SMALL MANUFACTURERS AND THE AGILE ENTERPRISE

INTRODUCTION

The Agile Enterprise is a business structure and behavior pattern that responds to the constant changes imposed on today’s businesses by the market forces, technology trends, and globalization imperatives. Becoming an agile enterprise with the ability to respond quickly and effectively to changes in the global business environment is a business necessity. That means adding the tools, techniques, and technologies to your small business’ operations. Which tools, which techniques, and which technologies depends on your customers and markets. It’s an organization with a flexible business model and the capabilities to respond quickly, effectively, and profitably to changes in customers, markets, and competitors.

The keys to achieving such an organization lie in each particular company’s structure and behavior—its products, processes, systems, cultures, and leadership. The what’s and how-to’s differ from company to company, industry to industry, and supply chain to supply chain. What you do and how you do it depends on how large or small your company is, what resources you have available to invest in change and adaptation, where you are in the supply chain (as well as what power you hold in it), and your willingness to take risks. A recent study (Lehtihet, Wilson, and Susman, 2004) for the National Institute of Standards and
Technology’s (NIST) Manufacturing Extension Partnership (MEP) looked at the future of manufacturing businesses in the U.S. and identified a number of factors that will affect manufacturing businesses. Figure 1 shows the linkages between global trends, strategic responses, and SME choices. Some of these things are in your control and some are not.

Figure 1. Framework for thinking about the future of manufacturing businesses (after Lehtihet, Wilson, and Susman)

Among the factors are globalization, ecological awareness, demographics, and technological advances. Each of these factors includes several subcategories that will impact not just manufacturers, but all business. For example, under technological advances, one might include large technology categories like biotechnology and nanotechnology, many aspects of which are still in the early stages and whose impacts are not yet known, and advances in a specific technology such as microelectrical mechanical systems (MEMS) and radio frequency identification (RFID) systems. In response to these factors, firms can choose from a number of strategic choices as a response. These choices might include things like shedding of physical assets, bundling of goods and services, customization (mass), and innovation. Implementation of those choices, in turn, requires organizational change and adaptation. The leadership of an agile enterprise knows that things will continue to change, and puts in place an adaptable structure and set of behaviors that can best take advantage of change. This is what will make a company an agile enterprise.

In this chapter, we will focus principally on smaller manufacturers, as they are the principal focus of NIST’s Manufacturing Extension Partnership program.