David versus Goliath: Challenges of Recruiting and Retaining Key Talent in Entrepreneurial, High-Technology Settings.

by

David Tai Wai Chan

Master of Science, Electrical Engineering
Massachusetts Institute of Technology (1984)

Bachelor of Science, Electrical Engineering
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Signature Redacted

Signature of Author: _____
Department of Sloan School of Management
May 7, 2002

Signature Redacted

Certified by: _____
John Van Maanen
Erwin H. Schell Professor of Organization Studies
Thesis Advisor

Signature Redacted

Accepted by: _____
Stephen J. Sacca
Director, Sloan Fellows Program

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ABSTRACT

Small companies comprise the most vibrant portion of the United States economy. They are believed to provide new technology and fresh approaches to addressing the rapidly changing markets of today.

Entrepreneurial companies face a different set of challenges from their larger competitors. Understanding some of the factors that differentiate those that succeed from those that fell by the wayside is of tremendous value to business and academic leaders alike. The factors are often intertwined and require careful examination.

This thesis hones in on four highly interrelated aspects of building and fielding a talented team for a high tech startup: Identifying, Recruiting, Motivating and Retaining key talent. Each is treated as a consequential process that impacts the viability of startup firms.

Interviews were conducted with members of several Greater Boston area startups. I asked CEO's to front-line contributors to discuss the factors they deemed critical to the future success of their enterprise. Comparisons were made to the corresponding factors in large companies. Similarities and differences were analyzed to identify best practices and to provide guidance for building a startup team.

Thesis Supervisor: John E. Van Maanen
Title: Erwin H. Schell Professor of Organization Studies

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First and foremost, I am indebted to John Van Maanen. During the Fall 2001 semester, I had explored various ideas for thesis topics, and it is to him I turn when deadlines loomed. He set aside time and patience, explaining subtle nuances and suggesting options and approaches that I would never have come up with by myself. But perhaps most important, his skills as an educator, pushing me to work beyond my limits, but at the same time building up my confidence to deal with a rather complicated set of issues, are those that I admire the most. John is my best friend, and my second harshest critic, during the course of this project.

The local entrepreneurs and business people that I have called upon to help me with a most ambitious research project, who have contributed and shared valuable personal insights, are the sources of inspiration. Without their generous time and encouragement, I would not be able to complete any work worthwhile of the standards of Sloan and MIT.

The Sloan Fellows Class of 2002 is a very close-knit family – we take care of each other, sharing experiences and insights. Paul Brady and Gordon Boggie volunteered valuable

time, observations, insights, and good humor, providing two cornerstone pieces of information.

The Sloan Fellows Program Office, with the cheerful Catherine Kim, and the very efficient Mary Marshall, has done wonders in keeping us focused on our work. Catherine, the computer is working now.

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Finally, I need to acknowledge the much appreciated, but always underestimated, support and companionship from my wife Monica, and kids Douglas and Elizabeth. Monica has enough on her plate – by day, she is a senior computer hardware architect with huge responsibilities; by evenings and weekends, she is the center of the Chan Clan. Douglas and Elizabeth have been very understanding as well, when Dad can't spend enough time playing catch outside, or helping with homework, or taking them skiing/swimming/... The demands of this Sloan Fellow year have tested our relationship, and I am happy to report that we have actually grown closer over the year.

David T. Chan

May 2002

Preface

Objectives

The thesis objectives go beyond simply satisfying "partial requirements" for an MBA degree. It also satisfies my personal passion in understanding how to build a successful team. I also wish to use this vehicle to build expertise and boost my confidence for future endeavors.

There are more immediate goals, however, in line with measurable accomplishments. The Sloan Handbook proposes the following goals for a thesis:

- *Provides an opportunity to explore a topic in depth*
- *Encourages a rigorous, logical, systematic and scholarly approach to problem solving*
- *Fulfills a requirement for Master of Science (S.M.)*
- *Career Development*
- *Fulfillment of your personal needs*
- *Real-world productivity*

This thesis fits all the above criteria. Since inception, the idea of writing about this topic has grown leaps and bounds to where it is today, an all-consuming mission to push me well beyond my comfort zone. It has inspired and delighted, while allowing me to see the bigger picture.

A prediction: Many years from now, the experience of writing this thesis will be fondly remembered as a turning point in my career.

The investigative process reaffirmed my passion for the subject matter. I found myself immersed for many hours in the Dewey Library, looking through previous research, trolling the Internet for relevant stories, reading and typing (and jotting down notes) into the wee hours of the morning, and manning the phone to reach CEO's, VP's, senior engineers, and relative rookies in different entrepreneurial settings. The MIT Sloan label, plus liberal use of the Van Maanen name-dropping, provided wonderful access to many movers and shakers and opened doors into exclusive domains. Time-deprived senior executives and front-line engineers went out of their way to make room for my visit. They are owed my sincere gratitude. For reasons of propriety, I am not be able to name them directly when discussing the results of the research but I fully appreciate the time they spent with me and their patience in answering my follow-up emails requesting clarification on the most mundane of facts.

Why this topic?

The Sloan Fellows Program at MIT has traditionally required each candidate for graduation to demonstrate substantial research and analytic skills through the completion of a thesis. Thesis requirements are listed in the annually updated Sloan's Thesis Handbook. One of the more important aspects in choosing the right thesis topic is more personal than can be easily described: that topic should stimulate a significant amount of

passion, allow for development of an original viewpoint, and require a degree of analytic depth and creativity worthy of a future alumnus of the esteemed Sloan Fellows Program. In my case, the promise of discovering new insights and pushing my knowledge base beyond past experience, while enveloped in a safety cocoon of an educational project, directed me towards exploring business environments with which I am unfamiliar.

Still, my background and professional contributions in various sectors of high technology are assets that could be leveraged during this exploration. My past allowed me to reduce the learning curve in when exploring the most fascinating issues that technology businesses face today. Understanding some of the jargon helped establish credibility with those interviewed and, in many cases, helped me cut through much elementary discussion to address the heart of the topic.

Additional factors that cast significant influence on my topical choice can be traced to the renowned expertise of the faculty of Sloan. A thesis topic needs to attract interest from a professor, versed in relevant academic discipline, who is both willing and able to provide guidance and advice.

Time is another consideration. The Sloan Fellows Program is intense. It is full of competing priorities – my classmates and I are expected to complete in 12 months what traditional programs require in two years. MIT's curricula are already reputed, deserved so, to be among the toughest in the world. Finding time to complete a thesis while attending to a demanding class load is a trying experience.

Finally, this thesis also serves as a potential monument to personal achievement. I needed to feel that this is something I would be proud of for the rest of my life. It needed to reach personal performance criteria for quality, thoroughness, applicability and originality. The shaving mirror is harshest critic.

All these considerations converged on a subject that addresses real life concerns in today's business.

Chapter 1: Introduction – The Wonderful World of High Technology

The challenges faced by small companies are many and varied but the fact remains that they have been the main driver of American economic growth the past few decades. *USA Today* reported on March 27, 2002, that:

> *"Small companies – defined as those with fewer than 500 employees – produce 75% of new jobs and are a major source of new technologies"*

While prevalent in many sectors of the economy, from family run restaurants to light manufacturing, entrepreneurial companies face challenges that are quite different from their larger-sized competitors and generally have higher failure rates.

Yet many examples remind us that some do buck the odds to become highly successful enterprises. Understanding some of the factors that differentiate those that make it from those that fall by the wayside is of tremendous value to business and academic leaders alike. These factors are often intertwined and require careful examination and untangling of confusing statistics and often contradictory qualitative suggestions.

To be sure, entrepreneurial companies face many challenges. One obvious factor is cash flow and capital reserves. Competing with much shallower pockets than large, established firms, requires that smaller firms establish other means of gaining competitive advantage. The financial handicap also forces smaller companies to address the segment of the value chain for which they are best equipped to compete. Going "full frontal" on

too broad a range of industrial value generation activities is capital exhaustive and diverts attention from core competencies of even the largest companies. Yet attacking too small a niche is also dangerous. Few would aspire to become the dominant player in a shrinking market. Smaller growth companies must always guard against the possibility that the value chain changes course and bypasses their niche(s).

There are many other challenges the entrepreneurial company faces beyond finances and its position in the value chain, for example, customer intimacy and marketplace familiarity. These are a number of areas where size does matter and being small is not advantageous. But, there are countervailing forces at work too. Established giants tend to carry a heavy burden based on legacy, whether it is supporting an existing customer base or needing to devote resources to a market steadily losing its attractiveness. Long established structures, typical of most large companies, generally provide obstacles to competing in many of today's fast changing markets. Nimble competitors of industrial giants have little insulation. Product and service developers are close to the customer/end user and are often able to run circles around slower bureaucratic organizations typical of large companies.

The one competitive advantage I examine in this thesis is the understanding small firms often display of the human dimension. If the financial and broad market participation of large companies are difficult to match, smaller companies can and must take full advantage of the quality of their human capital. Statistics here do not provide justice – many small companies try to take on the giants and fail without having much, if any,

impact in their marketplaces. Yet enough survive, even thrive, against the odds. The differentiation between the winners and losers involves, obviously, luck, but, frequently, also lies in smart use of the most potent of all resources – the properly motivated, adequately supported startup team with the right talent mix. This is particularly impressive in the world of high technology.

Overview

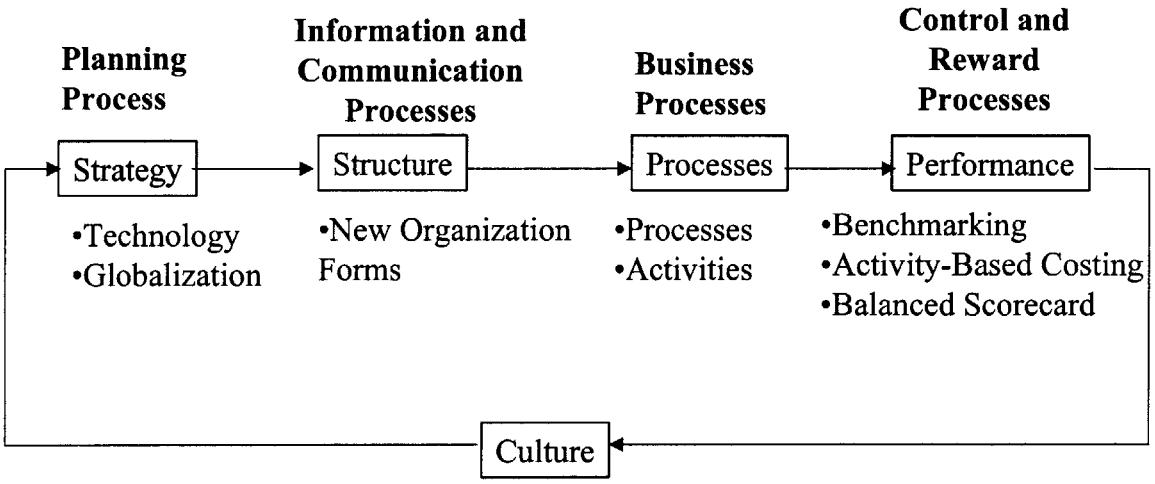
High technology is an umbrella term that encompasses many different disciplines. The many industries – hardware and software, semiconductors and computers, health and biotech, telecommunications and Internet, and many more – that are considered "high tech" have different characteristics and dimensions. They do have, however, many things in common – high "clock speed" market forces (Fine, 1998), capital intensity, reliance on highly educated professional work forces, high risk/high return investment characteristics, and high impact on non-technology-based industries. This thesis focuses on selected organizations and focuses on these firms' approaches to dealing with the human element. I look at the following areas:

- Identifying the right individuals who would likely succeed in a small company,
- Recruiting efforts,
- Motivating talented individuals and teams, and
- Retaining them.

I will further attempt to define the term "key talent" to include managerial, technical, sales and marketing professionals that form the basis of competitive advantage enjoyed by the firms involved.

Arnoldo Hax (Hax, 2002) of MIT has emphasized that one of the most reliable indicators of firm success lies in the net flow of talent - a "spirit of success". Hax's model of management strategy is summarized below:

Figure 1-1: Strategic Management Framework



As .1 details, strategy is one step in a strategic management framework that, in the ideal, helps determine organizational structure. Structure then leads to development of business processes that leads to the meeting of established and appropriate performance metrics. These, in turn, influence corporate culture (which is itself a factor in strategic choice).

This thesis explores the influence of firm culture on the net flow of talent. The role of culture in the four areas of investigation – Identifying, Recruiting, Motivating and Retaining – key talent cannot be understated.

The crucial role people play in organizational success is widely recognized. For example, Ed Lawler (2000) of USC concludes that:

> *"There is little doubt who will dominate business in the twenty-first century: organizations that can attract, retain, develop, motivate, organize, and manage excellent individuals."*

Notice that Lawler did not state the size of the organizations he ordains successful. Entrepreneurial startups can compete with powerhouse enterprises but only if they take the right road toward establishing and nurturing their talent base.

Smaller companies do seem to demand more from their talent. Mike Cassidy (2002), a columnist for the *San Jose Mercury*, wrote a seven-part series that illustrated some of the harsh working conditions of Bay Microsystems, an Internet network processor design startup in Silicon Valley. He paints a picture of a seemingly warped system of demanding work, a system that trumps family or any other personal factor, including the birth of a child or the death of a parent. Poignant, but far from being the exception, the Bay Microsystems portrayed in Cassidy's story is probably representative of many entrepreneurial ventures looking to cash in a big bet but to do so requires sacrifices unintelligible to those not immersed in the thrill of the chase.

What is also interesting about this story is that the talent involved – engineers, management, sales, marketing – all say they would gladly do it all again. There is definitely something that attracts the entrepreneurs and their disciples that many others would have difficulty understanding.

A contrasting viewpoint can be found in an email description sent to columnist Frank Burge (Burge 2002) of electronics trade weekly, *Electronic Engineering Times*. An engineer, apparently burnt out by his many experiences in high tech startups, wrote:

> *"I really went crazy two years ago when I went into a couple of startups. It was 18-hour days, all sitting in front of a computer, not to mention being part of a goofy, decadent, dormitory-style corporate culture that thinks humans thrive on Pop Tarts and Twinkies. Before I got wise and walked away, I [had grown to] 265 pounds on stress, sugar and sitting."*

Burge continued:

> *"This engineer quit the startup circuit and is now with a well-established and stable semiconductor company, where the hours are reasonable and the checks always clear the bank. For this engineer, this is his world of choice."*

The engineer in Burge's column had a taste of the entrepreneurial dark side and opted for the security of a large company to ply his talent. His decision is in stark contrast to those

of Bay Microsystems personnel. Clearly there is some difference between those that thrive in a startup environment and those that find success in more stable climates.

Brett Rhodes (2001), a Sloan Fellow alumnus, examined the motivation of engineers at the well-established company Pratt & Whitney. One of Rhodes' more important observations was that many of his research participants were concerned with the work-family balance equation. A not-too-difficult extrapolation of Rhodes' research would predict that these Pratt & Whitney engineers would be far less inclined to even attempt the startup gig. There is apparently a difference between the make-up of the talented individual that would seek out the "spirit of the startup" and that of a similarly talented counterpart finding refuge in much larger firm.

My thesis title reflects this difference. I want to explore and understand the human factors that contribute to entrepreneurial cultures in their various forms and their role in fostering startup success.

Relevance of this topic

Arnoldo Hax (2001) developed a strategic planning process that places top priority on establishing a corporate mission statement that identifies a purpose for the firm. A competitive strategy follows, based on external survey of the competitive landscape called the Environmental Scan. This is followed by an internal review of the firm's own strengths and weaknesses (Internal Scrutiny).

The Internal Scrutiny procedure breaks out several components for analysis. Hax proposes some modifications to the Value Chain, suggested by Michael Porter (Porter 1985), depending on the situation of the firm and its industry. There are nine broad categories of business tasks, five of them dubbed *Primary Activities* (Inbound Logistics, Operations, Outbound Logistics, Marketing and Sales, Service) and four *Support Activities* (Firm Infrastructure, Human Resource Management, Technology Development, Procurement). Each activity is analyzed for evidence of strengths and weaknesses and compared to relevant competitors. For Human Resource Management, the firm must rate itself according to the following sub-activities:

- Selection, promotion, and placement
- Appraisal system
- Reward system
- Labor/Employee relations and voice
- International training
- Human resources management organization and managerial infrastructure.

The importance of the Human Resource Management activity cannot be underestimated. While other activities provide information on the firm's current competitive positioning and advantage, the human dimension is what carries the firm into the future. Human capital is one of the key pillars holding up the competitive advantage of a firm.

This is particularly important for high tech companies. Eight of the nine activities in Hax's Value Chain are supported primarily by firm employees. Other assets in the company balance sheet do not possess anywhere near as much leverage. For example, software and Internet-based companies see their primary assets walk in and out the door every night (or in some cases, everyday).

Smaller companies may find themselves at a disadvantage when put up against the heftier assets of large competitors in most areas except the human capital domain. The key to overcome size handicaps lies in the leverage of the expertise and talent a small firm can exercise through its workforce. Sun Tzu, the Chinese military genius, around 490 BC wrote:

> *"Hence the saying: If you know the enemy and know yourself, you need not fear the result of a hundred battles. If you know yourself but not the enemy, for every victory gained you will also suffer a defeat. If you know neither the enemy nor yourself, you will succumb in every battle."*
>
> *- quoted in Clavell, 1981, page 26.*

Sun Tzu may have been concerned about military ventures, but his words ring true in today's fiercely competitive commercial landscape. While military intelligence may not translate directly into human capital, it is worth noting that the key message is to

understand and appreciate your own strengths and deploy your forces accordingly. Identifying expertise, attracting and recruiting the right talent mix, giving employees the nurturing needed to keep their spirits soaring in the face of great odds, and keeping them focused on the task at hand, are the issues addressed by this thesis. This thesis attempts to link the various tactics available to managers of small companies to build and keep a competitive advantage in the marketplace. What I have tried to do is extract some of the key learning points from those who run small companies and thus think about this day and night. I look to all levels – CEO's to executives to management to those on the front lines – and use their observations to provide insight on what it takes to succeed.

Sources of competitive advantage

Finances – life-blood of a startup

As noted, a small high tech company faces a different competitive landscape than its larger counterparts. It is important to note the important factors that shape the competitive positioning of small firms.

First, and most obvious, small companies generally have less financial resources to draw upon. High tech startups in the US tend to be backed by venture capital, although several notable examples (Lau Technologies of Littleton, MA) of debt-financed companies do exist. Company growth rates, often in the triple digits, place pressures upon financial resources, making equity funding the primary alternative. The US has a well-developed venture capitalist community, ready to support promising business ideas and entrepreneurs often view financing as Step One when turning their idea into reality. The

terms and conditions of venture capital financing do have a strong effect on the company structure, its management and its front line troops.

However, this is an area where well-heeled large companies with access to internal funding have a clear advantage. Despite recent highly publicized losses suffered by industry giants, small company CEO's often find that fund raising is a full-time job and more. Without capital, the best business plans and product ideas do not have a chance. Interestingly, of the CEO's interviewed, many looked back on the dark, gloomy days of uncertainty that surrounded their acquisition of financing as "defining moments." Senior management commitment is tested during times when money is tight and those that survive tend to develop strong bonds with one another and with the company. This is evident among many senior level executives who are close to the numbers. Many that I interviewed said they never thought of finding another job during those dark moments. In one of the startups I studied, senior managers unanimously volunteered to cut their salaries by half when the company was close to default. That management team is still very close today, apparently bonded by their past experience.

Employees, not privy to company finances, do seem to posses a very different view. While veterans can and do read the situation well, their commitment to a firm tends to be less firmly planted as senior executives. Phone calls to recruiters and contacts with other firms increase as financial problems become apparent. This poses a serious challenge to senior management and is explored in Chapter 6.

Strategy – positioning in the value chain

Looking beyond finances, another source of competitive advantage lies in the strategy of the firm. While there are several elements of firm strategy, the choice of what portion of the value chain to attack is critical to the success of the small company.

Unlike finances, there is no clear-cut advantage to being small or large in this regard. Large companies with established cash flow from existing customers need to devote a significant amount of energy and resources to keeping their customer base satisfied. In high tech, the rate of change is exhilarating and hanging onto existing customers can be quite a burden. Large company strategists, even if they are able to visualize, understand, and anticipate the changes in the marketplace, they are often powerless to drive the changes necessary for the company to compete in the future.

To illustrate the point, consider Cadence Design Systems. I worked for the firm from 1989 to 2001. This company was formed in 1988 from the merger of SDA Systems and ECAD. The company had a software product called DRACULA in its portfolio to address the integrated circuit physical verification market. This "cash cow" was well respected by its engineering users and purchasing agents. Fro a time, it ran laps around the competition. Technologically, the product received timely enhancements to accommodate increasing demands on capacity and performance. Then the market changed. Customers started to ask for hierarchical capabilities. Early adopters had stressed the importance of this feature for their future designs, whereas the mainstream

customer base wanted little perturbations to the product. DRACULA, by nature of its architecture, could address the mainstream needs well but would need to be revamped to deal with the new requirements. The need to protect the steady income stream and thus not rock the boat provided just enough of a window for a nimble startup competitor, ISS, to come to market with a product that provided a superior hierarchical solution. Then the market shifted dramatically and DRACULA sales dropped precipitously. In a few short years, Cadence lost its dominance in one of its most important markets and critically, it lost the confidence of customers.

Small companies do not always have the upper hand with respect to the value chain. Spreading valuable resources and human capital to address too large a segment of the chain is dangerous. Being only average or slightly above average in many related sections produces a mediocre product portfolio. Often, the wiser approach is to stake out a strong claim to supremacy in a core area of expertise and not let options in the up- or down-stream segments of the value chain distract managerial, sales, marketing and engineering talent from doing what they do best.

This approach bears scrutiny also because, in some situations, occupying the dominant position in a very narrowly focused portion of the value chain runs the risk of being the big fish in a small pond. If the company takes all of its profits from that position, there is no room to grow. Worse, the value chain can be re-routed to bypass that company's bread-and-butter product or service. High tech has myriads of examples of some small company holding a key patent or process and doing very well in their niche, only to find

competitors or customers building up a new solution that does not involve them. Transmeta, in possession of a breakthrough architecture that provided low-power consumption for microprocessors (Kanellos, 2000), began running into sales battles with Intel. Intel had great advantages in marketing (Hesseldahl, 2000, Mainelli, 2001, Niccolai, 2001). Plus, Intel had other technological advantages. Transmeta's claim for supremacy was rapidly diluted. Thus strategic positioning in the value chain poses no clear advantage to small companies nor does it necessarily yield advantage to large companies. It is difficult to draw out any general rules in this domain.

This sets the stage for the third element involved in the analysis of competitive advantage for small companies. Human capital is the one area that does seem to provide a potentially major competitive advantage for a small company over large competitors. I now explore several areas of cultivating and nurturing human capital.

Coinvestment: Financial Capital + Human Capital

MIT's Professor Stewart C. Myers coined the term "Coinvestment" and used it to stress the importance of the human element in building up a successful company (Myers 2002). This is most important in high tech, where "...assets...go down in the elevator and out to the parking lot at the close of each business day. They may drive into the sunset and never return" (Breasley & Myers, 2000). It is clear that employees invest in a company in non-tangible ways – by their emotional attachment, by their enthusiasm for the tasks at hand, by their going the "extra mile." The degree of employee investment varies depending on management capabilities.

The role of human capital is everywhere recognized as critical. To illustrate, consider the following excerpt, taken from an email from Sloan Fellow Alfonso Diaz, Director of Goddard Space Flight Center. Diaz wrote in response to an inquiry about his efforts to reinvigorate NASA's talented team of engineers and scientists. NASA had lost prominent scientists to a startup in the exciting new field of photonics but welcomed them back just a short while later.

Diaz wrote:

> *"Here at Goddard we have been concentrating in recent months on the development of our Human Capital Strategy. We think it is central to our success. We have identified three principal elements:*
>
> *1) <u>Exciting and meaningful work</u> - We are absolutely convinced and have a lot of recent evidence that people come to Goddard and stay because they are excited by the opportunity to do work that they think is important and takes advantage of all of their talents. While there may have been a tendency at time in the past to stray into areas of work that can be and is done elsewhere, we have recommitted ourselves to doing things here that few if any other organizations can or will do. It is the uniqueness of the opportunity to do things like the formulation of major space missions like the Hubble Space Telescope that has brought people here in the past and continues to bring them here. It is only when people don't see that kind of opportunity here in the future and they see excitement elsewhere that we lose good people. That was the case several years ago when there was a lull in the vision for the future and there was excitement in the developing photonics business nearby that we started losing some very good laser and optical systems engineers. Our recent rededication to doing exciting work (coupled I need to add with a recent downturn or stagnation in the growth of the industry) has caused a reversal of the trend. In the wake of the Challenger accident and the soul searching in NASA I found myself in the same malaise in the late 80s. That contributed to my short departure from NASA. But I came back (for the work!).*
>
> *2) <u>Sustainable workload</u> - Our people need to feel that they have the resources to be successful. This includes colleagues to help get the work done, facilities and tools as well as dollars and cents. We have made a concerted effort to put together an integrated business planning process that ties together all of the various elements of the work here including workforce planning, institutional*

resource planning, facilities planning and program planning. While there are always issues, our employees and managers feel that there is a forum and a process that provides a venue for them to resolve these issues. It also assures our employees that the balance that they are looking for in their lives is at least considered by management in making work commitments.

3) Value Centered Management Practices - Our people want to work in an environment where thay feel comfortable that the values that they bring to work are appreciated in the workplace. They also want to have management recognize that life is more than simply "what they've got left after they are done with work" (Brian Holloway - Former Captain of the New England Patriots). We work very hard to understand what the values in the workforce are and to make sure that our management practices are consistent with those values."

As Diaz points out, NASA is able to attract and retain some of the best and brightest scientists and engineers in the world. It does so by providing them with opportunities that are so unique as to be irresistible. NASA does not compete for talent based on compensation alone; it offers a package of intangibles that few, if any, organizations anywhere in the world can match. Most startups do not have the cachet of NASA's Goddard, nor have the financial might of the Goliaths. Yet Diaz's statements can be applied to those that aspire to be great and provides the inspiration for this thesis.

Chapter 2: Research Design

My own professional experiences do not provide much insight in the dynamics of a startup. I have worked for IBM, Symbolics, VLSI Technology and Cadence, all public companies with established cash flow streams and significant market valuations at the time of my employment. An opportunity to push hard on the limits of my knowledge and stray from my comfort zone, is a part of this project.

Research Methodology

The research methodology relies on interviewing those that are closest to the high tech entrepreneurial scene. Chief executives, senior vice presidents, managers, individual contributors in startups all have stories to tell. In addition, support personnel from human resource departments and recruiting firms provide further information. They too have their own challenges in making the high tech startup environment vibrant.

My research began with a literature survey conducted through facilities spread across MIT. The Dewey Library, in particular, provided a comprehensive set of background materials on various industries as well as providing copies of prior work done by other researchers and graduates.

My industrial past was helpful in gaining access to key individuals and their company resources. Industrial trade newsletters (*Electronic Engineering Times* is, for example, a

source of information on the electronic design community), market growth projections, and updates on personnel movement (many of my interviewees are business acquaintances or associates) were also good sources of information.

In all, eighteen interviews were conducted. Table 2-1 provides a rough breakdown on interviewee position and title. All interviewees were from the New England area, with the exception of NASA's Diaz. High tech sectors were well covered with the exception of health and biotechnology. These sectors would have complemented the interview list well; their omission is purely due to time constraints. Four other senior executives also helped with the research. Their participation could not be arranged per scheduling difficulties. Nonetheless, their support is very much appreciated.

I felt that it was important to solicit opinions from various levels of the corporate hierarchy. Top level management was well represented and helped paint the "big picture" of Human Capital considerations. Mid-level management and individual contributors reported from the frontlines and added to a fuller understanding of how decisions made were interpreted.

Table 2-1: Interviews conducted

Interviewee Position	No. of interviews
CEO's/Presidents/Chairman	7
Senior Executives	3
Engineering/Marketing	5
Recruiting firm manager	1
Consultants/Other	2

Typically, interview targets were identified by personal recognition or referral. I concentrated my research on those in the local area for logistical reasons. This is actually a limitation that may be expanded on for a future thesis project. But the Greater Boston area is blessed with the abundance of powerful entrepreneurial individuals, many of whom have close ties to MIT. They also span several sub-sectors of high technology, from telecommunications to software to Web-based businesses to hardware. Support industries, such as recruiting firms, were also contacted for their assistance.

The interview process included a preliminary email, voice-mail or face-to-face introduction. This began with a brief statement of my interest and a quick discussion of how I would like to proceed. Appointments for an hour or so were made (sometimes through the help of an administrative assistant). During the interview itself, I first gave a quick rundown of my project. I then posed a range of subjects about which the interviewee was invited to explore. The subjects included:

- Identifying the expertise and talent needed,
- Attracting and recruiting efforts to woo the talent mix,
- Keeping the team focused and motivated to tackle the toughest problems
- Retaining the talent through good times and bad.

Most interviewees turned to one area about which they were apparently most passionate – at least most passionate at the time of the interview. The discussion that followed was usually quite practical rather than theoretical or philosophical. Generally, I allowed the interviewee to take the conversation in whatever direction they felt comfortable. They often brought up points that did not appear on my interview protocol. "Double clicking" on items of particular interest proved to be valuable. Typically, a slight interruption on my side, followed by an inquisitive "Can you tell me more about ..." provided depth. Most interviews lasted well longer than the originally planned one hour.

During the interview, I kept my note taking to a minimum, writing down only mnemonical codes for later retrieval. The important task is to take advantage of limited time and to extract as much pertinent information as possible. Right after the interview, in most cases within an hour of the conclusion of the discussion, I wrote up my recollections of the interview – including quotations and what I took to be "key messages" – for electronic archival. Statements were checked for consistency with emerging trends or for contradictions.

In most cases, follow-up email was required to further clarify statements or provide for context in which those statements are made. These were generally done quickly after the

interviews. A formal but personal note of appreciation was sent to all those interviewed. The results of my research will be shared with the many participants in an attempt to repay them for their time and support.

My analysis relied on pattern recognition within and across interviews. I categorized my data into four different areas – Identifying, Recruiting, Motivating, Retaining (plus an all-encompassing category, "Other"). The interview statements were contrasted by industry segment.

Logistics: Setting up the interviews

Interviewees were helpful in directing me towards the areas of their intense interest, and while the framework developed above provided good starting points. The four areas I asked each interviewee to respond to were handled differently in each interview. Table 2-2 notes these differences.

Table 2-2: Areas of focus per Interviewee

Interview/Source	Identifying	Recruiting	Motivating	Retaining
1			x	x
2			x	x
3		x	x	
4	x		x	
5	x	x	x	x
6	x	x	x	x
7		x	x	x
8	x		x	
9			x	x
10	x	x		
11	x		x	x
12	x		x	
13			x	x
14	x	x	x	x
15	x	x	x	x
16			x	x
17		x	x	x
18	x	x	x	x

The area that most focused on was "motivating" their key talent. Not surprisingly, senior executives and front-line contributors feel strongly about motivation and freely discuss the pros and cons of their approaches. The least "popular" topic appeared to be "identifying" talent.

Face-to-face, phone and email: Three ways to interview

Face-to-face: The Best option

Face-to-face interviews consisted of meetings held at a place of mutual convenience, generally at the interviewee's office or at a restaurant nearby. Most were scheduled for one hour. All took more time. One interview carried on for hours and was ended only when the interviewee needed to pick up her daughter from school. Another CEO picked up his phone, pushed back his next appointment for half an hour, then postponed it altogether when we used up that half hour. A typical session, after a few minutes of small-talk, started with about 10 minutes of my setting up a framework for the conversation – describing the of the MIT Sloan Fellow Program, thesis requirement, choice of topic, noting the four areas of my interest and then moved to free-flowing talk.

Phone calls: They worked, but less effectively

Phone conversations promise an efficient use of time. Much less time is devoted to the preliminary pleasantries. I conducted two phone interviews. One of these was conducted over a cell phone running low on battery power. The conversation was very short (but it did open up new ideas for discussion in later interviews). Distractions such as call-forwarding and other requests for attention (writing notes in one hand, flipping through references with another, holding the phone with a tilted head and shoulder) made the task all the more difficult (as it was perhaps on the other end). Visual feedback of the

interviewee's body language, an important input to determining the degree of excitement an interviewee exhibits on a particular subject, was not available.

Email: The last option

Email served as a follow-up and preliminary interviewing mechanism in this study. An example is Diaz's description of NASA's Human Capital Strategy quoted previously. Email allows for an examination of a specific issue but loses spontaneity.

For interviewees, responding to email questions could be done at convenient times and with less uncertainty about their positions. The challenge was for the interviewer to craft questions that were able to draw out the most thoughtful responses. Moreover, questions had to be posed in a manner that did not "bias the jury."

Table 2-3: Effectiveness of interview methods

	Face-to-face	Phone	Email		
Depth	+++	+	++	+++	Ideal
Dealing with the unexpected	+++	++	-	++	Desirable
Scheduling	--	--	+++	+	Useful
Follow up	---	--	+++	-	Inconvenient
				--	A Handicap
				---	Hard to overcome

Getting Information out of the Data

Data analysis occurred at two levels. The first level was targeted towards analyzing each specific interview. As often as possible, some time (15 minutes or more) was set aside immediately after each interview to review key points discussed and record the examples that were provided in that particular interview. These key points were categorized by their correspondence (for and against) to existing themes. As more data was collected, certain themes stood out as requiring more investigation, or were mentioned by several interviewees as important to them.

A second level of analysis looked for examples from the interviews that presented arguments for and against any particular practice. For example, large company viewpoints on motivating employees were contrasted with those of small companies. Arguments that were common to more than one interview were combined and the frequency of their being mentioned noted. These were used to stimulate discussion in subsequent interviews. For example, "Leadership" was an important topic to the majority of the interviewees and was used to start interviews late in the investigation. By the same token, when an issue seemed to be exhaustively covered, interview time was devoted to areas where more information was needed. Recruiting tactics, for example, were covered extensively early in the research and thus received less emphasis towards the end of the process.

Those interviewed came from diverse backgrounds (educational, professional and countries of origin). They do, however, share some traits. The first is, of course, a long association with high tech. Professional experience covers the gamut from minicomputers to applications software to imaging, to defense work to optical networking; to wireless to space aeronautics. Functional experience includes human resource management, chief executive roles, sales, marketing, engineering, operations, recruiting, journalism, and general management.

Profile of interviewees: Young, Energetic and Passionate

Interviewees ranged from those in their thirties to those in their early fifties. All displayed a zealous passion towards their high tech careers. Other adjectives that generally apply across the board as personal characteristics are optimistic, visionary, and outspoken.

Their long experience also includes exposure to up and down cycles. The Internet and telecommunications boom and bust provided a backdrop to discuss "best practices" and, implicitly, "worst practices." Good ideas in boom times can haunt in the bad. One particular striking impression of the group is that they do not regret their actions of the past. They treat them as lessons learned. The bad times served only to dampen spirits temporarily – all remain bullish on technology.

All have strong views on hiring and firing but are particularly passionate about the role of motivation. This is the area that provided the most contrast between the views of the top

and those of the front-line. Contributors from the trenches were often skeptical that senior management "really" had their best interests in mind. No doubt slogans like "People are our most important assets" fuel this wariness towards management. The Bledsoe-Brady* debate also served as a convenient conduit for eliciting opinions.

Finally, all have been exposed to the stressful situation of staff reductions. As a sign of the shift in corporate and employee expectations, layoffs apparently do not have the stigma they used to elicit several decades ago.

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* The 2002 National Football League Superbowl was won by the New England Patriots who started Drew Bledsoe at Quarterback at the beginning of the season. He was injured early in the season and replaced by Tom Brady, who led them the rest of the way. The question was whether Bledsoe should have been given his job back after recovering sufficiently. To his credit, Bledsoe displayed his regards for the team ahead of his own ego.

Chapter 3: Research Findings

Highlights of the more pertinent points that emerged during the investigation process are listed below (Table 3-1) and comprise this short chapter. It is important to note that although these were the main points of conversation, they were building on previously identified issues. Hence the number of mentions of any one issue in the table does not reflect its relative significance over the course of the entire investigation. For example, "Leadership" was high on many interviewees' list of concerns yet is shown only a handful of times. If an interviewee were particularly vocal and seemingly passionate about any one subject, it is listed. For example, the notion of diversity was very important to several people. Discussion of these highlights begins in the following chapter.

Table 3-1: Highlights of interview sessions

Interview/Sources	Organization size	Highlights of interview session
1	Greater than 10,000	Work opportunities are the draw
		Sustainability
		Value system
2	Under 500	Dual ladder: stress importance of contributions from multiple sources
		Honesty, even in the toughest times
		Sales-engineering compensation mismatches
3	Under 100	Value system throughout company
		Getting out of bed excited to make a difference
		Sales team may need more individual incentives
4	Under 100	Career goals, energy aligned
		Broadband (flexibility)
		Focus on opportunities, not downside
		No politics of big company
		Not pigeonholed
		Recognition system
5	Under 100	Formal process
		Leadership

		Do things that I won't be able to do
		Instill confidence in biz
		Self actuation: deep interests
		Taken for granted
		Change agent
		Fun
		Mistake: not figuring out what to look for
6	100-500	Well thought up building the company strategy
		Executives once removed from IBM are best candidates!
		Mix of Identifiers, Builders and Drivers: evolution over time/size
		Best retention technique: hire the right person
		Relationships: people leave people!
		Culture is key retention tool
		Leadership about initiating, not management
7	100-500	Communication
		Mind the 6's (Navy pilot term – look behind you at 6 o'clock)
		No pigeonholed, no org charts
		Build teams, with talent not necessarily from same industry
		Downtime puts pressure on system, shows true colors
		White water ride: taking risks
		Employee artwork shared
		Leadership: do not ignore simple things
		Learn from mistakes
		Full time Chief Scout, from day 1 of company
		Culture: Navy pilot: 4 points
8	N/A	Not for everyone; examples and counterexamples
		East-West Coast mentality differences
9	Greater than 10,000	Balance
		Hierarchy of needs
		Sense of security
10	Recruiting firm	Start with hard look at culture
		Not streamlining process: volume vs. quality
		Push/pull pros and cons
		15 minutes of fame - people need to be in limelight
		Leadership positions hardest to find and staff
		Diversity
		Way of life: East Coast vs. West Coast mentality
11	4-250	"When I worked here, I was a person; when I worked there, I was a number"
		Support continuing education - pay for schooling
		No place to hide
		President never gets true feedback
		Economy good: can train to fit job; economy bad: can wait for 100% candidate
12	Under 500	Risk profile
		Intellectual flexibility/versatility
		Cultural fit: not big-small debate

13	Under 500	Skeptical about slogans/double-talk: "People are our most valuable asset"
		Internally promote importance of all areas, not just engineering
		Ability to make an impact
		Want to feel ... somehow helping the world
		Lifelong contribution to society
14	N/A	Most HR report to CFO: cost center
		Diversity
		Talent pool exhaustive
		Marriage
		Managers take referrals; pros/cons; settling for referrals
		Expand talent universe: coops, universities, competitors, industry peripherals
15	Under 500	No manager telling you what to do
		No walls: think of something that the CEO hasn't thought of yet
		Headhunters barrage on company purchase by another
		Culture clash with entrepreneurial spirit
		If worried about retention, probably wrong guy to begin with
		Right person: take a high level problem, frame it, solve it
		Multicultural
		Three "threads" within company from large companies: Motorola/Nokia/Sun
		No prima donnas
16	Greater than 10,000	Big companies have more opportunities to move around
		Big company: deep in narrow field/ Small company: communal, shared
		More opportunities to work on ideas
		Seldom see president of large company/cannot see core business
		Balance personal objectives with company objectives: don't burn out
17	Under 100	Patience: long term vs. bubble
		Listen to everyone, not get discourage/depressed by "no"
		Frustrated by bureaucracy at large research lab
		VC endorsement of choice for president
		Doubts ever-present
		Recruiting like-minded: optimistic
		Camaraderie
18	Under 100	Big company in small company
		CEO can't challenge senior talent: empire building
		CEO must keep eyes/ears open to all levels, not just senior management
		Diversity
		Timing of hires
		Connections lead to credibility factors

Chapter 4: Identifying – *More Art than Science*

A number of themes stand out when examining my interview notes. I organize these themes according to my four categories.

Identifying the right candidates: ***Not just by the numbers***

A basic assumption carried by my interviewees is that of "fit": People have different characteristics or traits and those that seek out and thrive in startups find a large corporation's bureaucracy stifling. Conversely, those that prefer the support infrastructure and plethora of project choices available in many large companies may find it difficult to work in high tech startups. Moreover, my interviewees felt that some of these preferences and characteristics can be found by examining a candidate's past experience, academic and professional training, statement of intentions (both verbal and written), or recommendations by trusted sources.

Typical screening processes include requirements for length of service in a particular industry, functional competence in the desired area of expertise, the demonstrated ability to lead a certain size group or organization, and the experience of holding positions of responsibility (for example, profit and loss responsibilities, development of new markets). Job interviews concentrate also on interpersonal and relationship-building skills. Senior talent would also be judged for evidence of leadership skills. There are also the harder-to-quantify skills. These vary by company, culture, industry and location, among others. All else being equal, these "softer skills will make or break the chemistry that is so

important in building up the organization. Other soft skills mentioned by interviewees included "teamwork," "communication," "interpersonal skills" and "the ability to influence change."

As an example of a hard-to-quantify skill, the word "Leadership" came up in many of my interviews. When asked to define what the speaker meant by the word, various definitions were mentioned. When pushed, it became clear that the term had multiple meanings, even to members of the same organization. In one case, "leadership" was viewed skeptically. From this interviewee's perspective, leadership is "too vague to apply in absolute terms". However, his Human Resources Department defined a "leader" as a "Strategic visionary with the capability to look long range into changes in market place and influence internal product development strategy." It also included "Strong operational leadership skills; setting priorities and stretch goals, assigning clear accountability, oversight and achieving results..." and an "outstanding record of developing and mentoring staff, leading teams and creating high performing and highly motivating work environments." This mind-boggling set of requirements was part of a job posting for a VP of Marketing in the firm.

One interesting slant on identifying the candidates most likely to thrive in the harsh environment of a startup was furnished in rather stark terms by one of the interviewees. This man felt a candidate needed to exhibit a "risk profile" consistent with not allowing personal or family finances to distract from a "high-risk/high-reward workload." He felt there was little room for monetary problems at home for those making a commitment to

the demands of startups. Since entrepreneurial firms fail more frequently than the Goliaths, the swings between feast and famine (more often the latter) could fatally disrupt family life for those who are financially vulnerable. Unfortunately, this screening filter might eliminate many of the young and hungry. But it does illuminate the need some entrepreneurs feel to look beyond the person to their support system.

Large vs. Small

As mentioned, most interviewees from big and small companies alike felt that there is a significant difference between those that thrive in startups and those that do best in more structured, large corporate settings. One of my Sloan Fellow classmates, from a large company, offered the suggestion that big companies provide employees the chance to become "deep, in a narrow field," and offer them a "more steady income stream." He argued however that it was not the people but the type of work (e.g. scope) and typical reward system that are different. The nature of the work and compensation provide the differentiation, not the individuals. Most of my interviewees would disagree.

While many candidate qualities were felt by my interviewees to common for recruiters from both large and small companies (for example, number of years of experience in a particular sector), the softer skills tended to be emphasized by the small companies. The small company recruiter I interviewed looks for candidates to fit into a "less rigid, higher paced atmosphere" than she believes is offered by large companies. She noted that newspaper advertising for two comparable slots, one for a large company and one for a

small company, would list very similar requirements, but would use different "keywords" – "dynamic" versus "industry leader," "exciting opportunities" versus "well financed."

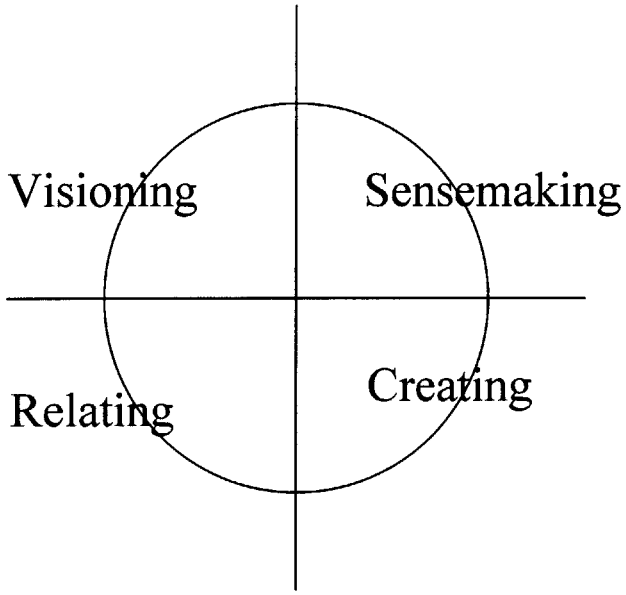
Delving into some of the softer skills, two issues related to the identification of potential recruits stood out: Leadership and Flexibility/Versatility.

Leadership – ***Not universally the same***

Leadership skills were, as noted, among the first items brought up when interviewees were asked for profiles of candidates that would fit into their company. Probing a bit further by posing the question of "what constitute leadership skills," the answers varied greatly. Most said they would look to "measurable pieces of evidence" of leadership such as the candidate "built a team from scratch" or "developed and grew a business". Each interviewee, however, placed different weights on the importance of such evidence.

Most of the small companies, by necessity, did not have a centralized control system. The emerging Sloan Leadership Model (Orlikowski, Malone, Ancona, Senge, Distributed Leadership Workshop, MIT Sloan School, January 2002), illustrated below, encompasses most of the leadership skills deemed important by my interviewees. It is especially useful when the idea of "distributed leadership" emerges.

Figure 4-1: Sloan Leadership Model



A startup environment stresses the importance of all four elements portrayed in the model. Ideal candidates should show strengths in three or more areas. Not surprisingly, startups needed versatile talent that can take on responsibilities that would be split up among several established departments in larger companies. In startups, engineers are asked to be salespeople, marketeers must pitch in on project finances, and accountants are expected to volunteer to help in public relations campaigns. As one engineer put it, there are "no managers telling you what to do" and "you can think of something that the CEO hasn't thought of yet."

Flexibility and Versatility – intellectual, functional, and social

Leadership also exhibits itself in the ability of a candidate to take on challenges that he or she has not been trained for directly. Much emphasis is placed on a candidate's projected ease of adaptation to unfamiliar techniques, comfort with fresh ideas and new approaches, some of which may never have been tried before. Thus, one element critical to the successful entrepreneurial company is group learning. Interviewees said that a company must encourage this through its culture (stated and unstated) and individual participants must want to embrace continuous learning.

According to my interviewees, the best indication of this desire is to look for evidence of flexibility in a "candidate's makeup" – intellectually, functionally, and socially. Candidates that fit a particular need but show no signs of wanting to break out of their habits and routines are viewed as less desirable, all other qualifications being equal, than those that exhibit an innate curiosity. Self-starters, such as those taking night classes in an area different than what they are familiar with, are believed to be more likely to learn to adapt to the rapidly changing demands of the startup role.

Social flexibility refers to the ability of a candidate to deal with different surroundings and work with people from all walks of life. Engineers would need to work closely with those in accounting, human resources, marketing, sales and manufacturing. They must be able to work in small teams, to establish trust and respect for one another's talents and contributions, and do so under highly stressful deadlines. The ability to contribute and

get the best out of a team with limited resources is not just desirable, it is thought to be critical. As one CEO put it, "there is no place to hide."

The CEO of an optical networking company has shown a knack for identifying successful candidates from unrelated industries. Two of his senior management team come from different roles in companies that have at best a tenuous link to networking or optics. As he explained, he screens candidates through the measurable quantities, hones in on their versatility, and determines which candidates are "prepared to do what it takes." He says his company gives "new recruits room to grow." The recruits reward the company by blossoming into high achievers. One of the recruits is currently running one of the more important business lines of the company.

Many of my interviewees felt that the personal drive to succeed can also be inferred by looking at a candidate's recent professional history. The "Chief People Officer" of a technology management consulting firm pointed out that the best candidates are "...twice removed from IBM." Those that left a large company to join a startup are often either charred by the experience and chose to return to the more comfortable confines of another large company or they gain the knowledge that they prefer entrepreneurial settings. If a candidate seeks out startups, they have probably identified themselves with the risks and rewards associated with entrepreneurial careers and can handle the exhausting demands of the small company.

Similar to a point discussed earlier, a sharp piece of advice was furnished by a software CEO that spun his company out from a large multinational corporation. He suggests looking at the "risk profile" of a candidate. In his view, a "startup gig" is wrought with uncertainty. Those that have a financial base to weather stormy months, who do not having to worry about the next few months' of mortgage payments or children's college tuitions, will be less distracted than those that do. He feels that under intense deadline pressure, any bit of extracurricular concern gets magnified and detracts from performance. He argues that it is not simply a matter of large versus small but a matter of "cultural fit". Large companies can be just as demanding as small companies and can carry an equivalent risk. This CEO's past experience is a good guide: He had taken on senior roles at Digital Equipment and Polaroid during their glory days.

It is important to note that risk assessment should not filter out the young and hungry – the risk should be perceived from the candidate's position. The newly graduated often bring enthusiasm and fresh ideas without a fear of failing. To them, starting over is not as imposing as it may be to grizzly veterans who have not as yet accumulated the financial assets necessary to buy peace of mind.

The Role of Culture Fit

Finally, my interviewees noted that identifying the right candidate requires an accurate understanding of the company's own culture and the value system that it formally or informally embraces. Most interviewees noted that, to employees, a company means a

lot more than a collection of assets and resources to address a particular market need. It also can inspire, challenge and nurture talented individuals to contribute and grow with the business.

Ancona, *et al* (1999) proposed using a Three Lenses model to examine organizations. The three lenses are named Strategic Design, Cultural System and Political System. In this model, culture is defined as a set of shared assumptions or approaches honored, formally or informally, by members of the organization. It permeates the environment and carries a moral force. The culture provides the answer to the question "how things are done around here." My interviewees point to cultural clashes as frequent causes of friction with newcomers. For example, an "East Coast/Type A" new hire would find it infuriating to work in a "laid back West Coast" culture. One of the companies I visited, based in New England, recently acquired a small group in Colorado. Getting the work cultures in the two locations to line up is recognized to be a challenging endeavor by senior management.

* * * * * *

A single "magic formula" for identifying candidates with the right mix of tangibles and non-tangibles did not emerge from my interviews. Firms, large and small, had their own methods and processes. Interviewees did resonate with the need to understand the role of culture. But the most important lesson from this discussion is that this first step is crucial to building a lasting, high performance organization.

I now turn to the next theme – successful recruiting.

Chapter 5: *Recruiting - Diversity counts, but there is no single best way*

There is general agreement among my interviewees that the recruiting climate is dependent on the state of the economy and, relatedly, the state of the industry. In good times, a high premium is routinely paid to hire the best and brightest. In bad times, the urge is to be most selective in filling positions. Yet there is also the feeling that the best are not available in either good or bad times. Different strategies have been employed with varying levels of success. The limited resources of startups, however, constrain recruiting efforts.

How do you get the best?

Once a profile of an ideal candidate for a particular startup job is in place (see Chapter 4), the task is to find the right match. Small companies generally do not have the recruiting infrastructure commonly available to large companies. They must nonetheless find ways to get their message to the right candidates. In good times, the best are courted by many companies and their current employers try hard to keep them in the fold. Even if an excellent candidate is interested in the opportunity provided by startup, there is no easy way to close the "deal".

Small companies have come up with various strategies to get their message out. When times are tough, the startup has to be careful to screen out the many applicants with similar credentials and select the candidate who most closely fits its needs. Moreover, job requirements may change dramatically over time. A startup's recruiting

responsibilities are usually in the hands of a very small Human Resources Department that must weigh the current and future needs of the company and develop a strategy for bringing in the right talent at the right time. Some specialists may be critical in one stage of a company's life and relatively unimportant once that stage has passed. Professor Stewart Myers of MIT discussed the value of an entrepreneur/scientist for a hypothetical high tech endeavor through various stages of the firm's development:

Table 5-1: Value of an entrepreneur/scientist (Myers 2002)

	Business Plan	Entrepreneur/scientist
I.	Prove concept and manufacturing process	Essential
II.	Pilot production and sales	Essential
III.	Improve product and manufacturing	Valuable
IV.	Full production	Helpful, replaceable
V.	Follow-on activities	Not needed

From the startup's point of view, the hiring of a top-notch talent to lead a product or service into solving market needs is often the most critical hire. The "best" are generally thought to be those that have distinguished careers in the field (or related fields) and have acclamations from industry insiders to go along with a lengthy list of accomplishment.

But, as noted, the best are also the ones that their current companies try the most to retain. Current employers do their best to keep them motivated and hope they do not look for outside opportunities. This holds true in boom or bust times. Thus, getting a recruiting signal to them is difficult.

The differences between recruiting during healthy and unhealthy states of an industry (or related industries) can be traced by my interviewees to the number of opportunities that vie for the attention of potential recruits and to the number of potential applicants that look to fill these slots. In good times, it is not uncommon to have a job-seeker get several competing offers. In slow times, an applicant feels happy to merely get an interview. This supply and demand imbalance can be exploited to maximize the chances of getting the best. For example, one CEO mentioned that during boom times, she would consider hiring candidates with less than a perfect match and rely on training programs to make up the difference. If the economy were bad, she would rather wait for the "100% candidate". One of the important features of high tech product development is TTM – Time to Market. During downturns, however, the demand for next generation products eases, and being first to market is not always a "must" as it is during boom times. Companies can afford to push back product introductions, and therefore be more selective in hiring processes.

During boom times, recruiting for a startup requires getting the message out. Many say they rely on "word-of-mouth" by current staff and by the "industry buzz" associated with word-of-mouth rumor mills to create a favorable firm image in the labor market.

Recruiting is thus marketing. Such marketing tactics are apparent in a legendary account occurring a decade ago: When John Sculley was recruited out of PepsiCo, Apple Computer founder Steve Jobs was reputed to have challenged Sculley " Do you want to spend the rest of your life selling sugar water, or do you want a chance to change the world?" (Rosenberg 2000).

Hire slowly, fire quickly: Have a good hiring process thought out

Potholes are hidden when a company grows rapidly. This is often the case in high tech. Mass recruiting during boom times risks compromising selection criteria. Many of the senior executives I interviewed put forth a "Hire slowly, fire quickly" philosophy. In their minds, the first step in a well-planned recruiting process is to understand the company culture, its practices, its makeup, its aspirations, and its environment. From such an understanding comes the company strategy that will dictate the type and role of needed talent. As mentioned, a profile of the ideal candidate is first developed, paying attention to both quantifiable skills and the soft skills necessary to excel in that role. Next, a marketing strategy is put into place with various tactics identified. Interviewees said that many times, current employees act as the best agents for getting the word out. Employee referrals often make up the majority of high tech startup hiring. One of the startups I visited relied on employee referrals for 75% of its new hires in 2001. Other companies also claimed a similar dependency. Some interviewees said that they use recruiting firms to target very specific roles or individuals. The Internet, for all its hype, is conspicuous by the lack of use it received for recruiting from those I interviewed.

Hiring to plan: a framework for building the team

One of the most sophisticated staffing and hiring processes was explained to me by the "Chief People Officer" at a technology management consulting company. His model for building the company's "human capital structure" included targeting "a particular mix of Baby Boomers and Gen X members, to achieve the best of both generations, with their accompanying tastes and dislikes, enthusiasm and experience." His goal is to establish a "feel" in the workplace such that employees would be comfortable calling the company a "home away from home." Every person he hired was thought to add to the talent base and thus contribute to the appeal of working for this company. Thus, culture becomes a retention tool.

He identified three kinds of employees in his company (around 170 people). Each employee was either a:

1. An Identifier (one who looks for change, such as serial CEO Jim Clark of Netscape fame). They often move on to a new venture after an endeavor starts to take root.
2. A Builder (one who thrives in small company settings). They are willing to learn, stay, and do anything necessary to build the company
3. A Driver (one who works best in a large companies). They often move on to more structured environments.

Accordingly to the CPO, early in the company's formation, startups are dominated by Identifiers and Builders. As the company grows, Builders and Drivers become more

prominent. The key message he feels is to match the recruiting and hiring efforts to the needs of the company, keeping an eye on future needs as well. The company values in this interviewee's firm stress:

- Performance
- Development
- Community
- Respect

These values, he says, are not compromised. Identifiers, Builders or Drivers are all expected to adopt them as their central philosophy. Candidates are screened for their content expertise (sales, engineering, accounting, etc), problem-solving capabilities, interpersonal skills, and fit with corporate values. Skill sets may not always match desired levels completely but if the candidate is deemed a Builder, training will be made available to pass on the necessary skills to the new hire.

This technology management consulting company for whom the CPO works has had its share of ups and downs. Once (and still) a high flier in its market, it has experienced three rounds of layoffs in its brief history. Yet the CPO is unfazed by the sector downturns and anticipates needing to again compete for talent very shortly. When the rebound occurs, he is confident that his processes will serve as a source of competitive advantage for the firm and key talent will be acquired as needed.

Some cautionary notes

In bad times, a company can afford to be selective, since the job market swings toward more applicants per job posting. However, being conservative can also backfire since the "best candidate" may not fit all the criteria looked for in the "ideal candidate". From personal experience, two of my best hires did not have college degrees yet both became pillars on which other team members relied. One CEO concurred, listing an example of a key contributor who acquired an undergraduate and a graduate degree after joining her company.

Another cautionary note pertains to the urge to fill an immediate vacancy based on a specific task. Once the task is performed, the new hire may only have a vague notion of how he or she fits into future plans of the company. An example given by an interviewee is that of a CFO hired into a startup with the objective of lending his weight to a Series B offering. Once the offering was consummated, the new CFO really did not fit into the corporate plans. After much anguish on both sides, the relationship was severed. As the interviewee noted, a temporary consulting assignment might have been a better alternative in the situation.

Venture Capitalists also have strong influence on the makeup of the startup team. VC's are known to "recommend" candidates to run critical parts of their portfolio companies and founders are often eager to please. The firm-specific screening process may then get shortchanged and resulting conflicts derail business plans. Many of my interviewees

suggested that VC-promoted candidates often do have the right skill mix and resume for the firm and CEO's are advised to carefully examine their fit within the company culture.

One interviewee, a mid-level director with several startup experiences under his belt, has some advice for CEO's looking to hire senior executives. The CEO, he counsels, "has got to keep eyes and ears open, and not just to senior management. If he takes action when things go wrong, it may be too late, as there are no warning signals." He goes on to provide some examples of personality conflicts in startups such as when a VP of Engineering did not have the respect of his engineers who, *en masse*, threatened to resign. Because of his VP status, lower level employees were afraid to speak up in his presence. The prudent CEO, therefore, must foster an open communicative environment, using skip level meetings if necessary, and taking advantage of regularly scheduled social events (e.g. Friday evening pizza parties) to take the pulse of those in the organization.

Headhunting: Outsourcing recruiting

The best use of "headhunting" agencies, according to a regional manager of a recruiting firm, involves much more than handing over a list of requirements. A startup needs to work with external recruiters to craft an accurate description of the desired candidate. This recruiting manager, specializing in IT for many years, first explores the startup firm's culture and then the working habits of the hiring manager. She suggests six relevant questions about the hiring manager:

- What are his (or her) communication tendencies?
- Is he or she hands-on (i.e. micro-manage)?

- What values are endemic to the company?
- How are accomplishments recognized?
- When are regular meeting scheduled?
- How tolerant is the environment of individual quirks?

Her message is simply to be proactive in the hiring process. Her experience suggests that the "intangibles" – such as the "personality fit" between the hiring manager and the new hire – are more important than measurable criteria. As an example, she relays the story of a Russian candidate that was well qualified for a senior position but when he met with those who would report directly to him, he was viewed as too arrogant and confrontational. The grumbling was loud enough such that the CEO stepped in and nixed the hiring.

Managers often find it hard to deal with intangibles such as "personality" or "style". My interviewees felt the tangibles are relatively easy to describe accurately (e.g. 5 years of experience in this field, must have a BSEE, etc). The hard part they felt comes with the intangibles. Higher quality candidates are usually associated with superior understanding of the softer skills and the willingness of the company to embrace any special quirkiness of a candidate. A hiring manager was praised by the recruiting firm manager for not passing on a candidate because of the candidate's sexual orientation. Not all company environments are receptive to gay co-workers, but in this case, the hiring manager understood the group dynamics well enough to make one of what he regarded as his best hiring decisions. The gay candidate was a hard-working high performer.

This recruiting company manager also cautions companies from waiting too long and wasting precious time and energy when making a hiring decision. Interviewing candidates is an exhausting, and expensive task. She says, "Productivity takes a hit, especially among those that do not have a streamlined process, and rely on volume rather than quality." Sadly, she continues, "that is hardly the exception." Startup managers often complain of not having the resources to devote to the hiring processes. Instead, they drag in key contributors and executives of the company to cover for a lack of a well-thought out process, burning up hours and weeks that could have been applied to other critical tasks.

Employee Referrals – ***Nice, but no panacea***

Employee referrals, in companies big and small, are often encouraged via bonus awards or special recognition programs. The reasoning goes that current employees are good judges of the corporate environment and they know best just how a candidate will fit into the company. Many companies post openings and note the bonuses an employee can receive if they provide a referral that results in a new hiring. This is an effective and cost-effective approach to filling positions.

Employee referrals have their drawbacks however. The financial incentives often skew the current employee into serving as a "body agent". My interviewees note that employees sometime play with numbers in the hope that of the many they recommend, at least some will stick. In such a way, the quality of the candidate pool is compromised.

Two other notes of caution emerged from my interviews. First, the hiring manager may default to the referral over another external candidate. This may result from a fear of annoying referring employees. This is particularly dangerous when a current employee is involved in the selection process and lobbies his colleagues to overlook deficiencies in his favored candidate or the referring employee tries to sabotage another candidate's credentials.

The second note of caution focuses on the sometimes unintended homogeneity produced by the overused referral system. Employee referrals often take advantage of networks of previous relationships at other companies. One interviewee assessed his company by saying that current employees came from three "threads" – teams of people from Motorola, Sun and Nokia. Employees belonged to one of the threads – an informal clique. The challenge is to not let these invisible cliques control the hiring process.

In a similar vein, another interviewee also noted that CEO's seldom second-guess the hiring practices of their senior executives. Senior executives naturally like to form their own teams with people they feel comfortable with and those that have worked well with them in the past. The danger is that new teams become duplicates of old teams, "moving in lock-step". A big company spirit is thus formed in a small company.

* * * * * *

Small companies use several recruiting tactics, each with their pros and cons. Understanding how these tactics serve the needs of the firm is a necessary step to fielding a competitive organization. After discussing ways to identify the right candidates and successfully recruit them, it is time to discuss keeping them motivated and focused on their tasks.

Chapter 6: Motivating: *Company Culture Trumps*

Getting the most out of human capital is every manager's biggest challenge. In good times, the challenge is often how to keep employees from believing "the grass is greener on the other company's lawn." This is particularly the case for key talented individuals who have established reputations within the industry. They are inundated by offers and temptations. The challenge is to keep talented individuals focused on their tasks/projects, to continue working with the spirit of entrepreneurship, risk-taking, and leadership.

There have been a number of research reports on motivating people. Sloan Fellow Brett Rhodes (Rhodes 2001) examined the motivation factors that applied to his group of 35-45 year-old engineers at United Technology/Pratt & Whitney. After examining several classic and contemporary models (Blake and Mouton, 1978; Gibbons, 1998; Herzberg, 1987; McGregor, 1960; Skinner, 1974), he settled on using Edgar Schein's Career Anchors model (Schein 1990). Schein identified eight different categories of career anchors:

- Technical/Functional Competence
- General Managerial Competence
- Autonomy/Independence
- Security/Stability
- Entrepreneurial Creativity
- Service/Dedication to a Cause
- Pure Challenge
- Lifestyle

Rhodes found that his large company engineers gravitated towards Technical/Functional Competence, Security/Stability, Pure Challenge, and Lifestyle. This offers a good baseline to contrast and compare the categories that would presumably be held by talented startup individuals. In general, I find more resonance with General Managerial Competence, Technical/Functional Competence, Entrepreneurial Creativity and Pure Challenge among the startup crowd. This speculation is based on my interviews with startup personnel and is supported by Schein's (1978) original study. There is, in other words, a difference between those that seek out startups and those that choose large companies and this difference should influence how startup managers seek to motivate their most valued employees.

Compensation, including the potential to cash in upon "going public" is a key component of motivating startup participants. There seems, however, to be a comfortable consensus among senior management and front-line contributors alike that other factors are just as important (if not more so). Simple gestures that might not seem important at first glance were cited by my interviewees as examples of why individuals develop a sense of belonging to the company. In an optical networking company, for example, the lab area was viewed as one of the most important parts of the company and was furnished accordingly. The CEO wanted to make sure that company culture paid high respect to lab engineers and technicians who, in other organizations, might slave away in a nameless, faceless, *windowless* back room. Instead, the CEO led me through a tour of the lab. It was sunny, clean, elegant, inviting, and situated behind glass walls just inside the

front reception area – a showcase. That company also displayed employee homemade artwork prominently around the building on a rotating basis.

For those from the frontlines, startup environments entail a rapid sense of feedback on their contributions. The word spreads quickly in a small community and successes and failures are magnified. Each individual can become a "hero" in an instant and be rewarded by accolades from management and, perhaps more significantly, from peers. Senior management interviewees inevitably put "constant communication" among their top priorities. The networking CEO emphasized the following to his company employees:

- Leadership based Management
- Communicate
- Equity Stake
- Environment

With regard to "Communicate," he listed "The Week that Was," News Letters, Open Door Policy and Lots of Walking Around. To him, "Speed Is Life" and he felt that "week-old news loses its relevance." A networking chip designer concurs: "Communication is big, big, big..."

Related to the need to communicate is the advice offered by the optical networking CEO: "celebrate often." This met with approval by those interviewed from the frontlines. At the company level, news of successful product launches or significant sales wins boost morale of the whole company. The Human Resources VP of a wireless networking

company cautioned that individual rewards need to be "genuine" and held in spirit of celebrating outstanding individual contributions. From the frontlines, peer accolades highlighted in celebrations were desired, often over token monetary rewards.

"People are our most valuable asset" – double-talk

A software marketing manager interviewed reacted strongly to the almost Dilbert'ish statement that she has seen many companies articulate: "People are our most valuable asset." The companies' actions were however more indicative of another description, namely, "the valuable people here are engineers who develop product and everyone else is expendable." She continued, "...when anything went wrong, the last direction to point the finger was at development." In high tech, the R&D scientists and engineers entrusted with coming up with the company's next generation products or services are often revered as "gurus". The danger is that the hero worship alienates other critical contributors. The marketing manager proposed that companies that "...internally promote the importance of ALL areas of the company can more faithfully live the principle [that people are the most valuable asset]. This is more sustainable and works for any industry." Senior management at the technology management consulting firm I visited promotes this image. Their office space architecture relies on mobile phones and undesignated offices. Employees "check in" to whatever spot is available to perform their activities.

Career management/coaching/counseling

One Sloan Fellow interviewee, a successful startup CEO, understood the different roles each contributor performed. He championed the establishment of dual ladders for career advancement and emphasized that his company valued contributions from technical and sales/account management tracks alike. Within the dual ladder structure, an employee could focus on developing skills without being envious of people on the other track. Their career advancement took into account their interests and strengths and did not force them into positions for which they were temperamentally unsuited.

There did not seem to be an abundance of evidence of formal career management or coaching programs among the startups I studied. Frontline contributors did not see this as an impediment – they seemed to have their own ideas about career development. Many found the entrepreneurial environment to provide sufficient visibility into their accomplishments and future careers without formal guidance. The environment also allowed them to experiment with different dimensions of their talent, something that they believed would be more difficult in large companies. On-the-job skill development is a matter of necessity, or as a networking chip designer I interviewed noted, "you gotta invent, need to build. There is no manager telling you what to do."

Culture and values: Building the sustainable advantage

Ultimately, employees at startups are motivated when they achieve a comfortable fit with company environment, culture, and values. Startup participants at all levels reported the reasons they chose to work in such a firm. Three reasons stand.

- "They want to make a difference"
- "They get out of bed ready to go"
- "They felt a passion"

The software marketing manager interviewed cited her belief that the "thing about small companies that I think draws most people is the ability to make an impact." She continued: "If a company could find a way to preserve this value somehow, key people would stay."

The CEO of a wireless communications company shared the company's strategic goals:

> *">50% CAGR on Revenue*
> *60% Gross Margin*
> *>50% Market Share*
> *95% Customer Satisfaction*
> *95% Employee Satisfaction..."*

> *"These were developed and presented at our company wide offsite planning meeting last year. They are the header for our performance management/review forms, they are top lines in our operating plan and progress is reviewed on a monthly basis. All individual, group and department goals are tied into these 5 items. It's everyone's mantra!"*

He laid out the importance of everyone understanding the targets the company had set up, the challenges they face, and the role of customer and employee satisfaction in hitting their targets. He says his company culture emphasizes open communication of strategy and goals and he believes this makes for a "sustainable competitive advantage through thick and thin." Indeed, he claims there is "deep bonding among his management team" because they collectively survived financial distress early in the company's history.

Career anchors: small company participants

Rhodes (2001) found in his study that his engineers reported their career anchors as Technical/Functional Competence, Security/Stability, Pure Challenge, and, a few, Lifestyle.

My own analysis of interviewee responses to motivational inquiries provided a different list from my interviewees:

- Technical/Functional Competence
- General Managerial Competence
- Entrepreneurial Creativity
- Pure Challenge

Technical/Functional Competence Career Anchor

Schein (1990, 22) described the type of recognition valued by a Technical/Functional specialist:

> *"...a pat on the back from a supervisor who really does not understand what was accomplished is worth less than acknowledgement from a professional peer or even from a subordinate who knows exactly what was accomplished and how difficult it might have been."*
>
> *"...one of the greatest threats to technically/functionally anchored people as they age is obsolescence."*

This anchor is particularly prevalent in the frontlines. The software marketing manager I interviewed was particularly excited about being the point-person for the interactions between her company's R&D team and the customer. She believed that her value was well recognized by both customers and developers, informed judges with exacting needs.

She relishes the small company environment that allows her talent in bridging the gap between parties with different agendas to shine through.

Senior functional managers also showed pride in building a new organization without the support and infrastructure of a big company. The IT and HR managers of a wireless networking company both indicated that the small company allowed them to exercise their talent in addressing a specific and technical business challenge, without a dedicated staff to execute decisions. The founder of a semiconductor company contrasted his passion for the startup with his days at Bell Laboratories and emphasized that his technical knowledge could not have garnered the recognition that he now enjoyed.

General Managerial Competence

Schein (1990, 23) described the difference between a General Manager from a Technical/Functional Manager in the following way:

> *" ...they (GM) view specialization as a trap. They recognize the necessity to know several functional areas well and they accept that one must be expert in one's business or industry to function well in a general manager's job."*

Frontline contributors found the diversity of tasks and breadth of responsibility to be one of the startups' main attractions. A Sloan Management of Technology (MOT) student with several startup experiences showed that his broad background in engineering, marketing, business development allowed him flexibility to contribute to his company's urgent needs. And because of the high degree of visibility of contributions, he was

quickly promoted to positions of general management and higher responsibility. And this broadening of responsibility was precisely what he desired for his career.

The optical networking CEO described how he hired an engineer from an unrelated discipline and watched him develop into a high performer. The small company environment eased his transition into a different business, a different function, and more responsibility. Today, he is responsible for one of the most important product lines of the company. The CEO of a defense contractor also offered her own experiences as an example. She left General Electric to run her own company. She wrote and maintained software that was used by her company's financial forecasting system. She quickly learned that salesmanship was also important, as were her relationships with bankers and investors. She also found out that she liked working with Pentagon generals.

Entrepreneurial Creativity

Schein (1990, 30) described the type of benefits and recognition valued by those with Entrepreneurial Creativity as a career anchor:

> *"For this group of people, ownership is ultimately the most important issue."*
>
> *"...entrepreneurs are rather self-centered, seeking high personal visibility and public recognition. Often they display this quality by putting their own names on products or companies."*

Several of my interviewees fit this description well. The wireless networking CEO shared his initials with the company. The optical networking CEO pushes the spirit of

ownership down to his staff, encouraging them with decentralized decision making authority and responsibility. The "Identifiers" of the technology management consulting firm (Chapter 5) are examples of people with strong Entrepreneurial Creativity anchors.

Frontline contributors also exhibited strong traits of this career anchor. The software marketing manager wanted "...to be the big fish in a small pond". The chip designer looked to "think of something that the CEO hasn't thought of yet."

Pure Challenge

Schein (1990, 31) described the Pure Challenge anchor in the following way:

> *"They define success as overcoming impossible obstacles, solving unsolvable problems, or winning over extremely tough components".*
>
> *"...they do not seem to care in what area the problem occurs. Some high-level strategy/management consultants seem to fit this pattern in that they relish more and more difficult kinds of strategic assignments."*

The chip designer I interviewed gushed with pride about his project: "huge chip, may not fit, not routable." The software marketing manager likes to think about "helping the world." The VP of IT for a wireless networking firm stressed the importance of "focusing on opportunities, not the downsides." The semiconductor founder is on a crusade-like mission to turn his idea into a widely accepted breakthrough for one of the most difficult problems of electronic design, increasing device performance.

Schein counseled that understanding the top career anchors of the company's key talent leads to better methods of motivating them. Differently anchored people respond

differently to the same handling techniques. Making sure that company values, its culture and strategic objectives align with prevailing anchors is likely to help nurture and sustain a high performing team. Schein also discussed the conflicts that certain anchors pose for organizational design. However, he did not provide a "magic recipe" for success.

Three Lenses Model: Strategic Design, Cultural and Political Systems

As noted, Ancona, *et al* (1999) looked at organization effectiveness through three lenses:

- Strategic Design
- Political System
- Cultural System

Startup environments offer a variety of organizational structures, cultural worlds and political systems. The formal structures of the startups I studied change quickly over time as new leadership is hired and new business opportunities present themselves. Business downturns also wreak havoc – when entire product lines or departments are abandoned with the accompanying loss of human capital. Startups need to be nimble to survive and nimbleness includes sacrificing significant portions of the company to ensure that the rest has a better chance to succeed.

There is less appreciation for the role of the political system among my interviewees than there is for the Strategic Design and Cultural lenses. The closest an interviewee came to addressing the political question was acknowledging the "absence of the politics of a big company." The recruiting manager was also hesitant to explore the political structure of client companies. While noting that she steered candidates towards certain

positions based on cultural and functional fit, she sidestepped a consideration of conflict or the political nuances of coalition building. The existence of politics in small companies, however, is live and well. One only needs to look at the hiring "threads" in the network chip company. The CEO of the defense contractor relayed the story of a quality inspector who used to report directly to her. When the inspector, who had an impressive background and set of credentials, was moved to another manager, his performance dropped. He bypassed his new boss and lobbied the CEO for recognition. Others in his group could barely maintain their anger towards this "brown-noser." He was eventually fired firm. But, according to the CEO, "it was two years too late." The danger in not recognizing the role of politics of small companies is that the morale of the "troopers" may fall. Leaders are advised to keep tabs on the political health of their organizations and to take steps (drastic if necessary) to avoid greater losses. The quality inspector's new manager pulled the trigger late to avoid rocking the boat – and possibly to avoid second-guessing the CEO's support – but almost lost the confidence of his entire group.

* * * * * *

The third of the four themes of this thesis, Motivating sparked the most passionate discussions among my interviewees. Motivational issues provided the largest number of contrasting viewpoints between management and frontline contributors. They also spawned the final theme, Retaining key talent, discussed in the next chapter.

Chapter 7: Retaining: *Need to be proactive*

"Retaining" started out in my study as a sub-topic of motivating key talent. But I pulled the process out to stand on its own as a way of emphasizing its importance to interviewees. Viewed in negative terms, invariably conjuring up images of awkward meetings with a valued contributor who has received an offer from another firm or has submitted his or her notice of resignation, it is too often treated as the last-ditch effort – an attempt to make a "diving save" of an employee.

All good things must come to an end. Or must they?

Perhaps one of the worst headaches that a manager must face is to be confronted by a resignation from a key member of his or her team. Many studies (Lesser and Prusak, 2001) have pointed out the costs associated with losing productive employees in their jobs, and replacing them with new hires. While unpleasant, the more effective managers use exits of key employees as occasions to learn from the soon-to-be-departed about the circumstances that led to the departure. Exit interviews are thought to be one way to learn how to prevent future defections. Another objective of the exit interviews may be to turn the person's decision around. A defense contractor CEO made it a point to attend every send-off party and learn about potential future defections. She reasoned that employees worked in "buddy systems". Once one left the company, others in the buddy system were more vulnerable to further poaching. She cited one example of three engineers leaving one after another to join the same startup. As a side-note, she noted that all three also returned after the competing startup folded.

High technology has traditionally suffered high turnover rates – 20% or more annually is not uncommon, even in the ranks of highly successful firms (Baron 2000). The danger is that these turnover rates are accepted as *"the cost of doing business,"* or taken-for-granted because *"everyone else has the same problem."* Startups have a difficult time coping with defections – there simply is not a deep candidate pool from which to draw replacements. Key defections have been known to doom a company's prospects, especially in tough times. Venture capitalists are particularly nervous about a company's relation with key individuals. Microsoft can survive the resignation of a top technical architect; the loss of a similarly important talent in a startup may sound taps.

Several of those interviewed have experienced involuntary reductions in staff. They all noted that such reductions inevitably lower morale among those remaining. Top talent within these companies often find themselves questioning their futures within these organizations after such departures. Understanding the psychology of those that need to be kept and reviewing the most effective practices for retention are critical. Ironically, one of the main reasons why talented individuals leave their positions is their "lack of bonding" with the company. The chip designer I interviewed left his previous company because he felt that his effort and talents were not recognized. A mechanical engineer who worked for a small defense contractor left for family pressure to have a much closer commute to a large defense contractor. He returned 8 months later, complaining, "When I worked here, I was a person. When I worked there, I was a number."

Most of my interviewees argue, however, that if retention is thought of only when exit interviews are conducted, it is too late to turn around a disenchanted employee. The key is to be proactive. A company should not be caught by surprise. Surprisingly, interviewees looked at the firing process as an important component of retention.

Firing: Maintaining the right atmosphere (or does it)?

Labor laws are relatively accommodating to companies in the US compared to those in many European countries. Culturally, there is less of a stigma attached to firing employees in the US, say, than in far eastern countries (Japan and Korea stand out). However, this added flexibility should be exercised carefully. Working for startups is already known to be risky and employees must feel that they are being treated fairly and humanely if things do not work out. US companies that exercise the firing process indiscriminately (from an employee's point of view), lose much more than those they let go. They may also lose the allegiance of those they hope to retain. In conversations with non-executive contributors, it is clear that their skepticism of senior management decisions on human capital is most rampant among those that have witnessed or experienced first-hand layoffs or firing.

But, companies do go into slumps. Industries do go into downturns. Sometimes, there is no alternative but to shut down operations, close a particular business line, or drastically cut expenses to ensure survival of the company itself. It can be argued that employee

loyalty can in fact be strengthened by the handling of such unpleasant tasks to ensure those left behind are fully in alignment with what has to be done and that those not in future plans of the firm are treated with respect and support.

Among the senior executives who talked about layoffs, their experiences were excruciatingly painful. While they say they were forced to be the "grim reaper," they did not overlook the human element. Of such situations, they express the contradictory emotions of compassion, respect, and self-blame. One CEO explained that any layoff has to be performed swiftly. It must not linger in the company. Whenever possible, an "all-clear" signal should be sounded. His tactic was to gather current employees into the company cafeteria for an "all-hands-on-deck" meeting. At this meeting, he took full responsibility for the layoffs. He blamed his own mismanagement for not generating enough business to justify his aggressive hiring. He agonized about this but ultimately he felt there was no choice. He praised the commitment and effort of those departed and pledged to help them find other opportunities. Tough questions followed and the meeting lasted past official office hours. This is one task he counsels against delegating. He says the CEO must be the one to take the brunt of employee furor – "up close and personal". He also views email as hiding behind the safety of computers, an inappropriate way of addressing human concerns. In the end, he thinks his actions probably gained more respect for himself among those left in the organization than if he had he followed other possible courses of action.

From the bottom looking up, the actions of the executives speak more than their words. Gross mishandling of firing situations cause many to wonder who will be next and what the reasons might possibly bring about more layoffs. This is unhealthy, hurts productivity, and, all agree, needs to be avoided. The worst case scenario reported by my interviewees is that the important talent who witness layoffs begin immediately to contact external recruiters. This happens inevitably whenever a company is perceived to be vulnerable. The chief executive's actions, however, can help and perhaps prevent the exodus of valued employees.

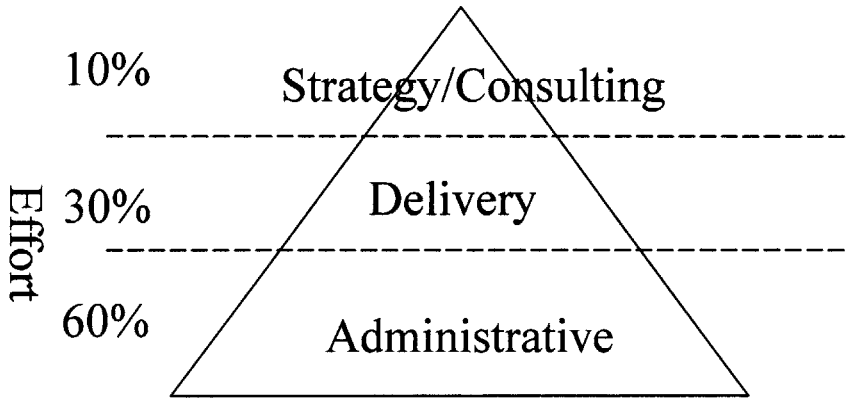
When single contributors (either in the trenches or in executive offices) need to be terminated, most of my interviewees concurred with the dictum to "Fire Quickly." Employees at all levels are not dumb. They can decipher who is making the grade and who isn't. Sometimes, it is not a matter of job performance but rather a clash of personalities or a case of a cultural misfit. Avoiding the distasteful task of firing someone who does not fit only serves to amplify the problem. And it may send a signal that personnel problems are tolerated or ignored in the firm.

The biggest mistake my interviewees noted is to do nothing and hope the situation heals itself over time. The recommended course of action is to deal with it quickly and decisively. Termination may not be the only option – transfer to another job in the firm, a change in reporting structure or an assignments to a staff (non-managerial) position must also be considered. All note that the signal that goes with any dramatic move is just as important as the move itself.

Why do people quit?

One senior human capital strategist views his task as dealing with three strata of a pyramid. As Figure 7.1 shows, the top tier is "Strategy/Consulting". This is high-leverage and long-reaching. But he says it only occupies ten percent of his time. The next thirty percent of his time is spent on "Delivery" of Human Capital services. The bulk of his time – sixty percent – is spent on what he regards as low-leverage "Administrative" activities.

Figure 7-1: Human Capital Effort Pyramid



His response to my question about how to retain valued employees is simply "hire the right people to begin with." This comes from the top of the pyramid. Furthermore, he argues that "people leave people; they do not leave jobs, posts or roles." He also put forth an analogy. He says that many companies today have relaxed rules regarding dating at work. With long work-hours, employees see the workplace as a social

institution. Thus, savvy human resource managers should recognize this and formulate strategies to take advantage of such a work environment. At a minimum, they should – in his view – set up explicit guidelines to deal with employee dating. *Business Week* (Symonds 1998) reported that dating in the workplace is common in Silicon Valley but only 13% of companies surveyed have explicit written policies about romance in the workplace.

Corporate culture itself it seems is a powerful retention tool. Employees often point to idiosyncratic quirks of the workplace as a source of pride. As mentioned, executives in the optical networking company I studied encourage employees to bring in home-generated pieces of art for exhibits on the walls or in the lobby of the company. My previous company hosted children's Halloween parties where designated offices were furnished with candy and spooky decorations. But it is also important to understand that culture changes over time. For example, as Gen X employees start to take over spots that used to be held by Baby Boomers, appropriate social occasions may change. What is a cute idea today may become an irrelevant or insulting a few years later. All interviewees suggest culture is important to retention but there is no universal culture they believe they must build.

Corporate image is also a part of the organizational culture. The technology management consulting firm in my study brands itself and its consultants as being able "to do what no one else can do." The managers in this company believe the branding itself helps retain

employees – who, they think, feel proud of being counted as among the best and thus would hesitate to move to a less prestigious firm.

Even compensation schemes can be used to build up an elite image. In the consulting firm, entry-level contributors are paid at market averages. Those with higher level of seniority are paid at the 75th percentile of comparable experience in the industry. Those that reach the top are "worshipped as heroes" and are paid at the 90th percentile. The best and brightest, therefore, are said to be paid almost double industry average. The key to not letting this imbalanced compensation structure generate feelings of unfairness and discourage teamwork within the firm is, according to my interviewee, comes from having an "adult relationship with the workforce." The firm's core value system – Performance, Development, Community and Respect (see Chapter 5) – was developed and adopted by employees across the company. Employees are held accountable for upholding these values. Management policies are aligned with these values also, letting talented individuals know that they are fairly considered for possibilities of moving ahead in the firm, and metrics are in place to encourage team play. The aggressively competitive structure of the compensation system is made possible by the value system in the company.

A valued employee submits her notice. Now what?

The best advice on the matter of retention was provided to me by a fellow Sloan Fellow. It is one I believe that most of my interviewees would offer as well. My colleague is very

proud of his ability to "turn around" those that have expressed to him a desire to leave. At one point, he said he was successful in retaining 9 out of 10 resignations. His secret? One word. "Honesty." He believes that the public reasons given for resignations are generally not the real ones. He believes that having a frank discussion with the disgruntled often reveals the "true" reason or reasons. In his view, seldom is the main cause simply compensation. Often it is miscommunication with management – about the state of a project or account. Other times, the "true" reason is dissatisfaction with advancement prospects. However valuable the employee may be, my Sloan Fellow classmate cautions against using financial incentives to address the issue. He believes this bypasses problems but does not solve them. In his mind, matching or exceeding external offers is unadvisable –if the employee is more valuable elsewhere he feels the company is not being fair in the first place. The real problem is one of equity. All these points must be conveyed in an open, trusting environment. Often, alternative positions within the company may provide just the right mix of new challenges, equity and comfort to re-attract the devotion of the employee.

One senior human resources vice president whom I interviewed joined a startup from a large cable company. In her previous position, she led a group much larger than the entire startup. Because the challenge of the new position was so attractive to her, she asked the cable company to stop any retention efforts on her behalf. Startups have an appeal that large companies do not. The wise executive should turn this mismatch into a strategic advantage.

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Chapter 8: Recommendations and Conclusions

Finding gems of wisdom from the interviews was not difficult. Grouping them to provide some useful recommendations is difficult, since contradictions, ambiguities and varied opinions abound. The following is an attempt to highlight the more important (and effective) tactics employed by my interviewees to build and sustain a high-performing company. These recommendations are addressed to management at all levels of startup firms, and are grouped in temporal order.

Identifying:

- Begin with an accurate understanding of the firm's culture.
- Derive Human Capital requirements from company strategy.
- Decipher functional needs (e.g. engineering talent with specific skill set).
- Develop an "ideal candidate" profile with quantifiable skills.
- Just as important, if not more so, fill out soft skills criteria, with emphasis on cultural fit.
- Work with external recruiting firm to develop recruiting plan.
- Look for flexibility/versatility.
- Use the Sloan Leadership Model to gauge soft leadership skills.
- Be sure candidate is "tuned" to the startup environment – "twice removed from IBM..."
- Develop a risk profile for all candidates – vulnerability to financial distress.

Recruiting

- Be proactive – have a hiring plan for the near (and distant) future.
- Remember that volume is not superior to quality.
- Post job descriptions internally to encourage employee referrals.
- For certain key positions, engage executive search or external recruiting agencies.
- Encourage diversity in candidate pool (e.g. no over-reliance on employee referrals).
- Think in terms of long-term relationship (Do not recruit to fill specific tasks).
- Understand the needs of the company, e.g. getting the right mix of Identifiers, Builders and Drivers.
- Hiring to plan: recruit to match company stage of development – target employee mix, not to fill a "req".
- Determine whether training "good, but not perfect candidates" is preferable to searching for the ideal candidate.
- Be sure the marketing of employment opportunities in the firm carries the right message and is reaching the right audience.

Motivating

- Understand employee career anchors, and design the reward system accordingly.
- Develop "bonding" with employees – making the organization a "home away from home."
- Develop core values system by involving all levels and functions in the firm.
- Communicate frequently and maintain openness throughout the firm, avoid communicating only on a "need to know" basis.
- Take feedback seriously and respond accordingly
- "Walk the walk" and remember slogans don't inspire employees as much as examples.
- Embrace diversity of opinions and groups. Try to break up cliques as they form.
- Pay attention to physical and social attractiveness of the workplace.
- Celebrate often.
- Provide "dual ladder" opportunities.
- Know the "political system" operating in the firm.

Retaining

- Hire the right people from the beginning.
- Be proactive with employees and encourage those who are thinking about leaving the firm to be communicative – avoid surprises.
- Watch out for "buddy systems" that multiply defections.
- After layoffs, invest in morale building programs and actions.
- Remember that people leave people, not the company.
- Treat the workplace as a social institution.
- Consider the organization image and culture to be the best retention tool. Invest accordingly.
- Get rid of problem employees quickly but with due process and respect.
- "Honesty."
- Remember that counter-offers only push problems into the future. There is always a need to identify root causes when employees leave (or threaten to leave) the firm.

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A Final Note

In this thesis, I set out to examine the sources of competitive advantage of small companies in high tech. The role of the small company in the US economy is well appreciated – it is acknowledged as a source of new employment opportunities, of new technologies and of productivity growth. After considering several other parameters,

such as access to financial capital and positioning in the value chain, human capital emerged in my mind as the critical source of competitive advantage for small firms. Large companies are also cognizant of the importance of their "non-tangible asset base" (those assets carried around between the ears of its workforce), they are constrained by legacy and marketplace restrictions. Small companies are freed of some these constraints and can capitalize on their people more productively.

The important question is just how small companies can unleash the collective energy of their employees. This thesis examined various stages of building a small high-tech company to effectively compete against larger companies with deeper pockets. Interviews with participants from large and small companies helped to identify a number of "best practices" in four areas – Identifying, Recruiting, Motivating and Retaining key talent. These "best practices" are intertwined but distinct enough to stand on their own. They all reflect the "softer" side of management. Yet, they provide competitive advantage for the small company.

References

Ancona, Deborah, T. Kochan, M. Sculley, John Van Maanen, Eleanor Westney, *Managing for the Future (2nd Edition),* Cincinnati, OH: Southwest, 1999.

Ancona, Deborah, Tom Malone, Wanda Orlikowski, Peter Senge, "Sloan Leadership Model," Distributed Leadership Workshop, MIT Sloan School, January 2002.

Baron, James N., Michael T. Hannan, and M. Diane Burton, "Labor Pains: Change in Organizational Models and Employee Turnover in Young, High-Tech Firms," Stanford Graduate School of Business paper, June 6, 2000.

Brealey, Richard A. and Stewart C. Myers, *Principles of Corporate Finance (Sixth Edition),* New York: Irwin McGraw-Hill, 2000.

Burge, Frank, "Choosing your own world," *Electronic Engineering Times*, February 11, 2002

Cassidy, Mike, "Birth of a chip," *San Jose Mercury News*, January 27 – February 7, 2002.

Diaz, Alfonso, "Re: Hello, thank you for your talk to the SF02 class last week," email to dtc@sloan.mit.edu, sent April 4, 2002.

Elmer-DeWitt, Philip, "Steve Jobs, Apple's Anti-Gates", *Time 100*, January 19, 2000.

Fine, Charles, "*Clockspeed,*" Reading, MA: Pegasus Books, 1998.

Hax, Arnoldo, *The Delta Model: Explaining New Sources of Business Profitability,*" MIT Course 15.902 handout, 2001.

Hax, Arnoldo, *The Strategy Concept and Process (2nd Edition),* New York: Prentice Hall, 1996.

Hax, Arnoldo, "The Five Frameworks for the Study of Strategy," MIT Course 15.902 handout, 2001.

Hesseldahl, Arik, "Mobile PC Chip Battle Looms," *Forbes Magazine*, October 11, 2000.

Hopkins, Jim, "Big business can't swallow these little fish," *USA Today*, March 27, 2002, Section B, page 1-2.

Kanellos, Michael, "Transmeta, Intel in a battle for notebooks", *CNET News.com*, November 13, 2000.

Lawler, Edward E. III, "*Rewarding Excellence,*" San Francisco: Jossey-Bass Publishers, 2000.

Lesser, Eric and Laurence Prusak, "Preserving Knowledge in an Uncertain World," *Sloan Management Review*, Fall 2001, Volume 43, Number 1, pp. 101-102.
Mainelli, Tom, "Intel Launches Low-Power Server Chip," *PCWorld.com*, November 13, 2001.

Myers, Stewart C., "*Financial* Architecture," Presentation to Sloan Fellows, April 10, 2002, page 33-35.

Niccolai, James, "Intel aims at Transmeta with low-power chip," *IDG News Service*, January 29, 2001.

Porter, Michael E., "*Competitive Advantage*," New York: The Free Press, 1985.

Rhodes, Brett, "In a Changing Corporate America: What Motivates 35-46 year old Engineers?," *MIT Master's Thesis*, MIT Sloan School of Management, 2001.

Rosenberg, Scott, "Silicon Valley's Power Cults," www.salon.com, April 29, 2002.

Sloan Educational Services, Thesis Handbook, MIT Sloan School of Management, 2001-2002.

Sun Tzu, *The Art of War* (Edited by James Clavell), London: Hodder & Stoughton, 1981.

Symonds, William C., Hamm, Steve and Gail De George, "Sex on the Job," *Business Week*, February 16, 1998.