

Improving Organizational Performance through Goal Deployment

Andy Hunt and James Oerth

Skyworks Solutions, Inc
20 Sylvan Road, Woburn, MA, 01801, USA
Tel: (781) 376-3220, Email: andy.hunt@skyworksinc.com

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Abstract

Exceptional performance of a manufacturing facility doesn't just happen. It requires effective management of all the various factors, constraints and resources. One important aspect of management is setting goals. This paper presents the goal deployment methodology utilized by Skyworks Solutions' GaAs pHEMT wafer fab. Using this method, the Skyworks Woburn fab has achieved significant operational improvements that have increased company profit margin.

INTRODUCTION

The consumer electronics market is very competitive. Companies that can provide the products which consumers desire with high quality, on time and with the lowest cost are best positioned to enjoy growth and prosperity. After the design teams have developed desirable products, it is the responsibility of the manufacturing groups to deliver these characteristics. This is accomplished through good management practices. The text book definition of a manager is a person who plans, staffs, organizes, motivates, controls, represents and coordinates the factors of production. Each of these responsibilities is critical to achieving success. This paper will discuss goal deployment, a topic that touches on all of these responsibilities. While conceptually very simple, it is actually very difficult to be highly effective at goal deployment. Goal deployment involves setting organizational goals and then deploying those goals to every person in the organization. Every person, in every function, must have clearly defined goals that feed up to and support the next level higher goals. Ultimately, every person's goals can be traced to supporting the top level goals of the organization. Routinely reviewing the progress is essential. Corrective action must be taken when satisfactory progress is not made.

DISCUSSION

The goal deployment of the Skyworks Woburn wafer fab was driven from a vision to be the best GaAs pHEMT fab in the world. Benchmarking of other fabs, both internal and external to the company was conducted and a gap analysis

performed using a SWOT technique. This helped the management team identify the critical actions necessary to chart a course for the organization and this became the basis of the "game plan" for success. In a manufacturing operation, there are some things that can never be compromised, such as Health, Safety and the Environment but there are others that legitimately compete for the time and attention of the resources in the different functions within the organization. These are typically in the core areas of Quality, Delivery and Cost and it is often the balance of the metrics within these categories that determine how an organization is characterized. One of the keys to an effective goal deployment is the creation of a set of high level metrics that take in to consideration the need to be operationally competitive while at the same time reflect the appropriate influences of the Customers and markets in which the company operates. Once this top level set of metrics is agreed, the deployment can be driven by a logical analysis of the data. A fundamental principle used in Skyworks Woburn wafer fab was that of prioritization. Since there are never enough resources and there will never be enough time to address everything that needs to be done, the Woburn fab leadership team chose to limit the number of metrics at each level of the deployment to provide focus. This is where management skill and experience really plays a part. By driving the analysis at every level of the deployment from the data, it is possible to determine the "most important things" that each function should be working on and it becomes very clear that there is significant overlap in responsibility between the functions. In fact, it becomes more visibly obvious that no one function can succeed without the support of the others and in the Woburn wafer fab deployment, it is common to find one function deploying goals to another, thus reinforcing the interdependency. When driven down many levels within the organization, an effective deployment enables everyone, in all functions, to see how they can contribute to the overall success of the organization, whether it is through their own function or via the support they provide to others. It is also very clear where the issues are at any time and the structure of the deployment takes away the finger pointing that sometimes takes place when goals are not met. This encourages functions to support, rather than blame, each other. The structure also allows management to quickly identify where help is needed and to reprioritize resources

accordingly. A rigorous review on a routine basis also helps to ensure everyone remains aligned on the goals of the organization. In this process of review, actions are assigned whenever goals are not met and an expectation established that these must be completed to affect the result before the next review. The ultimate value of a comprehensive deployment is to drive ownership and accountability at every level so that individuals and functions can more easily fulfill their inherent desire to do a good job without constant management guidance. This achieves a high level of engagement within the organization and a vehicle to self assesses operational performance, allowing management more time to focus on strategy and tactics.

RESULTS

Using the goal deployment methodology, critical performance metrics were established. After four years of implementation, all critical performance indicators showed significantly improved results. Example metrics and results are shown in Figures 1, 2 and 3.

Figure 1
Line Yield Normalized to 2004

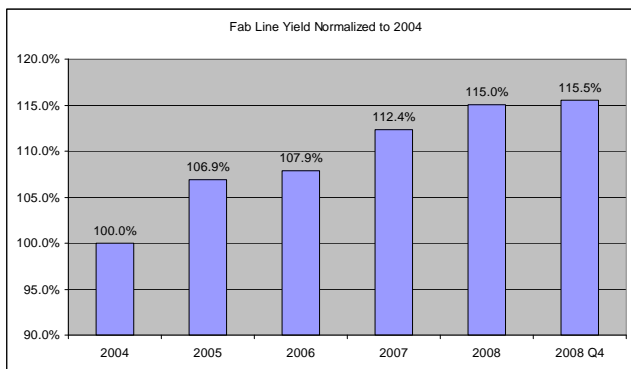


Figure 2
Wafer Output Normalized to 2004

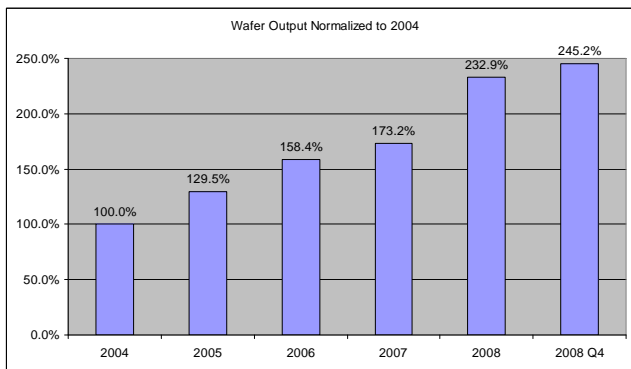
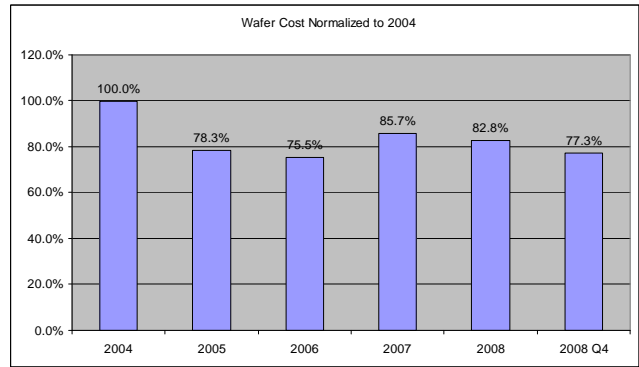


Figure 3
Wafer Cost Normalized to 2004



CONCLUSIONS

Organizational performance is increased by setting SMART goals, deploying them throughout the organization, tracking performance to those goals, and taking corrective action when the plans do not meet the goals. This methodology continues to be used at Skyworks.

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ACRONYMS

- SMART: Specific, Measurable, Attainable, Relevant, Time Bound
- pHEMT: Pseudomorphic High Electron Mobility Transistor
- SWOT: Strengths, Weaknesses, Opportunities and Threats