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Equipping, Enabling, and Encouraging Marketplace Leaders

Shifting Paradigms

Building an Organization That Leads Change

Horses as the primary mode of transportation, candles used for lighting, wood used for cooking and heating, windmills for pumping water, wind-up mechanical watches, and mimeograph machines, are all extinct. These were not bad products, but none the less they are gone.

What happened? Paradigm shifts occurred. Technology made new products possible, new products replaced old products, and in many cases, created whole new markets.

What would you have done if you had been the owner of a large mimeograph machine company and you knew that another company had the technology to create document copies using a new photostatic copy method? Would you have discounted the idea and continued to make mimeograph machines until one day you woke up to find yourself in Chapter 11?

The ability of leaders to recognize these types of paradigm shifts in the future will make the difference between companies who are successful in the 21st century and those that are just hanging on.

What is a Paradigm Shift?

The word paradigm comes from the Greek *paradeigma* which means “model, pattern, example.” In his book *Future Edge*, author Joel Barker provides his definition of a paradigm: “*A paradigm is a set of rules and regulations (written or unwritten) that does two things: (1) it establishes clear boundaries; and (2) it tells you how to behave inside the boundaries in order to be successful.*”

The greatest paradigm shift of all time came when Jesus preached the gospel. The impact of that simple message has been felt throughout the world. People changed, societies changed, and governments changed, all because of one man and His message.



Think about some “minor” industry changes. What would you have done if you had known about the following technology paradigm shifts in advance?

- FAX machines,
- Personal computers,
- VCR’s, Laser Disks, and DVDs,
- Cable television,
- Cellular phones, or
- Streaming audio & video?

The list of industries created in the last ten years numbers in the hundreds! The list of industries that are gone also numbers in the hundreds. Companies that want to survive well into the 21st century had better be adept at managing change, and able to forecast paradigm shifts.

An example of a paradigm shift that occurred in the latter half of the 20th century involved the Swiss and their watch industry.

The Swiss Blew their Opportunity

Up through the 1960’s, the Swiss were world renowned for their prowess at making mechanical watches. The Swiss invented the minute hand and the second hand. They were the undisputed leaders in gear and bearing technology. It was the Swiss who first developed the waterproof watch and the best self-winding watches. The Swiss were innovators. By 1968 they had a remarkable 65% of watch sales in the world. No one was even a remote second.

In 1967 the Swiss developed the first electronic quartz movement. Even though the Swiss manufacturers decided the new watch wasn’t noteworthy, they displayed it at the World Watch Convention. A small Japanese company named Seiko liked the idea of an electronic watch, and the rest, as we say, is history. By 1980 the Swiss share of watch sales dropped to below 10% worldwide.

The electronic watch revolutionized watch production; they were more accurate, more durable, and less expensive to manufacture. A paradigm shift had occurred. All the conventional rules about making and selling watches in the world changed in a matter of two years.

If you’re still not convinced that forecasting paradigm shifts are important to your business growth and development let me offer you an example from the world of print publishing:



The Fall of Books and Magazines

Book and magazine publishers are expert at typesetting, layout, graphic design, production, and marketing of their products through hundreds of distributors to thousands of bookstores throughout the country. If you were a print publisher in 1995, you might ask yourself, “What if someone came along and created a potable machine that could display the book or magazine on a screen that the machine “reads” from a disk?”

You would create a whole industry of people who would make the machines, the accessories, and the disks. At the same time, the publisher would have to change rapidly to stay in business. Eventually, you would completely eliminate the printing and binding of books and magazines altogether in favor of the small plastic disks.

Sony developed a product called the Data Diskman. It is capable of storing 80,000 pages of text on a single disc. This technology allows the consumer to download a book via modem to the disk in their Data Diskman. Imagine, call up the publisher, tell them the book you want and they modem it to you in a few minutes over the phone lines, which is then stored on your disk by the Data Diskman. The publisher charges your credit card and pays the royalties to the author. No more book stores, no more trees cut down, no more trucks hauling books back and forth across the country!

Now, imagine this whole distribution system is simplified even further by the ability to stream high resolution content directly to a reader’s personal tablet or cell phone? Oh, wait! We can!

This scenario may have sounded a bit “Buck Rogerish” to you in 1995, but remember, the technology to do this already existed. The only thing left was to change the way consumers bought their product. It took five years for the idea to go into production, and another 5-10 years for the idea to really catch on, but it happened.

Forecasting Paradigm Shifts

Some paradigm shifts will occur as a result of completely new technology. But for most businesses the technology for product development that will lead to many of the “minor” paradigm shifts exist in the world today!

The trick is to forecast the paradigm shift, recognize its development in the early stages, and then position your company to take advantage of the shift. To illustrate this three-step principle let’s review the history of transportation:

In the beginning, man walked. Probably for hundreds of years there were no paradigm shifts. But there were problems with walking; your feet got sore. Once the problem was identified someone developed a solution; sandals to protect the feet. There were still problems with walking,



however; you get tired walking all day long carrying heavy loads. Another problem identified. Someone realized that if they could get a donkey to carry the load, they could walk a lot further. Another problem solved. But you still couldn't get very far in a day; donkeys are not speed demons. Someone tamed a horse to ride, and another problem was solved. For hundreds of years, man's primary mode of transportation was horses. Industries developed around the breeding of horses, making tack, wagons, etc.

Eventually, someone realized that horses and wagons just didn't make sense to cover the long distances across countries. A wagon was fitted with a steam engine and laid on rails, and another problem was solved with the birth of the railroad. Railroads solved many transportation problems. They were able to carry enormous loads across great distances at high rates of speed, but they were confined to those tracks! To get to Aunt Mae's house across town, you still had to saddle your horse or hitch up a buggy.

Someone decided to put a steam engine on a wagon with steerable wheels, and the automobile was born. The automobile solved lots of problems; it was personal, you could go wherever there were roads, and whenever you wanted. As reliability increased, popularity grew, and the automobile evolved into the remarkable piece of modern technology that we enjoy today. As revolutionary as the automobile was it still took a long time to get across the country, they didn't work very well in the snow, and you certainly couldn't get across the ocean in one!

Then, of course, the Wright Brothers bolted an internal combustion engine onto an airframe, and the aviation era was born. Airplanes solved the problem of covering great distances at high rates of speed. They could be small enough to be personal, or big enough to carry the whole neighborhood. More problems solved.

Do you see the pattern above? There are known needs and unknown needs; paradigm shifts occur when someone meets these needs with a new product that solves the problems of the old product. Man knew his feet were sore and that he needed something to cover them when he walked. At the point when sandals met his needs for protecting his feet product development did not stop. The sandal evolved over hundreds of years into shoes that were designed to fulfill very specific purposes. These are the minor shifts.

A major shift occurred when man moved toward the donkey and the horse to replace walking as the primary mode of transportation. Another shift occurred with the development of railroads, another with automobiles, and another with airplanes. Another major shift will occur when we can say, "Beam me up Scotty," and be instantly transported from LA to New York. Each of these major shifts solved some of the problems of the previous product, but they also created a new group of problems. These new groups of problems led to the next major paradigm shift.



In many cases, paradigm shifts occur because new product technology creates new, previously unknown, needs. The development of the internal combustion engine led to the popularization of the automobile, but the man that built the first engine may never have thought his product would fully replace the horse and buggy. Most men probably never even thought they needed a faster way across the country until someone attached an engine to a wagon with steerable wheels. Most men with cars never thought they needed to fly! But the lack of “known need” didn’t stop someone from creating a product that created “new needs!”

Don’t Trust the Experts!

Often, experts who develop technology don’t even understand the import of their actions. Simon Newcomb, a noted astronomer, said in 1902, *“Flight by machines heavier than air is unpractical and insignificant, if not utterly impossible.”* In 1913 the American Road Congress reported that *“It is an idle dream to imagine that...automobiles will take the place of railways in the long-distance movement of...passengers.”* Thomas Edison said in 1880 that, *“The phonograph...is not of any commercial value.”* If you want to recognize paradigm shifts you might want to look to someone other than the “experts” for answers.

Getting Started

If you are a manager and you want to develop an organization capable of forecasting, recognizing, and taking advantage of paradigm shifts then the following points will be helpful:

1. Forecasting

Get a group of individuals together and have them write “future” scenarios. What will this industry look like in 20 years, 50 years? These “future” scenarios will help you see major paradigm shifts. If you’re in the home building business, you may see the concern for the environment as a precursor to a major shift in home building technology; new heating systems, new building materials, new super insulation materials, etc.

Get another group to write about what problems exist in the industry today, and to forecast future problems and needs. For example, if you’re in the plastics business you might consider oil supplies as a future problem. You might see pollution control legislation as a problem. You might see a need for a new type of plastic that will meet certain consumer needs, etc.

2. Flexibility

As managers, we tend to focus on problem solving. In the crush of our workloads, we tend to be very comfortable with current solutions to problems. What we don’t realize is that there are new ways of doing old things and that we must be willing to accept these new solutions, even while the old solution is still working.



3. Search and Reapply

Search and reapply is a big opportunity area for most businesses today. One department gets a good idea and uses it to solve a problem, but nobody else in the organization ever hears about it. We need to create systems for publicizing ideas throughout our organizations. Once this is done, we need to teach people to constantly look at the way other people do things as fertile ground for ideas that will help them do their jobs better.

4. Listen

As a manager, you need to understand that the people who have the ability to spot paradigm shifts are probably working for you right now:

- They are the young people who have not been so socialized by years of experience that they are capable of seeing things a different way.
- They are the experienced people who just took on a new job.
- They are the odd ducks who are always challenging the status quo, never content with the way things are; they are forever trying to change things.
- They are the inventors who get ideas and build prototypes. They often don't even realize how valuable their ideas are in terms of solving other problems.

Now that you know who is most likely to spot paradigm shifts, listen to them, and record their ideas. You never know when what seemed like a silly idea for one project will turn out to be a brilliant solution to another project.

One Final Thought

Any organization that wants to be successful in the 21st century will need to be:

- future oriented; capable of anticipating changes in technology and consumer needs,
- innovative; not only in the way they apply technology, but in the way they approach it, and
- focused on quality; total quality will be the bare minimum in the next century.

To be successful, you will need all three of these components; not one or two, but all three. Getting to the point where your organization has these attributes may represent a major paradigm shift, so you might as well start right now.