CHAPTER 4

SUCCESSFULLY MAKING A JOB OR CAREER CHANGE

KEY FACTORS IN MAKING A JOB OR CAREER CHANGE (COMPANY, TECHNOLOGY, INDUSTRY)

Tightly coupled and often interwoven with the previous career strategies is the type of career change you are making when changing jobs, departments, or companies. There are three major factors that the engineer must consider when making a job or career change. These factors are the company, the technology, and the industry. The first factor when contemplating a career change is the company. The obvious consideration for this is whether or not to stay with the same company or move to a new one.

The next factor is the technology or degree you must have for your new career choice. Are the technology and the corresponding degree the same or you must return for further training and obtain a new degree. An example is making a career move that requires you to be a software engineer when you are presently a chemical engineer. To be successful in your transition to a new career you will have to return for further training and may even have to obtain a new degree.

The final factor to consider is the industry in which you will be employed. Is the career choice in the same industry or will your career change move you to a new industry? An example might be moving from the automobile industry to the food industry.

A model to help you think through your career change choices is shown in Figure 4-1. The career choices have been mapped into a cube. Along one axis are the company choices, same or new. Along the next axis are the technology choices, same or new. And the final axis shown is the industry choices, same or new.

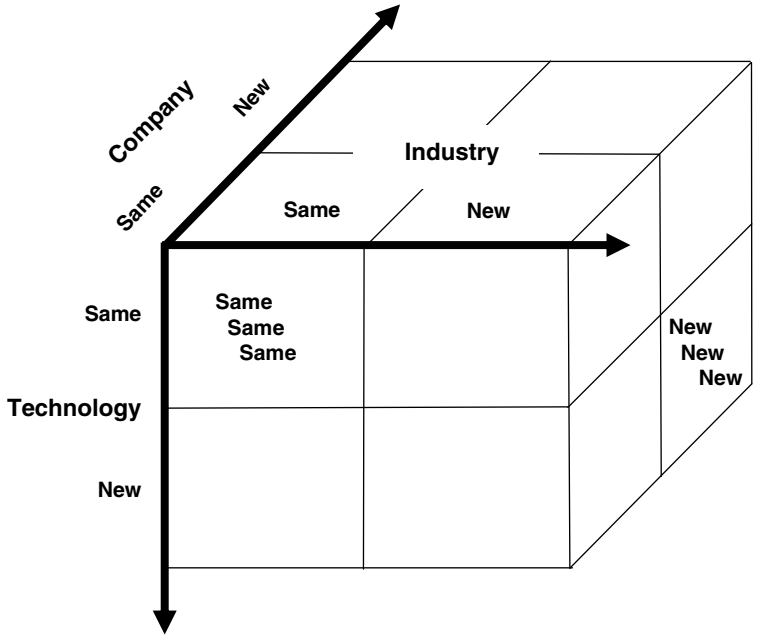

FIGURE 4-1 Career change choice cube model.

The upper left cube at the origin is where you are presently located. Making career changes and moving to different locations in the cube will involve varying degrees of risk and different types of career actions to successfully support the change.

The safest move and lowest career risk is normally changing your job where you remain with the same company, the same industry, and the same technology. This career move is shown in Figure 4-2, where a career change of this type keeps you all within the (same, same, same) cube.

This is considered the safest career move since you minimize the impact and amount of change to your career. You stay with the same company, in the same industry, and are working in the same technology field. It is not risk-free but risk has been greatly minimized. If you want to minimize risk and keep the amount of change in your life as small as possible, making a job change of this type is what you should seek.

The next type of change involves moving along a single axis where you only change one factor and keep the other two factors the same. I refer to this as a one-dimensional change. You move in the model in one axis only, so you have two factors the same and only one factor changing (same, same, new). An example of this is shown in Figure 4-3 where you move to a new company and stay with the same industry and same technology.

The next level of risk-taking when changing your career is doing a two-dimensional move or diagonal move in one axis. This is shown in Figure 4-4. This type of career move involves changing two factors at once and represents

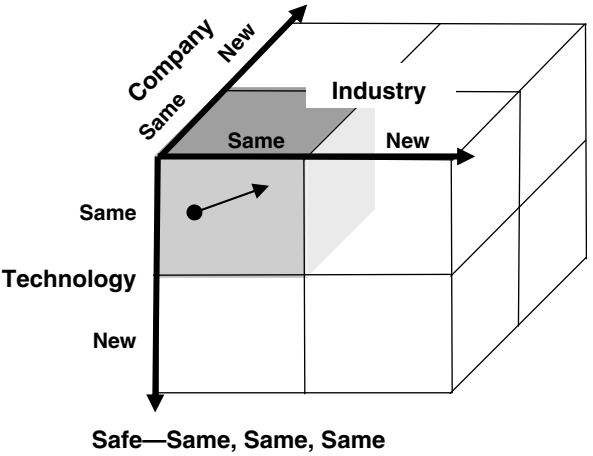

FIGURE 4-2 Safest career change.

a high-risk situation (i.e., new, new, same). These types of career moves have to be well thought out with encouragement and help from your mentors and career counselors.

The highest risk career change you can make is when you change all three factors at once and move in three-dimensional diagonal (i.e., new, new, new). This career move is shown in Figure 4-5.

For us, probability engineers, the total number of possible combinations of career changes is equal to 2^3 or 8 possible combinations. These combinations have been ranked in Table 4-1 from the lowest to highest in risk.

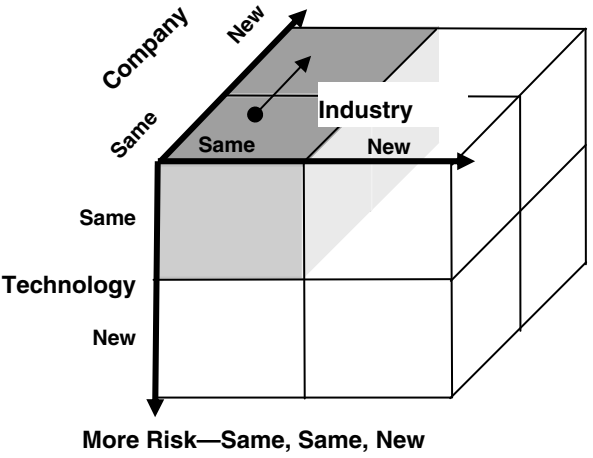

FIGURE 4-3 Career change involving one factor.

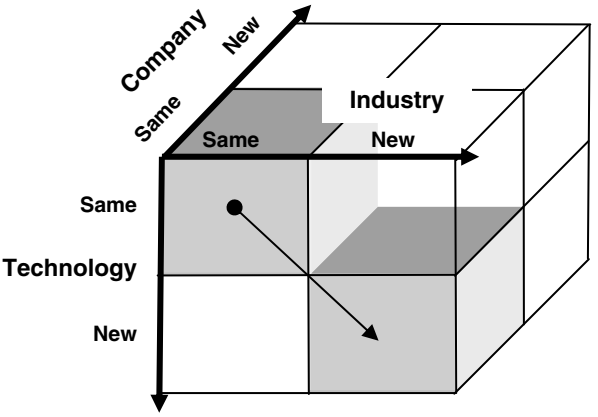

FIGURE 4-4 Career change involving two factors.

In Table 4-1, the left-most three columns identify the factor changing and the fourth column identifies an associated career risk level for the type of combinational change. Rated the lowest risk and the safest career change is when you make a career change where you stay in the same company, with the same technology, and the same industry. Although totally not risk-free, this type of career change usually has minimum impact on your work, residence, and your family.

The next level up of increased risk is changing just one factor (company or industry). This level is rated more risk. If you are contemplating a career change of this type, please be aware that significant planning should go into making this type of change.

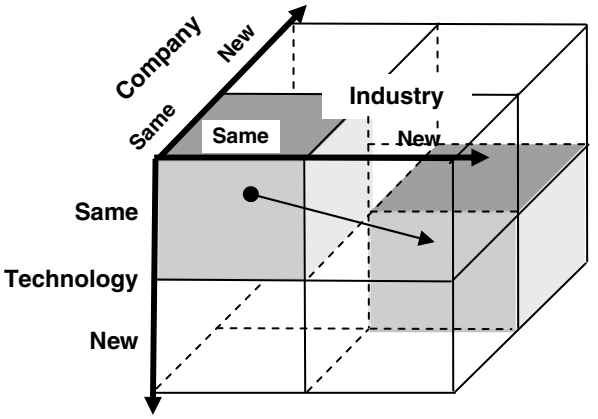

FIGURE 4-5 Career change involving three factors.

TABLE 4-1 Career Change Options

Company	Industry	Technology	Risk Consideration	
Same	Same	Same	Safest - Lowest Risk	Safe, but do planning
Same	New	Same	More Risk	Beware, significant planning required
New	Same	Same	More Risk	
Same	Same	New	High Risk	Caution! Intensive planning required
Same	New	New	High Risk	
New	Same	New	High Risk	
New	New	Same	High Risk	
New	New	New	Extremely High Risk	Dangerous! Get help

Are you prepared to do risk management?

Changing two factors or the special case where you change the technology or engineering degree you must have is rated high risk. Changing two factors at once or the single factor of your technology base represents a significant change in your career direction. It is not something to be taken lightly and extensive planning should be involved. Again, work with your mentors and career counselors if you are considering this type of high-risk change.

Finally, the highest risk or "total makeover" approach is to change all three factors at once. This is an extremely high-risk career move and the engineer should have professional help when making this type of change. A good example of this might be a nuclear engineer deciding to become a software engineer and leaving his company to go back to school to get a degree in computer science.

PLANNING FOR SUCCESS WHEN CHANGING YOUR CAREER

Key to making it through any change is identifying the risks upfront and have a risk mitigation plan for each one. The positives, negatives, and potential actions to reduce risks with making a career change for each of the factors are shown in Tables 4-2 through 4-4. The positive reasons for making a career change are generally the same for all three factors. People make career changes generally for better opportunities, better pay and benefits, and more interesting or challenging work. These are all very good reasons to consider changing your career.

Changing your company is the first factor we consider. The negatives for changing your company include potential home relocation. Others are loss of vacation benefits and retirement benefits. Also included in the negatives is loss of your people network. You are leaving all the people at your old company behind and the support they provided. Through years of experience you developed friends and technical points of contact that you could go to for

TABLE 4-2 Positives, Negatives, and Actions when Changing Your Company

Positive	Negative	Actions to Reduce the Impact or Risk
+ Better opportunity for advancement	– Potential home relocation	• Assuming you are still in the same industry utilizing the same technology:
+ Better pay and/or benefits	– Loss of vacation benefits	– Select a company close to home so you do not have to move
+ More interesting or challenging work	– Loss of retirement benefits	– Select a company you have dealt with previously and know about
	– Loss of people network	– Network and meet as many people as you can once you arrive at the new company
	– Must start over proving yourself; new person in the company	– Bring along examples of your work portfolio to share with people – Spend extra time learning the new policies and procedures of the new company – Learn about the products and customers

help. In the new company, you will have to start over developing your support network.

There are several actions you can take when changing your company to minimize the risk to your career. These risk reduction actions assume that you are only changing your company and not changing your industry or technology at the same time. Top of the list is to select a company close to your home so that you do not have to move or change your residence. You may also select a company you have dealt with in the past, maybe a supplier or customer and know about their products. Network and meet as many people as you can when you first arrive at the new company. Bring along examples of your work and take the time to show key people in the group you are joining some of your past accomplishments. Share your portfolio if you have one.

TABLE 4-3 Positives, Negatives, and Actions when Changing Your Industry

Positive	Negative	Actions to Reduce the Impact
+ Better opportunity for advancement	– Loss of experience base (people, customers, and methods of doing things)	• Assuming you are still working for the same company and in the same technology
+ Better pay and/or benefits	– New industry standards	– Network and meet as many people as you can
+ More challenging work	– Loss of people network	– Learn about the products and customers
	– Must start over proving yourself	– Obtain training on the new industry standards
		– Look for visible ways to stand out
		– Highlight things you bring from your old industry that may improve things
		– Attend conferences and engineering society meeting in the new industry

One of the key actions is spending extra time at work to learn the new company policies and procedures. This may include signing up for special training and attending more than your fair share of training courses in the first year.

Finally, but certainly not least, find out about the company products and customers. Get yourself invitations to customer meetings; learn about the customer hot buttons. Attend program reviews and company quarterly status meetings whenever you can.

The next career change factor to consider is changing your industry. This discussion assumes you are still with your same company and you will be required to use the same technology background. A good example of this might be changing from the car industry where you are a mechanical designer to the food industry where you handle mechanical processing and packaging of food. The negatives, positives, and recommended actions when changing industries are shown in Table 4-3.

The positives for changing your industry remain the same: better opportunity, better pay, and more interesting work. The negatives change,

TABLE 4-4 Positives, Negatives, and Actions when Changing Your Technology

Positive	Negative	Actions to Reduce the Impact
+ Better opportunity for advancement	• Return for new education, costly tuition	• Assuming you are still working for the same company and in the same industry
+ Better pay and/or benefits	• Loss of experience base; re-entering workforce like a new graduate	– Obtain training or degree before you make change
+ More challenging work	• Loss of people network	– Learn about the products and customers
	• Must start over proving yourself	– Obtain training on the new technology standards
	• Potential pay reductions	– Highlight things you bring from your old industry or company that may improve things
		– Attend conferences and engineering society meetings in the new technology
		– Network and meet as many people as you can

however, from the previous example. Changing industry causes you to lose your experience base that includes people, customers, and methods of doing things. To counter this and minimize the impact on your career you remain working for the same company and can easily go back to your former group should you need them and ask for help.

In the new industry, you are going to be subjected to all new standards and methods for doing things. Hopefully they will not be that different so you can easily adapt. An example of this might be changing from knowing all the crash standards in the automobile industry to health regulations for packaging in the food industry.

Again, you will lose your people network and spend time re-building a new network of coworkers, customers, and suppliers. In addition, you will be the new kid on the block so you will have to prove your technical skills all over again to your team.

Actions you can take to minimize the career impact for changing industries include networking and meeting as many people as you can. Putting in the extra effort and spending extra time learning about the

products and customers in the new industry is a must in order to survive in your new position. You should read old test reports and get training in the new industry standards as soon as possible. Look for visible ways to stand out and highlight your accomplishments. You could also highlight or share with coworkers the technology and methods of doing things that you bring from your past employer. Finally, a good way to get up to speed quickly is by attending industry conferences where you meet all the vendors and can obtain training by attending seminars.

The last career change factor to consider is changing your technology or degree. This discussion assumes you are still with your same company and you will be in the same industry. A good example of this might be a mechanical engineer who is considering returning to school to become a software engineer. Another example is an electrical engineer returning to school for a biomedical engineering degree. The negatives, positives, and recommended actions when changing technologies are shown in Table 4-4.

The positives for changing your technology remain the same: better opportunity, better pay, and more interesting work. Changing your technology is probably the hardest of the three factors to change and requires the most effort to accomplish. Returning for a new degree is not easy, to say the least. It could be very costly and require a significant multiyear investment of your time.

When you change your technology you lose part of your experience base. It is like re-entering the workforce at the college graduate level. Another negative is that you lose your people network and must start all over proving yourself. It may even include a salary reduction since you are starting over at the most junior level.

Even though there are very compelling reasons not to do this, it can be a very good move for your career if your technology base has become obsolete. Frequently, engineers who return for new degrees and return to work have very successful careers. Part of the reason is that they found new work where their old degree and new degree were both utilized, making them a highly educated and highly desirable employee.

To minimize the risk while making this change, one can obtain the training or degree before leaving your present company. Have your present company pay the tuition and hopefully help you find a job when you complete the degree. Another good move is to learn about the products and technologies that will utilize your new training. You can also minimize risk by learning the new industry standards. Once you start your new job make sure you highlight all the experience you bring from your previous job.

Network and meet as many people as you can in the new technology area. You have the option to network with the professors teaching the class, other students, and even customers and suppliers. Utilize your HR department and have them do a search for people in your company who already have the degree you are trying to acquire.

Making a technology or degree change is going to be very difficult and you need to call upon all the resources you have available: Human Resources department, fellow employees, professors, mentors, and career counselors.

SUMMARY

There are three major factors that the engineer must consider when making a job or career change. These factors are the company, the technology, and the industry. When making a job change, the safest move is staying in the same company working on the same technology for the same industry. Changing one of the three factors is higher risk and changing two or all three factors is considered the highest risk moves for your career. There are positives and negatives associated with any career change and knowing what to do to minimize the negatives is key to making a successful change. A highly risky career change can be successfully made when the proper actions are taken. These actions include networking with people who already have made significant career changes, educating yourself about the new area that you wish to change into, and getting professional help through career counselors.

For further information about making a career change, I recommend you search on the Internet using "Career Changes" or "Engineering Career Changes."

Have you identified any career actions you want to take as a result of reading this chapter? If so, please make sure to capture these ideas before you forget by recording them in the notes section at the back of the book.

ASSIGNMENTS AND DISCUSSION TOPICS

1. Which of the three factors (company, technology, industry) is the most difficult to make? Which is the easiest?
2. Do companies help you make a technology career change?
3. How long does it take to make a significant career change?
4. Is returning for a Master of Business a one-factor change only?