

MEASURING EXCELLENCE

A CASE STUDY IN THE USE OF THE BALANCED SCOREBOARD

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Metal Processors Inc. (MPI) is a steel processor, based in Sedalia, Missouri. Their major customer is a Tier 1 supplier to the automotive industry. The company achieved certification to ANSI/ASQC Q9002-1994 (ISO 9002) and QS-9000 in November 1996. As part of the continuous improvement philosophy the company is preparing to enter for the Malcolm Baldrige National Quality Award. Both QS 9000 and the MBNQA require that the company demonstrate progress through objective measurements.

MPI traditionally relied upon the standard financial accounting measurements but it was soon discovered that the financial measurements do not really help you lead the business towards excellence. It is rather like steering a ship by the wake; the financial measurements tell you what has happened but are unlikely to help you chart a course for the future. The future is simply too complex. Specifically, the company felt that the financial measurements present the following hurdles to continuous improvement:

- The financials do not highlight many problems. For example, Sedalia is enjoying a virtually negative unemployment rate. This makes it very difficult to attract and retain good people. This is a real life and death problem for many companies but the financials neither guide nor warn.
- Concentration on financial measurements can actually hide or minimise a problem. An attitude of 'Hey, the variance is only 5%, why worry?' institutionalises waste and is contrary to the continuous improvement philosophy.
- The financial measurements, alone, will not provide the necessary focus for continuous improvement. It was realised at MPI that much money had been spent by many fine companies on TQM, Continuous Improvement, Re-engineering and so on without any significant impact upon the bottom line. What was lacking in these companies was management focus. MPI was determined to keep 'their eyes on the prize!'
- The financials did not address specific QS 9000 [1] requirements for measurements.

Some examples are:

4.1.4 requires "Key internal quality and operational performance measurables".

4.1.5 requires the company to document trends in quality, operational performance (productivity, efficiency, effectiveness) and to benchmark against competitors and/or appropriate internal measurements.

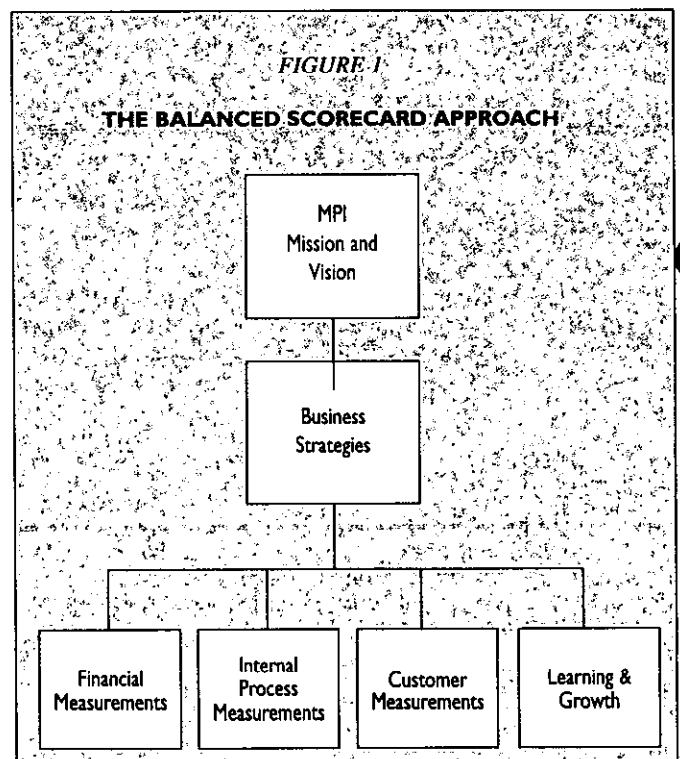
4.1.6 requires the company to implement a system to track performance to the customer delivery requirements.

The purpose of measurements are, of course, to provide management with feedback regarding the performance of the system. Essential is a timeliness to allow management to take effective and appropriate corrective action. This poses a problem for many managers - what do we measure? The approach taken at MPI was to look at the strategic plan and quality policy to decide which parameters were important to the continued success of the plan and to support the quality policy.

It follows that the parameters will be different for each company, but there are some common parameters that all well run businesses will use. The Cost of Quality Measurement, for example, is a 'total business indicator' designed to concentrate management's attention upon what is good and what is not so good. On time delivery should be a requirement for all companies, but for a QS 9000 certified company it is a make/break parameter. Any deviance from 100% on time must be brought to the attention of management immediately.

A good measurement tool is not only confined to the executive office. If the chosen parameters match the needs of the company then everyone should use the same measurements (obviously modified for appropriateness). A good measuring system can reach straight down to the lowest level of the corporate hierarchy and allow employees to understand how they are contributing to the welfare of the company and by extension, to their own welfare.

MPI chose the BALANCED SCORECARD approach. The Balanced Scorecard attempts to provide 'balance' to the company measurement parameters. It is an innovative management perspective that can be used to translate strategy for growth into operational terms. The Balanced Scorecard provides an irreplaceable agenda for the discussion of business strategies, strengths, weaknesses and performance. It provides the intense focus necessary to ensure that the company is performing in accordance with its strategic objectives. The 'hard part;' is to determine the most appropriate model. The model used by MPI covered four areas, which were derived from the requirements of the company strategy and philosophy:



Financial Measurements. Essentially these measurements guided management to answer the question 'How do we create value for our shareholders?'

Internal Process Measurements. What are the processes in which MPI must excel to achieve financial and customer objectives?

Customer Measurements. What do existing and potential customers value from MPI? How do we perform and compare to the competition in their eyes?

Learning and Growth. How do we continue to improve and create future value.

Once the important subject areas were established, then it was necessary to determine the parameters to be measured in each area. And further, the method with which to consistently measure the parameters. This was achieved by utilising the team approach composed of executive management, middle management and supervisory levels. Their job was to determine what could be measured most effectively.

The important parameters to a steel processor revolve around the tons of steel processed. MPI is a toll processor which means that MPI does not take the steel into inventory but merely charges a processing fee to the mills, who continue to own the material until it is delivered into the inventory of the end user. In essence, the more steel processed by MPI the greater the company earnings.

The financial measurements judged to be important include:

- Return on capital investment
- Profit per ton of steel processed
- Cash flow
- Accounts receivable days

The internal process measurements utilised are:

- Coils processed per hour
- Production volume
- Yield
- Scrap generated vs. scrap shipped to scrap dealer
- Safety control index
- Quality audit deficiencies
- Cost of quality

Measurements determined important from the customer's perspective include:

- Customer satisfaction
- EDI transmission success rating
- On-time delivery
- Customer call reports
- Customer complaints

Finally, measurements utilised from our employee's learning and growth perspective:

- Revenue per employee
- Employee satisfaction
- Training hours per employee
- Employee turnover

Annually, the strategic plan is reviewed and goals for the balanced scorecard are established. New categories of measurement may be added or deleted from the balanced scorecard as determined by its effectiveness. Most importantly, the goals are shared with all employee by the President of the company at an annual meeting describing the strategic plan to everyone.

On a quarterly basis, the balanced scorecard is generated. It is reviewed by the President and an outside consultant for performance against the strategic plan. A written report is generated for submission to Management Review and the Board of Directors. Any items requiring corrective action are tackled by Management Review. Examples of action items

and continuous improvement achieved by this process include:

- Cross-function teams created to improve coils processed per hour. One team was formed to look at methods and motivations of production teams to determine why one team could produce more coils than another. Another team was formed to study how to achieve quicker set-ups and reduce downtime between coil runs.
- A partnership was formed with the steel mill to improve yield at the MPI facility. Training was conducted by the mill representative. A one-half percent increase was achieved in the first six months. A goal of 1 percent increase has been targeted for the coming year. This is a highly visible joint project with the mill and our mutual end customer. Everyone has gained from this effort.
- Particular emphasis has been placed on employee satisfaction. A 20% increase in score has been realised in just 18 months. MPI has a target of a world class score in this arena and is only 2.1% away from achieving the goal. It has required a great deal of attention to detail.

Every question on the employee satisfaction survey which does not meet the minimum score generates its own action plan as to how to find a way for our employees to feel satisfied in this area. The Management Review team often has to explore many options before they see even a small increase in employee satisfaction. The attitude is that the corrective action will remain open until a world class score is achieved.

At MPI, the balanced scorecard is much more than a performance measurement system. It has become the way that we monitor our progress against the strategic plan. It has become a way to implement our business strategy.

REFERENCE

- [1] Quality Systems Requirements, QS 9000-1995. Chrysler Corporation, Ford Motor Company, General Motors Corporation.

About the authors

Diann Gordon is the President of Metal Processors, Inc., (MPI) and is one of a select few lady presidents in the steel processing industry in the United States. Another lady in New York has just become a president!! - so much for exclusivity!!). She is also the founder and chairperson of the Outside Processors' Council, a body whose mission is to provide an interface for steel processors with the steel mills.

She has been with MPI for about 14 years, having risen through the ranks from General Manager to company president. Diann led her company through a perfectly clean QS-9000 certification audit in November 1996. This effort was achieved in a record ten months of preparation. She is very active in the steel industry, local Chamber of Commerce and Industrial management committees.

Thomas Gordon FIOM, CFPIM, CQA is a graduate of the University of Leeds. He is an independent manufacturing, ISO 9000 and QS 9000 consultant based in Kansas City, Missouri, USA. He is a Fellow of the Institute, is certified as a Quality Auditor by the American Society of Quality Control as an Assessor by the United States Registration Accreditation Board and as a QS 9000 Assessor by the Automotive Industry Supplier Quality Award Examiner with the Missouri Foundation for Excellence.