

# Chapter 1

## Manufacturing Excitement!

It's Sunday evening and you and your spouse are flying home after celebrating the wedding of your college roommate's daughter. It has been a delightful weekend, renewing old friendships, revisiting old haunts, enjoying a happy young couple who have a bright future, relaxing, a great break before next week.

You shift gears and get a familiar rush of energy as you think of the week ahead. You reach into your briefcase for the express mail package, delivered to your hotel this morning, from your executive assistant, Alexia. In addition to the latest version of next week's calendar, she included a few short papers that could aid your preparations for the week.

The Executive Leadership Team (ELT) of Big Aircraft Incorporated (BAI) is meeting on Thursday and Friday to set strategy for the next year. The meeting won't be easy. Big challenges threaten today's bottom line and could impact BAI's future for the next decade or more. You have to facilitate the meeting, guiding it so that by Friday afternoon, the whole committee will have agreed to a high-level action plan.

The ELT is a strong group—individuals who didn't get where they are by being shy. They have a lot of ideas about how to solve BAI's problems. Each has his or her own special responsibilities and competencies so their solutions tend to be "rifle shots." Part of your job will be to ensure that BAI's strategies and action plans address all the important issues.

BAI is an important manufacturer of four families (very large, large, medium-sized, and commuter) of commercial aircraft. The company is well recognized and respected. Since its founding 60 years ago, BAI has become a success, but there is significant, aggressive,

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global competition—Boeing and Airbus, but also emerging competitors from Canada, Europe, Brazil, the former Soviet Union, Japan, and China.

You want BAI to continue its success and to grow its position, something it can do only if it remains strong and profitable. Some of the questions facing the ELT are:

- ▶ Will BAI lose orders if it has to stretch deliveries? Or should BAI increase the size of the assembly operations? Are there enough skilled people available to staff the assembly facility if BAI expands it? Should BAI hire and train additional people?
- ▶ Is the supplier base capable of handling additional orders—while maintaining the quality BAI needs? Are they willing to expand? Can they find the skilled people they will need?
- ▶ Does BAI have a sound basis for its make/buy decisions? What about co-production—are BAI's co-producers capable of meeting schedule requirements and quality standards?
- ▶ Is BAI navigating the maze of cultural and language differences among its suppliers and co-producers? Is BAI being smart about currency fluctuations? Can BAI absorb the costs of supply bottlenecks, especially since many assembly operations are performed serially?
- ▶ Is there enough design and engineering talent available to undertake development of a new very large aircraft? Would there be partners available who would not only make capability and capacity available, but also be willing to share the risk? What about the competition: Do they have the will and the capability to compete with us?
- ▶ Does BAI's ELT really know what's going on? Are we getting the right information? Are our people getting the information they need? Does our information system have the required capacity and transparency? Are our systems internally compatible? Are they compatible with those of our suppliers? Have we adequately addressed lifecycle costs including an efficient service support system?
- ▶ Does BAI have enough capital to finance both a new development program and a ramp-up in production? What strategy should we follow in dealing with security analysts?

*How are you going to keep the discussions balanced? As you think about this question, you consider tomorrow's key meetings.*

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First, the weekly highlights meeting with the ELT will provide a dose of reality. You'll hear about today's problems and the team's plans for solving them.

Then, the market forecasters will present their views of the market—next year and in the next decade. BAI is a global company. Although based in the United States, since 1990, 63 percent of BAI's sales have been outside the United States. The expansion of the global economy in the early and mid-1990s resulted in a considerable expansion of air travel for business and for recreation. The rate of increase outside the United States and of intercontinental flights was greater than that within North America. This led to a stronger increase in the demand for commercial aircraft than predicted by BAI's market forecasts. Orders came in rapidly and backlog grew, especially for the medium-sized aircraft that are used for intracontinental flights.

Some airports seem to be reaching saturation and regulatory authorities are seeking to reduce congestion of the airspace. For a while airlines saw an insatiable demand for additional seating capacity on intercontinental flights and there appeared to be growing interest in even larger aircraft.

Then came the so-called Asian crisis, a shock to the global economy that rippled around the world, resulting in a dip in demand, even some planes sitting in storage because the customers could not pay for them. For a few months, it looked like recession was just around the corner, but then things stabilized. You are sure this won't be the last glitch in the economy before you retire.

You speculate about what the forecasters will say. They will give detailed forecasts for the next six months based on what the marketers think their customers are already committed to do, but as the forecasters look further out, they will use lots of qualifiers: "As long as China's economy continues to grow. . . . If there is no blowup in the Middle East. . . . If consumer confidence stays high. . . . If there are no more surprises in the credit industry. . . . If. . . . If. . . ."

*What is it going to take to compete in a world like that?*

Tomorrow afternoon after your lunch with your old friend, the CEO of ABC/Flightways, you are meeting with a group tasked to rethink the *product and process realization process*, with the idea of reducing the time to income while minimizing lifecycle costs. BAI essentially is a designer and assembler. The company depends to a great extent on an extensive supplier base. BAI is the integrator of the entire aircraft and therefore is responsible for its performance and for customer satisfaction. BAI actually manufactures some of the structural parts and some of the avionics. A number of subsystems and components come

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from suppliers who specialize in the design and manufacture of these products, and who are also suppliers to competitors.

Later in the afternoon, you are meeting with the BAI supplier council, a group of first-tier suppliers with whom you want to strengthen relationships—you realize you cannot make major improvements in product realization without having them on board.

First thing Tuesday is a meeting with BAI's senior vice presidents for human resources and knowledge management and the vice president for labor relations. They have lined up a series of presentations on what they call the knowledge processes—innovation, change, and knowledge supply. BAI has survived a competition that has seen the collapse of a half dozen competitors in the past 20 years, and the emergence of a half dozen new competitors outside the United States. You think BAI has survived because BAI has been smarter than the others, but smarts are subtle and elusive. BAI has operated through several economic cycles, with times of great demand followed by times in which the order rate was very low. In response to the increased demand, the company has sometimes hired additional people only to lay them off shortly thereafter. The past hiring-and-firing policy has affected the morale of the labor force and the reputation of the company in the community—and sometimes BAI lost some smart people it didn't want to lose. Now you have to partner with the unions to find the right combination of people, knowledge, and technology so you can sustain BAI's competitive advantages.

After lunch, you'll follow up on the implications of the proposed processes for product realization for BAI's workforce. You know knowledge and human resources are closely coupled. You also know that it is getting harder and harder to attract and keep the people BAI needs, that you are going to have to grow the workforce with the right policies and training.

In the late afternoon, you have a meeting with the Community Leadership Council. Lately the Council has focused on education. Everyone has gotten the idea that you, and the rest of industry, need educated workers. But nobody quite knows how to sort out the roles and responsibilities industry and education share in developing and supporting a productive twenty-first-century workforce.

Wednesday morning, the information systems guys, who report to the VP-Knowledge Management, are going to give you a *roadmap*, their best guess on what BAI will have to do to use technology for competitive advantage.

That afternoon, you'll meet with a consultant from the local university whose methodology for relating operational investments to corporate business measures is attractive. The ELT is going to have to sort through many attractive, but potentially costly, alternatives.

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The final presentation will be a wrap-up to make sure that all the pieces fit into context. You'll then have a few hours for final prep—and you will be ready for the ELT meetings on Thursday and Friday.

With the week's calendar as backdrop, you turn to some of the readings your administrative assistant provided. The first is a survey of challenges CEOs are facing. Done by the Baldrige Award people, the survey results came out in July 1998. A quick glance lets you know that BAI is not alone. The Baldrige Foundation's 1998 survey of chief executive officers elicited the following list of challenges as the most important ones they were currently facing:

- Globalization.
- Improving knowledge management.
- Cost and cycle time reduction.
- Improving supply chains globally.
- Manufacturing at multiple locations in many countries.
- Managing the use of part-time, temporary, and contract workers.

That looks a lot like a list of the things you have been worrying about. A second list gave the next tier of concerns:

- Developing employee relationships based on performance.
- Improving human resources management.
- Improving the execution of strategic plans.
- Ongoing measurement and analysis of organizational processes.
- Developing a consistent global corporate culture.
- Outsourcing of manufacturing.
- Creating a learning organization.

Those looked familiar, too. They seem to be some universal signs of the times.

The next article talks about four operational strategies for creating a so-called Next Generation Manufacturing (NGM) company. This piece argues that over time all companies will need to pursue all four strategies:

1. *Integrate the Enterprise.* The NGM Company will respond quickly to market opportunities using many different people, systems, and technologies. The workforce will be organized as teams and there will be teaming in extended enterprises.

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Rapidly responsive teaming, getting the right things done at the right time, will require a high level of integration of people, systems, processes, and equipment.

2. *Use Human Resources Intelligently.* People will be the essential knowledge assets in a knowledge-competitive world. Having the right people, highly motivated and able to use their skills, when and where the company needs them will be crucial.
3. *Develop, Manage, and Employ Knowledge.* The NGM Company will need a steady supply of new knowledge to maintain its advantage—and the processes to ensure that the new knowledge will be put to its best use quickly. Once knowledge is put in practice, the company will have to manage the subsequent changes.
4. *Employ NGM Processes, Equipment, and Technology.* Processes, equipment, and technology will become obsolete rapidly if they are not designed and selected to accommodate growth and change. While the specifics of change may be unpredictable, the need is to design, build, or acquire multiuse equipment and processes.

*Hmmm. This might be a way to organize your thinking for the Management Committee meeting.*

Another article in the same series talks about 10 implementation substrategies that define essential sets of actions companies should take. It's carrying the operational strategies a step forward, pointing to the actions that are important to make the operational strategies real. It looks like a good way to connect so-called "Big M" manufacturing, the work of the whole enterprise, with the "Little M" of shop floor operations.

*Maybe this is a way to continue shaping the thought process.* This looks like the raw material for an action plan. The problem is to weave the right matrix of actions for BAI.

*What else do you need to make this into a workable strategic process?*

You begin sketching. You start with the "vision thing":

- If you have a pretty good idea of the competition and the competitive markets, you should be able to describe how BAI should "look" to compete effectively.
- If you know how BAI should look, you should be able to put measurements on goals that, if you reach them, will achieve that "look."

## Challenges and Rewards for Leaders of Manufacturing ➤ 7

Next is the “how to”:

- You need a strategy that gets you and keeps you “looking” the way you want to. You’ll use the four NGM operational strategies for this.
- Then you need to identify the actions that fit the strategy. The NGM implementation substrategies suggest a set that looks comprehensive.

Finally, you need to know you are doing the right things right:

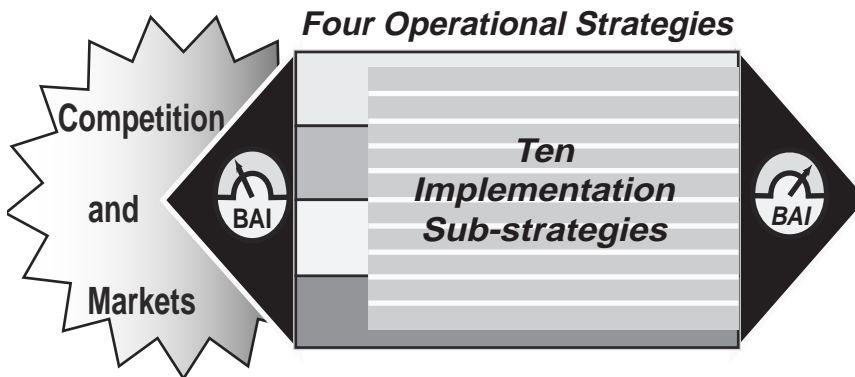
- You need to have measurements to help decide the investments you’ll make and then show that your actions are “on track.”

When you have finished doodling, you have the sketch shown in Figure 1.1, a simple plan for attacking some big-time issues.

*Hey! This is pretty clever. It is a simple way to look at the big picture and help us understand what we need to do. Bet someone could write a great book about NGM if they could put some meat on these bones, and still keep it readable.*

### ■ CHALLENGES AND REWARDS FOR LEADERS OF MANUFACTURING

That is the authors’ goal: a book to assist those of you who want to lead your companies successfully into an uncertain future. Some of you are in the generation of leaders setting today’s directions. Others



**Figure 1.1** A Back-of-the-Envelope Strategic Planning Process

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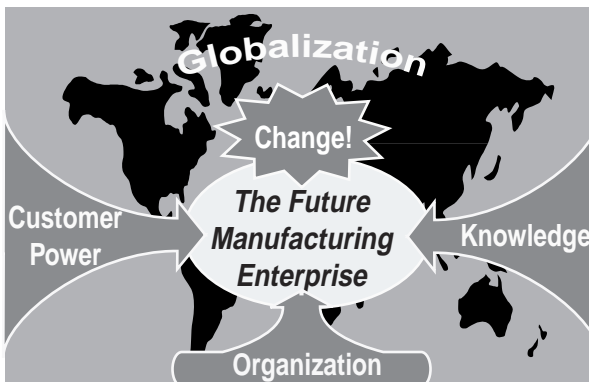
are in tomorrow's generation, already immersed in industry. Still others are just setting out on the path of excitement, adventure, and contribution, of risk and reward, of hard work and satisfaction, that will be the next generation of manufacturing.

You face greater challenges than any previous generation of leaders. The world is riskier now than ever before. Everything is changing explosively: the global economy, markets, competition, people, technology. Much is happening all at once. Time is the most valuable dimension, and because time is so precious, the margins for error are getting slimmer and slimmer. There is a sort of Heisenberg Uncertainty Principle at work here: The slimmer the margins for error, the bigger the challenge to leadership and ingenuity.

If you face greater challenges than your predecessors did, those of you who are successful can expect to reap rewards greater than most of them received. You can have greater worldwide impact for the good of society, the economy, and the industry. You have more freedom to listen to the entrepreneurial spirit, to innovate, and to create new products, new processes, new markets, new ways of doing business. The important contributors will receive commensurate financial rewards, but the biggest rewards will come from the fun of thriving in a tough world.

### ■ THE MAJOR THEMES

The tough world of manufacturing will be dominated by the five themes illustrated in Figure 1.2.



**Figure 1.2** Five Themes for the Future of Manufacturing

**► Customer Power**

There have been times when manufacturers had the power to force their products on customers. No more! Customers now demand choice, or to put it more accurately, they demand what they want, not what the manufacturer chooses to sell. And now there is little difference in the standards set by markets anywhere in the world.

Everywhere in the world, customers demand high-quality products that meet their requirements and fit their pocketbooks. And they want those products when they want them—not before, not after. Competitors from every country fight for the customer's attention. It is true in every industry sector.

In the automotive sector, Henry Ford told his customers 80 years ago that they could order any color Model T they wanted—as long as it was black and had a 20 hp, four-cylinder engine—but they could have an optional electric starter. There was no viable choice if customers wanted an affordable and reliable automobile.

Today, the Thai banker who drives a red V-6 518i coupe between Bangkok and the beach at Hua Hin on the Gulf of Siam, is demanding—not just about color, but also about handling, acceleration, braking, and reliability—in her selection process, just as demanding as the American engineer who drives a gold V-8 Grand Cherokee between Silicon Valley and the beach at Pajaro Dunes on Monterey Bay.

The effects are remarkable.

Once the auto industry could design for model runs of a million or more vehicles spread over several years; now a market for 50,000 vehicles of a given model is considered to be substantial. Once it was okay for a new model to take 5 to 10 years to go into production; now GM has an 18-month target because the customers' attention spans aren't much longer.

The old, lean production paradigm was easy when the same basic product was being churned out year after year—one could continuously improve the design and the manufacturing processes to squeeze out any excess costs. The new paradigm of mass customization means that at the same time lean principles are applied to the base platform, low-cost ways of adapting the platform to new uses must be developed.

**► Time and Change**

Everything is changing—now! Today's common wisdom is right for today, but it is wrong for tomorrow.

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Demand is based on what customers need and on what they want. These are often not the same, depending on the product's relative fad factor (RFF):

$$\text{RFF} = \text{Price} \times \text{Number of weeks of customer interest}$$

Changes in demand may be fashion statements, or they may be the results of changes in basic attitudes (say, regarding specific environmental protections), of consumer confidence levels (especially in conservative countries like Japan), of interest rates, of the emergence of conceptually competitive products, or simply changes in what customers need as lifestyles change.

The workforce changes, too. Some of the changes are simple and obvious, driven by gender and racial equality. Some are more subtle as, for example in the United States, where ethnic cultures are blended into companies by recent immigrants. The global availability of well-educated people places less educated workforces at a disadvantage. Changes in demographics (for example, longer lifespans) are reflected in the aging workforce.

The role of labor is changing, as automation and machines replace manual labor, but as the complexity of decisions and the skills and judgment required in the workforce increase.

Shareholders are more sophisticated in their demands. Shareholder interests vary between patience with the accretion of long-term value and a desire for short-term gains, with shifting emphases on fluid societal goals, with optimism over growth scenarios and pessimism when things look gloomy.

Some change is the result of natural phenomena. An earthquake in Japan or heavy snows in Europe can exacerbate regional economic woes and disrupt the supply of manufactured parts to plants throughout the world. A hurricane in Central America can wipe out developing markets.

The chaos theorists talk of the possible connection between a butterfly fluttering in the rain forests of Brazil and global climate change. While some may find this farfetched, flutters in the Brazilian economy, caused by a threat of nonpayment of debt, do reverberate throughout the global economy, influencing a myriad of individual buy/don't buy decisions.

Geopolitical changes can affect businesses. A change in government can open up a country as a market, or conversely, can severely limit market opportunities. Conflicts between countries and within countries can cause scarcities of natural resources. When geopolitical change is compounded by radical religious and cultural reform, the demand profile can change dramatically.

## The Major Themes ► II

Once the time constant for global competition could be measured in the months, even years, it took sailing ships to cross oceans. Then in the days or weeks of steamships. Then the minutes and hours of intercontinental telephones and air flight. Ancient history as far removed from our reality as King Arthur's roundtable. Our reality is that within seconds of the birth of new knowledge or the creation of new data it is accessible anywhere in the world. The Internet and cellphones mean that new design techniques or real-time shop floor data are instantly available on Mt. Everest, in Antarctica, or in the Gobi Desert, let alone in Toronto or Milan, or Novosibirsk.

Finally, there is change in manufacturing itself. New materials. New technologies. New processes. Some are incremental, say a shift from milled metal parts to injection-molded plastic ones. Others are more dramatic, such as General Motor's shift from steel toward aluminum, or Boeing's move to digital prototypes. Some new concepts, like designer materials formulated for specific product applications, or fabrication at dimensions measured in nanometers, promise fundamental structural change for major enterprises.

All this means that the decision makers in a manufacturing enterprise are faced, every day, with changes that can affect profit and loss, perhaps even the life or death, of the enterprise. The changes come from all directions. They are major and minor. They are recognizable and subtle. They come with years' warning and they come with no warning at all.

The profound truth that lies under this pile-on scrum of changes is that nothing is stable about a manufacturing enterprise. It is always in flux. No static model can describe the enterprise. The mathematicians would say that no set of boundary conditions will remain fixed long enough for a company to settle into a stable state.

*Time* is an explicit variable. It instills a sense of urgency, a need for quick, crisp decisions. For the market-oriented, the significant question is: How long will the window of market opportunity be open? For the technologist, the question of interest becomes: How soon will it be that today's materials and technology are made obsolete? For the operations person, the question is: How soon before a better process is found? For the financially-oriented, the question of import is: Will we be able to recover our investment before the next change hits us?

### ► Knowledge-Based Competition

Companies used to compete on energy. Now they compete with knowledge.

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The success of the industrial revolution lay in harnessing *energy*. Henry Ford succeeded because his mass production paradigm provided an efficient way to organize the energy of manual laborers. Ford supplemented manual energy with the energy from steam engines or electricity generators to drive lathes and mills, replacing the energy of craftsmen and laborers.

As the industrial revolution matured, companies used energy in more sophisticated ways. Some chose to compete with automation that reduced the manpower content to almost nothing. Others chose to use the energy of transportation to build efficient distribution systems, competing with fast container ships, MD-11 freighters, and optimized delivery vehicle scheduling.

*Success in the information age will lie in effective use of knowledge.*

Knowledge is data and information, but data and information that can be combined with human thought processes for useful decisions. The more refined knowledge is, the closer it is to *wisdom*, the capacity of judging soundly and dealing broadly with facts and knowledge. As used, the term implies depth of insight or ripeness of experience.

We have already seen profound changes as we make the transition from the industrial age to the information age. The electronic file transfer technologies of the 1970s and 1980s enabled the corporate restructuring and business processing re-engineering of the 1980s and 1990s. Business practices continue to change as we gain confidence with electronic commerce.

We are getting better and better at acquiring data. Our digital hardware and software for organizing and storing information are excellent. We can transport digital information from any point on earth to any other in seconds.

Yet, the transition to the mature information age is not yet complete. The lingering challenge is that of making useful knowledge out of information and data. Companies are finding, though, that they can better meet the challenges of *time* if they know what they know (and what they do not know) and then apply their knowledge effectively.

The shift to knowledge-based competition is already symbolized in the term *knowledge worker*. Originally, knowledge work was identified with so-called white-collar workers, the people who kept track of the company's business and administration. The term has spread to nearly all occupations; what used to be the blue-collar workforce now spends more time acquiring and manipulating data, turning it into knowledge, and subsequently making operational decisions, than they spend on manual activity.

### ► Organizing for the Best Decisions

Under the pressures of time- and knowledge-based competition, companies use *organization* to direct human intelligence to the actions needed to meet the company's objectives—now. Ultimately, the work of knowledge workers is decision making. Decision making is the processing of knowledge that leads to action.

Most decisions are interdisciplinary—they require inputs of several kinds of knowledge, the stuff we call *core competencies*. The design of an automobile, for example, requires visual artists; materials scientists; mechanical, electrical, chemical, and manufacturing engineers; and aerodynamicists, interacting among themselves and with accountants, logisticians, market forecasters, even customers.

The best decisions are made by those with the most information and expertise (core competencies) in the “decision space”—usually those closest to the object of the decision. A heavy equipment manufacturer may have a general knowledge of hydraulic pump design, but may lack the deep, most up-to-date, and detailed knowledge that a pump supplier has.

Peter Drucker, in his book *Management Challenges for the 21st Century*,<sup>1</sup> tells us that there is no one best way to organize a next generation company. The best organization for a company is the one that works best now and can grow into the one that works best tomorrow.

Companies are experimenting with organizational structures that focus the best competencies where they can best be used. In many companies, a *free market* model has been adopted, a model that assumes that a flux of competition and cooperation among the groups working in an enterprise will result in the most efficient use of resources in achieving a common goal.

Combining knowledge competition with time pressures has led to an international consensus that the enterprise of the future will be organized, at least in part, as teams of people each of whom embodies one or more core competencies, and so that the teams themselves possess definable core competencies.

Increasingly, companies find themselves without all the core competencies they need to complete a timely, competitive product. These companies team with others that possess the needed complementary core competencies.

Teams generally will not have time to wait for someone to tell them what to do. They will have to work autonomously, linking with other teams when they need to acquire or exchange information or to pass on results.

The work the teams do has to align with the enterprise's goals and their task objectives. They have to have a framework that both

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limits their autonomy and provides direction for it. This places a significant leadership, communications, and coordination burden on the company's leaders.

This "free-form" organizational approach is not intended to be one of anarchy, but requires a management philosophy and style that differs greatly from that commonly practiced in the past and still prevailing today, basically a rigid structure not too different from that of a military organization. This organization is essentially horizontal and based on the ideas of collaboration, open architecture, and free flow of information. It requires that people at all levels fully understand the minimum expected of them, accept responsibility for their job, and perform at the level and beyond that expected of them, working in an environment of trust.

### ▶ The Challenges of Globalization

Looming as the backdrop for customer power, knowledge, change, and organization is *globalization*. All of the top challenges found in the Baldrige Foundation survey involve globalization in one way or another.

Globalization is multifaceted. It is not just a question of competing in markets all over the world with products that appeal to different groups of people with differing needs and values. Today, it is a question of developing products with people all over the world. It is a question of manufacturing high quality products in different locations, with different cost structures, and with different cultures. It is a question of developing supply chains that, on the one hand, can service local content needs locally, but that on the other hand may be called on to provide components used in "global" products. It is a question of managing those supply chains so that they can meet ever more demanding requirements. It is a question of having the right knowledge at the right place anywhere on the globe, at the right time, accessible in a form that the people who need the knowledge can use it.

Look at the automotive industry—from the perspective of Detroit's Big Three: Ford, General Motors, and Chrysler. In the major automotive markets—the United States, Canada, Europe, and Japan—national companies have dominated. They have developed products whose regional character made them uniquely different from products made outside the region.

Ford and General Motors long ago developed a strong presence in the European countries. They developed, manufactured, and marketed specific products for Europe, or even for individual countries, just as they have done in Australia. The European activities were

separate from the North American ones. Chrysler made abortive efforts at European importing and manufacturing operations or joint ventures that, with the recent exception of the Jeep SUV products, failed to capture market share or profit.

None of the Big Three formed entirely satisfactory alliances to serve Asian markets, although each developed strategic alliances, even with equity relationships, in Japan, Korea, and some other Asian countries. The European companies did better in penetrating niche markets, although the large volume markets were served by Japanese companies.

For many years, the Big Three treated the less-developed world as distinctly down-market, selling older models and models without many of the options demanded in the developed world. They often had to build for rugged road conditions and for ease of repair.

Supply chains tended to be captive within regions, although some suppliers with desirable core competencies developed a global presence.

Today, there is active consolidation in the global automotive industry. Among U.S. companies, Ford has taken the lead in developing "world cars," basic platforms for products, like the Mondeo/Contour/Mystique, that can be marketed anywhere in the world. Ford has also purchased niche manufacturers, like Jaguar and Volvo, whose product lines and branding are complementary to its existing products. GM has begun experimenting with globalization of product lines.

The Japanese invaded the Big Three's home market, creating North American operations that compete fiercely on design, manufacturing, and marketing with operations that maintain tight links with the Japanese parent companies' engineering and management.

Chrysler took the radically different path of merging with Daimler-Benz and its very strong Mercedes-Benz brand, creating a company whose national (or international) flavor is not yet fixed. Through the merger, Chrysler instantaneously gained credibility in Europe and better access to worldwide markets.

As of this writing, the end is not in sight. After years of being King of the Hill, some Japanese manufacturers have fallen on hard times. There is some breakdown of the insularity that has characterized the Japanese companies. Renault has gained much control through its equity investment in Nissan and there is an expectation that other strategic alliances, equity participation, or even mergers, are coming.

What is going on in the automotive companies is mirrored in the supply chains. Suppliers are merging or forming alliances for two reasons: (1) to be able to serve their global customers better and (2) to assume greater responsibility for specific automotive subsystems.

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The automotive industry example is replicated in industry after industry. Globalization starts with the world's financial institutions. Mergers in the United States are being extended to include major European partners and are beginning to include partnerships with Japanese institutions. Globalization is supported by the relentless financial flows resulting from instant communication among the world's stock exchanges.

### ■ INTO THE WEEK

In the next ten days, you will be grappling with the future of BAI. It will be a time of exciting decisions, choosing the right risks to take. If you get them right, BAI will be a competitive winner—and you will be rewarded. If not, . . .

This book will look over your shoulder, watching as you and your colleagues analyze the competitive environment, reaffirm BAI's strategic goals, refine operational strategies, and prioritize your action plans.

### ■ NOTE

1. Peter F. Drucker, *Management Challenges for the 21st Century* (New York: HarperBusiness, 1999).