining the growth of the state. As previously stated, to achieve consistent growth, venture capital entities must develop proper planning and implementation methodologies by having many different professionals assessing potential projects, including internal personnel and outside partners.

There are several different questions that need to be answered by many experts for proper business inception by a VC:

#### **Question #1: Is it a New Combination?**

This question hinges on the degree to which new entrepreneurial discovery has taken place in order to take advantage of excess supply or excess demand. Entrepreneurial discovery occurs when an imperfection in the market can be identified and exploited. For example if a discovery is new for a VC, but not for other companies there is little reason to pursue the project; if the discovery provides a definite improvement over existing supply for present demand, or demand for present supply then the business should have access to financial and managerial expertise from within the state; and if the discovery is a real breakthrough there should be extensive infrastructural support and expertise provided to the business from within the state.

#### **Question #2: Is there a Product-Market Match?**

In the world of venture capital a new combination does not in itself determine that a product is innovative. For true innovation to occur, someone has to be willing to buy the product created in the new combination. Therefore, this question seeks to identify the degree to which customers, or potential customers, will commit to purchase the product. The question of product-market match is a key in the world of venturing and the allocation of investment funds. The higher the capital requirement for market entry, the more scrutiny this question must be given.

**Question #3: Is there a Net Buyer Benefit?**

This question of net buyer benefit centers on the drivers of customer demand for the product, and the relative relationship of perceived price and perceived product differentiation. Generally, is the value-added of the product to the customer such that they would rather have the product, than money in their pocket?

**Question #4: Are there Margins?**

As net buyer benefit defines value to the customer, margins define value to the venture. For the purpose of new venture technology, the question of margins focuses on what level of margin-per-unit can be expected on a fully-absorbed cost basis. The key comparisons should be based on realistic industry performance and expectations.

**Question #5: Is it Repetitive?**

This question hinges on the degree to which the product will be needed regularly (or on an ongoing basis) or that other strategic practices that drive repetitive product sales are prevalent and acceptable in the industry and are part of the express strategy of the venture for this product. The evaluation of a product's placement on the need/alternative use model is often useful in determining the repetitiveness of an entrepreneurial discovery.

**Question #6: Is there a Long-Term Need?**

The question of long-term need evaluates the extent to which the benefits of repetitiveness can be expected over time. This question hinges largely on an understanding of where the product (as a new combination) falls in the product lifecycle, and the relative speed of the lifecycle. This is often understood only through study of the lifecycle of similar innovations. Additionally, the ability to apply new venturing strategies to establish a clear two-way relationship with the customers is critical to long-term need.

**Question #7: Are Resources Sufficient?**

This question really looks at resources in financial, management, knowledge, and time sufficient to get the product to market. This view goes beyond short-term "start-up", to an evaluation of resource availability in the face of growth and other indicators of success unique to new venture formation and growth. The "Rule of 4" (it takes four times as long and costs four times as much as planned) plays into the evaluation of resources.

**Question #8: Is it Non-Imitable?**

Once a venture has achieved a level of innovation, the question arises as to whether or not the innovation can be maintained. This question hinges on the degree to which new entrepreneurial discovery can be imitated by competitors. Imitators (as opposed to substitutes) would do essentially the same thing as the venture, and in the same way.

Scarcity can be preserved by incorporating one or more of various types of isolating mechanisms into the venture, a key strategic skill employed by successful entrepreneurs. Maintaining "non-imitability" focuses on preventing new entrants from introducing additional supply to fill existing demand.

**Question #9: Is it Non-Substitutable?**

This question explores the degree to which substitutes exist (or can be created by competitors) for a new entrepreneurial discovery. Substitutes reduce demand for a product by doing something in a clearly distinct and

different way. The remedies to block substitutes are not the same as those that act as barriers to entry to imitators.

**Question #10: Is there No Slack?**

The second way that value is appropriated is through slack. Slack is inefficiency and waste in the product delivery process from the beginning to the end of the vertical supplier-customer chain. More generally, slack occurs whenever economic actors shrink the size of a venture's "pie" without ever discussing it with the venture. The key to reducing slack is appropriate structuring of incentives, a key skill of successful entrepreneurs.

**Question #11: Is There No Holdup?**

Appropriation of value occurs in two different instances. The first is when economic players use one of the many types of available power to force a venture to give them part of its financial gains. This is called holdup and is best viewed as thieves or bandits taking advantage of the fact that the venture has been built with few or no economic bargaining options, called small numbers bargaining.

**Question #12: Is Uncertainty minimized?**

This question hinges on the preparation of the organization for things that we know will happen in the future to affect the venture; but we don't know when, or the magnitude of the event(s). Minimizing uncertainty in a venture revolves around forward planning and risk management processes.

**Question #13: Is Ambiguity reduced?**

Ambiguity results when future events are unknown, meaning that the venture knows neither the nature, timing, nor magnitude of the event. In new ventures, the one certainty is that there will be a great deal of ambiguity. Because the market weeds out unfit ventures, understanding inertia, creating decision structures, and organizing to manage ambiguity are critical.

**Question #14: What is your level of Core Competence?**

Core competence obviously revolves around a venturing team's experience and specialization in the venture, as well as in venturing. These are two distinct sets of skills and abilities. Competence comes in the form of the ability to perform the key task required for the venture's success in whatever functional area that may be.

In addition to all of these questions there should be a particular focus on the economic benefits and restraints that an individual state can provide. It comes to be that the utilization of the aforementioned methodologies combined with professional experience is important; but what is more important is having professionals with extensive instate experience. It is more strategic for a conglomeration of instate professionals and instate venture firms to focus on instate ventures due to the fact that the professionals and the venture firm will be more aware of instate issues.

Having an instate focus is a piece of the puzzle, but this does not mean limiting the sales of products or services to inside a state. It is essential for a state to have an organized and efficient way to manufacture and export goods and services to other states to form a strengthened position of trade. This will benefit the local and state economies of all states who are involved with the trade. Of course this is the basis of commerce in the United States, but having a state focus rather than a broad economic focus will ensure a boost to a state's local economy instead of having a venture simply leave the state to go "where the money is." To help encourage a venture to stay instate there must be protocols established that outline prolonged residency requirements along with funding opportunities attached to lengths of time a venture remains instate.

Before a venture capital program can incorporate prolonged residency into their venture program they must first acquire the appropriate *instate* professional experts to ensure higher levels of successful venture outcomes. The

Oklahoma Seed Capital Fund has been continually successful because they utilize their strategic instate partnerships to make informed multi-perspective decisions when they invest in their state. Using professional partners from within a state ensures a certain level of continuity of the knowledge as it pertains to the state's economic environment; the more knowledgeable each strategic partner is about the state's economy means a higher probability of funding a successful business or entrepreneur in the state.

(Brus, 2009)

The Oklahoma Seed Capital Fund's first year ended with more than \$3 million invested in seven new, tech-based companies, and the placement of at least \$2 million more is already being considered by the midpoint of 2009, officials said.

The Oklahoma Seed Capital Fund is focused on growing Oklahoma's advanced technology companies," said Tom Walker, chief executive of the nonprofit Oklahoma corporation that manages the fund. "It's a good time to start and grow new entrepreneurial businesses. It is also an important time for organizations, such as ours, to support small businesses that are creating knowledge-based jobs. "

State support for the \$7 million venture capital fund is provided through the Oklahoma Center for the Advancement of Science and Technology (OCAST), with i2E, the state Development Finance Authority and Oklahoma Capital Investment Board as co-investors in the first series of the fund. Partners have contributed an additional \$16 million to innovative companies, Walker said.

OCAST Executive Director Michael Carolina cited Oklahoma City-based Lifetone Technology as a good example of the fund's potential.

With a \$430,000 investment, Lifetone is now working on the commercialization of a low-frequency fire alarm capable of waking people who are unable to hear traditional smoke detectors. Co-investors placed an additional \$3.8 million of investment in Lifetone, officials said.

Alarm inventor David Albert said that thanks to the fund and its co-investors, the first 10,000 units of the alarm are being manufactured, the company has an active sales organization, sales orders have been received and Underwriters Laboratories is testing the device. He said retail sales should begin within a few months.

"I'm very encouraged by what has been accomplished so far with the Oklahoma Seed Capital Fund," Carolina said. "The companies that we financed to date have very good growth potential. We are fortunate to have a pipeline of more new technology-based businesses queued up and waiting for investment. "

Carolina said that when the first series of investments are placed by the fund and its private investment partners, about \$25 million will be invested in Oklahoma startups. For the fund's second series round, as many as six or seven investments are under consideration.

"When people look at the Oklahoma model for economic development, that model includes financial instruments of the OCAST Technology Business Finance Program and the Seed Capital Fund," Carolina said. "I think there is a general recognition that we have the right portfolio of products and services that will help grow that culture of innovation in our state."

By leveraging multiple partners the Oklahoma Seed Capital Fund has been very successful in improving the state's economy. However, unlike the Oklahoma Seed Capital Fund, state-run venture capital firms offer a very stable model for

equity investment due the fact that they operate off of state dollars not private capital alone. State-run venture capital firms also offer the ability to provide larger amounts of initial funding because of their economic stability. These entities usually consist of a large network of selected venture capital firms that operate on behalf of the state-run program managers.

The VC's that operate under the general direction of the state still have screening and evaluation control, but are compensated by the state to cover operational expenses. The participating venture capital firms will also return a certain amount of profit to the state when a firm has a successful venture.

This structure provides many different operating methodologies under one roof with multiple fields of experience within a state. A network of this kind is imperative for making informed and highly scrutinized assessments of potential ventures within a state. Koprowski shows that over half of the states in the US have adopted a state-run venture fund with tens of millions of dollars for start ups.

(Koprowski, 2005)

State-run venture capital funds are increasingly financing early stage technology companies, picking up some of the slack left by private venture capitalists in the wake of the stock market bubble's burst, experts tell the E-Commerce Times.

Thirty-six states have venture funds, and the largest is Maryland's, started in 1994. Overseas governments also sponsor venture capital funds for their nascent technology industries, raising tens of millions of dollars for start-up firms.

### **Networking Investments**

The Maryland Venture Fund (MVF) distinguishes itself from other American state-run funds by making larger investments than other funds, and focusing on leveraging additional private investment in its portfolio companies. Many other state-run funds focus on technology transfer from research institutions.

The MVF is run by six employees of the Maryland Department of Business and Economic Development, and has invested US\$48 million in more than 100 companies, in traditional venture-equity investments and in seed financing for basement-and-garage technologists, according to a statement. During its first 10 years in operation, MVF has an annual internal rate of return of close to 30 percent. The benchmark annual average for the venture fund industry is 20 to 25 percent, experts said.

### ***Inefficiencies with State-Run Venture Capital***

Whether a venture capital firm is state-run, privately owned, or a conglomeration between series of partners, venture capital firms have some clear, beneficial, and impressive impacts on the economy of a state. However, poor planning and implementation methodologies can hurt all parties involved with a venture capital firm. When the global economy fluctuates up and down there must be policies and procedures put forth to both leverage and protect against fluctuations in the global and local economy. Maintaining stability (as is attained with a state-run structure) whilst also retaining the flexibility and visioning qualities a state-run system lacks is key.

The state-run structure provides stability but seems, in almost every circumstance, to have an end result of a below 2% success rate for incepted businesses and zero value to the state; the zero value occurs due to the fact that every success that is made barely covers operating costs of the participating VC firms, and in many cases is not enough to cover their operating costs and the state is left subsidizing the existence of non-performing VC's. Having an unchanging non-



performing system that benefits less than 2% of businesses incepted and provide no real value to the supporting state is an incredible waste of economic development dollars.

In addition to economic waste, the constant flux of modern day politics creates a very difficult operating environment; having several politicians with changing agendas and responsibilities in control of a VC program is detrimental to its success. Management of such a program needs to be conducted by professional individuals who are invested in making a program successful to benefit their state's economy; and this needs to be accomplished without the flux within politics directly affecting decisions about the future of a program.

A system that is built from these poor operational methodologies will be weak against economic fluctuations, and in and of itself, promote economic stagnation if qualified entrepreneurs and businesses are passed up because of poor evaluation/planning structures and the only financial beneficiaries are the VC's themselves. The New Mexico Venture Capital Association reports that during the recent recession New Mexico venture capital firms could not hold up to the economic fluctuation and suffered absolutely devastating results that severely damaged the state's economy.

(Robinson-Avila, 2009)

Private equity slowed to a trickle in New Mexico during the fourth quarter of 2008, and it has yet to rebound.

Venture capital firms invested just \$8.5 million in four companies from October to December, representing a 60 percent decline from the previous quarter, according to the latest tally by the New Mexico Venture Capital Association.

Deal flow is now at its lowest level since the association started tracking investments, said Tom Stephenson, managing general partner of the **Verge Fund** and chairman of the association's quarterly survey.

"The fourth-quarter numbers represent the lowest dollar value invested in two years and the fewest number of deals reported since we started recording quarterly activity," Stephenson said. "It was a dramatic drop."

Venture commitments in New Mexico began to decline in third-quarter 2008 as the recession deepened.

Activity was robust from January to June, reaching \$90 million in that period. But investments dropped by more than half in the third quarter, and then plummeted in the fall (see Table, page 1).

The decline in New Mexico mirrors trends at the national level.

Venture investments nationwide slowed markedly in 2008, and this year, the bottom dropped out. Venture firms approved \$3 billion for 549 deals in the January to March period – a 47 percent decline in dollars and a 37 percent decline in deals from fourth-quarter 2008, according to **PricewaterhouseCoopers** and the **National Venture Capital Association**.

Fundraising slowed substantially. Forty venture capital funds raised \$4.3 billion in the first quarter, down from 71 funds and \$7.1 billion in the same period last year.

The biggest problem is stagnation in initial public offerings, and in mergers and acquisitions. Only six venture-backed IPOs have taken place since January 2008, down from 86 in 2007. Likewise, just 56 mergers and acquisitions took place in the first quarter, compared with 106 in the same period last year.

Without exits, venture funds must invest more in current portfolio companies to keep them going. That reduces money available for new companies, or for struggling firms that need follow-on funds, said Trevor Loy, managing partner at **Flywheel Ventures** and a member of the national association's board of directors.

"Venture firms are forced to prioritize portfolio companies rather than make new investments," Loy said. "They also must triage portfolio firms to provide funds only to those companies most likely to succeed."

Statistics are not yet available for New Mexico's first quarter, but Stephenson said deal flow remains depressed.

"Investment totals are still very low," Stephenson said. "Those companies that do get capital will need to be very efficient with their funds because we probably won't see many big capital deals for a while to come."

Moreover, a freeze on the State Investment Council's "alternative" investments could delay recovery in venture activity, Loy said.

Gov. Bill Richardson ordered a temporary halt, pending approval of new disclosure regulations by the SIC, to crack down on controversial payments to third parties who seek investments for clients.

"The impact on state investments in venture funds was unintended because there are no allegations of improper actions in that program," Loy said. "Nevertheless, it will affect venture investments because many local funds rely on state contributions for a percent of the money they manage."

SIC spokesman Charles Wollmann said the government is just being prudent while it reviews its policies and procedures.

"We don't anticipate any changes to the program because it's been very successful in attracting high-tech companies to New Mexico and in keeping other companies from moving away," Wollmann said.

Meanwhile, Loy said early stage investments might rise in coming months because low start up costs and depressed valuations for new companies create bargain deals for venture capitalists. Flywheel, for example, expects to make 12 new seed investments from its "gap fund" in 2009 and 2010.

Even with the damage caused by the recession many venture capital firms will survive another day, the same can not be said for many of their clients. Although venture capital is still a preferred method for investment and fundraising, the infrastructure must change to be truly sustainable and efficient. A successful fund will avoid many of these intense market fluctuations by having a diverse portfolio and experienced professionals; having many different investments and professionals on hand means that when one particular branch of the economy suffers there are still entities involved that will be affected to a lesser degree.

If a diverse portfolio is to be created this means diverse expertise, management, processes, and planning elements must come together. Not only must these elements be diverse, but they will most likely be more successful if they are limited to knowledge within a state to better focus all efforts. Having a system that is focused on the state, with experts from many different fields, who all have experience within the state will provide a more stable and sustainable venture capital firm.

The Illinois Venture Capital Association has strengthened itself and its economic position by "being at the vanguard on key fronts," and pursuing knowledge from legislative, educational, and community related professionals on a frequent basis within the state. They leverage the expertise of many different entities to best serve a very broad web of clients.

Having such an involved methodology when it comes to knowledge acquisition and planning puts the Illinois Venture Capital Association at the forefront of investment structures.

(IVCA, 2009)

- **Legislative** – We hosted a series of legislative dinners with key lawmakers and IVCA Board Members; sponsored a number of trips to Springfield; and informed large numbers of legislators about our industry’s economic benefits to Illinois and our region. We benefit from developing these critical relationships as early as possible and, with its strong relationships with both political parties; the IVCA is well-positioned to work as a trusted partner on a variety of issues.
- **Events** – The IVCA delivered another full slate of activities. Among them were several programs that continue to strengthen: the Midwest Venture Summit, the annual CFO Summit, and our signature Annual Awards Dinner, which honored Kevin Evanich, Dick Thomas and Keith Crandell.
- **Education** – The IVCA launched a very successful four-event program, the IVCA Toolkit Series, which focuses on industry topics affecting our members. It already has set dates and topics for 2009.
- **Community Leadership** – We expanded the number of firms participating in the IVCA Scholars Program, with member firms hiring University of Illinois students of color for summer internships. The association also helped establish the Women in Venture and Private Equity organization and hosted its first event. Further, we launched IVCA Member Contribution series to highlight the many charitable efforts led by IVCA members. Undoubtedly, a number of challenges lie ahead for our industry. However, be assured that as we manage through the current economic problems, the IVCA – the nation’s leading regional private equity association – will continue to work tirelessly to position our industry for continued success. Thank you for your support and I look forward to seeing all of you in 2009.

Daniel Rosenberg Chairman 2008-2009

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*The IVCA – the nation’s leading regional private equity association – will continue to work tirelessly for our industry to position us for success ahead.*

- IVCA Chairman Danny Rosenberg In less than a decade, the Illinois Venture Capital Association has become the recognized voice for private equity and venture capital in Illinois and the premier regional venture capital/private equity association. Simply ask Mark Heesen, president of the National Venture Capital Association, who says the IVCA “excels” among regional associations and maintains it has “hit the nail on the head in tying public policy research to public relations.” Our current membership stands at 125 firms, including a core group of 33 founding members. These members represent the majority of active institutional investors in our region. We have come of age and become firmly engaged in the critical issues facing home-grown companies and entrepreneurs. This *engagement* reflects the IVCA’s maturity and its growing influence within and outside Illinois. The IVCA and its members:

- Ensure that lawmakers and regulators recognize the critical role the private equity and venture capital community plays in economic growth and innovation, through active lobbying on issues important to these sectors, political contributions and education.
- Serve as ambassadors and advocates for Illinois as an ideal site for investments, especially in emerging fields.

- Encourage the success of minorities and women in the private equity and venture capital industry through scholarships, advocacy and networking events.
- Offer entrepreneurs and private equity and venture capital professionals opportunities for networking, access to industry and educational forums, and events honoring those leaders in their fields.

By being at the vanguard on key fronts, IVCA has become the force making a difference. The media consult with IVCA. Entrepreneurs and companies already established do, too. So do government, trade groups, foreign groups, universities and others seeking to understand and work with the venture capital and private equity industry. Engaging is especially important in today's volatile business climate, which impacts the private equity, venture capital, entrepreneurial and employment sectors so severely. That's why, now more than ever, an established and engaged IVCA proves so invaluable. [www.illinoisvc.org](http://www.illinoisvc.org)

### ***Importance of State Focus and Prolonged Residency***

There have now been five key issues lined out that seem to promote a successful venture capital entity; the first is ensuring that no one type of expertise should be in total control of a venture capital firm; the second is ensuring that proper planning procedures are undertaken by several experienced professionals; the third is ensuring that all professionals involved not only have diverse experience but also have a great deal of experience within the state of operation; the fourth is ensuring that a venture capital entity creates jobs within the state of operation; and the fifth element is to ensure that income that a venture capital entity creates benefits the state economy, the local economy, and the entrepreneur.

Having a state focused program as apposed to having a state-run program is important to maintaining a balance of value to entire state economies. Being able to have an accountable ways to measure performance, measure value, and maintain sustainable business practices within a state is a new paradigm for venture capital. The first way that this new paradigm will be reached is by ensuring that all funded entrepreneurs and businesses that receive funding are heavily invested in the state. It is not enough to have a great deal of interest in doing business in the state but rather that a majority of all assets and employees are performing work inside the state.

The Arkansas Institutional Fund works along these lines by ensuring that; an Arkansas project is defined as one having 50% or more of its assets or employees located within the state; A highly cost effective program is measured both by cash-on-cash return to AIF on investments (including total costs and fees to the state) and the impact of the investments on the state economy; A reasonable diversification among investments within the total AIF portfolio; and that there will be a continuous presence during the term of an investment that will be comprised of the highest quality professional fund management experts that work in the State of Arkansas.

(Fund)

In an effort to strengthen the venture capital network in Arkansas and promote economic growth within the State, the Arkansas Development Finance Authority authorized Cimarron Capital Partners, LLC ( [www.arkansasinstitutionalfund.com](http://www.arkansasinstitutionalfund.com) ), to be the Designated Investor Group for the Arkansas Institutional Fund (AIF). The AIF is authorized to invest in professionally managed venture capital funds that in turn make risk capital more accessible to promising Arkansas firms.

The investment objectives of AIF in relationship to private equity and venture capital funds include:

1. The highest possible risk adjusted rate of return as measured by cash on cash returns net of all fees, expenses and carried interests.

2. A reasonable diversification among investments within the total AIF portfolio.
3. A limited life structure that aligns fund management, general partner and limited partner interests and goals.
4. A distribution policy that returns cash to limited partners as rapidly as possible given the nature of the underlying portfolio.
5. An allocation policy that minimizes tax consequences.
6. A structure that recognizes AIF's regulated investor status.

**The strategic objectives of AIF in relationship to private equity and venture capital funds include:**

1. The continuous presence during the term of the investment of the highest quality professional fund management working in the State of Arkansas.
2. A positive public image coupled with aggressive deal prospecting and fund promotion in Arkansas.
3. The highest level of investment or co-investment in Arkansas projects in absolute terms and in relationship to AIF commitments.
  - a. An Arkansas project is defined as one having 50% or more of its assets or employees located within the state.
  - b. Co-investment is defined as an investment by another entity (other than the fund(s) to which AIF has made a commitment) in a project in which the fund has invested at the same time under the same terms and receiving the same benefits as the fund investment.
  - c. Level of investment or co-investment is calculated by adding the two together. For example: if a fund makes a \$250,000 investment in an Arkansas project and attracts an additional \$750,000 in investment(s) from other sources at the same time under the same terms and receiving the same benefits, \$1,000,000 is the level of investment or co-investment in the Arkansas project.
4. The active addressing of one or more of the private equity and venture capital areas of the risk spectrum in Arkansas, in small and mid-sized businesses and in prominent or emerging state industries.
5. A highly cost effective program as measured both by cash-on-cash return to AIF on investments (including total costs and fees to the state) and the impact of the investments on the state economy.

The Arkansas Institutional Fund has a focus on there state with a diverse pool of experience and clientele. They are committed to creating jobs and benefiting the state economy, local economy, and entrepreneurs, however there is a crucial element that the Arkansas Institutional Fund assesses but all other previously mentioned firms lack; prolonged residency. If an incepted business is located outside of the state their main focus will most likely not have a central focus on that states economy little less on the local economies in the state. "Having 50% or more of its assets or employees located within the state" is, unfortunately, insufficient to provide real value to a state unless this is clearly managed by mandating a time period of operation within the state.

An entrepreneur or business may have all intentions of staying in-state if they can get funding or if there is a real market need within the state for their products or services. However, it could be that the VC that provided them the initial capital decides that they will more rapidly increase the growth rate of an incepted business in another state, and as an owner they may leave an original entrepreneur with no choice. The situation could be different as well if the entrepreneur decides that after initial funding they will leave the state to find more, thus taking potential jobs and money away from the state. In any of these situations it is the idea of having jobs and money leave the state after a VC inside the state provided initial capital that slows economic progress and provides value to only the VC, a handful of entrepreneurs, and potentially, out of state employees.

It is also understood that providing hands on assistance and training to an out of state entity is incredibly difficult. The solution to providing the highest value to a state's economy is to provide achievable milestones and measure success as a business grows; not only should progress be monitored and maintained but a successful venture capital entity should also ensure that a business will remain within the state so as to better provide hands on assistance and training. Hands on assistance and training combined with prolonged residency will greatly improve the chances of success for a business prospect, thus increasing the benefit to all parties involved.

A period of at least five years of prolonged residency will ensure that any incepted business by a VC will have adequate time to decide whether or not the venture is economically beneficial for the overall state's economy. The Venture Capital Authority program in Colorado has made great efforts to assure this essential element of prolonged residency.

(Development C. O., 2005)

#### ***HOW DOES A COLORADO BUSINESS "QUALIFY" UNDER THIS PROGRAM?***

The VCA's minimum requirements state that a business must generally meet the following conditions as of the time of High Country's first investment in the business to "qualify":

1. the business must be headquartered in Colorado and its principal business operations must be located in Colorado *or* the business must have entered into a contract to comply, within nine months after finalization of the contract, with the Headquarters/Principal Business Operations' requirements and the contract must contain enforceable provisions requiring a return of any investment of Certified Capital and any other revenues required to be paid in the event of noncompliance with any of the statutory requirements contained in the definition of a Qualified Business or any contract provisions.

Headquartered is defined as the chief location of a business from which its policies are made and orders are issued. Principal business operations is defined as being more than 50% of the business' total assets are physically present in Colorado and more than 50% of the business' net income is allocable to Colorado in accordance with Colorado income tax law regardless of whether the business is taxable or tax-exempt, for Colorado income tax purposes and more than 75% of the business' existing total salaries, wages and/or other compensation are paid to Colorado employees (calculated on a full-time equivalent basis);

2. the business must meet the United States Small Business Administration's (SBA) definition of a "small business concern" which is contained in the SBA's small business size regulations (available on-line at <http://www.sba.gov/size/>;

3. the business must not be predominantly engaged in any of the following business activities: professional services provided by accountants, doctors, or lawyers; banking, lending, real estate development, insurance, oil and gas exploration, direct gambling activities (does not include ancillary gambling businesses such as manufacturers of gaming equipment and others as defined by the VCA); or making loans to or investing in High Country or its Affiliates;
4. the business has not and will not receive investments from Colorado Fund I, LP's certified capital that exceeds fifteen percent (\$3,264,961.20) of Colorado Fund I, LP's aggregate total of certified capital (\$21,766,408);
5. the business must maintain its business in Colorado for at least five years after first receiving an investment of Certified Capital and must have entered into a contract to comply with this requirement. The contract shall contain enforceable provisions requiring a return of any investment of certified capital and any other revenues required to be paid in the event of noncompliance with this five-year maintenance requirement or any contract provisions;
6. High Country determine that the business is one which meets its general investment criteria; and
7. other requirements, as applicable, based on High Country's investment structure.

***ONCE A BUSINESS IS CLASSIFIED AS A QUALIFIED BUSINESS DOES IT ALWAYS REMAIN A QUALIFIED BUSINESS FOR FURTHER CERTIFIED CAPITAL INVESTMENT?***

Any Business Classified as a Qualified Business at the time of the first Qualified Investment in the Business shall remain classified as a Qualified Business, and may receive continuing Qualified Investments. The continuing investments shall be Qualified Investments even though the Business may not meet the definition of a Qualified Business at the time of the Continuing Investments; except that, to remain a Qualified Business and to receive continuing Qualified Investments, a Qualified Business shall comply with Section 24-46-201(8)(a)(V), Colorado Revised Statutes (maintenance of Headquarters and Principal Business Operations) for at least 5 years after an initial Qualified Investment.

***WHAT IS A QUALIFIED INVESTMENT?***

Qualified Investment means, subject to the exception provided for Qualified Rural Businesses, that an investment of Certified Capital in a Qualified Business or Qualified Rural Business, as applicable, shall be for the purchase of any debt, debt participation, equity, or hybrid security, including a debt instrument or security that has the characteristics of debt but provides for conversion into equity or equity participation instruments, including, but not limited to, options or warrants except that Certified Capital shall be used to make Seed and Early-Stage Investments in Qualified Businesses or Qualified Rural Businesses, as applicable.

Seed and Early-Stage Investment is defined as the first investment from a professional venture capital firm to a Qualified Business. A seed investment is made to a Qualified Business that has not yet fully established commercial operations or that involves continued research and product development. An early-stage investment is made to a Qualified Business for product development or initial marketing, manufacturing, or sales activities.

***HOW DOES A BUSINESS QUALIFY FOR A LOAN?***

The business must have received two written loan rejection letters from two different commercial banks headquartered or chartered in Colorado that make Small Business Loans, one of which shall be a preferred lender designated by the federal Small Business Administration. Any such loan shall not be made through or in connection with any guaranteed loan program. Additionally, the business must have received a loan rejection letter from the state's Business Loan Funds, which serves the geographical area of the business (if applicable). A current list of the Business Loan Funds and their respective geographical service areas may be obtained from the Colorado Office of Economic Development and International Trade's (OEDIT's) website. Rejection letters must include specified certifications and statements. The rejection letters apply to funding provided in the form of debt or instruments with debt-type characteristics.

***HOW CAN A QUALIFIED BUSINESS EXPEND THE INVESTMENT OF CERTIFIED CAPITAL RECEIVED?***

The Qualified Business or Qualified Rural Business in which the investment is made shall expend the Qualified Investment within Colorado except that this limitation shall not be deemed to preclude the purchase of services or goods from outside of Colorado if such services are performed and such goods are used in Colorado.

***WILL THE PROGRAM HELP BUSINESSES LOCATED IN RURAL PARTS OF THE STATE? WHAT DEFINES A RURAL PART OF THE STATE?***

The legislature set-aside 25% of the funds for use in rural areas only. The legislation defined rural. A Qualified Business located in a Designated Rural County shall mean a Prospective Business which is located in the following 49 counties and in a state designated Enterprise Zone within the state of Colorado: Alamosa, Archuleta, Baca, Bent, Chaffee, Cheyenne, Clear Creek, Conejos, Costilla, Crowley, Custer, Delta, Dolores, Elbert, Gilpin, Grand, Gunnison, Hinsdale, Huerfano, Jackson, Kiowa, Kit Carson, Lake, La Plata, Las Animas, Lincoln, Logan, Mesa, Mineral, Moffat, Montezuma, Montrose, Morgan, Otero, Ouray, Park, Phillips, Pitkin, Prowers, Pueblo, Rio Blanco, Rio Grande, Routt, Saguache, San Juan, San Miguel, Sedgwick, Washington and Yuma. The following do not qualify as a designated rural county for the purposes of this program: Adams, Arapahoe, Broomfield, Boulder, Denver, Douglas, Eagle, El Paso, Fremont, Garfield, Jefferson, Larimer, Summit, Teller, Weld. A list of local Enterprise Zone Administrators is available on-line at [www.AdvanceColorado.com](http://www.AdvanceColorado.com).

***WILL THE PROGRAM HELP BUSINESSES LOCATED IN DISTRESSED URBAN COMMUNITIES WITHIN THE STATE? WHAT DEFINES A DISTRESSED URBAN COMMUNITY?***



The legislature set-aside 25% of the funds for use in distressed urban communities. A Qualified Business located in a Distressed Urban Community shall mean a Prospective Business which is located in the following 15 counties and in a state designated enterprise zone within the state of Colorado: Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Eagle, El Paso, Fremont, Garfield, Jefferson, Larimer, Summit, Teller and Weld.

The Colorado Venture Capital Association has established the importance of having strict guidelines for, prolonged residency. This element is crucial, and can only be successfully utilized when in combination with small business fortification. It is simply not effective for small businesses to be provided capital and be left to their own devices, or be told what should be done next with no hands on activity by the venture capital firm. Holding equity in a company needs to be properly supplemented with qualified cooperative mentoring in business processes, and creating processes that set milestones and measure success before further access to capital is allowed.

Providing opportunity for multiple rounds of capital for businesses is an excellent way to keep a business inside the state. It further strengthens the relationship between the business and the states economy, and because they will have continued access to in state experts, they will be more financially and operationally competent. Having controlled rounds of funding also allows for complete re-evaluation of businesses to make generational, technological, operational, and any infrastructural changes that may be necessary.

Having a controlled processes with diverse experience managing multiple projects within a state improves successful outcomes for businesses even further. The added ability to shift and share resources within a diversified portfolio with the aid of several different experts can also boost success, but only if all stakeholders can work fluidly with well developed and establish planning and implementation methodologies. The Plymouth Management Company in association with the Michigan Venture Capital Association shows that their ability to shift resources through the state and maintain prolonged residency has benefited the states economy, the local economy, and the entrepreneur.

(Association M. V., 2009)

Plymouth Management Company EIR Ariel Sacerdoti recently became the first-ever Chief Operating Officer of PMC portfolio company Pump Engineering LLC (PEI). Sacerdoti led PMC's January 2009 venture investment in PEI, a Monroe-based global leader in providing hydraulic turbochargers and pumps for the sea water desalination industry. In March, Sacerdoti joined the firm as COO, fulfilling the talent retention promise of the Michigan Venture Capital Association (MVCA) EIR program. The program was developed in 2007 to help Michigan venture firms support the eventual placement of an EIR into a portfolio firm's operations post-investment; PMC and Sacerdoti received the award in 2008.

"We've been a family-run company for many years, but with demand for our product growing so rapidly, it was time to examine our internal structure and add some layers of executive management," said Roy Radakovich, CEO of PEI. "Working with Ariel during his tenure at Plymouth Management Company allowed us to see how well his capabilities fit with our needs." Sacerdoti will oversee the company's operations as well as help improve lean manufacturing capabilities.

PEI has doubled its sales annually for the past two years and is on pace to meet or exceed that mark for 2009. Plans to relocate to a larger facility are underway, with the need for an additional 50 new hires expected over the next five years.

MVCA Executive Director LeAnn Auer believes PEI represents the potential venture-backed firms hold in the state's changing economy. "Michigan companies need innovation, capital, and talent to be successful," she

said. "Plymouth Management Company's investment in Pump Engineering and its COO placement of Ariel Sacerdoti have filled those gaps for this growing company, and that's a mark of success for our EIR program and the larger Michigan venture community."

This week, the Michigan State Legislature unanimously approved bills allowing angel investors to receive an income tax credit if they put at least \$25,000 into a "qualified business" that received a total investment of \$100,000. This credit would apply to investments made prior to December 31, 2011.

Previously, the minimum investment amount was \$100,000, which left the tax credit unused since 2005, when it was introduced.

The MVCA represented our angel investor members by presenting our support of the bills to the New Economy and Quality of Life Committee in Lansing on February 25th.

A "qualified business" must meet all of the following conditions: (1) is a seed or early stage business as defined in Section 3 of the Michigan Early Stage Venture Investment Act of 2003 (MCL 125.2233); (2) has its headquarters in Michigan, is domiciled in Michigan, and has a majority of its employees working in Michigan; (3) has a pre-investment valuation of less than \$10 million; (4) has been in existence less than five years; (5) is engaged only in competitive edge technology; and (6) is certified by the Michigan Strategic Fund as a "qualified" business. "Competitive edge technology" includes advanced manufacturing, alternative energy; homeland security/defense; and life sciences.

### ***State Supported Not State-Run***

A successful venture capital firm needs to nurture and grow small businesses but they need the support of the actual state government, not to say the venture fund should be state-run, but rather state supported. State support can come from grants that are offered to small business development centers, colleges, financial institutions, private investors, or any other entity that can work along side a VC to increase the business competency of any current ventures.

State support can also be derived from providing programs that give tax credits to participating investors or perhaps that state owned property can be utilized for economic development purposes. State support is an integral part of having a successful state focused VC as it controls such huge amounts of capital. This being said it is also important to provide value to the state (to encourage support) by reinvesting a certain percentage of profit, and in order to have significant enough profit to share with the state, the VC must have a performance proven infrastructure that will cover its own costs, provide extra money to the state, provide a higher success rate to incepted businesses, create jobs, and improve a state's overall economic status.

For example Hawaii's Act 221 offers tax credits to investors willing to take an early risk on the state's high-tech future; this kind of support lays a frame work to help build a statewide infrastructure for investment that lures renowned scientists to Hawaii, brings accomplished young Island graduates back home to work, and creates good jobs and tax-paying companies for the state. It is the complex network of venture capital, angel investors, state support programs, small business development experts, diverse professional experts, and entrepreneurs that will truly provide an environment for stable and sustainable state economic growth.

(Spencer, 2009)

Hawaii's innovative high-tech industries have built new energy systems and discovered inexpensive ways to create pure drinking water in remote areas. They've regenerated human tissue for cell therapy, produced electricity for the grid, and developed vaccines for emerging infectious diseases.

Part of a new global community providing 21st century solutions, they're also luring renowned scientists to Hawaii, bringing accomplished young Island graduates back home to work and creating good jobs and tax-paying companies for the state.

Between 2002 and 2007, the high-tech industry pumped at least \$1.4 billion into Hawaii's economy in direct spending, creating a firm foundation to help the state move away from dependence on tourism and the U.S. military.

In a few short years the high-tech industry has grown from less than \$1 billion of the state's overall economy to an amount almost equal to the construction industry. Latest estimates peg tourism at \$11 billion; construction at \$3.5 billion; and high-tech close behind at \$3 billion.

All of this is thanks, in part, to one of the nation's most innovative stimulus programs for high-tech industry – a law commonly called Act 221 – that offers tax credits to investors willing to take an early risk on the state's high-tech future.

Act 221 is aimed at encouraging high net worth individuals in Hawaii to invest in innovation in their own back yard, but it has also served to inspire outside investors to evaluate Hawaii companies as wise investments with good return and strategies in place to reduce risk.

Since the high-tech tax credit was first initiated in 1999 – then later expanded and amended – results have been impressive. The 177 qualified Hawaii high-tech companies that filed with the state under a new 2007 transparency law, received \$1.2 billion in cash investments between 2002 and 2007. Over the same period, they spent \$1.4 billion in the Hawaii economy. They've employed at least 4,500 people, with more than half of the 1,450 full-time jobs averaging pay above \$60,000 annually. At the same time, the state has seen a welcome diversification into industries offering a "brain gain" with new opportunities encouraging more young people to consider innovative fields for themselves.

As previously stated, state assisted is different than state-run, when it come to venture capital. State-run venture capital programs often have poor management due to the fact that a complex network or professionals is needed to run a program, and the state agency that solicits an entity to run the program is often incapable of properly evaluating a complex management team.

If an entity is selected to run the venture program they must select feasible venture capital firms to join the program, and in many cases these venture capital firms are few and far between; because of this "available" venture firms are selected, not "appropriate" venture firms. Perhaps the most detrimental aspect of state government involvement is the political interference; depending on current legislature or legislative officials, funds provided for the venture program may be modified or pulled completely at the discretion of the state.

This potential non-performance related control of finances takes power out of the hands of entrepreneurs and negatively impact entire state economies in turn. Some venture capital firms that receive state funding and are unable to provide economic value to a community, and because they are state funded, receive operating capital whether or not they help entrepreneurs or local economies. A successful venture capital infrastructure must exist in a performance based environment with no outside control that could remove power from stakeholders or promote stagnant activities by unproductive venture capital entities.

The following Ohio venture capital program investment policy guidelines document shows the lack of understanding of experts needed to manage the program, the stable and sustainable operation of the program, the factors in which a

qualified small business can receive funding, and any information regarding business development services to promote successful business outcomes.

(Program, 2009)

OHIO ADMINISTRATIVE CODE  
Chapter 150-1 Investment Policy

150-1-01 Ohio venture capital program investment policy.

(A) Purpose of the investment policy.

The Ohio venture capital program investment policy (the “investment policy”) outlines the policies and procedures to be followed by the program administrator selected by the Ohio venture capital authority (the “authority”) to manage the Ohio venture capital program (the “program”) established under chapter 150 of the Revised Code. Specifically, this investment policy:

(1) Identifies the program’s expected investment objectives;

(2) Establishes the program’s investment focus, standards and limitations;

(3) Describes the mechanisms for securing any “loss” (as defined in division (A)(3) of section 150.03 of the Revised Code) incurred by lenders to the program fund created under section 150.03 of the Revised Code (the “program fund”)

(4) Specifies certain components of the criteria and process to be used by the program administrator to identify investments that best achieve the program’s purpose.

(B) Program purpose and investment objectives

Chapter 150 of the Revised Code authorizes the creation and management of a fund of private equity funds for the expressed purpose of increasing the amount of private investment capital available in Ohio for “Ohio-based business enterprises.” For purposes of this investment policy, an “Ohio-based business enterprise” is a business entity that employs at least one individual on a full-time or part-time basis, or a self-employed individual, that in either case satisfies the following additional conditions:

(1) The principal place of business and operations of the business entity or the self-employed individual is located in Ohio;

(2) The business entity, or the business of the individual, is in the seed or early stages of business development and requires initial or early stage funding.

(C) Investment focus, standards and limitations

(1) Limit on loans to the program fund.

The program administrator shall have the authority to secure loans to the program fund; provided, however, the program administrator shall structure the loans to ensure that payments of principal, interest or interest equivalent due in any fiscal year do not exceed twenty million dollars.

(2) Ohio-based venture capital funds.

The program administrator shall invest not less than seventy-five per cent of program fund monies under its investment authority in "Ohio-based venture capital funds" as defined in division (A)(5) of section 150.01 of the Revised Code.

(3) Eligible venture capital funds.

The program administrator may invest monies from the program fund in private, for-profit venture capital funds that invest or commit to invest in enterprises in the seed or early stage of business development and that demonstrate potential to generate high levels of successful investment performance. To determine whether a venture capital fund possesses an appropriate commitment to invest in seed or early stage businesses so as to qualify for program investment (an "eligible venture capital fund"), the program administrator may rely on factors including, but not limited to the following:

(a) A venture capital fund's prospectus or other similar documents that describe the fund's investment focus;

(b) A venture capital fund's investment history; and

(c) Contractual commitments by a venture capital fund to the program administrator.

(4) Limits on program fund investment in venture capital funds.

(a) Maximum Commitment The maximum aggregate commitment of program fund monies by the program administrator to any single venture capital fund shall not exceed ten million dollars; subject, however, to the following additional limitations:

(i) In the case of an Ohio-based venture capital fund, the commitment shall not exceed fifty per cent of the total amount of capital committed to that venture capital fund from all sources;

(ii) In the case of other venture capital funds that are not Ohio-based, the commitment shall not exceed twenty per cent of the total amount of capital committed to that venture capital fund from all sources.

Many state-run venture programs will claim to have large returns or boast the number of dollars invested in small businesses, but how does this affect the economy?

The first claim in the following article states that a company was sold for \$225 million after only a \$34 million dollar investment; what is not generally stated is how many failed business ventures were incurred by all participating partners in other ventures, it is often the case that even with huge successes, venture firms often just break even or worse. To date the MVF has only invested 45 million in 175 different ventures (since 1994), so excluding the \$550,000 stated in the following article (in one company) that leaves approximately \$3 million a year of investment with an average of \$17,241 per investment. It is obvious that these numbers would not add up which means that probably around 98% of incepted businesses failed and the remaining 2% would have received the bulk of the funds.

The MVF has returned \$57 million to the state over the past 15 years which means that after removing the \$45 million invested it leaves approximately 800,000 in profit each year; this money is then redistributed to pay for the operating costs of the fund which has a number of employees there by leaving a very small amount of actual profit, if any, to the state. "About 35 other states have venture funds of some kind, but none is as large as Maryland's," means that they likelihood of the operational funds being completely used up by the small returns is fairly high; in fact, most of the time it is more likely that the state will actually owe the venture capital firm more operational capital because profits, overall, are so low. This fact is usually covered up by the advent of tremendous success that takes place once in a great while; this way it seems that there is economic progress, and this can pacify the funding source for a little longer. The truth is,

it costs a state money to subsidize the existence of these inefficient state-run venture programs that, in turn, provide very little value to a states economy.

The second claim that, "In its 10 years, MVF has an annual internal rate of return of close to 30 percent, officials at the fund said," was once true, but is now at a rate of 20% due to the funds poor operational processes. The fund, that was already providing almost no value to the state that actually subsidizes the program, is currently doing worse, and continues to have access to operational capital.

This following article is an example of how this state-run venture capital program tries to spin the facts to hide the reality that their infrastructure is detrimental to the state itself and most all the entrepreneurs involved.

(O'Hara, 2005)

### **State-Run Venture Fund Succeeds With Native Firms**

By Terence O'Hara  
Monday, October 24, 2005

When *Sourcefire Inc.*, a systems security software company, sold this month for \$225 million in cash, some of the biggest names in venture capital chalked up a major payday. Four VC firms, including local shops *New Enterprise Associates* and *Core Capital Partners*, collected about six times their \$34 million investment in the Columbia-based firm since 2001.

But perhaps the people most responsible for getting Sourcefire off the ground were a few mid-level state employees in Baltimore who run one of the most successful early-stage venture funds in the region, the *Maryland Venture Fund*. Their investment of \$550,000 of public money in Sourcefire in 2001 -- when Sourcefire founder Martin Roesch was developing the software in his Carroll County basement -- netted \$3.9 million when the company was sold.

The Maryland Venture Fund was started in 1994 and is a leader among state-run funds. About 35 other states have venture funds of some kind, but none is as large as Maryland's. Most, including funds in the tech centers of California and Massachusetts, offer much smaller equity investments, focusing on technology transfer from research institutions.

MVF is run by six employees of the Maryland Department of Business and Economic Development. It has invested \$45 million in more than 100 companies, in traditional venture-equity investments and in seed financing for basement-and-garage technologists with good ideas. It has returned \$57 million in cash from more than a dozen exits and has an active portfolio of about 50 venture investments in the biotech and information technology industries. It last reported the market value of its venture investments, in June 2004, at \$20.6 million.

In its 10 years, MVF has an annual internal rate of return of close to 30 percent, officials at the fund said. The benchmark annual average for the venture fund industry is 20 to 25 percent.

Like any venture fund, MVF's returns are largely attributable to a relatively few big payoffs. The fund cleared more than \$16 million in profit from the sale of *Gene Logic Inc.* in 2000, and more than \$27 million from the initial public offering of *Visual Networks Inc.* in 1999.

From 2000 to 2004, the fund had no big-money exits. Five exits since 2000 lost money, and two of those were nearly total losses.

But since June 2004, the fund has had four exits that have returned three times each investment or better. In addition to Sourcefire, MVF cleared \$2.4 million from a \$600,000 investment in *Platform Logic Inc.* when that company was sold to Symantec in December 2004. It tripled its \$500,000 investment in Baltimore's *Advertising.com Inc.* when it was sold to America Online for \$435 million in June 2004. And *Panacos Pharmaceuticals Inc.*, a Montgomery County developer of antiviral drugs, several months ago returned \$1.85 million on a \$500,000 investment when it merged with a publicly traded Massachusetts company.

In the past 18 months \$11 million has been returned to the fund through "liquidity events," such as a sale of a company or an IPO.

"We're on a path to be self-funding," said *Christopher C. Foster*, deputy director of the Department of Business and Economic Development, who oversees the fund. MVF gets an annual appropriation from the Maryland General Assembly to cover operating expenses and expected investments, but Foster wants new investments to be funded entirely by returns on old ones. With the returns so far this year and those Foster expects next year, the annual appropriation has dropped significantly. Last year, Foster asked for \$7.5 million, and he got it. This year, the fund will get \$2 million, and Foster expects to request only \$1 million next year.

Foster also has removed the informal (and sometimes exceeded) \$500,000 cap on investment in one company. He said the cap limited the fund's ability to participate in later venture funding rounds. Most venture-funding companies go through at least two rounds of funding, and some as many as six. In industry parlance, unless early investors "re-up" and invest in later rounds of funding, their equity stake in the company is diminished, as is any final return.

*Elizabeth Good*, who became managing director of the fund in 2004, said one of MVF's biggest investments is \$775,000 in Frederick-based *Qovia Inc.*, a company that provides monitoring of networks for Internet phone calls. In addition to lending Qovia its seed money in 2002, MVF has participated in both rounds of Qovia's VC funding, which totaled \$16 million.

Foster and Good said that despite MVF's desire to participate in later funding rounds, its primary goal is to be an early-stage investor, in many cases providing the money entrepreneurs need to get off the ground. MVF's investment is always passive. It never takes seats on company boards and its VC investments are always relatively small parts of equity financing deals. For every \$1 invested by MVF, the goal is that at least \$3 be invested by private VC funds.

"We know the places where we want to play," Foster said. "Our goal is to fill the gap between what an entrepreneur has going early on and when he can get actual VC funding."

"The goal of it is of course economic development," said *Donald J. Rainey*, a partner at venture firm *Intersouth Partners*, who sits on MVF's advisory board. "In this case it makes money for the public cash register." Actually, the fund usually reinvests its returns in new companies. Only twice, in the big payouts from Visual Networks and Gene Logic, has the fund returned money to Maryland's general fund.

Like any state-run economic development tool, there's always the potential for political interference, Foster said. Imagine a state legislator or agency head whose cousin or a political supporter is starting a high-tech firm.

"Sure, we get those kinds of calls. Somebody who knows somebody, that sort of thing," Foster said. "But I take them, not my staff, and as a courtesy only. The decent thing is to tell them no and tell them why."

Nor does the fund parcel out its money by region or legislative district, Foster said. "The only way for this thing to work is to do investments based on the technology and the profit potential. . . . I've told the people I've hired that if they ever make an investment based on demographic reasons, they're fired."

Good said that one reason the fund may avoid political interference is its relatively small size. If it had more money to invest it could take bigger stakes in companies. It also could hire more people (who are, by the way, paid state salaries; no VC-style bonuses are handed out). "But, theoretically speaking, if we got more money from Annapolis, they would probably want us to spread the wealth around a little."

#### Current 2009 Status:

The Maryland Venture Fund has established a track record of investing in some of the most promising technologies that the state has to offer. The Fund has two investment vehicles: the Challenge Investment Program and the Enterprise Investment Fund. Combined, the fund has invested over \$45 million since 1994 in more than 175 companies. Some of the other financial and economic development accomplishments of the Fund include:

- Fund has returned in excess of \$57 million to the State;
- Companies in the portfolio have attracted over \$1 billion in private equity;
- Average salary is \$70,000 – compared to the State average of \$36,000;
- More than 1,500 jobs have been created;
- Estimated annual rate of return of 20 percent.

### ***Angel Investment***

Aside from banks, CDFI's, venture capital firms, and state-run funds there are very few options remaining for capital acquisition. Individuals such as friends, relatives, and individual philanthropists are rare, but the most hassle free of the options. Because an individual is not locked into any kind of operational procedures when it comes to their personal funds they can provide money to anyone for any reason. This however can lead to unpredictable outcomes if a contract is not properly established and does not come with any added business development impacts. It is far more likely that a business will fail if they do not develop their business methodologies from many different angles with many different professionals. So due to this lack of development and structure it is often the case that although it is the path of least resistance, failure is the result.

These individual investors may not always be friends or family either they may be people known as Angel Investors who are generally professionals in financial or other professional fields. Angel Investors offer a special kind of support to entrepreneurs because, *"entrepreneurs' emerging technologies are frequently viewed as too risky for banks, private equity firms and venture capitalists, yet many fledgling companies require more investment to grow than can be raised from friends and family. Angel investors are increasingly stepping in to fill this gap."* (Hayter, 2008)

Angle Investors alone are quite weak when it comes to making "real value" decisions in the marketplace which is why their efforts must be supported by the states that they operate inside of. Just like with the ACT 221 from Hawaii it is important to have state support for venture capital and Angel Investment, this is again state support, not state-run. Some of the potential benefits that governors of states can provide to increase participation of Angel Investors are included in the following article.

#### **State Strategies to Promote Angel Investment for Economic Growth\*** **Executive Summary**



Governors are increasingly interested in entrepreneurship because of its key role in driving business innovation. While entrepreneurs face several common challenges, including developing business acumen and making connections with experts and mentors, often their greatest challenge is raising capital. Entrepreneurs' emerging technologies are frequently viewed as too risky for banks, private equity firms and venture capitalists, yet many fledgling companies require more investment to grow than can be raised from friends and family. Angel investors are increasingly stepping in to fill this gap.

Angel investors are wealthy individuals with business or technology backgrounds who provide entrepreneurs with capital, connections, and guidance. They provide early-stage financing in a space once occupied by venture capitalists, who now invest primarily in larger deals and more mature companies. Individual angels invest between \$5,000 and \$100,000 in local and regional ventures, primarily in high-technology sectors, giving their investments local impact. In the past decade, many angel investors have formed and joined groups because investing through groups offers several advantages, most notably a large and more diverse portfolio, access to expertise, and higher deal flow.

States increasingly recognize the value of angel investments and are adopting policies to promote them. Some have created statewide networks to assist the formation of angel groups, link angel groups to share best practices, and help groups invest together in companies that need more funding than a single group can offer. Governors have several options to encourage the formation of angel groups to expand early-stage investment:

- Promote seminars on private equity investment for current and potential angel investors;
- Assist entrepreneurs by connecting them with existing entrepreneurship education and services;
- Facilitate the formation of statewide angel group networks to organize and empower local leadership and build investor knowledge;
- Ensure that angel investors are well-represented on state economic development advisory boards, along with entrepreneurs, universities, and other industry representatives; and
- Identify and collect metrics to monitor the impact on policies to encourage angel investment.

Many states have also implemented financial incentives such as tax credits, conditional loans, or matching grants for angel investment. These policies can be controversial and their impact has not been rigorously evaluated; even angels are in disagreement as to the economic growth benefits of tax credits. However, if tax credits are to be implemented, there are several principles that states can incorporate from other states' experiences. Additional monitoring and evaluation will be needed in the field of angel investment to better determine the effectiveness of financial tools.

### ***Stagnate University-Run Programs***

Angel Investors alone may be limited but as part of a network of professionals they provide much needed expertise in capital acquisition and instate professional experience.

The last form of important venture capital to discuss is university-run programs. Universities offer unparalleled knowledge for scientific ventures and almost any other field of study. In a study of six universities all of them had *"initiatives to support commercialization of knowledge. The initiatives range from incentive systems, courses, and study programs in entrepreneurship to business plan development support programs, student organizations for supporting entrepreneurship, patent and license offices, on-campus incubators, and seed capital."* However, it is often the case that these programs fail worldwide because of the focus to enhance primary funding opportunities that come from enrollment, research grants and studies, state funds, books, services, or, in the following studies case, the government.

Although, *“It seems difficult to generate substantial direct income to the university through commercialization of knowledge, there are examples where licenses and high-tech spin-offs have generated valuable research cooperation projects for the university.”* It is because of this university mindset, that it is not a large or relatively lucrative market to pursue commercialization when they can focus on primary funding improvement and scalability, that makes colleges with seemingly endless expertise, a stagnant form of capital acquisition for an entrepreneur. In Europe it is often the case that, *“less than 10% of external income comes as full financed contracts from industry, the rest is partly or wholly government supported,”* that makes university-run venture capital an overall unattractive investment, which causes all entities except the university to suffer a stagnant unmotivated process.

There is a common theme among these many venture entities that are either self governed, state-run, university-run, or private individuals; they all have a piece of the puzzle, but none have them all. This is a result of varying motivational influences, operational abilities, and competency to conduct business.

With the university structure it is usually not an issue of funding acquisition, operational ability, or competency; it is an issue of motivation, most universities would simply rather conduct and improve the primary activities that bring in the most stable source of capital (after all they are a business). Research and teaching is the focus of a college and the university-run venture structure has been tried in many different forms, devised by many different experts, in many different fields inside these colleges; all of which seem to point towards the fact that the capacity and growth that colleges possess is never reliant on funding through commercialization.

Traditionally, the university's mission in society has been research and teaching. As scientific knowledge seems increasingly important for innovation and new business development, politicians and governments are asking universities to take a more direct role, as actors in regional and national economic development.

The main focus of this study is university-industry interaction and the report is based on information collected at six universities in five European countries. Primarily, the report addresses university initiatives that seem successful and constitute good lessons for other universities in the process of improving their contribution to economic development. Some of the lessons learned from the study are:

1. The demand for university research in industry differs considerably between countries due to the structure of industry and the role and size of the research institute sector.
2. Stimulation of university-industry interaction by governments is mainly done through financial support of cooperative research.
3. The need for research funding is observed as the main driving force for cooperation with industry both on institutional level and among scientific employees.
4. It seems that less than 10% of external income comes as full financed contracts from industry, the rest is partly or wholly government supported.
5. The relationship between the universities and the nearby/on campus research institutes seems fruitful when the roles both on institutional and project level is clear with respect to: division of work and budget, invoicing routines, profiling, publishing, intellectual property rights and guidelines for contact with industry.

6. All the universities in the study have initiatives to facilitate university -industry relations, though number and types of initiatives differs considerably. Observed initiatives are: nearby or on campus research parks and industrial parks, multidisciplinary research programs and centers, industry seminars and continuing education programs, private consultant companies of university employees, student projects, master-thesis and part-time employment in industry.
7. All the universities have initiatives to support commercialization of knowledge. The initiatives range from incentive systems, courses, and study programs in entrepreneurship to business plan development support programs, student organizations for supporting entrepreneurship, patent and license offices, on-campus incubators, and seed capital. In addition, independent companies nearby campus are offering the same kind of services as mentioned above to students and scientific staff.
8. It seems difficult to generate substantial direct income to the university through commercialization of knowledge, but there are examples where licenses and high-tech spin-offs generate valuable research cooperation projects for the university.
9. In countries where the general demand in existing industry for delivery of research from university is low, the governmental funding should stimulate the universities to contribute in the process of developing new knowledge-based industry.
10. As a conclusion, there are no straight-forward recipe or guidelines for the universities aiming to improve the role as an economic development actor. Each university has to select and promote initiatives adopted to their needs and specific circumstances.
11. Valuable lessons might be learned from the experience done at other universities. Developing the new role for the universities seems dependent on initiative and lead from the top management of the university, faculties and departments. Finally, the role of individuals in the scientific staff cannot be emphasized enough.

### ***Summation of Depth***

Venture capital has existed in many different forms under many different styles of management and can provide both extremely beneficial and extremely devastating economic effects. State-run, university-run, and venture firm infrastructures and operating methodologies alone have all made great strides in economic development but they are unable to provide continued, sustainable, or scalable as they exist today.

In addition to poor infrastructure creation and management their needs to be a clear effort to keep destructive political interference away from venture capital. The constant flux of modern day politics creates a very difficult operating environment, so although state support is necessary, having several politicians with changing agendas and responsibilities in control of a VC program would be detrimental to its success. Management of such a program needs to be conducted by professional individuals who are invested in making a program successful to benefit their states economy; and this needs to be accomplished without the flux within politics directly affecting decisions about the future of a program.

A state supported program that utilizes complex economic and business development methodologies is needed that not only provides seed capital but has a hands on approach to guiding businesses to a successful end. Better business evaluation processes need to be developed with a focus of keeping businesses and business growth inside a state.

Providing in-depth project management and planning procedures that include milestones and investment goals will ensure “best possible” outcomes and with experience from professionals across a state there will be a more informed and educated entrepreneurial force.

Driving state economic development in combination with performance based assessment that involves quantitative job creation management is key. Not only should a state venture program be influenced by many experts but many kinds of funding sources as well. Having different funding sources and experts will allow for a more flexible and powerful network for businesses to utilize. The need for a complex and precisely constructed state venture capital program would be beneficial to state economies, local economies, and entrepreneurs.

It is the combination of successful elements of a wide range of venture capital programs in a state focused system that will yield a new kind of entity. An entity that solicits, collaborates with, funds, manages, maintains, educates, trains, guides, re-forms, networks, and ensures the highest level of success among promising new businesses.

## Proposed Solution for Venture Capital in Alaska

### Executive Summary

The state of Alaska like most other states faces three significant problems when it comes to economic development through the creation of private for-profit business. The First problem being that a business needs to have the money necessary to create a business, run a business, and attain profit with that business. The second problem stems from the need to have management expertise to properly run a business. Perhaps the most difficult problem however, is the ability to attain customers and get their product to market.

For the state of Alaska the most significant of these problems is access to capital. The reasons for this problem being the most significant began in the 1980's. Many Alaskan investors were negatively impacted in the mid 1980's as a result of a wide range of failed investments. The failed investments of these Alaskan investors were so substantial that losses totaled in the hundreds of millions. This happened to not only individual investors but institutional investors as well. Although Alaskan investment opportunities began to turn around in the late 1990's most of the available investment capital had already fled the state. The state of Alaska itself, even with the revenues inside of the permanent fund, invests less than 1% of the 40.3 billion dollars within the boundaries of the state of Alaska. The solution proposed by the Alaska Manufacturing Extension Partnership is to create a state run venture fund, called the AMBIT Venture Capital Program. In Ohio the state run venture fund The Ohio Capital Fund, "attracted \$445 million in new venture capital investment last year alone. (University, 2009)

There have been efforts in the past to create incentives and opportunities for venture capital and entrepreneurs from the lower 48 states. There have even been attempts to establish businesses that would help entrepreneurs work alongside venture capital firms. Unfortunately these programs were unsuccessful due to the reluctance of out-of-state investors. These investors were not confident in placing their capital in such a remote area where it seems that the capital is utilized in an unmanaged environment with no ability to have personal oversight. This being so the few venture capital acquisitions that have occurred in Alaska in the last 15 years have all sought to relocate the funded entity to the lower 48, in order to be close to the actual investors.

The University of Alaska has sought to create entrepreneurial programs and channels for investors. The Universities goal was to connect with start-up businesses based upon university sponsored research, yet every attempt has failed. One of the significant factors of this failure is due to the requirement of the universities overhead, the current rate of which is at 43%. This 43% is removed before any other internal or external entity is able to use any of the capital. Other states have experienced similar problems with running programs like this through a university structure and have moved towards removing all venture capital and entrepreneurial activities from the universities control.

It is absolutely imperative to create a program that meets the venture capital needs of Alaska and its businesses. A program that holds within it the opportunities for funding sources to be aggregated from the private sector of the state and the federal government. There must be a common understanding of the roles of government, venture capital and the businesses that use it. There must be an understanding of how businesses operate in Alaska, how the entrepreneurs make decisions for the start up of their businesses, why that is important for Alaska's economy, and how a governmental entity can enhance this system. There is a great need to develop a program that combines roles of government, venture capital firms, and angel investors to create and sustain new business in Alaska. The Alaska Manufacturing Extension Partnership has begun development on such a program, the AMBIT Venture Capital Program (AVCP), and this paper intends to explain the feasible nature of its structure, methodologies, and deliverables.

## Goal

The goal of the AVCP is to provide a non-predatory capital opportunity program that:

- Provides several kinds of funding opportunities to a wide range of Alaskan businesses;
- Provides project support, knowledge, and management to strengthen businesses success;
- Provides access to free managerial and technical training.
- Not only provides access to capital but guide promising businesses through the process.
- Develops a real stake in companies through ownership investment.
- Provides measurable support practices after capital is raised.

- Provides in depth market analysis and leverage opportunities within and outside the state.

## Information on Lead Agency

### ***Background Information***

**Alaska Manufacturing Extension Partnership** - Established in 2004, the Alaska Manufacturing Extension Partnership, Inc. (AMEP) is a new Alaska office of federal, state, and private partnership. AMEP strives to establish a sustainable base of manufacturing in Alaska that takes advantage of Alaska's strategic location, vast natural resources, growing human resource base and rich cultural heritage to meet the needs of the Alaskan and the global market. AMEP is committed to developing the state's economy through the provision of technical, business, and economic training and assistance to Alaska's manufacturers. AMEP also supports rural Alaskans producing, marketing, and distributing Native art and other home-based manufactured products. AMEP is a 501(c)(3) organization and our Tax ID number is: 75-3161481.

AMEP provides fee-based consulting & training for Alaskan manufacturing firms. One method we use to carry out our mission is to support the Alaska Native Arts Foundation, and through them, outreach to Alaska Native artists who are deemed small, home-based manufacturers by our federal partner – the National Institute of Standards & Technology. We help improve manufacturing competitiveness with technical assistance and training to entrepreneurs, urban businesses, and village-based enterprises.

AMEP fills a unique niche in the Alaska economic development system by:

- Connecting rural communities with distant markets through E-Commerce. This gives artisans and home-based manufacturers higher profit margins, more control over their business and greater customer feedback.
- Strengthening collaboration between existing economic development organizations. AMEP matches the needs of existing manufacturers with local, statewide and national experts to solve their business challenges. This system is a locally-centered, needs-driven, bottom-up method of delivering business assistance.

### **AMEP Services**

### **Organizational Development**

- Start-Up Planning - Visioning, roles, resources, funding, products and markets
- Business Planning - Feasibility studies, pro forma financials, market definition
- Funding Acquisition - Guiding clients as they pursue debt and equity for growth

## **Marketing**

- Market Research
- Market Expansion
- Collateral Marketing Material

## **Rural Economic Development**

- Alaska Business Portal and strategies for E-Commerce market development
- Distance delivered training and workforce development
- Supply chain management

## **Quality Management Systems**

- Project Management
- Training Within Industry (TWI)
- Lean Enterprise
- Six Sigma
- RoHS & WEEE

## ***Previous Successful Planning Efforts***

1. **Alaska Marketplace** - AMEP participated on three cycles of the Alaska Marketplace, which is a rural business idea competition hosted by the Alaska Federation of Natives. Winners receive up to \$50,000 for business ideas in rural Alaska that are innovative, sustainable, and support Native culture. Over the years, AMEP has participated as an Organizing



Sponsor, as a coach and trainer to applicants and finalists, and as a provider of technical business assistance as a follow up to award winners.

2. **Alaska Lean Consortium** - AMEP is spearheading the creation of an Alaska Lean Consortium. The consortium is a network of senior managers and practitioners involved in Lean, Six Sigma and other continuous improvement methods. The network will share best practices, support each other through focused plant tours with recommendations, training for members and non-members, and provide coaching to businesses just starting on the path of continuous improvement.
3. **CDFI Financial Literacy Training** – AMEP provides this training because without an appreciation of money concepts and an understanding of financial options, people are likely to pay more than they have to for financial services, fall into debt, damage their credit records, over-invest in life insurance, or declare bankruptcy. Poor financial choices harm both individuals and communities. Families become more vulnerable to sudden economic shocks such as health emergencies or unexpected job loss. Decreased family stability, increased foreclosure risks, and disinvestment in homes and local businesses challenge already disadvantaged lower-income communities.
4. **ANAF Artist Training and Outreach Program (Example)** –
  - Situation:

Ms. Anvil-Kiana was successful in selling slippers, fur hats, gloves, Eskimo yo-yo's and other sewn items at local craft shows, to friends and to referred customers. Selling at craft shows is expensive due to the high cost of travel in rural Alaska. She wanted to expand her marketing reach without increasing her costs. She determined that the best way to expand her reach without increasing her travel costs was to sell over the Internet.
  - Solution:

Ms. Anvil-Kiana worked with the Alaska Native Arts Foundation (ANAF), who is a partner and sub-recipient of AMEP, to get some of her art posted on their online art gallery at [www.AlaskaNativeArts.org](http://www.AlaskaNativeArts.org). The work included

developing an artist profile, identifying which products would likely sell, focusing on key points of quality that buyers look for, photographing her art for online display, and setting the right price point for her items. ANAF also carried some of her products in their gallery and brought them to regional craft shows at booths staffed by ANAF workers.

- Result:

These activities resulted in Ms. Anvil-Kiana getting her art on the Internet, being represented in ANAF's Anchorage gallery, and getting her products at different craft shows without having to staff the booth herself. She sold over \$5,000 worth of products her first month, with little to no increase in marketing costs.

## ***Key Personnel***

### **CEO**

**Thomas A. Myers** is the Deputy Director of the Alaska Manufacturing Extension Partnership (AMEP). He is responsible for business, manufacturing and workforce development service delivery. In addition he is responsible for innovative technology enterprise advancement; and web-based curriculum development and implementation. Myers began his career with AMEP in 2006. Since then, he has held a variety of senior-level positions. He was most recently the chief learning officer and senior business consultant.

Myers extensive manufacturing experience, education and business leadership background serve as the central core of the AMEP senior management team's implementation of economic development vision across Alaska.

Myers holds a Master of Science degree in administration from Central Michigan University, a bachelor of science in occupational education from Wayland Baptist University; is a certified master black belt in Six Sigma, and is an Edgerton Award Auditor.

Myers' past positions include serving as the University of Alaska's Business Enterprise Institute Executive Director; Bellevue University Director of Corporate Assessment, Project Management Institute's Heartland Chapter Vice President of Communications & Publicity, and the American Society for Quality Section 1302 Chair. In add, he was a lead examiner in Baldrige criteria for the

State of Nebraska's Edgerton Award; is currently ISO9000 Lead Auditor certified; and a Malcolm Baldrige National Quality Award Examiner.

## Partnering Agencies

AMEP will be collaborating with several other agencies to form the AMBIT Venture Capital Program (AVCP). The AVCP will be the entity performing the implementation of the proposed Alaska based venture capital system. The AVCP is a series of partnerships with several different entities, each of which provides essential elements to the program such as initial discretionary funding and potential business assessment. The entities that will be acting as partners under the AVCP umbrella are as follows:

### **The Alaska Manufacturing, Business, Industry and Technology Program (AMBIT) –**

An Alaska Manufacturing Extension Partnership project, the AMBIT Program's goal is to help business, industry, and technology within the state. The AMBIT program already controls a business portal, several virtual and physical economic incubators, educational programs, and programs that help to leverage Alaskan resources:

**The Alaska Business Portal** – Creation of the Alaska Business Portal has provided manufacturers and other businesses an opportunity to participate in electronic commerce without having to purchase and maintain their own website and e-commerce programming. The template-based portal showcases Alaska-made products and services in an easy to use format, allowing any Alaska merchant the opportunity to be online and sell their products all across the nation even if they themselves do not have access to a computer. The Alaska Business Portal is a multi-faceted approach to create a new and innovative economy in Alaska.

**Business Incubators** – Virtual and physical incubators are available for all Alaskans, no matter where they are located in Alaska. The virtual incubator will help businesses find financial, technical, and capital partners. AMBIT's goal is to help small businesses create collaborative networks, eliminate inefficiencies and maximize resources. AMBIT also provides its facilities to parties interested in building their businesses by providing on-site or in-house training and many different business

services. The physical incubator program has been so successful that AMBIT is in the process of building a central hub that will be dedicated to the advancement of Alaskan businesses. It will be located in the Matanuska Susitna Borough and will better help to serve rural Alaskans.

**Secondary and Higher Education Outreach** - The education outreach programs help train young Alaskans in the latest technologies of: web-based strategy, ecommerce, business-to-business transactions, and online marketing. AMBIT strives to boost work readiness skills useful in any urban or rural setting. High school students learn skills in personal finance, banking, and basic business management. These learned skills help them to succeed in future small business ventures.

**Leveraging Alaskan Resources** - Infrastructure including commerce, communication, transportation, health care and education is needed for the success of any community. Local, state, federal and Alaska Native government and organizations all contribute to infrastructure development throughout Alaska. Communication infrastructure is vital to connecting rural Alaska to the outside world. Telephone, Internet, and television provide the communication link for Alaska to reach the global marketplace. Aviation and marine transportation systems are the only transportation infrastructure to most of rural Alaska. Today, movement of goods and services is available by the U.S. Postal Service, and other delivery services that were not available to remote communities even ten years ago. AMBIT takes advantage of having an in-depth knowledge of these environmental factors in Alaska and helps give businesses opportunities they may have otherwise not had.

The goal of AMBIT in regards to the AVCP is the same as its own internal goals, to promote and help grow Alaskan businesses. AMBIT has an extensive background of business growth patterns, obstacles, and opportunities in Alaska, therefore, will be indispensable in advising for, and the construction of, the AVCP. AMBIT will serve as the key business evaluator and fund management entity for the proposed venture program. Although AMBIT can be the sole source of capital for an approved business (if the business is willing to part with a decided percentage of ownership), it is the desire of the AVCP to provide many different “less perceived risk” options for initial discretionary funding. After discretionary funding has been awarded it is a much safer environment for the business and AMBIT to decide if buying or selling shares to grow is conducive to growth.

### **Small Business Administration (SBA) –**

The U.S. Small Business Administration (SBA) was created in 1953 as an independent agency of the federal government to aid, counsel, assist and protect the interests of small business concerns, to preserve free competitive enterprise and to maintain and strengthen the overall economy of our nation.

The AVCP will leverage this well known, highly credible entity's financial power to help provide discretionary funding for approved businesses. It is advantageous to have the SBA involved with this initial funding to better help protect developing businesses from any perceived predatory lending practices usually seen from venture capital firms. The SBA guarantees any loans made to a business, thereby taking away immense financial burdens from the bank. The AVCP can then allocate more capital on top of funds provided by the SBA so a business is not entirely reliant on selling percentages of their business to raise growth capital.

The SBA will also engage with other screening entities to decide the level of preparedness shown by businesses who enter the AVCP program. Again, the SBA will be looking to see if they would be a good fit for funding alone, or if engaging multiple funders would increase the likelihood of the businesses success.

### **The United States Department of Agriculture (USDA) –**

The USDA focuses on the following key activities: expanding markets for agricultural products and support international economic development, further developing alternative markets for agricultural products and activities, providing financing needed to help expand job opportunities and improve housing, utilities and infrastructure in rural America, enhancing food safety by taking steps to reduce the prevalence of food borne hazards from farm to table, improving nutrition and health by providing food assistance and nutrition education and promotion, and managing and protecting America's public and private lands working cooperatively with other levels of government and the private sector.

The USDA, much like the SBA, is an entity that has the ability to promote growing businesses, only they do so in a particular area of the economy. The AVCP will be working with the USDA because their grant and financial assistance programs are seemingly custom made for the Alaska's surroundings. Many of their programs help rural individuals, land developers, food

distributors, and every flavor of agricultural development, all of which are prevalent in the state. They provide loans and grant opportunities on a regular basis to individuals here in Alaska and the rest of the nation, so they will be able to provide expert knowledge during discretionary funding procedures.

#### **Small Business Development Centers (SBDC) –**

SBDC's are all members of the SBA who work to improve small businesses with hands on assistance and early grant opportunities, with a special focus on underprivileged entrepreneurs. Although they will not supply loans, they can still provide grant opportunities if a good fit is assessed. Their main role in the AVCP process will be to provide knowledge and experience during the business screening process, or to help guide a selected business if the AVCP program is not right for them.

#### **Alaska Industrial Development and Export Authority (AIDEA) –**

AIDEA was established to promote, develop, and advance economic growth and diversification in Alaska by providing various means of financing and investment; AIDEA accomplishes this through its credit programs and development finance programs. AMEP has worked alongside AIDEA for many years to help develop rural and urban Alaskan communities. From financial assistance to training, AIDEA provides many important services that will benefit the AVCP process. Their specific role however, is to help AMEP find and mentor prospective businesses for the AVCP process.

#### **Community Development Financial Institutions (CDFIs) –**

The CDFI Fund was created for the purpose of promoting economic revitalization and community development through investment in, and assistance to, community development financial institutions (CDFIs). The CDFI Fund was established by the Riegle Community Development and Regulatory Improvement Act of 1994, as a bipartisan initiative.

The CDFI Fund achieves its purpose by promoting access to capital and local economic growth in the following ways:

1. through its CDFI Program by directly investing in, supporting and training CDFIs that provide loans, investments, financial services and technical assistance to underserved populations and communities;

2. through its New Markets Tax Credit (NMTC) Program by providing an allocation of tax credits to community development entities (CDEs) which enable them to attract investment from the private-sector and reinvest these amounts in low-income communities;
3. through its Bank Enterprise Award (BEA) Program by providing an incentive to banks to invest in their communities and in other CDFIs; and
4. through its Native Initiatives, by taking action to provide financial assistance, technical assistance, and training to Native CDFIs and other Native entities proposing to become or create Native CDFIs.

Since its creation, the CDFI Fund has awarded \$1.11 billion to community development organizations and financial institutions; it has awarded allocations of New Markets Tax Credits which will attract private-sector investments totaling \$26 billion, including \$1 billion of special allocation authority to be used for the recovery and redevelopment of the Gulf Opportunity Zone. CDFI's may be the most utilized form of loan guarantors in the initial round of AVCP discretionary funding as they are the most secure, they provide prompt financial assistance, and they are easier to predict. Additionally, AMEP has become a CDFI and will lend its own internal expertise to the project.

#### **Permanent fund –**

The Alaska Permanent fund was created to ensure that, "At least 25 percent of all mineral lease rentals, royalties, royalty sales proceeds, federal mineral revenue-sharing payments and bonuses received by the state be placed in a permanent fund, the principal of which may only be used for income-producing investments." The Fund is invested in a diversified portfolio of public and private asset classes. All investments, whether in Alaska or around the world, must be expected to produce income with an acceptable level of risk.

It is because of this high risk potential that Alaskan companies are passed up more often than not when it comes to new investments. This creates a problem due to the fact that if no one invests in Alaskan businesses (including the Alaska Permanent fund) then there will continue to be only risky business opportunities. This is why the AVCP will take advantage of legal functions of the fund and utilize capital from its main budget of 1% (approximately 300 million dollars) that must be invested within Alaska. A State funded project like the AVCP called Act 211 in Hawaii "has proven it's an incredible vehicle to start truly successful

companies, bring folks back from the Mainland, and inject capital into Hawaii,”(Spencer, 2009). The AVCP will continue, as part of its contract with this state entity, to re-invest 50% of its earnings back into the permanent fund with each successful business. The AVCP intends to acquire up to 300 million dollars from the fund for direct investment.

## Market Analysis

### *Current Opportunities*

**Grants** – Grant opportunities are available all over the world, and are offered by individuals and institutions alike. Although they can potentially provide businesses in Alaska with a great deal of capital they do require extensive experience in the grant writing process. Not only do they generally require grant writing experience they are generally created with the collaboration of researchers, scientists, and financial experts; all of which most small businesses have limited access to. Because of this the AVCP will utilize its own internal resources, including engineers, scientists, financial experts, grant writers, and project managers to aid incepted businesses in grant acquisition (if opportunities exist). By trying to leverage these potential grant opportunities for the businesses, we can limit financial burden taken on by loans and promote a fiscally safer operating environment.

There are many different types of funders that the AVCP will engage to help provide initial funding for the incepted business’s projects. As long as funding opportunities can be derived from agencies that will be helpful to businesses and will promote increasing economic growth across the state of Alaska, they will be pursued.

Some important sources of funding that the AVCP will follow are:

- Associations, Clubs, and Unions (e.g. Small Business Administration)
- Corporations and Local Businesses
- Governments
- Research agencies
- Foundations
  - **Family foundations** are founded by family members to honor the family name in perpetuity (e.g. Bill and Melinda Gates Foundation).



- **Government foundations** (e.g. National Science Foundation).
  - **Special-purpose foundations** focus on one specific area of giving (e.g. Solving Kids Cancer Foundation).
  - **Corporate foundations** are the charitable giving arms of corporations (e.g. The Citi Foundation).
  - **Community foundations** raise money, usually from the local community, and then redistribute these funds (e.g. The Northwest Area Foundation).
- Individuals such as Angel Investors

**Bank Loans** – In order for a business to apply for a loan there are certain criteria that must be accounted for; they must fill out a loan application, provide personal background information, provide a personal financial statement, provide any current business financial statements, provide projected financial statements, list and account for ownership and affiliations for the business, produce a current business license, provide their loan application history, provide business income tax returns, provide personal tax returns, provide up to date resumes for business participants, and provide in depth business plan documentation with a history of past operations if the business has already been established.

Not only must a business produce all of this information, but they must produce it exactly the way a particular institution requires. This means that for every different institution that a business prepares to engage for a loan all of the above data (or more) will have to be provided as they outline. After a loan is assessed it is either approved or disapproved, and after the first time it is very unlikely that it will be approved. Banking industry has been hit hard in recent years and during their recovery have become even more unlikely to lend to under prepared businesses. So you have a situation where there is a large amount of information that needs to be generated in several different ways for several different institution that are more likely than not going to reject you at least once, and on top of these factors lies the fact that banking institutions are less likely to lend as a whole.

It is a very daunting task to jump into the world of loan acquisition and that is why entities such as the Small Business Administration exist. However, even though this entity and others like it (such as CDFI's) exist to help small businesses they can only help to slightly guide a small business, the business is still responsible to provide all of this information on their own. The SBA and CDFI entities do offer an incredible boost to businesses through their loan guarantor process as discussed earlier in this document. Without a loan guarantor an individual must have a co-signer which is viewed to be incredibly risky by lending institutions if both parties do not have good credit and loan history. It is the intent of the AVCP to not only guide a business through this loan acquisition process but to also have hands on interaction and help when it comes to the creation and modification of documents. The AVCP will increase the competence and appearance of incepted businesses thereby increasing loan acquisition success. Not only will businesses benefit from this but the AVCP will also become a preferred medium for businesses to pass through in the eyes of the banks. It is the combination of increased competence and access to loan guarantors that will make the AVCP an attractive option.

**Non Stakeholders** – Individuals such as friends or relatives are rare, but most hassle free of the options.

Because an individual is not locked into any kind of operation procedures when it comes to their personal funds they can provide money anyone for any reason. This however can lead to unpredictable outcomes if a contract is not properly established and does not come with any added business development impacts. It is far more likely that a business will fail if they do not develop their business methodologies from many different angles. So due to this lack of development and structure it is often the case that although it is the path of least resistance, failure is the result. The AVCP will work with Angel Investors who will scrutinize and have an actual stake in the business through ownership acquisition. Angel Investors will have access to advice from many different kinds of professional in many different fields, thereby yielding a more prudent investment. This helps the investors and the businesses involved have a more well developed and knowledgeable interface, thus

encourage successful outcomes. “Entrepreneurs’ emerging technologies are frequently viewed as too risky for banks, private equity firms and venture capitalists, yet many fledgling companies require more investment to grow than can be raised from friends and family. Angel investors are increasingly stepping in to fill this gap.”

(Hayter, 2008)

## Deliverables

- **Provides several kinds of funding opportunities to a wide range of Alaskan businesses;**

The AVCP (as listed previously) intends to promote more efficient processes, more competent businesses, and higher success rates when it comes to businesses and their acquisition of capital. Some businesses owners choose to finance their businesses with debt. Debt financing is capital that a business owner has borrowed and must repay with interest.

Debt financing may include traditional bank loans, credit card debt, lines of credit, unsecured loans, financing from commercial finance companies, insurance policy loans, securing trade credit and Small Business Administration Loans. The AVCP will help businesses be more prepared and provide hands on assistance to encourage higher success rates when it comes to borrowing.

The AVCP also realizes that business owners are often uncomfortable with debt, and they would rather choose to pursue sources of equity financing. With equity financing, the people or entities who contribute capital to a business do so in exchange for a share of ownership in the business. The business owner gives the equity investor a share of ownership in the business since the equity investor is assuming the primary risk of losing his or her funds in the business. Having either the AMBIT Venture Fund or an Angel Investor take ownership of an incepted business means that there will be real motivation to help the business succeed. If the business fails, all of the equity investors lose their investments. If the business succeeds, the founders and equity investors share in the benefits. This is the basis of venture capital (VC) and as the AMBIT Venture Fund will be operated by a non-profit (AMEP), it can be insured that non-predatory lending practices will be observed.

Predatory lending is the act of unfair, deceptive, or unlawful activities carried out by a financing entity. Predatory lending in venture capital may take the form of taking over a business (by purchasing a majority share) and then intentionally making

poor decisions until the original owners are forced to sell the remaining shares. It may also be that a VC firm has ownership in a company that has a potential competitor looking for capital, and then the VC firm may take ownership of that business and destroy it from the inside out to benefit their other pre-existing partner. Predatory lending happens in many different ways and has forced legislature in Alaska and around the United States to limit or even prohibit the existence of venture capital. It is because of this that the planned AVCP will have all VC movements dictated by a non-profit. A non-profit operating the AMBIT Venture Fund means that the state pays all wages and operating expenses for the personnel involved in the project, the AVCP will never have direct ownership and therefore work on behalf of the business – not there finances. Because profits from successful businesses will be reinvested into the Alaska Permanent fund it provides motivation to the state to continue funding the AVCP which, in turn, provides funding and support to Alaskan businesses. “State-run venture capital funds are increasingly financing early stage companies, picking up some of the slack left by private venture capitalists in the wake of the stock market bubble's burst – they’re safer and tend to be devoid of predatory lending practices), experts tell the E-Commerce Times (Koprowski, 2005).

- **Provides project support, knowledge, and management to strengthen businesses success;**

The AVCP staff will contain engineers, scientists, financial experts, grant writers, and project managers to provide hands on training, visioning, and other assistance. The AVCP will not only give simple advice, they will do actual writing, program management, and even in some cases do initial prototyping/testing for manufacturing businesses. For the Michigan Venture Fund they stated that, "Our goal is to fill the gap between what an entrepreneur has going early on and when he can get actual VC funding," but AMEP feels that the AVCP must bridge that gap and then continuously provide support, knowledge, and management to have more successful businesses. (O’Hara, 2005)

- **Provides access to free managerial and technical training;**

As the AVCP will have a panel of experts ranging in experience, we intend to actively influence businesses from the inside, not the outside. We want to enter the different businesses that are incepted into the program and provide management methodologies and lessons learned experience to essentially evolve the businesses at a rapid pace. We can even handle certain financial and technological development services until the business can do it on their own.

- **Not only provides access to capital but guide promising businesses through the process;**

The AVCP, with its inside approach, aims to provide funding, management, and complete guidance services for incepted businesses. It is understood by AMEP that providing access to capital and leaving businesses to fend for themselves is a poor approach to helping a business grow. You must provide relevant advice, experience, and then actively guide a business through the steps in order to help them be successful.

- **Develops a real stake in companies through ownership investment;**

Having Angel Investors and the AMBIT Venture Fund actually purchase equity (percentages of ownership) from incepted businesses removes the burdens of debt and provides full resource access to the business. Not only will the AVCP be helping guide a business that it has ownership in, it will also allocate any available internal resources to ensure the success of the business. By having this ownership it also means that many operational burdens will be removed increasing the power of the original founders by removing many time and money restraints. A business that has the opportunity to have a full arsenal of experts on their side will improve overall business competence and growth rates.

- **Provides measurable support practices after capital is raised;**

It is often the case that small business development or incubation centers provide external organizational support to a certain point but often will move onto other projects once a business acquires funding. The AVCP will strive to provide financial, managerial, and technical support even after funding has been acquiesced. It is during these moments after having capital that businesses often invest it improperly and have structural collapse or relapse. In order to avoid costly rework the AVCP will help businesses understand how to manage funds from start to finish and develop lean operating methodologies and quality management practices. Even after the economic distress over the last year, "It's a good time to start and grow new entrepreneurial businesses. It is also an important time for organizations, such as ours, to support small businesses that are creating jobs after receiving experience from multiple skilled experts – not just pulling from their own limited experience." (Brus, 2009) This idea is powerful because a business is not just risking their own financial lives when they start out they are also risking the lives of their employees. This being the case, the more prepared you are for the work environment, and the more support you get through and after the project, the more likely you and your stakeholders will be to succeed.

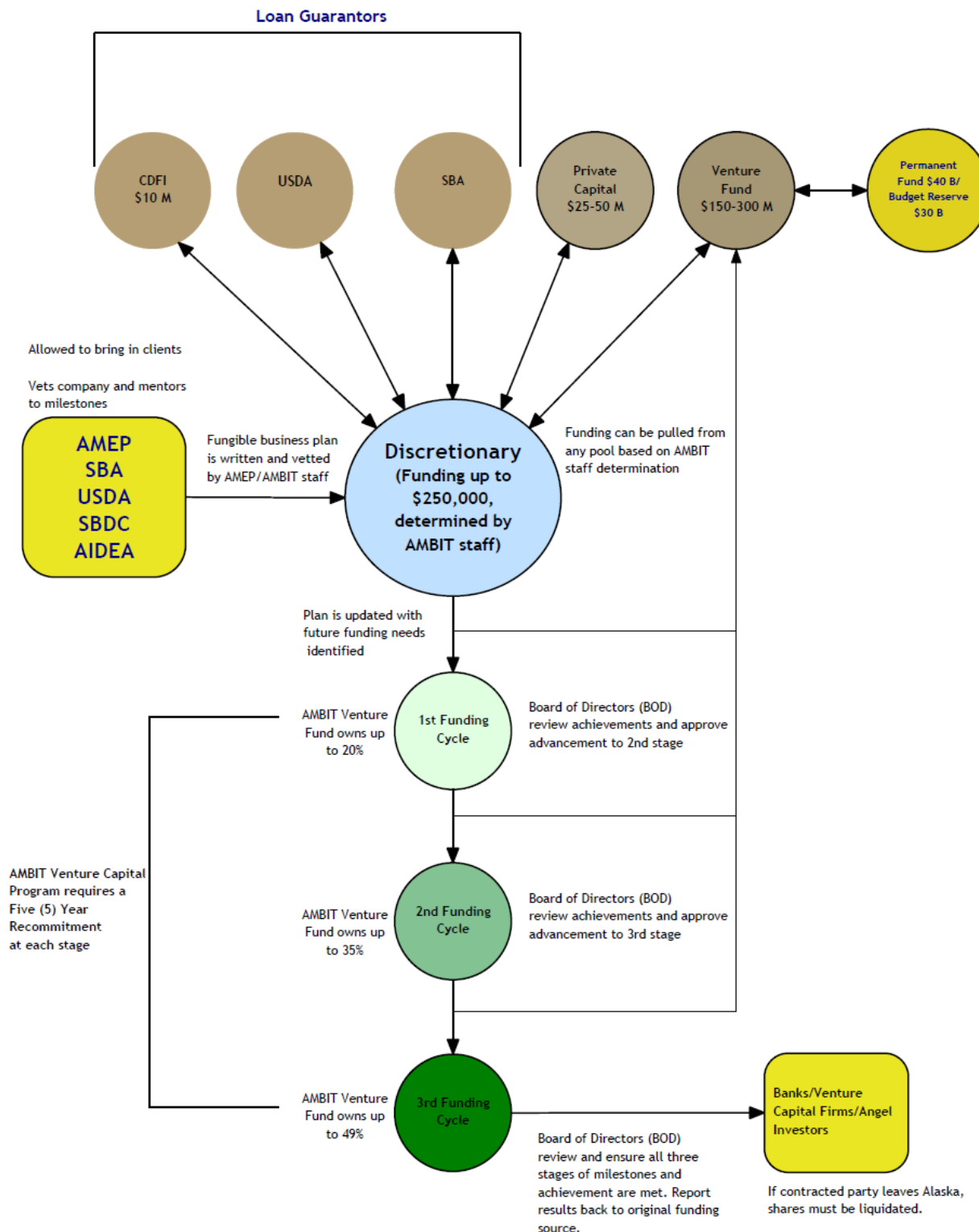
- **Provides in depth market analysis and leverage opportunities within and outside the state;**

In addition to financial support and organizational development services the AVCP will utilize its network of internal experts and external partners in the lower 48 states to provide in depth market analysis. Within the state the AVCP will provide market penetration opportunities for growing businesses and can determine whether or not they can provide services outside of Alaska effectively. Effective market penetration will mean that the AVCP will need to help incepted businesses create a marketing plan and provide any cost reduction information that can be assessed. Even after the economic distress over the last year, "It's a good time to start and grow new entrepreneurial businesses. It is also an important time for organizations, such as ours, to support small businesses that are creating jobs after receiving experience from multiple skilled experts – not just pulling from their own limited experience. "

## **Organizational Structure**

The Alaska Manufacturing Extension Partnership and the previously outlined partnering agencies will work together to form and operate the AVCP. The following diagram shows the flow of the project and the organization structure between each active agency:

# The Creation of the AMBIT Venture Capital Program



There are five main sources of capital for business excepted into the funding program. There are three loan guarantors who promise to repay any debt to a bank if an incepted business defaults on the debt or is unable to make payment. These sources of protected financing will be comprised of local CDFI's, the loan programs offered by the USDA in Alaska, and SBA loans. 200 million dollars will be acquired from the Alaska Permanent fund out of their required 3.5 billion that they must reinvest in Alaska, it is

similar to the, “InvestMichigan! Growth Capital Fund, which is a \$150 million state funded Venture Capital Firm intended to provide assistance to growing Michigan companies, attract world class investment in the outstanding companies already present in Michigan, and encourage investors to locate their portfolio companies in Michigan” (Michigan Venture Capital Association, 2008). Angel Investors have already declared that they would invest at least 25 million into the program and even more if things are lucrative.

Businesses who wish to join the program will be assessed by AMEP, SBA, USDA, SBDC, and AIDEA managers and professionals. Any businesses that are not yet ready to peruse funding will have support from these different agencies and there financial, technical, and managerial services. The AMBIT staff will then communicate all new business information to the 5 main sources of funding in order to help determine which pool of capital is best suited for the project. After an assessment has been made, AMBIT staff will select the most suitable source and investment of up to \$250,000 will be made.

If AMBIT is approached by a business that has successfully utilized the initial capital, and is in need of further funding, it will be reviewed by the board of directors. If approved AMBIT will arrange for another round of funding (the amount is at the discretion of AMBIT and the 5 main capital sources) and the AMBIT Venture Fund will take up to 20% ownership of the business. This process can repeat up to three times as a successful candidate’s business grows. Each time the ownership by the AMBIT Venture Fund will increase by up to 15%. Except in the last round of potential funding where no more than 49% of the enterprise may be owned by AMBIT. This is done to keep controlling power in the hands of the successful entrepreneur and shareholders.

After each round of funding is approved, the business must sign a contract to remain in Alaska for at least 5 years (to promote economic growth in the state). If and when the 4 total rounds of funding have been utilized, the AMBIT board of directors will compile and send an all encompassing report back to the original funding source. The success or failure of the business at any point in time will be documented appropriately and after the most recent 5 year recommitment phase has ended the entity is free to relocate or remain in Alaska. If, however, the business should wish to terminate their contract with the AMBIT Venture Fund, leave



before the end of the 5 year period, or pursue additional funding by leaving the state, all shares owned by AMBIT will be liquidated and a penalty fee will be evoked.

## Opportunity and Risk Assessment

### Opportunities-

- Twelve local Angel Investors are interested and ready for contact.
- Three CDFI's are committed to participate in the program.
- The Alaska branch of the SBA is interested in participating in the program.
- We are need to secure capital from the Alaska Permanent fund to provide initial funding.
- AMBIT is already formed and has been operating for the last 2 years successfully with economic development improvements for Alaskans.
- There were over 1000 new businesses in the just Anchorage and the Mat-Su Valley in 2008 (The market growth is sizable and sustainable).
- The AVCP requires only state approval for the program to come to fruition.

### Risks

- The AVCP risks investing in unsound projects.
- Poor investments mean discontinued Permanent fund funding and Angel Investors are likely to pull out.
- The program risks becoming over burdened with different businesses if evaluation and operational methodologies are not well establish and followed.
- There is a strong possibility that the Alaska Permanent fund will provide a smaller allotment of "test" capital, thereby reducing the number of businesses we can work with.

- Must adhere to any current or emerging anti-predatory lending legislature so as to avoid legal setbacks or even program termination.

## **Risk Management Methodology**

- **Risk Identification**

Risks will be identified before the project start by using the AMEP developed Risk Assessment Questionnaire Template (an electronic form), augmented to include other project specific risks, as appropriate.

- **Categorize Risks**

The AMEP Risk Assessment Questionnaire Template groups the risks into categories. The AMEP risk management team will create additional categories, as required through the life of the project.

- **Risk Impact Assessment**

For each risk identified, the risk management team will assess the risk event in terms of likelihood of occurrence and its effect on project objectives if the risk event occurs. This information will be used to prioritize the risk using established threshold criteria.

- **Prioritize Risks**

Risks prioritized by the threshold criteria will be recorded as appropriate in the Risk Response Plan.

- **Risk Response Planning:**

For each risk in the Risk Response Plan, determine the options and actions to reduce the likelihood or consequences of impact to the project's objectives (deliverables).

- Determine the response based on a cost/benefit analysis (cost vs. expected effectiveness).
- Describe the actions to be taken to mitigate the risk.
- Describe the actions to be taken when the risk event occurs (contingency plan).
- Assign responsibilities for each agreed upon response.
- Assign due dates so that risk responses are time sensitive.
- Incorporate this information into the Risk Response Plan via the AMEP developed Risk Assessment Questionnaire Template.

- **Risk Response Tracking:**

- Document the dates and the actions taken to mitigate a planned risk.
  - Document the actions taken when a risk event actually occurred.
  - Document any subsequent actions taken (planned/ unplanned actions).
  - Incorporate this information into the Risk Response Plan.
- **Monitor Risk:**
    - Establish systematic risk reviews and schedule them every quarter (or as needed) in the project schedule.
    - These reviews are to ensure:
      - All of the requirements of the Risk Management Plan are being implemented.
      - Proper assessment of currently defined risks.
      - Proper evaluation of effectiveness of actions taken.
      - That the status of actions to be taken is in line with the Risk Management Plan.
      - Proper validation of previous risk assessment (likelihood and impact).
      - Proper validation of previous assumptions.
      - That new assumptions are stated.
      - That new risks are identified.
      - That Risk Response Tracking has been completed in accordance with the Risk Management Plan.
      - That communication of Risk Monitoring results are being distributed to necessary personnel.
- **Control Risk:**
    - Validate mitigation strategies and alternatives.
    - Take corrective action when actual event(s) occur.
    - Assess impact on the project due to actions taken (cost, benefit, time spent)
    - Identify new risks resulting from risk mitigation actions.
    - Ensure the Project Plan (including the Risk Management Plan) is maintained and on schedule.
    - Ensure any proposed changes to be made to the project are documented properly to address risks associated with the proposed change.
    - Revise the Risk Assessment Questionnaire and other risk management documents to capture results of mitigation & corrective actions.

- Revise Risk Response Plan as appropriate.
- That communication of Control Risk results are being distributed to necessary personnel.

## Budget

It is assumed that the project will take up to two years before it is fully operational, below is the project budget separated into quarters over the two years. All Facility related expenses will be incurred by AMEP as the facilities will be housed in the same building.

# Proposed Budget - AVCP



PROJECTED INITIAL CAPITAL	Permanent fund	\$300,000,000
	Private Investor Capital	\$35,000,000
	<b>Total Initial Capital</b>	<b>\$335,000,000</b>
ACTUAL INITIAL CAPITAL	Permanent fund	\$0
	Private Investor Capital	\$0
	<b>Total Initial Capital</b>	<b>\$0</b>

<b>FUND VALUE AFTER OPERATING BUDGET (Projected Capital - Project Costs)</b>	<b>\$333,175,190</b>
<b>ACTUAL BALANCE (Actual Capital - Project Costs)</b>	<b>\$0</b>
<b>DIFFERENCE (Actual minus projected)</b>	<b>\$333,175,190</b>

1.1 First Quarter	Projected Cost	Actual Cost	Difference
2 Project Managers	\$28,700		\$28,700
1 CEO	\$15,000		\$15,000
1 VP Finance (investment Manager)	\$27,500		\$27,500
1 VP Admin	\$23,750		\$23,750
2 Senior Engineers	\$20,000		\$20,000
2 Junior Engineers	\$12,500		\$12,500
2 FAC/SERV/SUPP Staff	\$8,750		\$8,750
Appropriate Software	\$10,000		\$10,000
Drafting Tools	\$3,000		\$3,000
Testing Tools/Enclosures	\$6,000		\$6,000
Assembly Tools	\$1,500		\$1,500
Ordered Available Technology	\$5,000		\$5,000
11 General Computer Work Stations	\$4,950		\$4,950
9 Design/Control/Testing Computers	\$7,200		\$7,200
11 Simple Communications Devices	\$110		\$110
Office Supplies	\$600		\$600

1.6 Sixth Quarter	Projected Cost	Actual Cost	Difference
2 Project Managers	\$28,700		\$28,700
1 CEO	\$15,000		\$15,000
1 VP Finance (investment Manager)	\$27,500		\$27,500
1 VP Admin	\$23,750		\$23,750
2 Senior Engineers	\$20,000		\$20,000
2 Junior Engineers	\$12,500		\$12,500
2 FAC/SERV/SUPP Staff	\$8,750		\$8,750
Appropriate Software	\$3,000		\$3,000
Drafting Tools	\$0		\$0
Testing Tools/Enclosures	\$0		\$0
Assembly Tools	\$0		\$0
Ordered Available Technology	\$0		\$0
10 General Computer Work Stations	Provided by step 1.1		\$0
Design/Control/Testing Computers	Provided by step 1.1		\$0
10 Simple Communications Devices	Provided by step 1.1		\$0
Office Supplies	\$200		\$200
Project Build/Alternate Stations	\$0		\$0

4 Project Build/Alternate Stations	\$800		\$800
Emergency/Maintenance Funds	\$6,000		\$6,000
5 Laptops	\$3,000		\$3,000
20 Travel Days	\$2,000		\$2,000
2 Small Relocation Equipment	\$100		\$100
Training/Presentation Equipment	\$0		\$0
Cleaning/Maintenance Equipment	\$200		\$200
Cleaning Maintenance Supplies	\$40		\$40
Cleaning Maintenance Tools	\$20		\$20
Fringe and Benefits 40%	\$54,480		\$54,480
Operational Facilities	\$16,000		\$16,000
<b>Total</b>	<b>\$257,200</b>	<b>\$0</b>	<b>\$257,200</b>

<b>1.2 Second Quarter</b>	<b>Projected Cost</b>	<b>Actual Cost</b>	<b>Difference</b>
2 Project Managers	\$28,700		\$28,700
1 CEO	\$15,000		\$15,000
1 VP Finance (investment Manager)	\$27,500		\$27,500
1 VP Admin	\$23,750		\$23,750
2 Senior Engineers	\$20,000		\$20,000
2 Junior Engineers	\$12,500		\$12,500
2 FAC/SERV/SUPP Staff	\$8,750		\$8,750
Appropriate Software	\$2,000		\$2,000
Drafting Tools	\$0		\$0
Testing Tools/Enclosures	\$3,000		\$3,000
Assembly Tools	\$0		\$0
Ordered Available Technology	\$0		\$0
General Computer Work Stations	Provided by step 1.1		\$0
Design/Control/Testing Computers	Provided by step 1.1		\$0
Simple Communications Devices	Provided by step 1.1		\$0
Office Supplies	\$200		\$200

Emergency/Maintenance Funds	\$6,000		\$6,000
Laptops	Provided by step 1.1		\$0
20 Travel Days	\$2,000		\$2,000
Small Relocation Equipment	\$0		\$0
Training/Presentation Equipment	\$0		\$0
Cleaning/Maintenance Equipment	\$0		\$0
Cleaning Maintenance Supplies	\$40		\$40
Cleaning Maintenance Tools	\$20		\$20
Fringe and Benefits at 40%	\$54,480		\$54,480
Operational Facilities	\$16,000		\$16,000
<b>Total</b>	<b>\$217,940</b>	<b>\$0</b>	<b>\$217,940</b>

<b>1.7 Seventh Quarter</b>	<b>Projected Cost</b>	<b>Actual Cost</b>	<b>Difference</b>
2 Project Managers	\$28,700		28,700
1 CEO	\$15,000		15,000
1 VP Finance (investment Manager)	\$27,500		27,500
1 VP Admin	\$23,750		23,750
2 Senior Engineers	\$20,000		20,000
2 Junior Engineers	\$12,500		12,500
2 FAC/SERV/SUPP Staff	\$8,750		8,750
Appropriate Software	\$3,600		3,600
Drafting Tools	\$0		0
Testing Tools/Enclosures	\$0		0
Assembly Tools	\$0		0
Ordered Available Technology	\$0		0
13 General Computer Work Stations	Provided by step 1.1		0
Design/Control/Testing Computers	Provided by step 1.1		0
20 Simple Communications Devices	Provided by step 1.1		0
Office Supplies	\$400		400
Project Build/Alternate Stations	\$0		0

Project Build/Alternate Stations	\$0		\$0
Emergency/Maintenance Funds	\$6,000		\$6,000
Laptops	Provided by step 1.1		\$0
20 Travel Days	\$2,000		\$2,000
Small Relocation Equipment	\$0		\$0
Training/Presentation Equipment	\$0		\$0
Cleaning/Maintenance Equipment	\$0		\$0
Cleaning Maintenance Supplies	\$40		\$40
Cleaning Maintenance Tools	\$20		\$20
Storage/Packaging Items	\$0		\$0
Fringe and Benefits at 40%	\$54,480		\$54,480
Operational Facilities	\$16,000		\$16,000
<b>Total</b>	<b>\$219,940</b>	<b>\$0</b>	<b>\$219,940</b>

<b>1.3 Third Quarter</b>	<b>Projected Cost</b>	<b>Actual Cost</b>	<b>Difference</b>
2 Project Managers	\$28,700		\$28,700
1 CEO	\$15,000		\$15,000
1 VP Finance (investment Manager)	\$27,500		\$27,500
1 VP Admin	\$23,750		\$23,750
2 Senior Engineers	\$20,000		\$20,000
2 Junior Engineers	\$12,500		\$12,500
2 FAC/SERV/SUPP Staff	\$8,750		\$8,750
Appropriate Software	\$3,200		\$3,200
Drafting Tools	\$0		\$0
Testing Tools/Enclosures	\$0		\$0
Assembly Tools	\$0		\$0
Ordered Available Technology	\$0		\$0
General Computer Work Stations	Provided by step 1.1		\$0
Design/Control/Testing Computers	Provided by step 1.1		\$0
Simple Communications Devices	Provided by step 1.1		\$0
Office Supplies	\$200		\$200

Emergency/Maintenance Funds	\$6,000		6,000
Laptops	Provided by step 1.1		0
20 Travel Days	\$2,000		2,000
1 Small Relocation Equipment	\$50		50
Training/Presentation Equipment	\$0		0
Cleaning/Maintenance Equipment	\$600		600
Cleaning Maintenance Supplies	\$80		80
Cleaning Maintenance Tools	\$40		40
Fringe and Benefits at 40%	\$54,480		54,480
Operational Facilities	\$16,000		16,000
<b>Total</b>	<b>\$219,450</b>	<b>\$0</b>	<b>\$219,450</b>

<b>1.8 Eighth Quarter</b>	<b>Projected Cost</b>	<b>Actual Cost</b>	<b>Difference</b>
2 Project Managers	\$28,700		28,700
1 CEO	\$15,000		15,000
1 VP Finance (investment Manager)	\$27,500		27,500
1 VP Admin	\$23,750		23,750
2 Senior Engineers	\$20,000		20,000
2 Junior Engineers	\$12,500		12,500
2 FAC/SERV/SUPP Staff	\$8,750		8,750
Appropriate Software	\$9,000		9,000
Drafting Tools	\$0		0
Testing Tools/Enclosures	\$3,000		3,000
Assembly Tools	\$0		0
Ordered Available Technology	\$0		0
General Computer Work Stations	Provided by step 1.1		0
Design/Control/Testing Computers	Provided by step 1.1		0
Simple Communications Devices	Provided by step 1.1		0
Office Supplies	\$700		700
Project Build/Alternate Stations	\$0		0
Emergency/Maintenance Funds	\$6,000		6,000

Project Build/Alternate Stations	\$0		\$0
Emergency/Maintenance Funds	\$6,000		\$6,000
Laptops	Provided by step 1.1		\$0
20 Travel Days	\$2,000		\$2,000
Small Relocation Equipment	\$0		\$0
Training/Presentation Equipment	\$0		\$0
Cleaning/Maintenance Equipment	\$0		\$0
Cleaning Maintenance Supplies	\$40		\$40
Cleaning Maintenance Tools	\$20		\$20
Fringe and Benefits at 40%	\$54,480		\$54,480
Operational Facilities	\$16,000		\$16,000
<b>Total</b>	<b>\$218,140</b>	<b>\$0</b>	<b>\$218,140</b>

<b>1.4 Fourth Quarter</b>	<b>Projected Cost</b>	<b>Actual Cost</b>	<b>Difference</b>
2 Project Managers	\$28,700		\$28,700
1 CEO	\$15,000		\$15,000
1 VP Finance (investment Manager)	\$27,500		\$27,500
1 VP Admin	\$23,750		\$23,750
2 Senior Engineers	\$20,000		\$20,000
2 Junior Engineers	\$12,500		\$12,500
2 FAC/SERV/SUPP Staff	\$8,750		\$8,750
Appropriate Software	\$2,000		\$2,000
Drafting Tools	\$0		\$0
Testing Tools/Enclosures	\$3,000		\$3,000
Assembly Tools	\$0		\$0
Ordered Available Technology	\$0		\$0
General Computer Work Stations	Provided by step 1.1		\$0
Design/Control/Testing Computers	Provided by step 1.1		\$0
Simple Communications Devices	Provided by step 1.1		\$0
Office Supplies	\$200		\$200
Project Build/Alternate Stations	\$0		\$0
Emergency/Maintenance Funds	\$6,000		\$6,000
Laptops	Provided by step 1.1		\$0
20 Travel Days	\$2,000		\$2,000
Small Relocation Equipment	\$0		\$0

Laptops	Provided by step 1.1		0
20 Travel Days	\$2,000		2,000
4 Small Relocation Equipment	\$200		200
Training/Presentation Equipment	\$4,000		4,000
Cleaning/Maintenance Equipment	\$400		400
Cleaning Maintenance Supplies	\$80		80
Cleaning Maintenance Tools	\$40		40
Fringe and Benefits at 40%	\$54,480		54,480
Operational Facilities	\$16,000		16,000
<b>Total</b>	<b>\$232,100</b>	<b>\$0</b>	<b>\$232,100</b>

<b>TOTAL PROJECTED COST</b>	<b>\$1,824,810</b>
<b>TOTAL ACTUAL COST</b>	<b>\$0</b>
<b>TOTAL DIFFERENCE</b>	<b>\$1,824,810</b>



Training/Presentation Equipment	\$0		\$0
Cleaning/Maintenance Equipment	\$0		\$0
Cleaning Maintenance Supplies	\$40		\$40
Cleaning Maintenance Tools	\$20		\$20
Fringe and Benefits at 40%	\$54,480		\$54,480
Operational Facilities	\$16,000		\$16,000
<b>Total</b>	<b>\$219,940</b>	<b>\$0</b>	<b>\$219,940</b>

<b>1.5 Fifth Quarter</b>	<b>Projected Cost</b>	<b>Actual Cost</b>	<b>Difference</b>
2 Project Managers	\$28,700		28,700
1 CEO	\$15,000		15,000
1 VP Finance (investment Manager)	\$27,500		27,500
1 VP Admin	\$23,750		23,750
2 Senior Engineers	\$20,000		20,000
2 Junior Engineers	\$12,500		12,500
2 FAC/SERV/SUPP Staff	\$8,750		8,750
Appropriate Software	\$9,000		9,000
Drafting Tools	\$0		0
Testing Tools/Enclosures	\$0		0
Assembly Tools	\$0		0
Ordered Available Technology	\$0		0
General Computer Work Stations	Provided by step 1.1		0
Design/Control/Testing Computers	Provided by step 1.1		0
Simple Communications Devices	Provided by step 1.1		0
Office Supplies	\$700		700
Project Build/Alternate Stations	\$3,000		3,000
Emergency/Maintenance Funds	6,000.00		6,000
Laptops	Provided by step 1.1		0
20 Travel Days	\$2,000		2,000
4 Small Relocation Equipment	\$200		200
Training/Presentation Equipment	\$12,000		12,000
Cleaning/Maintenance Equipment	\$400		400
Cleaning Maintenance Supplies	\$80		80
Cleaning Maintenance Tools	\$40		40
Fringe and Benefits at 40%	\$54,480		54,480
Operational Facilities	\$16,000		16,000
<b>Total</b>	<b>\$240,100</b>	<b>\$0</b>	<b>\$240,100</b>

## Final Recommendation

It is the recommendation of the Alaska Manufacture Extension Partnership that the AVCP is technologically, financially, and managerially feasible for implementation in the State of Alaska. The partnering entities are committed to the programs success and are capable of completing the work outlined in this document. There is an established need for the program in the Alaskan market and given the current lending environment it is imperative that a paradigm shift in small business assistance takes place to prevent economic stagnation.

The AVCP not only contains a sound infrastructure in which to bring the project to fruition but its many partners have years of experience in economic development and understand the need for change. The potential risks involved with the project are avoidable and do not present significant enough obstacles to prevent a successful implementation of the AVCP. The AVCP does currently have any legislative barriers in which could prevent its completion and has detailed risk and quality management processes (documentation available upon request). With only the requirement for the state to provide operational and infrastructural funding, it is deemed by AMEP that the AMBIT Venture Capital Program is feasible and beneficial for implementation in the State of Alaska.

In addition to this document there have been two other supporting documents created to better outline the specific and comprehensive operating behavior, infrastructural organization, assessment processes and all other elements that are essential for understanding the AVCP.

- The first document, *The Alaska Venture Capital Investment Program: Program Guidelines* document (**Appendix**), outlines how the AVCP functions, and is an essential foundation for an economically beneficial venture program within Alaska. It contains the information needed for Alaskan entrepreneurs to begin their interactions with the AVCP and describes all necessary eligibility requirements, financing opportunities, approval processes, reporting requirements and other general information about how the program works. This document is to be considered a

piece of supplemental “getting started” material for interested parties that will be integrated with the hands on processes of the AVCP.

- The second document, *The Alaska Venture Capital Enhancement Act* (**Appendix**), is a carefully compiled potential solution for legislative implementation of the AVCP in Alaska. The act shows the specific details that the program will follow in regards to all entities involved. The document also shows comprehensive understanding and compliance with Alaska state laws and regulations. It clearly and appropriately defines the purpose of the AVCP in Alaska, how it will be governed, who will govern it, how potential venture will be assessed, dissolution protocols, the powers of the AVCP, the quality management procedures, and all other necessary operational information and guidelines.

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## Resume

### Thomas A. Myers

1601 Tammy Ave

Cell (907) 223-0515 Work (907) 777-7332

Anchorage, Alaska 99515

[tom@ak-mep.org](mailto:tom@ak-mep.org)

## Summary

Results oriented leader with over 20 years of extensive experience in business start-ups, planning, development, marketing, media, education, production, information technology, training, management skills, decision making, and leadership. Proven track record for providing on time, on budget, within scope delivery, achieving goals and exceeding customer expectations. Ability to identify program needs, initiate appropriate solutions and integrate leading-edge technologies or process improvements. Creative approach to problem solving with the ability to avoid and resolve crisis situations. Ability to build, train, motivate and retain multi-disciplined work teams. Superior communication, strategic planning, critical thinking and resource management skills. Career experience includes:

Business Start-up	ISO 9000 Procedures	Metrics
LEAN & Balanced	E-commerce/Marketing	Benchmarking
Six Sigma	Govt. Contract Mgt	QA/QC
Project Management	Executive Training	Facilitation
Human Resources	Knowledge Management	Daily operation
Fiscal Management	Instructional Design	Reengineering
Quality System Auditing	Organizational Development	Baldrige Award

## Professional Experience

### ALASKA MANUFACTURING EXTENSION PARTNERSHIP, Anchorage, AK Jan 2006-Present

Deputy Director / Chief Learning Officer / Senior Business Consultant

Responsibilities include planning and creation of the Alaska Manufacturing, Business, Industrial, & Technology project (AMBIT), business research & commercialization, consulting services, training programs, negotiation of service agreements, patenting, marketing and promotion, market assessments, logistics, recruitment-training-management of staff and control flow of contracts, determine program/project pricing, and serve as liaison between AMEP, business community, and government.

Negotiated, designed, developed contracts, and established community partnerships for the creation of the 100,000 sq ft Alaska Science Research & Business Incubator.

- Created the partnerships including Federal, State, and local governments to create science research and business incubator facility for start in spring 2009, currently \$60M project.
- Wrote numerous grants to support programs that impact entrepreneurs both for the individual start-up and the advanced manufacturer.
- Created partnership with two local television stations to launch a “get the word out” campaign by doing the Alaska Business Report on the Monday night news and to host a local entrepreneurs program called “Tom’s, in your Business”.
- Manage all staff members and interact with politico’s and policy makers at the state and federal level. Some of the programs created are now going nation-wide through the MEP system.
- Developed venture capital investment program for Alaska based on the successful programs in Utah, New York, Florida, and Pennsylvania.
- Took a failing MEP center and built it up to meet its Minimally Acceptable Impact Metrics and become a cutting edge developer and deliverer of innovative programs.
- Created online learning system for Alaska meeting its diverse rural & urban needs of cultural acceptance, financial viability, and organizational sustainability.

#### **UNIVERSITY OF ALASKA, Anchorage, AK**

**Fall 2004-Jan 2006**

Executive Director of Business Enterprise Institute

Responsibilities include establishment and management of the Business Incubator, business research, consulting services, training programs, negotiation of service agreements, marketing and promotion, logistics, recruitment-training-management of staff and control flow of contracts, determine program/project pricing, and serve as liaison between university and business community.

Negotiated, designed, developed contracts, and established community partnerships for the creation of the 50,000 sq ft Anchorage Alaska Business Incubator.

- Determined the four business start-up constituencies: University faculty researchers turning research results into product sales, Students desiring to take educational results of business planning through to fruition, Local businesses wishing to conduct skunk-works and R&D, and Local entrepreneurs needing more support than they can receive out of their garage.
- Created partnership with City of Anchorage, Community Land Trust, Alaska Invest-net, and Anchorage Economic Development Corporation.
- Established project plan that is set to return a profit from the incubator in the first month of operation.
- Entrepreneurial training program created to ensure incubator participants learn skill needed to be successful in business.
- Created online virtual incubator to work with rural entrepreneurs
- Conducted research on Alaskan small businesses.

Created multiple education and training programs to fulfill the needs of Alaskan entrepreneurs and businesses targeting skills and abilities that are specific to all sizes of Alaskan businesses and markets.

- Emerging trends in seafood logistics.
- Alaskan Seafood Salesmanship.
- Seafood buyers tour of Alaska.
- Certificate in Travel and Tourism.
- RFID Radio Frequency Identification Planning.
- Project Management, Six Sigma, Lean Methodology.
- Corporate and Personal Anti-Terrorism and Natural Disaster Planning.
- Personal Sales Strengths

**BELLEVUE UNIVERSITY, Bellevue, NE**

**1999 - 2004**

Director of Corporate Assessment

Adjunct Professor

1999 - Present

Responsibilities include research, program development, planning, organizational development, instructional design, and assessment (project, and quality) in order to assure meeting customer needs, improve university productivity, and increasing overall satisfaction. Led lead generation and negotiated agreements with major corporations, developed new services, created marketing and promotion plan and materials, managed the flow of contracts, recruited-trained & supervised staff and faculty, scheduled programs and faculty contracts, determined pricing and managed budgets on multiple programs.

Created, marketed and taught online Six Sigma, LEAN, and Balanced Scorecard programs that met the needs of corporate partners and added new curriculum and revenue stream to University.

- Participants in program thus far have generated revenues averaging 1.5 Million per participant for corporate partners, University estimates internal revenue from program to reach 1 Million over next fiscal year.
- Examples of Six Sigma Projects Include;

Redesign/reengineering of coating spraying system resulting in new business application/order of \$20 Million

Redesign of process for the auctioning of scrap metal \$3.5 M

Creation of online system for tracking benefits program \$5 M in savings

On-time product delivery utilizing ¼ Less assets \$12

Addition of product line delivery process \$1.8 M

Creation of online Six Sigma educational program \$1M

Database redesign/reutilization for project selection \$2 M in savings



Worked with the National Institute of Corrections on the development of online degree program

created Marketing plan, worked with 15 state correctional programs to drive enrollment in degree:

- Degree program has students enrolled with curriculum completed for launch.
- University estimates revenue at \$750,000 for first year building to over 2 Million the following year.

Created, marketed and taught online Project Management program that met the needs of corporate partner and added new curriculum and revenue stream to University.

- Educational program in project Management has been very successful over the last three years, participants have created project that have changed entire organization.
- Examples: one student was promoted to head of IT for the state of Minnesota; another was promoted to head of project management of Bemis corp.

Developed partnering process to make University the education partner of choice through the adoption and adaptation of professional partner's educational programs for university credit and in some cases conducting the training onsite at the University.

- Signed partnership agreements with professional organizations such as American Society for Quality, Project Management Institute, American Society for Training and Development.
- These partnerships have accounted for part of increase in enrollment.
- Partnering programs have driven university enrollment up approximately 20% in the last year and 15% in the previous year.
- Harvard University consultants have estimated that corporate programs will account for \$75 Million over the next 5 years, matching all current revenues.

Conducted 3 year research study on the ROI of training and education utilizing data collected from corporate partners, students and other educational institutions to determine value of education & training.

- Results were much different than expected, it was believed that technical/managerial skills would be near the top of desired attributes of an employee and the desired affect of training and education, but what was revealed stated that integrity and organizational loyalty were the most important.
- The university has used this data in marketing and has changed the composition of many programs.

Developed Lean, RFID, ISO9000, MBNQA, Benchmarking, Six Sigma Champions, and Reengineering short courses to fulfill corporate need and to round out curriculum in Quality Management Systems.

- Programs have run and have been profitable, but the most important factor is university now has a portfolio of corporate programs that can be marketed as a step in the door to developing partnerships that drive higher enrollment and greater profits.

Worked with faculty to develop assessment measurements and methods that quantified and qualified curriculum and instructor effectiveness.

- Both students and corporations have shown a much high satisfaction rate with university programs and increased word-of-mouth enrollment.

#### **AIR FORCE WEATHER AGENCY, Offutt AFB, NE**

**1984 - 1999**

Manager Internal Quality & Project Management

Responsible for budgets, quality practices, personnel training programs, organizational audits, project management procedures, and customer relationship management.

An audit of all current and past projects was accomplished to determine which funds had been spent on which project, all project account funds were then reallocated to the proper project, a voucher system was created then instituted to target specific funds at specific projects and tracked by project codes.

- Congressional investigation was dropped and senior leadership no longer threatened with Imprisonment.
- Voucher Process still in use having handled over 100 million in funds that have been properly allocated.

Conducted a research / benchmarking program to determine call center size, functionality, and software requirements, designed call center, implemented software, and populated database with best practice info on each product, trained new hires on call center tasks to handle 24hr ops using Remedy software.

- Production workers able to produce greater amounts of output leading organization to add new products to production schedule utilizing current assets increasing value \$9.5 M.
- Customer satisfaction dramatically increased by 300% as call center was much more able to meet immediate needs and document problems/solutions creating knowledge base for future solutions.

Established a Q/PMO (quality & project management office) and began instituting organizational training Programs in Baldrige Criteria, ISO9000, Benchmarking, Project Management, and reengineering, also began the tracking of all projects through a project submittal system and began assigning project personnel to teams based on skills need for successful completion of projects.

- Immediate reduction in project cost was seen as the right people were assigned to specific projects, 2.5 million in savings were freed up in first year to target peripheral projects and provide for personnel training.
- Government organization began to function following private sector management principles while saving taxpayer dollars.

## ACADEMISSION,

Lead Consultant

For the projects that follow this task list; I accomplished these tasks as needed for each highlighted project.

### Product Research

- Evaluated existing portfolio for “products” to be packaged and marketed.
- Worked with clients and prospects to develop new products

### Product Development

- Document Functionality
- Prioritize Feasibility and viability (size of opportunity)
- Initiate and track development
- Coordinate product marketing
- Coordinate product training

### Product Management

- Catalog inventory of products
- Identify target markets (i.e. verticals, prospects, etc...)
- Measure sales opportunities by product
- Manage product portfolio

### Industry Research

- Pricing
- Track sales opportunities
- Establish “market” price by category (i.e. market, product, size, etc...)
- Competitive Analysis
- Identify competitors by category (i.e. market, product, size, etc...)

### Communication

- documentation and Training
- Marketing
- Strategic, Tactical, and Resource Planning

Wrote business plan, marketing plan, and designed web network linking 137 regional web sites promoting travel, main web portal established as [www.entertainmeusa.com](http://www.entertainmeusa.com) and main regional site as [www.entertainmevegas.com](http://www.entertainmevegas.com), created new streaming video process that allows for the use of Microsoft windows media player to stream high quality video at high speed multiple rates.

- Web portal now attracting 2.5 million hits per month as commercials launched on cable TV in selected markets, internet marketing targeted at current and potential users of online travel services.
- Las Vegas group being paid for the hosting of streaming video by hosted property and receiving revenue from the travel bookings, revenue also generated through the collection of participant data sold to hosted property marketing department, the Entertainme network plans to go public by August 2005.

Wrote business plan, marketing plan, and designed educational materials based on investment and

insurance, designed web site to market product to potential buyers for The Basics.Biz.

- The Basics.biz is currently in negotiations with Ameritrade Inc to provide educational training to Ameritrade clients.
- Partnered with Manatee Technologies to create, sell and distribute educational CD's to a world wide market.

## INDUSTRIAL EXPERIENCE

Experience includes: manufacturing of products, welding, cost reduction programs, vendor analysis, standards and process development, plant layout, tool design, and special projects.

<b>DERSON MANUFACTURING, INC.,</b> Watertown, MN	1981-1984
Malcolm Baldrige National Quality Award Examiner	2001-2004
Edgerton Quality Award Examiner	1995-2004
Midlands Auditing Group, ISO9000 Auditor	2001-2004
American society for Quality Regional President	2002-2003
Project Management Institute Regional Vice President	2000-2002
American Society for Quality Regional Councilor	1998-2002

**Gallup Strengths Signature Themes:** 1) Command 2) Activator 3) Ideation 4) Strategic 5) Input

## EDUCATION

1997, master of Science, Specializing in Administration, Concentration in Human Resources, Central Michigan University

1995, Bachelor of Science in Occupational Education, Minor in Finance, Wayland Baptist University

## SEMINARS, TRAINING & CERTIFICATIONS

Certified Six Sigma Master Black Belt

Certified ISO9000 Lead Auditor

Certified Project Management Professional

Certified Quality Manager  
Malcolm Baldrige Quality Award Examiner  
Edgerton Award Auditor  
Government Contract Officer  
Senior Professional in Human Resources Training  
Benchmarking & Competitive Intelligence  
Various in-house Management training seminars  
Top Secret SIOP Security Clearance

**University programs created Online, In-class & Blended:** Six Sigma, DFSS, RFID, Lean Manufacturing & Servicing, Project Management, Capability Maturity Model, Financial Investing, Behavioral Interviewing, Correctional Administration & Management, Quality Management Basics, Telecommunications Management, Political Science, ISO9000, Quality Inspection & Measurement, Benchmarking & Competitive Intelligence, Balanced Scorecard and Entrepreneurship.

**University programs taught Online, In-class & Blended:** Six Sigma, RFID, Six Sigma Champions, Lean Manufacturing & Servicing, Balanced Scorecard, Project Management, Capability Maturity Model, Financial Investing, Behavioral Interviewing, Correctional Administration & Management, Quality Management Basics, Telecommunications Management, Political Science, Ethics, American History, ISO9000, Quality Inspection & Measurement, Benchmarking & Competitive Intelligence, Entrepreneurship, Leadership, and Management Information System.

# ***Alaska Venture Capital Investment Program: Program Guidelines***

## **Program Guidelines**

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## Section I – General

### A. Introduction

The Alaska Manufacturing, Business, Industrial & Technology project (AMBIT), through the Alaska Venture Capital Investment Program, shall provide loans to venture capital partnerships for investment in Alaska-related companies. The nature of the investments by the venture capital partnerships shall be equity or convertible debt.

These guidelines outline the nature and focus of the Alaska Venture Capital Investment Program, as well as the applicable process and procedures in the administration of this program. The AMBIT Board reserves the right to review the guidelines and make additions, deletions or changes as it deems appropriate.

The Alaska Venture Capital Investment Program is a State of Alaska initiative intended to address the financing needs of Alaska businesses by providing \$300M in venture capital, leveraged by another \$180M of private equity, to total \$480M for Alaska-related companies. In addition, in order to increase the amount of capital available in traditionally underserved areas, the State has instructed that 25% of the funds be made available to businesses with primary offices staffed with at least one full-time senior-level partner located in rural Alaska communities, as defined by state law.

The Alaska Venture Capital Investment Program's flexible financing is designed to meet the needs of growth-oriented businesses and are adaptable to the newly developed business structures evolving in the newer sectors of the Alaskan growth economy. The Alaska Venture Capital Investment Program holds the promise of more firmly establishing a diversified growth based economy within Alaska, allowing Alaska to compete in the global marketplace.

### ***B. Program Eligibility***

1. At least 25% of the funds made available for the program shall be used to make investments in businesses which have primary offices staffed with at least one senior level partner located in rural Alaska.
2. Listed below are certain requirements that will apply to every venture capital partnership that receives funding from this program.
  - a. The ultimate beneficiary of the financing must be a Alaska related company which is defined as an entity with operations located in this State or an entity willing to locate significant business operations in this State. For purposes of this program significant business operations is defined as having a simple majority of its workforce employed in the State.
  - b. There must be a financial return mechanism to the Alaska Venture Capital Investment Program. The rate of return need not be high or substantial in every financial transaction approved, but the goal of the AMBIT Board is to achieve an adequate rate of return while balancing the goal of economic development within the State.
  - c. The fund applicant must be willing to provide all pertinent information requested so that a complete due diligence review of the proposed investment can be conducted and if deemed necessary by the AMBIT Board, the applicant must be willing to be vetted and or willing to go through the AMBIT incubation program.
3. The applicant has or will open an office in Alaska, staffed with at least one senior level partner and will maintain such office for a minimum of five years for each level of investment. In approving the application, the Board shall consider whether an applicant has had an office in this State for at least the 12 months immediately preceding the date of the applicant's application.
4. All investments awarded to the applicant and any matching nonpublic equity shall be invested in Alaska-related companies.

### ***C. Types of Financing Available***

1. The actual method of financing to be offered by the Alaska Venture Capital Investment Program is through an investment where equity in the firm is held until it is deemed necessary and or desirable by the AMBIT Board to be sold.

## **Section II – The Application Process**

### ***A. General***

1. An Alaskan company seeking investment capital may submit an application to the AMBIT Board using the Single Application form.
2. Applicants ready to apply for funding must utilize the Single Application.
  - a. The Single Application can be printed and/or completed online by accessing: [www.AMBIT.cc](http://www.AMBIT.cc) Type “Single



Application” into the search mechanism.

- b. Copies of the Single Application kit may be obtained by contacting AMBIT Customer Service at 1-907-279-2637 or fax 907-279-2638 or e-mailing: [investments@ambit.cc](mailto:investments@ambit.cc).
- c. Applications may be filed at any time during the fiscal year, subject to availability of funds, in accordance with the process outlined herein and subject to AMBIT Board approval. However, dates for presentations and application deadlines will be determined by the Board and posted on [www.AMBIT.cc](http://www.AMBIT.cc).
- d. Applications should be submitted to:

Alaska Manufacturing Extension Partnership  
Customer Service  
701 Sesame Street, Suite 200  
Anchorage, Alaska 99503

- e. Correspondence should be sent to:

Same address as above, reference: Alaska Venture Capital Investment Program

#### ***B. Fund Investment Application***

1. Applicants wishing to access the Alaska Venture Capital Investment Program must submit the following supplemental information (see attached questionnaire in Appendix A for additional detail).
  - a. Business Plan including:
    - Applicant’s name.
    - Address of the applicant and a list of all offices of the applicant located in the State.
    - The applicant’s business planning documents,.
    - A history of the applicant’s development, operations, accomplishments and historical investment returns including past performance of principals and partners.
    - Specific amount requested from the Alaska Venture Capital Investment Program.
  - b. Financials/Information:
    - Ownership status, e.g., locally owned, subsidiary of larger corporation, and the home office address of the parent corporation (if applicable).
    - At risk position of principles.
    - Remuneration, distribution and participation in project for principals and partners.
    - Conflict of interest and risk factors.
    - Term sheet commitments or letters of commitment from third party investment sources for this project currently and in the future.
    - List investment sources approached, but not participating in this project.
    - An aggregate IRR on all investments, including both realized and unrealized gains.
  - c. Marketing/Opportunity:
    - General size of present active marketing areas.
    - Investing strategy and intended industry sectors including stage of investment.
    - How sufficient qualified deal flow will be generated.
    - What are the screening criteria?
    - What has past experience been in performing due diligence and what is the process going to be?
  - d. Experience/Management:
    - Management team, board members and qualifications.
    - Qualifications, Network and Access to the expertise of experienced industry advisors to project management team.

- How will oversight of management be handled?
  - To what extent will capital management be involved in operations?
  - A description of the applicant's current and proposed relationship with organizations in this State that foster economic development.
- e. Potential Impact:
- Priority will be given to projects that demonstrate significant AK job creation, AK business impact and AK citizen impact. Please provide both the initial and three year projection for each one of these measures including any past relationships with organizations within the State that have fostered economic development.
- f. Any other information required by the Authority.

### ***C. Approval Process***

1. Staff will review the application. Staff will work with the applicant to obtain a full understanding of the venture capital partnership. Staff will utilize the matrix that is approved by the AMBIT Board to determine the rating of the venture capital partnership. Staff will review and analyze all necessary documentation to determine, among other things:
  - a. If the applicant has created Alaska-related companies in the past.
  - b. The applicant has demonstrated strong relationships with organizations in this State which foster economic development.
  - c. That the applicant has demonstrated a satisfactory return on investment performance record.
  - d. The anticipated economic development return to the region or the State.
  - e. The AMBIT Board will consider whether the applicant has demonstrated that it can and will accomplish all items of the business plan.
  - f. That the applicant has or will open an office in Alaska staffed with at least one senior level partner and will maintain such office for the duration of the investment.
  - g. That the applicant complied with all other criteria established by the AMBIT Board.
2. Applications for capital may be rejected or deferred for any one or more of the following reasons:
  - a. The applicant fails or refuses to provide pertinent information regarding the fund which is deemed essential to adequately perform a due diligence review.
  - b. The proposed financial return is non-existent or negligible, or a return cannot be readily defined and/or calculated.
  - c. There is inadequate participation by other investors in the company or the level of participating investment committed to the company is insufficient to accomplish the business plan.
  - d. The anticipated economic development return to the region or the State is non-existent or negligible, or the level of proposed return is not commensurate with the amount of AMBIT financing being requested.
  - e. The company is not based in Alaska, or does not maintain a substantive presence within Alaska.
  - f. There are insufficient funds available to the AMBIT fund to make an investment in the company.
  - g. The company does not meet the minimum scoring requirement in the matrix that is approved by the AMBIT Board.

- h. Any other criteria adopted by the AMBIT pursuant to an appropriate resolution.

#### ***D. Post Approval Process***

1. Upon being satisfied that all requirements have been met, the Board may approve the application and, if approved, the capital will be awarded. The Board shall establish the term of investment and other returns to the Authority and all other terms and conditions of the investment consistent with the guidelines.
2. No investment will be closed until the following have been satisfactorily resolved:
  - a. The applicant must certify that it shall not discriminate against any employee or against any applicant for employment because of race, religion, color, handicap, national origin, age or sex.
  - b. The applicant and its principals must be current in payment of all state and local taxes unless they have entered into a workout agreement satisfactory to the respective taxing authority and are in full compliance with the terms thereof.
3. Following disbursement of funds, staff will monitor the activities of the applicant to insure that the conditions of the Authority investment are being observed and met. Staff will promptly advise the AMBIT Board of any substantive failure in performance by the applicant and any failure or delay in making any required payment. The Authority shall have full authority to engage in any and all activities required in order to protect and preserve its investments, including but not limited to appropriate legal action when required, and the AMBIT Board may empower staff to initiate action in this regard.
4. The applicant shall maintain full and accurate records with respect to the company and the company's management, and shall ensure adequate control over the records of all related parties to the investment. Staff shall have access to such records and be able to inspect all project work and all relevant records at reasonable times and places. Upon request, the applicant must furnish all data, reports, contracts, documents and other information relevant to the project, as may be requested in the investment documents.
5. If a project is approved and it is subsequently determined that the application contained material misrepresentations, or funds were used for ineligible activities or activities not permitted under the terms of the approved financing or financing documents, the applicant will be in default and the Authority will demand immediate repayment of any and all funds advanced in connection with the investment. In addition, the matter may be referred to the appropriate authorities for criminal investigation.

#### ***E. Reporting Requirements***

1. All reporting is due via e-mail within 15 business days of the end of the quarter.
2. All recipients must provide quarterly reports quantifying the progress toward accomplishing approved deliverables.
3. Aggregated IRR for the quarter reporting and period to date are required.
4. Audited annual financials are required.
5. Following investment in an Alaskan business, AMBIT will be required to monitor and report quarterly on a cumulative basis the following impact measures:
  - a. Citizens Impacted -An action that compels an action/effect that can be quantified and verified.
  - b. Business Impacted – An action that improves or enhances the operational process of another AK based company in a quantified and verifiable manner, including the current employment for portfolio companies.
  - c. Jobs Created – The direct creation of new jobs in AK for your operation. This does not include the transfer of jobs within AK.

## Appendix A – Funding Questionnaire

### *I. Proposed Capital Need*

- A. Briefly describe the use of capital that you are proposing. Include a description of the funding’s purpose, focus, geographic focus, and any limitations imposed on the investment process.
- B. Describe the business philosophy and strategy you plan to employ. Has this changed from your previous use of funds?
- C. State the size, life and active investment period of the funding you are requesting. How does this differ from your previous requests?
- D. Describe the management fee, offsets of other compensation against management fees, proposed allocation and distribution structure, co-investment opportunities, the structure and role of your Advisory Board in developing policies; and any other important terms and conditions related to this funding. Your answer should include, but not be limited to, any proposed provisions for:
  - 1 No-fault divorce
  - 2 Any claw-back
  - 3 Joint and several liability
  - 4 Conflicts of interest
  - 5 Restrictions on raising multiple funds
- E. List any special advisors, consultants, business brokers, etc., you plan to use for acquiring this funding.
- F. Break out intended stage of investment and industry focus by percentage for the investment.

### *II. Previous/Current Funds*

- A. Describe your previous and current capital experience using the format provided below:

Capital	Source	Source	Source
Final Closing			
Total committed capital			
Total invested at cost			
Realized Proceeds			
Cash-on-cash multiple			
Performance ending most recent quarter stated as net IRR to LPs			
Total Number of companies financed (including write-offs)			
Average size of investment			
Number of investment professionals			
Company Portfolio			

B. Please provide a list of companies you have been associated in the creation of with a detailed spreadsheet for each company, as outlined below:

- Company Name:
- Industry:
- Leadership:
- Location:
- Date of Initial Investment:
- Initial Investment Cost:
- Total Investment Cost:
- Net Realized Proceeds:
- Value of Company:
- Initial Percentage Owned:
- Current Percentage Owned:
- Number of Financing Rounds:
- Initial Financing Stage:
- GP Role (Lead, Co-lead, Follow):
- Board Seats:
- Lead Investor:
- Co-Investors:
- Deal Source:
- Date of Exit:
- Exit Method:
- Ticker Symbol (if public):

C. Please list all office locations current and planned.

**III. Management**

- A. List personnel responsible for private equity investment activity including the day-to-day operations of the company. Include backgrounds and prior expertise in venture capital/alternative investments. Please provide total number of current and planned employees.
- B. Describe how return on investment is apportioned among the general partners using the format provided below.

Individual	ROI Year 1	ROI Year 2	ROI Year 3

**IV. Deal-flow**

- A. Describe your current and planned deal flow sources. Specifically, list economic development entities, universities and venture capital firms and provide a description of the relationship.
- B. Provide number of deals reviewed versus invested in the prior year. Split out Alaska based deals.
- C. Number of AK based companies in partnership relationships.
- D. Please describe any partnership agreements with VC's or corporations.
- E. Please provide a copy of your most recent deal log for the most recent quarter.

**V. Reporting**

- A. What type of reports do you prepare for limited partners? Do financial statements follow accounting standards?
- B. Who is your CPA? How are your accountants selected and how often do you change firms? Have your accountants

requested changes to any of your company valuations? Please explain.

#### ***VI. Limited Partner Relationships***

- A. Provide a list of current LP's and indicate whether they are public or private.
- B. In the proposed funding, how many of the current LP's are re-investing?

#### ***VII. References (please provide telephone numbers)***

- A. Provide a reference listing of CEOs of all partners.
- B. Provide a reference listing of all mezzanine/subordinated lenders who have provided capital in your previous investment requests.
- C. Provide a reference listing of all senior debt lenders who have provided capital in your previous investment requests.
- D. Provide a reference listing of all venture capitalists/private equity investors who have provided capital in your previous investment requests.
- E. Provide a reference listing of individuals who have an understanding of your firm's investment use and management.
- F. Provide a reference listing of all past management personnel.
- G. Please list the firm's executive departures within the last five years, citing reasons for each departure and contacts for departed partners.
- H. Provide a description of any litigation pending against any financial partner.
- I. Are you registered as an Alaska business?

## ***ALASKA VENTURE CAPITAL ENHANCEMENT ACT***

**Title** This part is known as the "Alaska Venture Capital Enhancement Act."

**Findings -- Purpose** (1) The Legislature finds that: (a) fundamental changes have occurred in national and international financial markets and in the state's financial markets; (b) a critical shortage of seed and venture capital resources exists in the state, and that shortage is impairing the growth of commerce in the state; (c) a need exists to increase the availability of venture equity capital for emerging, expanding, and restructuring enterprises in Alaska, including enterprises in the life sciences, advanced manufacturing, and information technology; (d) increased venture equity capital investments in emerging, expanding, and restructuring enterprises in Alaska will: (i) create new jobs in the state; and (ii) help to diversify the state's economic base; and (e) a well-trained work force is critical for the maintenance, diversification and development of Alaska's economy. (2) This part is enacted to: (a) mobilize investment in a broad variety of venture capital projects in diversified industries and locales utilizing investment funding from the permanent fund as per APFC resolution 09-07 III PORTFOLIO MANAGEMENT, Fund of Funds; (b) retain the culture of focusing on rate of return in the investing process while enhancing Alaskan economics; (c) secure the services of the Alaska Manufacturing, Business, Industrial, and Technology project to implement program and funding; (d) facilitate the organization of the Alaska AMBIT Investment Fund to place investments and to serve as a catalyst in those investments by offering state incentives and capital for project investments in the Alaska AMBIT Investment Fund; (e) enhance the venture capital culture and infrastructure in the state so as to increase venture capital investment within the state and to promote venture capital investing within the state; (f) accomplish the purposes referred to in Subsections (2)(a) through (e) in a manner that would maximize the direct economic impact for the state; and (g) authorize the issuance and use of capitals to accomplish the purposes referred to in Subsection (2)(a) through (e) while protecting the interests of the state by limiting the manner in which capitals are issued, registered, transferred, claimed as an offset to the payment of state income tax, and redeemed. (h) remove this system from political decision making as much as possible to ensure sustainability and so that investments can not be pushed or pulled based on political winds or changing administrations or power shifts. (i) to ensure that the people of the state of Alaska are able to secure direct investment benefits from the funding that they own and that those funds are

invested within the state we request that up to 1% of the permanent fund be made available for this investment pool.

**Definitions** As used in this part: (1) "Board" means the Alaska Manufacturing, Business, Industrial, and Technology Investment Board. (2) "Certificate" means a contract between the board and a company seeking capital under which capital is available and issued to the organization. (3) "Commitment" means a written commitment by a company seeking capital to follow the established AMBIT capital guidelines. Each commitment shall state the dollar amount of capital that the company is seeking. (4) "Capital" means monies issued under this part that is available against tax liabilities imposed by state guidelines governing Corporate Franchise and Income Taxes. (5) "Corporation" means the Alaska Manufacturing, Business, Industrial & Technology project. (6) "Company" means: (a) a person or group of persons who seek investment from the Alaska AMBIT Investment Fund; or (b) a transferee of a certificate or capital. (7) "Borrower" means: (a) a person who enters into a written undertaking with AMBIT; or (b) a transferee who assumes the obligations to make the returns described in the commitment. (8) "Person" means an individual, partnership, limited liability company, corporation, association, organization, business trust, estate, trust, or any other legal or commercial entity. (9) "capital reserve" means the reserve established by AMBIT to facilitate the investment process. (10) "Alaska AMBIT Investment Fund" means the organization chartered to drive venture capital investments in Alaska.

**AMBIT Capital Investment Board** (1) There is created within AMBIT the Capital Investment Board to exercise the powers conferred by this part. (2) The purpose of the board is to mobilize venture equity capital for investment in a manner that will result in a significant potential to create jobs and to diversify and stabilize the economy of the state. (3) In the exercise of its powers and duties, the board is considered to be performing an essential public purpose.

**Board members -- Meetings -- Expenses** (1) (a) The board shall consist of seven members. (b) Of the seven members: (i) one shall be the state treasurer; (ii) one shall be the AMBIT CEO; two shall be appointed by the AMBIT CEO to represent the business community and serve a single four year term each and (iii) three shall be appointed by the governor and confirmed by the Senate. (c) The three members appointed by the governor shall serve four-year staggered terms with the initial terms of the first three members to be four years for one member, three years for one member, and two years for one member. (2) When a vacancy occurs in the membership of the board for any reason, the vacancy shall be: (a) filled in the same manner as the appointment of the original member; and (b) for the unexpired term of the board member being replaced. (3) Appointed members



of the board may not serve more than two full consecutive terms except where the governor determines that an additional term is in the best interest of the state. (4) Five members of the board constitute a quorum for conducting business and exercising board power, provided that a minimum of four affirmative votes is required for board action and at least one of the affirmative votes is cast by either the CEO or the state treasurer. (5) (a) Members of the board may not receive compensation or benefits for their services, but may receive per diem and expenses incurred in the performance of the members' official duties at rates established by the Division of Finance. (b) Members of the board may decline to receive per diem and expenses for their services. (6) Members of the board shall be selected on the basis of demonstrated expertise and competence in: (a) the supervision of investment managers; (b) the fiduciary management of investment funds and/or business accounts; or (c) the management and administration of capital allocation programs. (7) The board and its members are considered to be a non-governmental entity with all of the rights, privileges, and immunities of a corporate entity and the Alaska Governmental Immunity Act. (8) Meetings of the board, except to the extent necessary to protect confidential information with respect to investments in the Alaska AMBIT Investment Fund, are subject to Open and Public Meetings. (9) Meeting shall be held monthly.

**Board duties and powers** (1) The board shall: (a) establish criteria and procedures for the allocation and issuance of capitals to companies by means of certificates issued by the board, provided that a capital may not be issued unless the Alaska AMBIT Investment Fund: (i) first agrees to treat the amount of the capital by the state as a loan from the state to the Alaska AMBIT Investment Fund; and (ii) agrees to repay the loan upon terms and conditions established by the board; (b) establish criteria and procedures for assessing the likelihood of future certificate repayments by AMBIT to the state, including: (i) criteria and procedures for evaluating the value of investments made by the Alaska AMBIT Investment Fund; and (ii) the returns from the Alaska AMBIT Investment Fund; (c) establish criteria and procedures for registering and redeeming capitals by companies holding certificates issued by the board; (d) establish a target rate of return or range of returns on venture capital investments of the Alaska AMBIT Investment Fund; (e) establish criteria and procedures governing commitments obtained by the board from companies including: (i) entering into commitments with companies; and (ii) drawing on commitments to redeem certificates from companies; (f) have power to: (i) expend funds; (ii) invest funds; (iii) enter into contracts; (iv) insure against loss; and (v) perform any other act necessary to carry out its purpose; and (g) (i) make, amend, and revoke rules for the conduct of its affairs, consistent with this part and in accordance Alaska Law; (ii) all rules made by the board under Subsection (1)(g)(i) are subject to review by the Alaska

Division of Investments: (A) whenever made, modified, or revoked; and (B) in each even-numbered year; and (iii) Subsection (1)(g)(ii) does not preclude the Legislature's Administrative Rules Review Committee from reviewing and taking appropriate action on any rule made, amended, or revoked by the board. (2) (a) The criteria and procedures established by the board for the allocation and issuance of capitals shall: (i) include the contingencies that must be met for a certificate and its related capitals to be: (A) issued by the board; (B) transferred to a company; and (C) accepted in order to receive a capital; and (ii) tie the contingencies for redemption of certificates to the targeted rates of return and scheduled redemptions of equity interests designated by the Alaska AMBIT Investment Fund. (b) The board may not issue capitals under this part prior to July 1, 2010. (3) (a) The board may charge a placement fee to the Alaska AMBIT Investment Fund for the issuance of a certificate and related capital to a company. (b) The fee shall: (i) be charged only to pay for reasonable and necessary costs of the board; and (ii) not exceed .5% of the equity investment of the company. (4) The board's criteria and procedures for redeeming certificates: (a) shall give priority to the redemption amount from the available funds in the capital reserve; and (b) to the extent that there are insufficient funds in the capital reserve to redeem certificates, shall grant the board the option to redeem certificates: (i) by certifying a capital to the company; or (ii) by making demand on companies consistent with the AMBIT requirements. (5) (a) The board shall, in consultation with the companies, publish an annual report of the activities conducted by the Alaska AMBIT Investment Fund, and present the report to the governor and the Appropriations Committee of the Legislature. (b) The annual report shall: (i) include a copy of the audit of the Alaska AMBIT Investment Fund and a valuation of the assets of the Alaska AMBIT Investment Fund; (ii) review the progress of the investment fund allocation manager in implementing its investment plan; and (iii) describe any redemption or transfer of a certificate issued under this part. (c) The annual report may not identify any specific company who has redeemed or transferred a certificate, without their explicit written permission. (d) (i) Beginning July 1, 2010, and thereafter every two years, the board shall publish a progress report which shall evaluate the progress of the state in accomplishing the purposes stated in the AMBIT project. (ii) The board shall give a copy of the report to the Legislature.

**Alaska Manufacturing, Business, Industrial & Technology project-- Powers and purposes** (1) (a) There is created an independent quasi-public nonprofit corporation known as the Alaska Manufacturing, Business, Industrial, & Technology project. (b) The corporation: (i) may exercise all powers conferred on independent corporations state law; (ii) is subject to the prohibited participation provisions of state law; and (iii) is subject to the other provisions of, Independent

Corporations Act, except as otherwise provided in this part. (c) The corporation shall file with the Division of Corporations and Commercial Code: (i) articles of incorporation; and (ii) any amendment to its articles of incorporation. (d) In addition to the articles of incorporation, the corporation may adopt bylaws and operational policies that are consistent with this chapter. (e) Except as otherwise provided in this part, this part does not exempt the corporation from the requirements under state law which apply to other corporations Chapter 2, Independent Corporations Act. (2) The purposes of the corporation are to: (a) organize the Alaska AMBIT Investment Fund; (b) select a venture capital investment fund allocation manager to make venture capital fund investments by the Alaska AMBIT Investment Fund; (c) negotiate the terms of a contract with the venture capital investment fund allocation manager; (d) execute the contract with the selected venture capital investment fund manager on behalf of the Alaska AMBIT Investment Fund; (e) receive funds paid by companies for the issuance of certificates by the board for investment in the Alaska AMBIT Investment Fund; (f) receive investment returns from the Alaska AMBIT Investment Fund; and (g) establish the redemption reserve to be used by the corporation to redeem certificates. (3) The corporation may not: (a) exercise governmental functions; (b) have members; (c) pledge the credit or taxing power of the state or any political subdivision of the state; or (d) make its debts payable out of any moneys except those of the corporation. (4) The obligations of the corporation are not obligations of the state or any political subdivision of the state within the meaning of any constitutional or statutory debt limitations, but are obligations of the corporation payable solely and only from the corporation's funds. (5) The corporation may: (a) engage consultants and legal counsel; (b) expend funds; (c) invest funds; (d) enter into contracts; (e) insure against loss; (f) hire employees; and (g) perform any other act necessary to carry out its purposes.

**Incorporator -- Appointment committee** (1) To facilitate the organization of the corporation, the CEO shall serve as the incorporator as provided in state law. (2) To assist in the organization of the corporation, the Alaska Department of Commerce and Economic Development shall appoint three individuals to serve on a development committee. (3) The development committee shall: (a) elect the initial board of directors of the corporation; (b) exercise due care to assure that persons elected to the initial board of directors have the requisite financial experience necessary in order to carry out the duties of the corporation as established in this part, including in areas related to: (i) venture capital investment; (ii) investment management; and (iii) supervision of investment managers and investment funds; and (c) terminate its existence upon the election of the initial board of directors of the corporation. (4) The division shall assist the incorporator and the development committee in any manner determined necessary

and appropriate by the incorporator and development committee in order to administer this section.

**Board of directors** (1) The initial board of directors of the corporation shall consist of five members. (2) The persons elected to the initial board of directors by the development committee shall include persons who have expertise, as considered appropriate by the appointment committee, in the areas of: (a) the selection and supervision of investment managers; (b) fiduciary management of investment funds; and (c) other areas of expertise as considered appropriate by the development committee. (3) After the election of the initial board of directors, vacancies in the board of directors of the corporation shall be filled by election by the remaining directors of the corporation. (4) (a) Board members shall serve four-year terms, except that of the five initial members: (i) two shall serve four-year terms; (ii) two shall serve three-year terms; and (iii) one shall serve a two-year term. (b) Board members shall serve until their successors are elected and qualified and may serve successive terms. (c) A majority of the board members may remove a board member for cause. (d) (i) The board shall select a chair by majority vote. (ii) The chair's term is for one year. (5) Five members of the board are a quorum for the transaction of business. (6) Members of the board of directors: (a) are subject to any restrictions on conflicts of interest specified in the organizational documents of the corporation; and (b) may have no interest in any: (i) venture capital investment fund allocation manager selected by the corporation under this part; or (ii) investments made by the Alaska AMBIT Investment Fund. (7) Directors of the corporation: (a) shall be compensated for direct expenses and travel; and (b) may not receive a director's fee or salary for service as directors.

**Investment manager** (1) After incorporation, the corporation shall conduct a national solicitation for an investment manager for the oversight and investing of capital by the Alaska AMBIT Investment Fund in accordance with the requirements of this part. (2) Any proposed investment plan shall address the applicant's: (a) level of: (i) experience; and (ii) quality of management; (b) investment philosophy and process; (c) probability of success; (d) prior investment funding results; and (e) plan for achieving the purposes of this part. (3) The selected venture capital investment fund allocation manager shall have substantial, successful experience in the design, implementation, and management of seed and venture capital investment programs and in capital formation. (4) The corporation shall only select a venture capital investment fund allocation manager: (a) with demonstrated expertise in the management and fund allocation of investments in venture capital funds; and (b) considered best qualified to: (i) invest the capital of the Alaska AMBIT Investment Fund; and (ii) generate the amount of capital required by this part.

**Management fee -- Additional financial assistance** (1) The corporation may charge a management fee on assets under management in the Alaska AMBIT Investment Fund. (2) The fee shall: (a) be in addition to any fee charged to the Alaska AMBIT Investment Fund by the venture capital investment fund allocation manager selected by the corporation; and (b) be charged only to pay for reasonable and necessary costs of the corporation.

**Dissolution** (1) Upon the dissolution of the Alaska AMBIT Investment Fund, the corporation shall be liquidated and dissolved. (2) Upon dissolution or privatization of the corporation, any assets owned by the corporation shall be distributed to the Alaska Permanent fund Reserve.

**Organization of Alaska AMBIT Investment Fund** (1) The corporation shall organize as the Alaska AMBIT Investment Fund. (2) The Alaska AMBIT Investment Fund shall make investments in companies or entities for the following purposes: (a) to encourage the availability of a wide variety of venture capital in the state; (b) to strengthen the economy of the state; (c) to help business in the state gain access to sources of capital; (d) to help build a significant, permanent source of capital available to serve the needs of businesses in the state; and (e) to accomplish all these benefits in a way that minimizes the use of capitals. (3) The Alaska AMBIT Investment Fund shall be organized: (a) as a limited partnership or limited liability company under Alaska law having the corporation as the general partner or manager; and (b) to provide for equity interests for designated investors which provide for a designated scheduled rate of return and a scheduled redemption in accordance with rules made by the board pursuant to state law.

**Compensation from the Alaska AMBIT Investment Fund to the corporation -- Redemption reserve** (1) The corporation shall be compensated for its involvement in the Alaska AMBIT Investment Fund through the payment of the management fee previously described. (2) (a) Any returns in excess of those needs designated by the fund shall be deposited in the redemption reserve and held by the corporation as a first priority reserve for the redemption of certificates. (b) Any returns received by the corporation from investment amounts held in the redemption reserve shall be added to the redemption reserve until it has reached a total of \$ 300,000,000. (c) If at the end of any calendar year the redemption reserve exceeds the \$ 300,000,000 limitation referred to in Subsection (2)(b), half the excess shall be reinvested in the Alaska AMBIT Investment Fund and half dispersed to the Alaska Permanent fund Reserve.

**Investments by Alaska AMBIT Investment Fund** (1) The Alaska AMBIT Investment Fund shall invest funds: (a) principally in high-quality vetted companies: (i) that have made a commitment to businesses located within the state; and (ii) have committed to maintain a physical presence within the state; (b) in direct investments in individual businesses. (2) (a) The Alaska AMBIT Investment Fund shall give priority to investments in companies that have demonstrated a commitment to the state as evidenced by: (i) the investments they have made in Alaska-based entities; (ii) the correspondent relationships they have established with other Alaska-based businesses; or (iii) the commitment they have made to expand the reach of expertise within the state by adding additional investment areas of expertise. (b) The manager of the Alaska AMBIT Investment Fund may waive the priorities under Subsection (2)(a) only if necessary to achieve the targeted investment returns required to attract designated investors. (3) The Alaska AMBIT Investment Fund may invest funds in newly created companies only if the managers or management team of the company have the experience, expertise, and a successful history in business as vetted by AMBIT staff (4) (a) An investment or investments by the Alaska AMBIT Investment Fund in any company may be comprised of no more than 49% of the total equity in the venture.

**Powers of Alaska AMBIT Investment Fund** (1) The Alaska AMBIT Investment Fund may: (a) engage consultants and legal counsel; (b) expend funds; (c) invest funds; (d) enter into contracts; (e) insure against loss; (f) hire employees; (g) issue equity interests to designated investors that have purchased certificates from the board; and (h) perform any other act necessary to carry out its purposes. (2) (a) The Alaska AMBIT Investment Fund shall engage a venture capital investment fund allocation manager. (b) The compensation paid to the fund manager shall be in addition to the management fee paid to the corporation. (3) The Alaska AMBIT Investment Fund may: (a) issue capital funds needed to accomplish its goals; (b) not secure debt with capitals issued by the board; (c) open and manage bank and short-term investment accounts as considered necessary by the venture capital investment fund allocation manager; and (d) expend moneys to secure investment ratings for investments by designated investors in the Alaska AMBIT Investment Fund.

**Annual audits** (1) Each calendar year, an audit of the activities of the Alaska AMBIT Investment Fund shall be made as described in this section. (2) (a) The audit shall be conducted by: (i) the state auditor; or (ii) an independent auditor engaged by the state auditor. (b) An independent auditor used under Subsection (2)(a)(ii) must have no business, contractual, or other connection to: (i) the corporation; or (ii) the Alaska AMBIT Investment Fund. (3) The corporation shall pay the costs associated with the annual audit. (4) The annual audit report shall:

(a) be delivered to: (i) the corporation; and (ii) the board; and (b) include a valuation of the assets owned by the Alaska AMBIT Investment Fund as of the end of the reporting year.

**Certificates and capitals** (1) In accordance with state law, the board, in consultation with the State Tax Commission, shall make rules governing the form, issuance, transfer, and redemption of certificates. (2) The board's issuance of certificates and related capitals to designated investors shall be subject to the following: (a) the aggregate outstanding certificates may not exceed a total of \$ 300,000,000 of capitals; (b) the certificates shall be issued contemporaneously with an investment in the Alaska AMBIT Investment Fund by a designated investor; (c) capitals shall be issued in a manner that not more than \$ 100,000,000 of capitals may be initially redeemable in any fiscal year; and (d) the credits are certifiable if there are insufficient funds in the redemption reserve to make a cash redemption and the board does not exercise its other options. (3) In determining the \$ 300,000,000 maximum limit in Subsection (2)(a) and the \$ 100,000,000 limitation in Subsection (2)(c): (a) the board shall use the cumulative amount of scheduled aggregate returns on certificates issued by the board to designated investors; (b) certificates and related capitals which have expired may not be included; and (c) certificates and related capitals which have been redeemed shall be included only to the extent of tax credits actually allowed. (4) Capitals are subject to the following: (a) a capital may not be redeemed except by a company in accordance with the terms of a certificate from the board; (b) a capital may not be redeemed prior to the time the Alaska AMBIT Investment Fund receives full payment from the company for the certificate; (c) a capital shall be claimed for a tax year that begins during the calendar year maturity date stated on the certificate; (d) an investor who redeems a certificate and the related capital shall allocate the amount of the capital to the taxpayers of the investor based on the taxpayer's pro rata share of the investor's earnings; and (e) a capital shall be claimed as a refundable credit. (5) In calculating the amount of a capital: (a) a capital shall be certified by the board only if the actual return to the company is less than the return that was targeted at the issuance of the certificate; (b) the amount of the capital may not exceed the difference between: (i) the sum of: (A) the initial equity investment of the company in the Alaska AMBIT Investment Fund; and (B) the scheduled aggregate return to the company at rates of return authorized by the board at the issuance of the certificate; and (ii) the aggregate actual return received by the company and any predecessor in interest of the initial equity investment and interest on the initial equity investment; and (c) the rates, whether fixed rates or variable rates, shall be determined by a formula stipulated in the certificate. (6) The board shall clearly indicate on the certificate: (a) the targeted return on the invested capital; (b) the amount of the initial equity

investment; (c) the calculation formula for determining the scheduled aggregate return on the initial equity investment; and (d) the calculation formula for determining the amount of the capital that may be claimed. (7) Once moneys are invested by a designated investor, the certificate: (a) shall be binding on the board; and (b) may not be modified, terminated, or rescinded. (8) Funds invested by a company for a certificate shall be paid to the corporation for placement in the Alaska AMBIT Investment Fund. (9) The State Tax Commission may, in accordance with state law, and in consultation with the board, make rules to help implement this section.

**Transfer and registration of certificates** (1) A certificate and the related capital may be transferred by the company. (2) The board, in conjunction with the State Tax Commission, shall develop: (a) a system for registration of any certificate and related capital issued or transferred under this part; and (b) a system that permits verification that: (i) any capital claimed is valid; and (ii) any transfers of the certificate and related capital are made in accordance with the requirements of this part. (3) A certificate or capital issued or transferred under this part may not be considered a security.

**Redemption of certificates** (1) If a company elects to redeem a certificate, the certificate shall be presented to the board for redemption no later than June 30 of the calendar year maturity date stated on the certificate. (2) Upon presentment to the board, it shall determine and certify the amount of the capital that may be claimed by the company based on: (a) the limitations in AMBIT procedures; and (b) rules made by the board in accordance with state law. (3) (a) If there are sufficient funds in the redemption reserve, the board shall direct the corporation to make a cash redemption of the certificate. (b) If there are insufficient funds in the redemption reserve, the board may elect to redeem the certificate: (i) by certifying a capital to the designated investor; or (ii) by making demand on companies to purchase certificates in accordance with AMBIT processes. (4) The board shall certify to the State Tax Commission the capital which can be claimed by the company with respect to the redemption of the certificate. (5) The board shall cancel all redeemed certificates.



<i><b>Proposed Cost Narrative</b></i>	<b>AVCP-2010</b>
<b>List of Project Items/Services</b>	<b>Projected Cost</b>
1 Project Manager (Per Hour)	\$35
1 CEO (Per Hour)	\$160
1 VP Finance (Per Hour)	\$110
1 VP Administrator (Per Hour)	\$95
1 Senior Engineer (Per Hour)	\$60
1 Junior Engineer (Per Hour)	\$30
1 FAC/SERV/SUPP Staff (Per Hour)	\$15
Appropriate Software (\$200 for each general work station/ \$1,200 for each design software suite such as AutoCAD/ \$500 for each programming software suite such as C++ Compiler or Visual Basic/ \$1,000 for each specialized accounting or program management software	\$200-\$1,200
Drafting Tools (Per every 10 people, amount based on common cell phone production as a base) Tools will be utilized for sample project builds for new technologies the AVCP is involved with.	\$3,000
Testing Tools/Enclosures (Per every 10 people, amount based on common cell phone production)	\$3,000
Assembly Tools Drafting Tools (Per every 10 people, amount based on common cell phone production as a base) Tools will be utilized for sample project builds for new technologies the AVCP is involved with.	\$1,500
Ordered Available Technology (Technology such as available sensors, detectors, circuit boards etc. / the prices for such technology very widely but for the sake of this document will be considered between \$1,000-\$5,000 a unit to stay on the high end) Technology will be utilized for sample project builds for new technologies the AVCP is involved with.	\$1,000-\$5,000

1 General Computer Work Station (Unit price based on average medium level workstations provided by Dell and HP)	\$450
1 Design/Control/Testing Computers (Unit price based on average high level workstations provided by Dell and HP)	\$800
1 Simple Communications Devices (These units such as phones would be purchased in bulk/ average unit price varies, however, \$10 a unit seems to be the lower end of the market price)	\$10
Office Supplies (1 unit of office supplies is predicted to be \$20 per employee per quarter)	\$20
Project Build/Alternate Stations (For extra stations other than general work desks these stations can facilitate project builds or even training)	\$200
Emergency/Maintenance Funds (It is assumed that the allocated budget may not encompass extra charges like excess paper use or unforeseen computer failure / it in turn exists to provide flexibility as the project changes / the amount is regulated by 2,000 per month)	\$2,000
Laptops (Unit price based on average medium level laptop computers provided by Dell and HP)	\$600
Travel Days (This unit is calculated in relation to \$100 per day of travel and assumes no more than 3 members will travel at once (airfare not included))	\$100
Small Relocation Equipment (Units such as moving carts and small hand trucks)	\$50
Training/Presentation Equipment (equipment such as simulators, white boards, projectors, etc. / Estimated based on \$4,000 per every 10 people to be trained (amount derived from Sysco Development Protocols )	\$4,000
Cleaning/Maintenance Equipment (One unit includes a piece of equipment such as a vacuum cleaner or shampooer)	\$200

Cleaning Maintenance Supplies (One unit includes cleaning supplies such as Windex, Clorox, and soap)	\$40
Cleaning Maintenance Tools (One unit includes items such as a broom and a mop)	\$20
Fringe and Benefits 40%	Forty Percent
Operating Facilities (Rent Per Month)	\$4,000