

## The Transition to Empowered Problem-solving Teams at Motorola

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Motorola is one of the world's leading providers of electronic equipment, systems, components and services for worldwide markets. Our major products include semiconductors and wireless communications equipment such as two-way radios, pagers, and cellular telephones.

With sales exceeding \$13 billion, Motorola employs more than 113,000 people in facilities around the world. Every employee in each facility understands how Motorola plans to be successful in the future--through absolute dedication to total customer satisfaction.

As we develop our individual business strategies, we have fine tuned the objective to what we think reflects the ownership and commitment of our organization. Motorola's fundamental objective (everyone's overriding responsibility) is TOTAL CUSTOMER SATISFACTION. We strive to provide our customers with the best products and service in the world. It's a simple, clear statement. We encourage our customers to have high expectations.

We firmly believe that no matter what product we make or business we might be in, the processes of success are the same, however, initiatives and goals change with the current needs of the business.

The constant that has been with us from Motorola's beginning is the belief in uncompromising integrity and constant respect for people. We believe that our people are the competitive advantage. We believe that diversity gives our work force a unique quality that enhances problem-solving skills. We are prepared to invest in that belief.

We invested over \$100 million in 1992 to train and educate our associates worldwide. Every employee has a minimum of 40 hours of training per year--many of our businesses invest twice that amount. The return on that investment continues to ensure the best deployment of our human resources to achieve superior service to our customers.

What does an organization that values the knowledge and skills of its people as a primary resource look like?

Motorola took an honest look at where we were compared to where we wanted to be and decided we were not organized to bridge the gap. We were allowing internal charts and short-term goals to manage us instead of demanding that we understand our customers, our

businesses, products and long-term strategy. We were not satisfied with our ability to anticipate the directions of our continuously changing global businesses.

A new direction was required for us to break out of the way things have always been done. We needed to identify and implement a process that demands that each of us takes responsibility for running the business, that each of us anticipates and solves problems, that each of us prepares for the current and future needs of the business. We needed to create a work force that could bring the necessary number of skilled people to whatever job needed to be done.

Our management structure and pay-for-performance systems now reflect this process of ownership of the business by all. Employees manage the business. Management provides the total work environment and leadership to make the strategy work. The significant changes include:

- Management ownership and responsibility by employees at all levels is now a reality.
- We have delegated decision-making authority to empowered problem-solving teams and turned managers into leaders and employees into business managers.
- Pay systems that reward performance have replaced the old time-ingrade systems. Base pay is measured by demonstrated skill and flexibility through periodic job certification.
- Merit pay is based upon each person's contribution to the business, as much as one third of base pay; there is one grade with a broad range of pay for all factory production operators and technicians.
- We have an understanding and belief in the importance of focusing on the customer.
- Managers know they must become leaders, facilitators and coaches.
- We must share information with everyone.
- We allow people to take risks and make mistakes. To take no risk is the greatest risk of all.

Both the management structure and pay-for-performance systems require employees to understand, anticipate and prepare for the current and future needs of the business. Ownership of this process is required by all. Employees understand our business challenges and our competitive position through a process of timely education and communication.

At Motorola, the difference between training and education is the difference between learning how and why. Motorola has taken the additional step of building the why into expanding knowledge and skills. For example, in the belief that you know a subject thoroughly only when you can teach others, many of our production operators have agreed to become Skills Center Instructors for eighteen months. This rotation through the Center develops instructor skills, team-building skills and problem-solving skills that are passed on in the classroom and back to the manufacturing floor.

We insist that local community colleges who provide basic skills education, do so in the context of the work place and focus on the why as part of our ongoing educational process.

Education designed to provide business knowledge equips our associates to understand the complexities of the business and how to participate in that business for the benefit of our customers--no matter what challenges arise tomorrow.

Credible, timely and actionable information allows employees to attack problems and improve performance. We hold briefing meetings regularly in which the successes, competitive position, concerns, challenges and goals of our businesses are shared.

Meetings are held by factory production operators on the manufacturing floor to review orders, identify daily and weekly accomplishments and check the pulse of the customer. Supervisors make themselves available across shifts to ensure that accurate, timely information is shared with all team members.

Engineering support is on call around the clock. Since meetings are designed to have a direct impact on the business, they are as likely to take place on the manufacturing floor as in a conference room and have a cross-section of participants from factory operators to senior managers.

Motorola's management structure, pay system, education and communication systems provide the framework for a series of new expectations. Our associates are taking the opportunity to build a culture as they build a business. Empowered employees can accomplish remarkable things if given the education, then the authority to do so. Here are some examples:

- Factory operators make repair vs. buy decisions for the benefit of the customer and the business.
- Factory operators have reduced cycle time by analyzing and modifying the factory layout from a push system to a pull system. One team of empowered employees have reduced Motorola production costs by \$340,000 per year.

· In a cellular telephone factory in the suburbs of Chicago, teams of employees have helped us to reduce the cycle time of producing a telephone from 4.5 weeks to one hour and improved quality ten times.

The traditional suggestion programs used to focus on problem identification. This new culture has replaced those programs with a different model: See a problem . . . Find a solution . . . Make it happen . . . Measure the results . . . Continue to improve . . . Take ownership.

Supervisors and factory production operators, working together, in one of our businesses reorganized and reduced existing work space while accomplishing a 5X increase in production.

· We have factory operators who have travelled to Japan, Puerto Rico, Malaysia and the United Kingdom to talk directly with customers and understand their needs.

· To help each other help the business, small groups of factory operators identify their peer's contributions, strengths and improvement areas.

We think we have some insight into the future based on what we are learning everyday. Our objective is to focus on service to our customers; not on ourselves.

This objective is, in fact, a process that evolves to a new goal as each accomplishment is achieved. It is always reaching and a system of continuous improvement.

We have succeeded because our commitment to quality, cost and service to the customer through an educated and empowered work force has saved us more than \$3 billion in the last six years. At the same time, our sales per employee have doubled. That is an increase of productivity of more than 12 percent per year. We have committed to a process of continuous improvement: 1 0X defect reduction every two years, customer satisfaction indices in each business and 1 0X cycle time reduction in five years.

But, that's what we do at Motorola. We continue to redefine the global electronics business. We take it personally! It often leads us down the road less travelled and that makes all the difference.