Improving the way organizations run through participative planning and management.
Branch-Smith Printing
2002 Malcolm Baldrige National Quality Award

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Organizational Profile and Leadership
David C. Branch—Located in Fort Worth, Texas, Branch-Smith Printing is one of two divisions of Branch-Smith, Inc. This fourth-generation family-owned business was founded in 1910. We have sixty-eight full-time employees and annual sales in excess of $10 million.

Branch-Smith offers a complete array of turnkey services for publishers, including design, image scanning, electronic and conventional pre-press work, printing, binding, and mailing/delivery.

Who we are

Our corporate values
As a corporation we have found it helpful to our business and our lives to be guided by a few common values. We believe that a successful organization requires faith, which in our case means a commitment to a higher purpose. We also believe it requires having strong morals, offering opportunity for our employees, and serving our customers in a manner that will lead to their business success.

In the spirit of our founder, Aaron Smith, our company has agreed to uphold four corporate values: (1) to honor God in all that we do, (2) to pursue excellence with integrity and commitment, (3) to help people develop as individuals and as a team, and (4) to grow profitably by committing ourselves to our customers’ success.

A common vision
We set the context of our business through a common vision. Our vision expresses our desire to produce strong results for our expert employees, our company, and our partner customers by providing turnkey services. Our vision statement reads as follows: “Market leading business results through an expert team providing turnkey solutions to customer partners.”

Mission statement
Publishers work with us because we focus on serving their niche requirement for printing: a vertically integrated, value-added service under one roof that results in lower costs, reduced cycle times, and on-time delivery. Building on our vision statement, we formalized our corporate mission, which is “To provide expert solutions for publishers.”

A look at the printing industry
The printing industry is one of the largest in the nation in terms of the number of establishments. There are 45,000 printing companies in the United States.
CASE STUDY

Branch-Smith Printing: 2002 Malcolm Baldrige National Quality Award

A look at the printing industry, continued

States, including 3,100 in Texas and 1,100 in the Dallas/Fort Worth area alone. Most of these companies are small; 80% have fewer than twenty-five employees.

The industry tracks nationally very closely to the gross domestic product and has until recently experienced 5% growth per year. Branch-Smith's $10 million in annual sales is a small market share relative to the $3 billion in commercial printing sales reported for the Dallas/Fort Worth area and the $155 billion reported for the entire United States.

Still, we successfully compete against general commercial printers in our region for business from magazines. We are also aware that our true price competition comes from specialized plants owned by major international printing companies.

Our quality policy

Our ability to compete for business successfully is largely determined by our ability to consistently deliver value. To that end, we created a quality-policy statement to go along with our corporate values, vision, and mission statement.

This quality-policy statement reflects our dedication to excellence and to creating value for all our stakeholders through a comprehensive approach to improving performance, which we call Innovating Excellence (described in detail later). Our quality policy reads as follows: “Branch-Smith Printing will seek to continuously improve results for all stakeholders [customers, stockholders, employees, and suppliers/partners] through the application of its Innovating Excellence system.”

A growing customer base

We have grown our customer base from ninety-one in 1998 to 167 in 2002. We experienced a 72% growth in sales between 1998 and 2001, a gain that we held in 2002 when the industry as a whole declined by 6.6%.

While most of our customers are in the Dallas/Fort Worth area, we have a growing group outside of Texas. Our top fifty customers provide 80% of our sales.

We seek customers with shorter-quantity jobs that require our services to fulfill their ongoing needs for low-volume print runs. Because we have a sheet-fed print operation, we have lower fixed costs than our competitors who have roll-fed operations. Those companies are more efficient with longer print runs.

Our product mix

Magazines account for 63% of our sales. These are primarily special-interest national publications, often for corporate publishers or trade associations.

Books account for 23% of sales. Our books are for certain end-use purposes, such as leisure activities. Directories and catalogues account for 9% of our sales. These are either show products or list resources, such as buyer’s guides.

We also do general commercial work, which makes up 5% of our total sales. This work effectively utilizes our capacity to serve niche customers better than our larger competitors can.

We must understand customer requirements

It is important for us to clearly understand our customers’ requirements. One tool that we use to this end is a customer survey that enables us to determine the
We must understand customer requirements, continued

level of importance they place on various requirements. The top six customer requirements as identified by this survey are as follows: (1) product quality, (2) reasonable prices, (3) reliability (e.g., on-time delivery), (4) responsiveness (e.g., promptness of problem solving), (5) interpersonal relationships (e.g., how competent we are), and (6) added value.

Our Innovating Excellence system

Our cultural focus on achieving continuous performance improvement has led us to develop a comprehensive model that we call Innovating Excellence.

The model has four distinct processes (see Figure 1 below). We start with our strategic-planning process (described in detail later). This is where we decide how we will create value for all our stakeholders. Second, the Leadership Accountability process determines how we will develop measurable results through developing our employees. Third, our Management Review process determines how we will drive agility through a rapid response to changing trends that we discern either from the Leadership Accountability process or from specific inputs from our stakeholders. Fourth, our Quality Information Database (QID) enables us to access knowledge so we can share what we have learned and maintain a balanced scorecard.

The Leadership Accountability process

The Leadership Accountability process is a series of meetings during which we roll up information from individuals, to workgroups, to the organizational level and back for review. Information flows both ways throughout this process.

Our leadership system operates systematically to drive strength and consistency throughout the organization. Leadership involvement in the strategic-planning process is critical. We learn by trying different approaches during the process, so it is important to have a clear vision regarding where we want to go.

Our leaders must involve our employees so together they can set direction and values through strategic planning. Everyone must understand the company vision.

Our leaders must also clearly understand where our industry is going and help forecast performance. As a small company, we must be active in industry associations. This also helps strengthen our place in the printing-industry community.

The direction and values to which we commit during the strategic-planning process are communicated through department meetings. Full deployment occurs through the Leadership Accountability process, where every department and person sets goals to align with the company direction.
The Leadership Accountability process, continued

To be successful, we must work with our employees to develop them to grow with us and help them understand how they make a difference every day. The Leadership Accountability process includes training and communication that rolls up information from individuals, to workgroups, to the organizational level for review. This process is the way in which we set direction and expectations, and the way in which we understand how we are doing relative to those expectations. In addition, it helps us to build our employees’ careers through training.

The Leadership Accountability process also involves building empowerment and innovation into our culture. Employees are expected to participate in quality-improvement process teams, offer suggestions, and be responsible for the quality of the work they do. They know they have the power to stop non-conforming jobs. They have control over what they are doing, and they understand that we don’t want any non-conforming work going out to our customers.

Management Review

Management Review is the core meeting of our company’s senior leaders. It is designed to ensure that we have full knowledge about our current situation and our future outlook so we can be intentional about our strategic position and direction. During this meeting, we monitor our progress and coordinate the most effective response possible to changing circumstances in an effort to drive our capacity to respond to the situation.

During Management Review, we balance our resources as things change so we are ready to make the next move. We also take into account every trend of concern and respond to four kinds of stakeholder events: (1) internal non-conformance, which is an internal process complaint by an employee; (2) supplier non-conformance, which is incorrect work or billing by a supplier; (3) customer complaints, which are external problems identified by our customers; and (4) opportunities for improvement, which are employee suggestions. Each of these trends or events is reviewed and prioritized, then either referred to other channels or closed.

The primary driver of the Management Review meeting is our Quality Information Database (QID). It is designed to enable us to use and deploy data and information throughout the organization. All our supervisors and leaders have access to it and are trained how to use all the forms and reports, how to run Pareto Charts, and so forth. We work hard to get our people comfortable with this tool.

The QID was designed to allow data and information to be used and deployed throughout the organization. All stakeholder events and performance-result measures are maintained in the QID, where they can be accessed and rolled up into useful information from anywhere within the organization. Leaders must be in a position to manage by fact rather than try to make decisions based on anecdotal information or inaccurate opinions. The output from all Management Review meetings is a status list of all open and closed items. This list is posted on the company bulletin board for everyone to see.
Strategic Planning

David C. Branch—Strategic planning is the way in which we focus on creating value. It is the knowledge-based process our leadership uses to set direction and identify competitive opportunities and threats. Through extensive analysis of internal and external data, we evaluate what we have done and what we must do to bring about a successful future for all stakeholders: customers, employees, suppliers, and owners.

Our organization faces several strategic challenges. One is that we compete in a highly fragmented, multi-billion-dollar industry for potential customers who use general commercial printers. We address this competitive market by focusing on a specialized niche, which yields us a price and service-level advantage when compared to typical local commercial printers.

Another key issue is our need to continue growing to provide the critical mass required to invest in technology to survive in this competitive market. We achieve this level of growth solely through new customer acquisition and expanded capability, and we invest in new technology to drive our efficiency.

Another strategic challenge is trying to ensure we can address the growth in our customers’ industries. To do this, we focus on increasing our productivity and efficiency by using digital workflow enabled by the internet.

For us, the internet has become more of an enabler than a competitor. The improved tools that have emerged have aided our relationships with our customers through better communication mechanisms and file-transfer capabilities. On the other hand, the internet has created some competitors. We must compete with internet procurement and digital publishing. However, electronic publishing of our product is becoming more feasible as it generates yet more print volume.

Our actions are aligned, and our measures cascade from our objectives and strategies. We conduct our strategic planning with three major objectives in mind.

The first is to continually improve our business results through a strong financial performance, partnership with our suppliers, and a process-improvement focus through our Innovating Excellence system.

The second objective is to become the partner of choice for our customers through relationship development, excellent execution to customer requirements, and a targeted marketing plan. To become our customers’ partner of choice, we must continually improve our delivered value.

The final objective is to become the employer of choice through industry-leading compensation, benefits, and reward and recognition systems; growth opportunities and continually improving training systems; and a caring, involved culture.

Our strategic-planning process enables us to visualize our ideal future and create strategies and plans to achieve it. It incorporates improvement opportunities
An eight-step process, continued

into prioritized action plans. The eight-step process occurs formally each year with updates and tracking meetings conducted monthly during our Management Review process. Ongoing updates throughout the year allow us to be proactive about opportunities and to correct our direction.

Step 1 is to make research assignments to ensure appropriate information is collected and reviewed for decision making. All our leadership team members take responsibility to assess or research our situation in their appropriate background areas. We also look at improvement opportunities regarding leadership effectiveness and the way we have conducted our planning in the past.

Step 2 is to review our vision, mission, and values to ensure they align with our current environment. Then we review and revise our objectives, which communicate what we expect to accomplish in the next three to five years. These areas are fairly stable, but they change as we learn and our perspective changes. Our leadership team goes off-site for a day to work through most of this assessment.

Step 3 consists of an operational review to analyze the results of key performance measures and the annual Baldrige-based assessment feedback. Because we track a comprehensive set of metrics, we can see where we have either exceeded our goals or come up short. This step contributes to the elements included in our strength-weakness-opportunity-threat (SWOT) analysis, which is generated in step 4 and conducted in step 5.

Step 4 is a business analysis to evaluate the external environment in an effort to forecast changing trends and market requirements. During this analysis, we review data about market conditions, competitor analysis, customer and stakeholder requirements, business and community risks and issues (such as technology changes), and supplier and partner capability.

In step 5, we focus on the SWOT analysis, from which we develop short- and long-term strategies and action plans. Action plans from the prior year are also considered so they can be prioritized with the new ones.

As we consider these plans, we set measures and goals for objectives and strategies. Action plans are developed and entered into the QID for review and tracking. A final balancing meeting is then held to review the plans as a whole and to adjust them to balance any resource constraints.

Step 6 is the deployment stage. During this step we hold a deployment meeting to communicate to employees the results of our strategic planning. Individual departments discuss these results in follow-up sessions, which allows teams and individuals to update their goals and mission statements so they align with the company’s. Other stakeholders receive communications that detail our plans and strategies for their informational and planning purposes. We also hold a supplier appreciation luncheon to provide a more direct opportunity to present our plans to key supplier partners and receive feedback on their plans and needs.

During step 7, we ensure that resource requirements for accomplishing our action plans are included in our short- and long-term budget projections.
An eight-step process, continued

Step 8 begins our ongoing tracking of the plan, through monthly Management Review meetings, to review the overall progress of our strategic and action plans and key measures. Throughout the year the strategic plan is updated with new or modified action plans to reflect any changes in the environment.

Various sources of data are used

We learn a great deal about various production and technology issues from a wide variety of sources. This contributes to the potential opportunities and threats that we collect for our SWOT analysis.

These sources of data include industry associations and publications; customer, employee, and supplier surveys and discussions; complaints; benchmarking; and internal performance trends.

A lot of our information comes from a deep involvement with industry associations and through attending trade shows to understand where technology is going. The National Association for Printing Leadership is one of the two major printing organizations in the United States. We learn a great deal from them about what is going on regarding technology. We also look at strategic issues and trends happening in the supplier industry. Another help is our progressive peer group (for additional information, visit the website peergroup.org).

The role of the Leadership Accountability process

Our Leadership Accountability process is where action plans are accomplished and where the strategic plan is executed. This process is a consecutive series of meetings designed to facilitate a continual flow of information from individuals to workgroups and on to the organizational level for review and back again. Our method of communication is truly a two-way street.

Working with their leaders, individuals develop personal action plans and quality-improvement initiatives that will be a part of their performance expectations and appraisal. At the workgroup level, leaders review progress and provide support to employees to ensure successful accomplishment of their action plans. At the organization level, key human resource plans are designed. In addition, staffing levels, which are based on projected activity and training requirements, are determined.

The role of Management Review

Management Review is the core meeting of our senior leaders. Its purpose is to ensure we have full knowledge of our current situation and our future outlook as it affects our strategic position and direction so we can drive agility.

Part of Management Review is the Quality Improvement Process (QIP), which is a basic problem-solving process. It is also a mechanism for employees to create and implement solutions. It involves the use of process tools taught during quality training. After a QIP initiative is completed, measurements are taken to determine its success. Every QIP initiative is approved and tracked by Management Review.

As a follow-up to the strategic-planning process, Management Review provides ongoing updates throughout the year to correct our direction if necessary or to proactively respond to risks and opportunities that arise.
Leaders who support action plans or QIP initiatives exchange updates with Management Review to coordinate organizational progress. The primary driver of this exchange is our Quality Improvement Database (QID).

The QID is a Microsoft Access database that enables us to deploy data throughout the organization for planning purposes and to monitor the status of process performance.

The QID and externally gathered information form the foundation of our strategic planning. We also base our projections on this information.

Process Management

Daniel E. Hanson—We view our entire company as a system. Everything we have is looked at from a process perspective. The Innovating Excellence system is all about defining and using processes. In this system, the direction and functioning of all processes are aligned to the strategic directions of the organization. As stated earlier, strategic planning is used to create value, Leadership Accountability is used to develop results, Management Review is used to drive agility, and the QID is used to access knowledge. These four subsystems link together.

We begin with our strategic plan. Nothing is done at Branch-Smith unless it is aligned with this plan. The three areas we look at are competitive process performance, supplier performance and its capabilities to keep up with our strategic direction, and alignment of our sales and marketing processes to the company direction.

The Leadership Accountability process consists of a consecutive series of meetings to facilitate the cascading of goals from the individual level up to the company level. We also use this process in other disciplines, including the sales/marketing and human resource areas. And it truly is the way we manage our processes, since it ensures that each individual is aligned with the company goals.

Because our production processes are aligned to key requirements across departments, we make sure we answer the following questions for each of the various production areas: What are the key measures? How are we going to measure them? What is meaningful in our world?

Major departmental workgroups have shared requirements. Efficiencies for key operation processes are tracked from the individual, to the cost center, to the department level for posting to performance charts.

Our first key production process is sales, estimating, planning, and scheduling. This is where we gather requirements from customers and create the job tickets, plans, and layouts for the product we are producing.

The second key process is design and preflight (i.e., troubleshooting electronic files to ensure they will flow through the system). The design department is where graphic designers create the pages of a document.
Six key production processes, continued

The other four key production processes at Branch-Smith are pre-press, press, bindery, and fulfillment.

The common measures we use for these key processes are price of non-conformance (PONC), cost by related root causes, complaints, percentage of time chargeable to jobs, and equipment efficiency (where appropriate).

Support processes

Our support processes are documented as ISO processes. We modify them through our QIP in the same way as our production processes. Three of our major support processes are accounting, which tracks days to invoice and billing accuracy; information technology, which tracks system uptime and response time; and human resources, which tracks accidents, turnover, and employee satisfaction.

The Leadership Accountability process gathers performance information for these processes in an effort to identify process-improvement needs. This information is tracked in our printing-management software and in the QID.

Processes are monitored by Management Review

Our performance-improvement approach at Branch-Smith consists of a Plan-Do-Check-Act (PDCA) Cycle that has five steps: (1) identify the problem, (2) analyze the problem's cause, (3) select the solution, (4) plan the implementation, and (5) evaluate the solution's effectiveness.

Management Review is the core meeting of our senior leaders. Its purpose is to ensure we have full knowledge of our current situation and future outlook as they affect our strategic position and direction. The Management Review team monitors our QIP initiatives to ensure progress is being made and support is provided as we balance all the following processes: INC (internal non-conformance), SUP (supplier non-conformance), COM (complaints), and OFI (opportunities for improvement).

The INC process

One key activity of the Management Review process is to review the status of INCs. This process proceeds as follows.

First, an employee fills out a form and submits it to the quality manager, who logs it into the QID. It is routed to the appropriate department leader, who might respond with a recommendation to initiate a QIP to study how it can be prevented, which Management Review will monitor. Or the leader might instead check to see that a satisfactory process is already in place, in which case a training issue is the cause (i.e., an employee didn't follow a process, and there is an adherence issue).

Management Review ensures that all INC issues are communicated and discussed in department meetings and that training is put in place for issue resolution. Thus, we have a closed loop for all INC issues rather than a complaint system. This process, which we implemented very carefully, has proved to be one of the more effective recent additions to our quality system.

Because we already had a very effective external complaint system in place, we were a little concerned when we first installed the INC process. It had the potential to turn into a finger-pointing situation. We had to make sure our leaders understood
The INC process, continued

that was not our objective. Rather, the INC process is about helping us get better by identifying internal gaps that occur when people don't follow what they know to do or when we have processes that are not as mature or defined as we need them to be. Management Review helps oversee the INC program to make sure the tone of the program stays on track.

Part of Management Review is to review trends quarterly. The INC process is an important input to Management Review. We look for trends among INC issues and aggregate them to look for any overall cultural trends or patterns.

Another key activity of the Management Review process is to review the status of SUPs. This process proceeds as follows.

First, the quality manager notifies the supplier of a problem and logs it into the QID, where it is referred to the appropriate buyer. The buyer reviews the supplier's response and reports to Management Review. The buyer might respond with a recommendation to begin a QIP initiative to study how it can be prevented, which Management Review will monitor, or he/she might receive a satisfactory response from the supplier. Depending on the depth of the issue, we evaluate that and determine whether it needs further action (i.e., to be turned into a team project). Management Review ensures that all SUPs are responded to and resolved.

With any supplier-management system, it's important to obtain closure and bring accountability to your supplier. Because any SUP can easily turn into a customer issue, we want to make sure that everyone involved follows through, that we get resolution, and that we do proper problem solving in these areas.

With a problem regarding a paper company, for example, we see what it is about this particular company that causes continued problems in this area. We elevate it to a more serious level at that point with some face-to-face meetings with that supplier to specifically talk about it.

In one particular case, we were putting roll-sheeting equipment on our sheet-fed presses. As we converted from sheeted paper to rolls of paper, we found some problems as we got down near the core of these rolls.

The supplier was one from whom we had been buying paper for years. They had previously sheeted the paper before selling it to us; now they were selling it to us in rolls. Because of some new processes we were installing, they had to make modifications at the paper mill for us to be able to maintain the proper tension on the rolls.

Their response was to come down from Canada to review what we were doing. We had several SUPs occur in this area. Every chain of events is documented in our database, together with related responses. We can go back and re-create each scenario anytime and see exactly what our learnings were.

Like our production processes, our business processes are documented as ISO processes. We modify them through the QIP in the same way as our production processes. Some aspects of our major business processes are as follows:
Business and production processes are modified the same way, continued

• Management Review tracks responses from our employee, customer, and supplier satisfaction surveys, as well as any communication issues that arise from them.
• Our sales and marketing departments track ratios and averages, such as invoice and estimate amounts.
• Supplier partnering tracks the clarity of our requirements as we convey them to suppliers, as well as their perception of our relationships with them. Our supplier survey feeds into this. We ask them questions such as “Do you like the way we pay our bills?” and “Are we a good customer to you?”

Methods of managing our processes

We manage our processes by tracking performance information and other key measures using our printing-management software and the QID. We also manage our production processes through daily production meetings and in-process customer approvals, and by providing clear requirements to our suppliers.

Employees perform internal audits and tests throughout each production process to create consistent and reliable results. We have various points of in-process inspection and testing.

Value-added sales per employee

We track our sales-productivity gains on a value-added basis per employee and compare these gains to the industry benchmarks.

Our productivity experienced a little dip in 1999. This is because in 1998 we embarked on a major expansion, and in 1999 we installed some major new technologies and staffed up during the training process. We put people on before we saw revenue growth from this investment, so we actually saw the value-added results per employee decline as we made heavy investments in our people. We reaped the fruit of our efforts in 2001, however, when we achieved our stretch goal.

Organizational effectiveness is measured in several ways

One way in which we measure organizational effectiveness is by PONC as a percentage of sales. PONC refers to mistakes and rework costs. We were able to reduce our PONC costs from the increase we experienced during our year of major change when we brought in new processes and technology.

Another way in which we measure organizational effectiveness is by tracking on-time delivery of jobs against a Baldrige recipient benchmark and the Industry Week comparison. We show strong results in this area.

Yet another way in which we measure organizational effectiveness is by comparing our chargeable time percentage to our peer-group average. Chargeable time is the actual hours spent on a machine producing work. We subtract PONC costs from time that is chargeable to the customer. We are still trying to obtain our stretch goal of 80%, which is a high mark in our industry.

Still another way in which we measure organizational effectiveness is by cost per plate. Process improvement and technology implementation have enabled us to greatly improve our cost per required pre-press plate while greatly increasing the volume of output. Our cost per plate today is less than 50% of what it was in 1998.
Organizational effectiveness is measured in several ways, continued

when we started our performance improvements—a significant gain.

Another way in which we measure organizational effectiveness is by our supplier performance. We segment this by amount of product within specifications, percentage of correct invoicing, and percentage of on-time delivery. This measure has consistently improved since 1998 and now exceeds our Baldrige benchmark.

Information and Analysis

Fred S. Herbert—Strategic planning is where we use knowledge from the Leadership Accountability process to set direction for the company. We begin all strategic-planning processes with research.

We start off by doing an organizational review, looking at what our organizational capabilities are and how we will meet future needs. We talk with all our key suppliers and try to get a clear picture of their capabilities and whether they will be able to meet our future goals.

Then we look at our customer information. This data includes customer-satisfaction information from complaints and surveys. We determine whether we need to consider any of this information during the strategic-planning process. We also pull into strategic planning data from the human resources side: employee information, surveys, and focus groups.

We also try to understand the climate of our market in an effort to determine how economic conditions might affect our strategic planning. In addition, we look at societal and technological trends and how we believe they will impact our future.

When selecting information to use during strategic planning, we try to gather as much industry data as possible. We pull together Printing Industry of America research information, which consists of surveys done in our industry. We also try to compare ourselves as much as possible with industry best practices.

In addition, we look at other industries for best practices and comparative data. Events like the “Quest for Excellence” conference are very helpful to us in learning best practices. Last year we visited Clarke American Checks, a previous Baldrige Award winner, for one of their sharing days and came away with some great ideas for improving our practices.

One idea, related to human resources, enabled us to improve our leadership-evaluation process. Another idea was to create an awards program for employees involved in our quality-improvement project teams. We value looking outside our industry as much as we value looking inside.

Selection and use of data

When we train employees to use our Innovating Excellence system, we provide them with the tools they need to analyze and improve our processes—both individually and as QIP team members. We want our people to be able to analyze processes and problems on an individual level and also as part of a QIP team. We use root-
Selection and use of data, continued

cause analysis, fishbone diagrams, and other quality tools that have proven valuable in the quality field over the years. We give new hires some quick training on some of these tools so they can begin to fit into the corporate culture right away, and then we include these employees in the next available formal training session.

We also select work goals, which are measured and reviewed regularly on an individual level with employees’ supervisors. We talk with employees about their key measures, performances, and teamwork.

Resource leaders work closely with employees to establish individual goals and measures that align with our organizational goals and directions. Departmental plans and measures are selected and reviewed in departmental meetings. Departments are responsible for maintaining ISO work instructions and procedures, which are checked by an internal audit team and a third-party registrar.

Information-access methods

We use a printing-management software program to run our operations. Employees have computer terminals close by their workstations where they can log on and access specific jobs and operation codes. From this data we can track individual, cost-center, and department performance, as well as job costing. All employees have access to electronic job tickets, which contain detailed job instructions.

Information is entered into and rolled up through the QID. Supervisors have access to it and can update data and run reports as needed.

We use a customer-relationship-management software program that enables customer-service reps (CSRs), sales reps, accounting personnel, and supervisors to capture customer-communication history and other important contact information.

Other information-access methods for our suppliers, partners, and customers include faxes, the telephone, e-mail, and the internet. Our customers also have access to our FTP (large file transfer) site.

Employee access to information

It is important that our employees have access to the information they need. It is not possible to make fact-based decisions unless all employees have access to useful information about what’s going on both inside and outside the company.

Departmental results are posted on bulletin boards in each department. Division and Management Review reports are posted in a central location for all employees to review. Department and division results are discussed in monthly departmental meetings.

All employees meet individually with their supervisors on a scheduled basis to review results and progress on their measures, QIP participation, and action plans.

As pointed out earlier, all Branch-Smith employees have computer access to job information. Many employees have e-mail at their workstations, as well as internet access when appropriate.

ISO work-instruction manuals are located in each department. We are currently moving to a paperless system; all work instructions are being converted to
Employee access to information, continued

HTML format and will soon be available at all workstations through our intranet. We were first ISO certified in 1996, and we moved to the new ISO 9001:2000 standards in March 2002.

We hold an annual supplier/partner appreciation luncheon to reinforce their value to us and communicate the overall direction of the company to them.

Much research is done before Management Review

As mentioned earlier, Management Review is the core meeting of our senior leaders. In preparation for strategic planning each year, we research an array of information in an effort to make the most informed decisions possible.

For example, we review our organizational capabilities. We talk to key suppliers and determine their ability to meet our future needs. We pull together customer information, such as complaints and customer-survey data. We look at employee-survey and employee-feedback data. We review the competitive and economic environments. And we look at societal and technological trends.

The QID is the key to analysis

The Management Review process is designed to provide leaders the opportunity to review the status of our current actions and key measures from throughout the organization. In Management Review, we balance improvement opportunities and allocate resources.

Our primary approaches to analysis are trend analysis, employee- and customer-survey analysis, and SWOT analysis. This information is aggregated for review into charts or reports that include key financial indicators. We compare current results against those of previous years, against our current goals, and against budget forecasts. We use spreadsheets and database reports for in-depth analysis of financials and other trends to determine required responses.

The heart of the information system is our QID, which is made up of internally and externally gathered data. It has evolved over time, with more and more components added to provide more information. All the charts we use are created from this database. Information entered from the shop floor, including customer complaints, all gets aggregated for charting.

Productivity, employee, and customer information is entered into the database and aggregated for review and chart generation. Also entered are Management Review events, such as complaints, SUPs, or INCs.

Internal data

Internal data consists of several modules in the database: ISO-related data, on-time delivery, complaints, PONC, supplier performance, INCs, OFIs, and employee-survey results.

The INC program is a good example of our system's flexibility. We added this module to the QID about a year ago to track internal customer complaints and quickly spot process-improvement opportunities. This has also become a part of our Management Review process.

Journal of Innovative Management
The external data that we maintain in the QID includes printing-industry ratios, supplier input, customer-survey results, and competitor analysis. We prioritize the data in the QID for use in Management Review and the Leadership Accountability process to create and track QIP initiatives and action plans.

We also use the data in conjunction with divisional goals and strategies to help enable employees to align their goals to the needs of the organization.

We use a printing-management software program called PSI (which stands for Printing Software, Inc.) that contains many different modules. Our shop-floor data collection, estimating, job costing, and scheduling information all come together in this software program.

Management Review also does a departmental performance analysis to review any trends that need to be reviewed during the Leadership Accountability process.

During strategic planning, we select data that supports our key performance indicators and division strategies. We also perform a complete review of our organizational performance.

During this process we also select comparative data to set our stretch goals. We compare ourselves to other companies of our size in our industry as well as external best-in-class sources. Sources for this comparative data include industry ratio studies, surveys, and industry associations.

We benchmark with our printing peer group, which has members across the nation. Peer-group members share key industry best practices.

Accurate and reliable information is critical for making fact-based decisions. Information that we obtain from shop-floor data collection goes through a four-step validation process to verify its accuracy. First, daily time reports are reviewed, and relevant employees mark any corrections. Second, the reports are reviewed and corrected by their supervisors. Third, administrative assistants review them. Finally, I review monthly summaries before the end-of-month closing.

We protect key data, such as our human resources information and ISO documentation, through the use of server-folder lockouts, security levels, and passwords. We also maintain internet firewalls and virus-checking software on all computer systems. In addition, we run nightly incremental backups and full weekly backups, which we then store off-site.

Computer system reliability is maintained through our ITS (information technology services) department, whose personnel take care of maintenance, backups, and upgrades. We have regular meetings with ITS to establish priorities and discuss needs. Server uptime is protected with redundant power supplies and mirrored drives. Our server uptime averages 99.82%, with most of the downtime occurring for scheduled upgrades.

Software integrity, reliability, and user-friendliness issues are addressed through...
partnering with PSI, our printing-management software partner, for close support. We also use established, well-tested software products, such as those from Microsoft.

### Customer and Market Focus

Daniel E. Hanson—Customer focus is embedded into all parts of Branch-Smith's Innovating Excellence system. An early McKinsey study discussed four aspects of a successful printing company. One of them was to make an attempt to define a market niche, as we have done: We serve publishers and customers who desire turnkey solutions to their bound-product needs through our wide range of services, from design through mailing.

We also focus on customers who require shorter-quantity runs so we can compete successfully against competitors who have roll-fed or web presses. Our market segments are special-interest magazines, books, and directories/catalogs.

### Gathering customer input

We use many methods to gather input from our customers. For instance, our customer survey provides us with satisfaction results that are ranked by importance and are compared to our competitors’ results. We use ratings about new or emerging product/service areas to validate our investment direction and use this as input to the strategic-planning process. We track histories of customer buying behavior and trends in reasons for complaints.

In addition, we receive continuous feedback from our personal visits to customers and suppliers who are familiar with the printing industry. We are also active in industry associations, and, as mentioned earlier, we belong to a progressive peer group of leading printers from across the United States.

### The importance of our annual survey

The key method we use for determining customer satisfaction is our annual survey, which is conducted by a third-party research firm. This survey is reviewed and acted upon first during the Management Review process.

In Management Review, we pay particular attention to several different categories of the customer-satisfaction survey. These include satisfaction with our products and services, satisfaction with our competitors, product-quality attributes, added value, reliability, responsiveness, interpersonal relationships, market interest, and overall customer satisfaction.

Our company president sends a letter of thanks to customers who participate in the survey and a status of the survey at its completion. This is to encourage future feedback. Results are then reviewed by market segment. We look at areas of weakness, which are then assigned to teams and QIP groups. Additional customer-satisfaction comparisons are confirmed through informal methods, including one-on-one discussions with suppliers and new hires.

As mentioned earlier, our survey identified the priority of customer requirements as follows: (1) product quality, (2) reasonable prices, (3) reliability, (4) responsiveness, (5) interpersonal relationships, and (6) added value.
The importance of our annual survey, continued

Additional customer-satisfaction comparisons are done through one-on-one discussions with suppliers and new hires.

Several methods of listening and learning

We listen and learn about customer requirements and determine customer satisfaction using several methods. One is customer relationships, which include sales contacts, customer-service contacts, and meetings between key customers and Branch-Smith leaders. Another is follow-ups done by CSRs with each customer after completion of a job to determine their satisfaction.

We learn about buying behavior by studying complaints, sales success, bid analyses, and lost-customer reports. We use daily production meetings to communicate information about customers and address their needs for satisfaction.

Our organization also learns from our informal contacts with customers and suppliers at meetings and conferences.

Building and maintaining customer relationships

To build relationships, we have a strong support team that includes CSRs, our sales and estimating personnel, department supervisors, and our quality manager.

Our Customer Plan is an ISO document for key customers that defines a customer’s specific needs so that everyone can share this knowledge and respond accordingly. We want a CSR or support-team member to be able to visit a customer or call in our internal technicians as needed to respond to any issues that arise.

A senior manager visits key customers at least annually to maintain these relationships. We also stay in touch through a helpful customer newsletter containing technical tips and current changes under way at Branch-Smith.

Determining contact requirements

We determine our contact requirements through customer-history documents and our survey. Requirements are deployed through job descriptions and work instructions. Our CSRs’ work instructions contain customers’ direct phone numbers, toll-free numbers, and e-mail and web addresses. CSRs are instructed to respond within two to four hours of a customer inquiry. We have goals for CSRs’ PONC, increasing of value-added sales, and decreasing of complaints. And we measure the results against the goals.

Database usage

The QID is not exclusive to production and operations; it also includes information relative to our customers and stakeholders. In other words, it is relevant to every aspect of our business.

All measures contained in the database are aggregated for review and action. One such measure is on-time delivery (OTD), which is aggregated by reason (e.g., customer issue or what piece of equipment was used). Another measure is complaints, which are aggregated by reason and by type of complaint. A third measure, price of non-conformance (PONC), is aggregated by reason and by department.

We run extensive Pareto Charts that contain PONC codes. We have over 200 such codes in our data-collection system, which are root-cause codes that we can
Database usage, continued

put into a Pareto Chart at the end of a specific time period to determine where we need to take action.

We use our printing-management software to compile information for sales reports and win/loss ratios. And our employees provide other useful information through their informal conversations with customers, suppliers, and industry groups.

Overall customer satisfaction is high

Our customer satisfaction continues to be high compared to the average printer as determined by our customer survey.

In the survey, our customers rate issues (e.g., satisfaction with our products/services, product-quality attributes, reliability, and responsiveness) based on their importance to them. Figure 2 below weights each issue by the importance given to it by our customers. As you can see, there is a wide margin between us and the average printer score and our competitors’ scores. This is a very high benchmark that typically pertains to award-winning printers in our business.

We also keep track of customer complaints per 100 pre-press plates. Our trend in this area has been very good, and we are actively working to make sure we capture complaints that are less serious in nature but nevertheless provide us with useful information that we can use to improve even further.

Human Resource Focus

Shelly Allain—The growth and development of Branch-Smith employees is an important aspect of our Innovating Excellence system. Our strategic-planning activity is designed to focus on the current and future needs of not only Branch-Smith but also its employees and other stakeholders.

Our objective is to be the employer of choice. Our vision is to be the most
A quest to be the employer of choice, continued

Employees are accountable for organizational success

A desirable workplace possible, where employees can grow as individuals and find an opportunity to develop their careers.

Our employees are categorized into departments, which include customer service, art, pre-press, bindery, and fulfillment. Within these departments are written job descriptions, work instructions, and process maps, all of which are created by the employees who do the work every day. All processes have output requirements. Any new processes or changes in work instructions are covered during group training, which generally occurs during monthly departmental meetings.

Each department has created its own mission statement, which describes its role in fulfilling the organization's mission. It is through employees' participation in this process, along with goal setting, where they gain a sense of accountability and an understanding of how their contribution affects the success of the entire company.

Identifying needed skills and abilities

We conduct industry research by participating in trade peer groups and various associations where we find projections for the future of the printing business. As changes are projected, we review and revise our training plans to meet future needs. This also affords us the opportunity to benchmark best practices with many fine companies, including previous Baldrige recipients.

Another way in which we identify needed skills and abilities for the company to achieve its goals, particularly long-term goals, is through our strategic-planning process. Computer technology, software applications, and leadership development are key areas of concentration.

Employee survey

We conduct an employee survey that asks fifty questions about communication, management, customer focus, quality, job responsibility, training, processes and procedures, teamwork, and overall satisfaction. Employees in each department take the one-hour survey while their supervisor is not present. We segment the information we get from the survey in numerous ways by using our database.

After all the results are in, we go over each department's results and seek feedback on questions that scored particularly high or low. This is a great opportunity for employees to share their thoughts and concerns. We take this valuable information into our annual strategic-planning meetings, where action plans are created for key areas for improvement. No matter how good a company we might be, we know we always have room for improvement.

Annual performance appraisals

Each employee establishes work objectives to support the company objectives. These are tracked through individual performance reviews. We meet with every employee either weekly or biweekly to keep them informed about how they are doing. We manage by fact and objective information.

Progress against goals for each team is reported through performance charts and posted on workgroup bulletin boards. Then, as work objectives are accom-
Annual performance appraisals, continued

accomplished throughout the year, they are reported through the Management Review process, as are new initiatives.

We conduct an annual performance appraisal in February. It has three major components: goals, competencies, and training.

Individual goals are derived from organizational objectives. One of those objectives is to continually improve our business results. Another is to become the partner of choice for our customers.

Throughout the year, each employee and his/her supervisor meet frequently to go over the employee's progress in meeting these goals. Meanwhile, supervisors and managers meet with company leadership to review progress made on departmental objectives, such as QIP initiatives on which they might be working. This continual flow of information is the foundation of our Leadership Accountability process.

Another important component of the performance appraisal is the evaluation of competencies. Employees perform a self-appraisal of eleven competencies, which include job knowledge, initiative, and teamwork. This information is included with an employee's supervisor's appraisal to identify areas for development.

Training events

Together each employee and his/her supervisor discuss training plans and select at least two training events for the upcoming year that will be of benefit to both the employee and the company. This year, for example, we have sixteen different scheduled in-house training events from which to choose.

The two required training events are in addition to mandatory safety and human-relations training. This year this training has four tracks: leadership development; a basic skills toolkit that includes quality tools; human relations, which includes communications, sexual harassment awareness, and diversity awareness; and job-specific skills training.

At the conclusion of a training event, each trainee evaluates all internal and external training events he/she attends. This lets us know if trainees found the training beneficial and if they will be able to apply it to their jobs. Our employee survey also provides us with training-effectiveness feedback.

Compensation and benefits

Employee compensation is based on market-rate salaries from industry surveys. We use printing industry and cross-industry data. We have a bonus plan tied to company profitability. We offer health, life, and dental benefits; flexible spending accounts; a 401(k) plan; and YMCA membership. We also encourage and support community participation through the United Way.

Community activities

Employees and leaders alike are involved in community activities, and they explore industry issues through associations. We are also proactive in addressing societal concerns, such as reducing volatile organic compound (VOC) emissions and eliminating hazardous-waste streams. Between 1998 and 2001, Branch-Smith made a significant reduction in the amount of VOC emissions produced.
Recruitment and training

Finding the right employees isn't just about placing employment ads and verifying an applicant's previous employment. We have a comprehensive recruiting process that includes behavioral interviewing, profile testing (done through one of our business partners) that is specifically designed for each job, and a thorough background check.

The first few weeks after joining any company are critical for an employee. To make this period go smoother, we have a new-hire orientation that includes a presentation about the history of Branch-Smith, an introduction to our culture, a review of the quality tools, and an overview of our policies and procedures.

Employee recognition

Employee recognition comes in a variety of forms at Branch-Smith. Our employee newsletter, called the Final Proof, provides us with opportunities to spotlight employees, introduce new hires, and announce promotions. We recognize years of service at our quarterly luncheons. And our “Caught in the Act” award program gives employees an opportunity to recognize each other. All participating employees are recognized on the company bulletin board and in the newsletter.

Training and development

We encourage our employees to sharpen their skills so they can develop their careers successfully. We group employee training into three broad categories: skills, safety, and quality. Much of this training, such as attendance at in-house events and various seminars, is informal. As mentioned earlier, this year we have sixteen scheduled in-house training events, based on our strategic plans, from which employees and supervisors can choose.

We offer educational assistance for employees looking to further their formal education. To encourage interest in this program, we pay for approved courses and books up front. There is a cap of $1,500 a year per employee on this. We have seen an increase in participation in this program since we changed from a reimbursement system to paying at the time of registration.

We don't discuss career development only during the performance-appraisal process; we continually work with employees to develop their careers. After all, they fuel our progress as an organization.

We recognize that we gain greater flexibility by cross-training employees as much as is feasible. Our bindery department, for example, has done a great job at cross-training our folder, cutter, and stitcher operators so that they can run a variety of machines. This removes the limitations of single-machine skills, provides greater flexibility in scheduling the work, and offers employees some variety in their work.

Communication and diversity awareness are both important parts of our training plans. They enable us to capitalize on all our differences and changing needs.

Safety programs

We have a safety handbook that provides employees with general safety rules and guidelines. It also includes our emergency evacuation and preparedness plan.

Some of our work processes require the use of personal protective equipment.
Safety programs, continued

All employees who work in these areas receive appropriate PPE training.

We have a group of employees from various departments who volunteer to participate on our safety committee. They help establish the goals and objectives of our safety program and perform facility inspections. This year they are going to present some of our safety training to their fellow employees.

Each year we bring in a group of safety consultants to conduct an annual safety audit. These consultants look at our facilities, equipment, and programs and identify any areas in need of improvement.

We take part in the OSHCON program, which is offered through the Texas Workers Compensation Commission. This inspection is based on OSHA criteria.

For the past two years we have met the required criteria for participation in SHARP (Safety, Health Awareness, and Recognition Program). If our inspector were to find violations, he/she would write us up and give a time frame for correction. If we didn't make the correction within the required time frame, our local OSHA representative would be notified. But OSHA is willing to work with SHARP participants to maintain a solid safety program and a hazard-free workplace.

The OFI process

We know that if a process can be improved, our employees will find a way to do it. Our formal suggestion program, called Opportunity for Improvement (OFI), offers an avenue for employees to share their ideas. When submitting an OFI suggestion, an employee must outline the current situation, a recommendation for improvement, and the specific advantages that will be derived from the improvement.

Management goes over the OFI suggestions during Management Review meetings to see if they meet the required criteria for approval. The originator of each OFI suggestion is then notified whether his/her suggestion has been approved, and points are awarded accordingly. Employees can immediately redeem their points for a gift card toward a dinner and a movie, or they can accumulate points to go toward an American Express gift check. All approved OFI suggestions are then routed to the appropriate person or department.

An OFI can lead to a QIP initiative, which might involve a project team. Team activities are great opportunities for employees to exercise their skills and develop their problem-solving and teaming skills while innovating creative solutions.

Employee satisfaction

We had an 86% overall employee-satisfaction rate for 2001. Our stretch goal was 90%. In 2002 we were at 91%. We calculate reportable accidents per 100 employees. For 2002, our average was 2.71% (which for us means one accident). Our voluntary employee turnover was 7.75% for 2002.

Seeking a professional methodology

Journey to Performance Excellence

David C. Branch—When we entered this journey, we were seeking a professional organizational methodology. The Baldrige model describes four phases of process maturity: reacting to problems, the early systematic phase, an aligned approach, and
an integrated approach for aligning strategic and operational goals. I will describe our journey in terms of our progression through these phases.

**Phase 1: Reacting to problems**

In 1991, our culture consisted of activities rather than processes, and we were reacting to problems. The culture we desired was one that had features of an integrated approach, such as reliable, repeatable operations and regular evaluation and improvement across work units.

Our strategic-planning process was typical for a small company. Our culture was paternalistic with entitlement, in the sense that consequences were not easily and clearly linked to performance.

We were a good company by normal standards, but we were becoming concerned about someday being blindsided by the market. There was a lot of discussion about quality, but we didn’t know what the idea of quality really meant.

Research led us to the Hogan Center for Performance Excellence in Dallas, which offered a small-business quality consortium. Participation in this consortium involved our joining several other small businesses for twenty-four months of quality training, including aspects of Total Quality Management (TQM). Then we received training in teamwork and problem solving. We even had a TQM kick-off celebration at Branch-Smith to initiate a cultural change.

By April 1994, our strategic-planning process included quality. However, our quality plan was separate from our business plan; we had not integrated our ideas. As we ended the twenty-four-month quality training, we were given our first Baldrige-based self-assessment.

**Positive changes began to occur**

That self-assessment drove us into phase 2, the early systematic phase. In the self-assessment, we rated simple statements by category. This revealed that the process-management category was in need of the greatest amount of improvement.

During this time, ISO 9001 was the benchmark quality-management system. One of its greatest benefits is the way it converts the tacit knowledge of experience into explicit knowledge as a basis for standardization and training.

I appointed a team of four leaders, and in January 1996 we became one of the first independent printers in the nation to become registered for ISO 9001.

**ISO 9001 registration**

We were then about to experience our first Baldrige-based external assessment. A pilot program was announced by the Texas Quality Award committee in the Dallas/Fort Worth area for Level I and II Texas applications (which are written at a lower level and with fewer pages). They held a workshop to help with the application process. While our team was working on ISO certification, I wrote our first Level II application, which we submitted in November 1995.

This helped create our first real perspective of our organization relative to
Our first Baldrige-based external assessment, continued

the Baldrige Criteria. It was soon clear that the feedback report is only as strong as the application. But it was a start that undoubtedly brought some amusement to many experienced Texas examiners.

We were steadily making progress. We created the Management Review process to help track customer complaints and other stakeholder concerns. Now we had it and ISO 9001 to support our strategic-planning process.

Phase 3: An aligned approach

It was the examiner process that drove us into phase 3, the aligned approach phase. While attending Texas examiner training, I struggled through my training case study and went on a site visit. That was an incredible learning experience that helped me understand what an application should look like and what went on during one of these visits.

During this training, with my permission, Branch-Smith's application from the previous year was sanitized for use as a Level II case study. It was fascinating to listen to everyone else discussing my company when they didn't know they were talking about someone who was present.

Also during this time, I saw the importance of having aligned goals and measures as a communication tool. I also began to understand the linkages that were required across the different Baldrige categories.

Creation of the QID

That led us to identify important issues that needed to be measured and to create a tool that would make the measurement process accessible and useful. We built our Quality Information Database (QID) during this time. It enabled us to record key events and begin to systematically manage by fact.

A part of this process was to generate workgroup performance charts to put on bulletin boards that cascaded from the overall posted results. We also began to circulate and post reports with the current status of action plans, complaints, and other stakeholder event concerns.

We continued with Baldrige-based assessments. We followed up my examiner year with a 1998 Level II application. In the same year, I again served as an examiner and led a site-visit team. During the following cycle, we submitted an application and were honored with a 1999 Texas Quality Award.

Alignment toward stakeholder opportunity

At this point we had QID and ISO 9001 supporting our Leadership Accountability, Management Review, and strategic-planning processes.

We had much-improved visual communication aids (the workgroup performance charts mentioned above) to promote involvement by workgroups, we had structured input, and we linked our action plans to key measures as a part of the Leadership Accountability process. We now believed that we had the tools aligned so that all our stakeholders would have the opportunity to be successful together.

This alignment made us feel that we had an integrated approach. Our strategic challenge to serve our customers well in the future involved a commitment to a new
platform of capability and technology that was coming of age at the time. In 1998 we made strategic plans in this area, and in 1999 we conducted major coordinated upgrades in technology, equipment, information systems, and human resources.

To successfully utilize the investment required, we needed to go from servicing accounts in-house to using an outside sales force supported by our own customer-service personnel. This was part of an effort to approximately double our sales as the capability came on-line. This required an integrated approach, and our team accomplished this successfully during a very difficult time in our market.

As a part of our information-systems upgrades, we were able to close the loop to individuals. Now our individual performance metrics align with workgroup and organizational results as well as provide an objective basis for performance appraisals.

We have regular review meetings with individuals to share performance feedback and learn how Branch-Smith can remove any obstacles to their success. Also, we can more constructively develop their careers through education and training.

We continued throughout this phase to undergo Baldrige external assessments. We went to consensus review, but did not receive a site visit, in 2000, following our first year of major expansion.

We applied again in 2001 and received a site visit—and excellent feedback—just before successfully completing our second ISO re-certification to the new 9001:2000 standard in March 2002.

When the Baldrige folks created an opportunity for applicants to designate an examiner in 2002, I jumped in for the cycle and learned a great deal. Of course, Branch-Smith was very honored to receive the 2002 Baldrige Award.

For us, the Innovating Excellence model represents a means to involve everyone at Branch-Smith in building, applying, and sharing knowledge. We believe that the way we deal with knowledge is the key to our ability to sustain organizational success. It’s all about continuous learning.

The results from our journey to performance excellence illustrate our success. Figure 3 shows our sales growth.
Knowledge is the key to sustaining success, continued

from 1997 to 2001 compared to the printing-industry average during the same period. In addition, our share of the primary market in the Dallas/Fort Worth area almost tripled during this time frame.

A long walk that held amazing discoveries

Our journey to Innovating Excellence was a long walk, but it held amazing discoveries. From that perspective, I like the story told by Norman Vincent Peale about the missionary teacher in Africa who received a beautiful shell from a student. The boy had gone on foot to a distant section of the African coast to get the shell.

“You’ve walked so far to bring me such a wonderful present,” the teacher said.

“Oh, teacher,” the boy replied, “the long walk is part of the gift.”

Author information

Shelly Allain joined Branch-Smith as human resources manager in 2002. She has ten years’ experience in human resource programs development and implementation.

David C. Branch is president of Branch-Smith. He has also served as an examiner for the Malcolm Baldrige and Texas Quality Awards.

Daniel E. Hanson, vice president/general manager, oversees manufacturing and sales operations. He has worked in the printing industry for twenty-two years.

Fred S. Herbert, quality manager, joined Branch-Smith in 1998. He is an ISO internal auditor and led Branch-Smith’s transition to ISO 9001:2000.

Editorial assistance for this article was provided by Cathy Kingery.
A European Hope for Business and Quality

By Laurence R. Smith

The Hague, 2-6 June—An often-quoted Margaret Mead statement is: “Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has.” It appears to be in that spirit that several hundred executives from business, government, health care, and education traveled from six continents to this Dutch city that houses the Carnegie Foundation’s Peace Palace and the International Court of Justice. They came to discuss and discover ways to run organizations in a manner that facilitates a high quality of human life, economic life, and other forms of life on earth. The sponsors of this historic event were the European Organization for Quality (EOQ) and the European Foundation for Quality Management (EFQM).

“Social Dimensions of Organizational Excellence” was the theme for this forty-seventh EOQ Congress and the EFQM Learning Edge. Sessions were organized into eight categories:

- Valuing work and life: the human side of business
- Corporate sustainability and social responsibility
- Organizational excellence in educational institutes
- Organization-wide improvement programs
- Facing the challenges of networking organizations
- Leadership and revolutionary breakthroughs in health care
- Food safety
- Using standardization in government and company accountability

Three keynote speakers set the stage for the congress, followed by sixty-five presentations and discussions over the next few days.

What reality shall we work to produce more of?

When the Berlin Wall was being taken down, British Army General Frank Steer stood on it as a symbol to freedom. As barriers go, that wall had been pretty formidable for many years. Now retired from the army, Steer appears to be standing on another wall, a symbolic one but every bit as formidable, hoping that it, too, will be taken down by people working to do the right things. However, while this symbolic wall separating different realities may not be readily visible, it nevertheless separates two ways of life, two different economic worlds.

On one side are those who design and run organizations in a manner that seeks to produce high-quality workplaces, products, services, and communities in which to work and live. In the process they want to—indeed they know they must—make money. Foremost, it is a world view that favors sustainability, social responsibility, ecological well-being, and economic prosperity. It is a view that there can be enough resources in the world to enable a good society, and that people can create systems to make it happen.
On the other side of this wall are those who run organizations first and foremost— and perhaps solely—to make money and are not particularly interested in doing it in a manner that leads to better qualities of life for their customers, employees, communities, or nations. It is a view that is driven by abstract quantitative, not qualitative, measures. It sees scarcity everywhere and lives in fear that there can't be enough for everyone. Adherents don't even look to design systems to make better qualities of life happen. They focus on competition to dominate the marketplace, lobby for government favoritism to protect their interests, and treat workers like replaceable, mechanical, parts.

Standing around Steer on this new wall are leaders from a variety of public and private organizations from thirty-five European countries. Together they are the European Organization for Quality, and Steer is president. In his keynote address to open the EOQ Congress, Steer said:

The role played by EOQ members in their nations in spreading the message of the importance of quality in all we do is a vital one. It is only through the proper application of the ethos for which we stand, the methods and systems we have developed to improve quality, and the whole range of tools and methods that are available, that we are able to offer ways in which businesses and organizations can improve. And, of course, I refer to the public as well as the private sector.

On the face of it, it is obvious. There are tools out there that set minimum international standards to which we all adhere. And in adhering to them we can show others in our own country—and internationally—that we have set and met those minimum standards, thereby increasing supplier and customer confidence, and benefiting the flow of business and trade between companies and between nations.

Steer also announced an agreement in principle to join EOQ and EFQM into a movement that speaks with one voice. He told the Congress that a working group is being convened to develop the details, and he invited their involvement. Steer emphasized that:

Until there is a movement for quality that is pan-European and speaks with one voice, we shall never be in a position even to begin to influence the improvement we all seek in the development of the European economy. Until we combine all facets of what we seek to do, and place them under one umbrella, we shall not begin to drive European business, big and small, in the direction that will help to transform this multi-faceted, multi-lingual, multi-cultural economy. We shall harness the diversity that is our strength only if we provide a platform to harness and focus that diversity. We shall start winning together only if we work together. We shall begin to be European quality professionals only if we are part of one movement for quality. Such a movement involves risk, but it is in my view a risk we have to take. It is also an opportunity to come together and help build a truly European movement for quality.

Global problem solving can’t be left to governments alone

Jean-François Rischard, Vice President–Europe, Worldbank, France, stated his personal belief, in a keynote address, that two major forces will bring about dramatic change in the world over the next twenty years. The first is “demographic force.” As the Earth’s population grows by a third over the next two decades (to eight billion people by 2025), we will experience an array of potentially dangerous environmental and social stresses. The second force is a new world economy driven by two revolutions: (1) a technological revolution centered around increasingly inexpensive telecommunication
A European Hope for Business and Quality

and computer technologies, and (2) an economic revolution that comes from virtually all countries swinging over to market-type policies. This second force is likely to produce both unprecedented opportunities and unprecedented stresses, he said.

Rischard believes these two forces will reflect an exponentiality of scarcity in the case of the demographic (including ecological) force and an exponentiality of plenty in the case of the new world-economy force. Because of this exponential shape and the “fast time” that characterizes the two forces, they will tend to overwhelm our history of linearly evolving, snail-paced, human institutions (i.e., governments, government departments, international institutions, and other large hierarchical entities still steeped in the industrial age).

He thinks these forces will overwhelm existing systems and reveal a governance gap that has many manifestations: financial crises like the one in Asia in 1997/1998; protesters speaking out; voters no longer trusting their politicians to really solve today’s problems; and a kind of bad mood in political life all over the world. But the worst casualty of the governance gap, he believes, has to do with the non-resolution of urgent global problems.

Rischard said these urgent global problems can no longer be solved within each nation-state. “We need collective action, which is something the world hasn’t been good at,” he said, adding that “there are about twenty such global problems, and they fall into three categories: how we share our living space, how we share our rulebook, and how we share our humanity. They all need solving during the next twenty years, not thirty, forty, or fifty years.” Rischard’s book, High Noon: 20 Global Problems, 20 Years to Solve Them, details them for those who want to look closer, from fisheries depletion to e-commerce rules to communicable diseases.

He says the current international system hasn’t been effective or quick to solve these problems: treaties are slow and often not enforced; big United Nations conferences are useful but do not produce detailed solutions; G8-type groupings do a lot but are mostly reactive; and the roughly forty-five international institutions in the world do many useful things and can help, but are not in a position to grab one or several of the twenty problems and solve them on their own.

Rischard proposes a solution: Set up, for each of the twenty global problems, a permanent Global Issues Network (GIN) that would group representatives from governments concerned by and experienced in the issue at hand, with knowledgeable representatives from business (whether business is part of the problem or part of the solution), as well as representatives from international non-governmental organizations (NGOs) that know the issue well.

He explained that these GINs— which would mark the entry of tri-sector partnerships in global affairs— would take apart a problem (e.g., fisheries depletion), search for solutions and pathways, and then emit detailed norms and standards that would be used to coax the various players into the direction of definitively solving the problem for the world at large. The GINs, having set forth acceptable standards, would then turn themselves into rating agencies whose job would be to expose those nation-states,
Corporations and society in search of trust and reliability

J. W. Oosterwijk, Secretary General of the Netherlands’ Ministry of Economic Affairs, noted that we live in an interconnected world and acknowledged the importance of international treaties and partnerships, addressing the importance of corporate social responsibility and the role national governments can play in this. “Corporate social responsibility happens to correspond extremely well with the objective of the Dutch Ministry of Economic Affairs,” he said, “and our promotion of sustainable economic growth.” Without pretending the Dutch model is the one and only way to a better society, he noted that in their culture public-private partnerships and accepting one’s responsibility are important virtues.

He said the motto of the Dutch government is “join in, more work, fewer rules.” “More than ever before, citizens are aware of the deficiencies that can be seen in our society,” he said, “and of the necessity to improve the quality of our democracy, of public services, security, education, and health care.”

At the same time, he noted, the economic and budget situation has deteriorated, and the new government will strive for a strong economy, a decisive government, a better democracy, and a safe society. To achieve all this, the policy will be to improve the Netherlands’ competitive position, reduce “red tape” and bureaucracy, increase the responsibility of citizens, give them a greater say, and guarantee safety.

The new government has indicated that it cannot do all of this on its own, Oosterwijk said: “Everyone has to join in. ‘Joining in’ means taking responsibility. People can achieve a great deal if they are given the freedom to do so: as an entrepreneur, an employee, a teacher, a police officer, a nurse, a homemaker, etc.”

A private-public sector parallel

Oosterwijk made an attempt to draw a parallel between the private and public sectors, saying the central objective for both sectors is continuous improvement and a focus on their customers—consumers or citizens. He said, “The calls for more freedom of choice and the opportunities for this freedom of choice are increasing under the influence of the process of individualization, improved access to information, the increasing level of education of the population, and increased prosperity. Governments must allow room for this.”

Oosterwijk noted that many companies have already made the change to custom-
made products—a change to offering what the consumer wants: healthy, safe, and increasingly better, innovative products. One specific tool used to achieve this is quality management, he said.

The next change that companies in the Netherlands appear to be making, Oosterwijk said, is an even broader orientation toward society.

In the space of some ten years, increasing numbers of people have realized that the success of a company is inextricably linked to the prosperity and stability of the community. Profit, people, and planet also play a vital part. This insight calls for a new corporate logic, a logic where looking after employees, communities, and the environment are not just regarded as a moral duty but are also regarded as the best approach from the point of view of continuity and profitability. In short: Corporate Social Responsibility.

Also bear in mind that, from the point of view of competitive position, CSR is essential for companies operating at an international level. A good reputation is easier lost than gained! Yet CSR is not all about moonlight and roses, it's also about companies making painful decisions. In complicated ethical matters, in particular, a win-win solution is not always possible. But don't doubt that, in the long run, CSR is beneficial both to society and to corporate life.

The Secretary General said that to make sure that CSR gets off the ground properly, CSR needs to become a norm, just like quality management. “To do this we need a joint effort between government, social organizations, and the business world,” he said. And then he articulated a division of roles:

CSR is primarily a matter for the company itself. Many big companies take their responsibilities. After all, at the start of the CSR journey it’s the companies that must recognize the opportunities and grab them. The companies themselves must anchor CSR from within. However, the fact that the initiative lies with the companies does not mean that they are out there on their own. Government must support and encourage them.

The symbol of the extended hand fits in with this facilitating and stimulating role. The extended hand is a symbol for a new approach. A new, modern attitude focused on creativity and collaboration, an attitude that says farewell to old assumptions, like the assumption that the government must change the world with laws and grants, which doesn't work. Nor does the assumption that companies focus solely on production. This is no longer the case. And finally, the assumption that social organizations are merely saying “boo” is also in the past. Non-governmental organizations are still stimulating the business world, but now they are increasingly doing so through dialogue.

Seven CSR points

Oosterwijk then explained that the new approach and the new role assumption for the government have been translated into a seven-point CSR action plan.

1. The Government in the role of change agent

The government positions itself as a facilitator of change, bringing parties together, inviting innovative collaboration. No admonishing finger. No laws and regulations. No bags full of money.

Increasing numbers of partnerships are formed in the Netherlands. Many are between town councils and companies.

In an international context, the partnership format is a hot topic. In November 2002, a successful joint mission to India was carried out by the Ministries of Economic Affairs and Development Assistance. At that time, partnerships were placed high on the
meeting agenda. The aim is to encourage the Dutch business community to collaborate with its counterparts in developing countries, and for these collaborations to become the starting point for initiatives in the area of CSR and enterprise against poverty.

2. Promotion of OESO guidelines

Increasing numbers of companies operate abroad. Increasingly, companies discover the option of converting social problems into business opportunities, thus serving the interests of different stakeholders. However, operating in countries that have their own problems and their own cultures can also create problems. The Ministry of Economic Affairs feels it is important to help companies find the right way to do things, and it promotes guidelines formulated by OESO for multinational enterprises.

OESO directives are a basis for socially responsible business. OESO stands for Organisatie voor Economische Samenwerking en Ontwikkeling. EOCDE is the English version, which stands for Economic Cooperation and Development. The web site is eocd.org.

Every company applying for an export grant receives a Ministry of Economic Affairs brochure regarding the OESO guidelines. The Ministry also demands that applications for export credit insurance be accompanied by a statement that the applicant has read the OESO guidelines.

The OESO Directives for Multinational Companies are recommendations passed from the governments of OESO member countries to companies in their respective countries. The Directives lay down what governments expect from companies. They offer a guideline code of conduct about how to go about various long-term aspects of doing business. The Directives deal with a range of subjects concerned with, among other things, the environment, disclosure of information, working conditions, and combating corruption.

3. CSR research program

CSR is not just a question of desire. It is also a question of ability, and the Ministry of Economic Affairs supports the university CSR research program.

4. CSR awareness campaign

This year the Ministry of Economic Affairs is launching a CSR awareness campaign. This campaign has three objectives: to stimulate companies to become involved in CSR, to initiate a wider social debate on the theme of CSR, and to put the CSR Knowledge Centre on the map as the source of knowledge relating to CSR.

5. Combining strengths

The new division of roles also means doing things together, combining strengths instead of fragmentation. We will ask the CEOs of companies we consider to be CSR front-runners to share their knowledge and inspiration with anyone willing to listen, including the people who still have to get used to the whole CSR concept. It’s not just about sending a message. It’s also about receiving it. The express intention is to start up a dialogue among all the parties involved.
The Ministry of Economic Affairs also wants to intensify contacts with the NGOs and intermediaries, thus becoming even more open to initiatives from social organizations. In concrete terms, the Ministry of Economic Affairs will be setting up a multi-stakeholder platform. This platform will accommodate companies, unions, intermediary organizations, pension funds, and NGOs. Of course, the composition is open to change, as are the themes.

6. Social reporting

Because of the interest in the “sustainable investment” product, companies are encouraged to provide information about the sustainability of their operations. At the request of the Ministry of Economic Affairs, the Board for Annual Reporting will shortly be issuing a recommendation about social annual reporting.

In combination with the activities of the Global Reporting Initiative, this recommendation will provide an important quality impetus to this type of reporting in the Netherlands. The Ministry of Economic Affairs will actively bring the recommendations made by the Board and the GRI guidelines to the attention of companies.

The government does not want a situation where a social annual report is compulsory. After all, CSR is more than just adhering to statutory rules. CSR goes beyond the law. It’s all about respect and responsibility. If we force companies to report annually on CSR aspects, we miss the real objective and it simply becomes a question of ticking the boxes. The Ministry of Economic Affairs can see more benefits in a dialogue, about just what is meant by respect, decency, and responsibility. This way, we contribute much more to the inner definition of CSR.

7. Responsible purchasing by the government

The government plays a supporting and stimulating role in the effort to turn CSR into an everyday norm. This role does not absolve us from the obligation to lead by example. After all, the government is also in business. We buy products and services and regularly outsource work, all on a large scale. In all of these activities the government, too, must turn its principles into policy. Within the government, for example, sustainable purchasing and outsourcing is still in its infancy, but this issue is being addressed seriously with a concrete plan of approach.

Conclusion

Oosterwijk concluded by saying that CSR is in full development in the Netherlands, and he compared CSR development to the way quality management started when it first became an issue, which eventually resulted in usable tools. He then suggested three topics that might be considered for dialogue:

1. The chain of responsibility with companies operating on an international level and NGOs in an effort to achieve a clear understanding about the extent to which companies are responsible for their suppliers.
2. The role of pension funds as large and potentially sustainable investors. How do they see their role in CSR?
3. The way the interests of shareholders and of stakeholders increasingly coincide.
The Business Impact of Corporate Social Responsibility

Julien De Wilde, CEO, N.V. Bekaert S.A., Brussels, Belgium

Introduction

Bekaert is an international group founded in Belgium in 1880. The group operates production plants in thirty countries with 17,000 employees, and generates sales of 2.8 billion euros in 120 countries.

Bekaert is undergoing a fundamental renewal process, summarized in Figure 1, evolving from a producer of products based mainly on metal wire to a more diversified product portfolio with products closer to the end user. These products are based on two core competencies: metal transformation and coating technologies.

We focus on markets having a high long-term growth potential. Many of our new products relate to safety, comfort, quality of life, and clean environment—elements that rank high on the list of concerns of people in today’s society.

The ultimate goal of this renewal process, initiated by the board of directors, is to create sustainable value and growth for all stakeholders, including customers, business partners, shareholders, employees, and society at large.

A growing maturity in commitment to quality

Bekaert’s commitment to quality, in its broadest sense and in all its aspects, has a long history. It seems clear to us that a corporate commitment to quality matures when attention is paid not only to economic viability, but also to human life and our common physical and emotional environment. This broad commitment to quality is the foundation of what Bekaert has become today: a sustainable company with good corporate governance and a balanced attention to profit, people, and planet.

Responsibility profile

Bekaert’s corporate social responsibility profile of today, which is widely recognized, is the result of an organic historic evolution. In aspects such as quality, social responsibility initiatives, environmental care, and ethical behavior, Bekaert has always been a front-runner. This has been recognized externally by a multitude of awards that the company received from highly reputed quality and sustainability organizations and by the international investment community. As you can see from...
Responsibility profile, continued

the list of awards shown in Figure 2, the recognition our company has received has come from a number of respected organizations in several diverse countries throughout the European community.

Figure 2. Corporate Social Responsibility (CSR) Recognition.
- Ethibel (leading European research organization for CSR).
- Eiris (Ethical Investment Research Service–UK-based).
- FTSE4Good (London).
- IMUG Investment Research, Hannover (Germany).
- Zürcher Kantonalbank (Switzerland).
- SNS (leading CSR asset manager in the Netherlands).
- Storebrand (Scandinavia) “Best in Class” label.

An organic evolution toward business excellence

It is said that a picture is worth a thousand words, and Figure 3 is a graphical representation of our culture change over the past four decades. Before and during the 1970s, attention was focused on the product. We were interested in quantity and quality to the extent that “end-of-pipe” quality control of the product was vital to ensure that the customer received a perfect product.

Quality was not an all-embracing, integrated-management concept. Neither was environmental care. Attention was paid to end-of-pipe treatment mainly. And the same held true for the management of human resources. It was not integrated; it was based on an all-caring and sound paternalistic view toward people and society.

However, long before “works’ councils” became compulsory in Belgium, Bekaert had installed a so-called “factory council” and a “safety council” involving employees in exchanging information with the objective to involve people in making a better-quality and more competitive product, and a safer and healthier work environment.

In the 1980s the scope of quality was broadened. Product quality evolved toward seeking to control the quality of the process, with full involvement of the operators as key players in this process. This included the establishment of standard operating procedures, and the assurance that everything was done as specified. We saw the emergence of numerous quality-control organizations issuing quality certificates. The processes also began to be scrutinized from an environmental point of view, with more attention paid to the rational use of raw materials and consumables to reduce both the direct cost of waste and the indirect cost to clean it up. Human resources policies became part of an integrated-management approach, and the role of the employee as a key player was recognized in the “Beliefs and Mission” statements of many companies.

The next stage in our evolution came with a growing recognition that we had to pay special attention to the fact that TQM has a technical, behavioral, and
managerial component. We saw that even with a process emphasis, a sub-optimization of each function or part of the organization was still possible.

We also saw that the leadership and guidance role of top management in the overall process did not get enough recognition. There was no guarantee that “all noses were pointed in the same direction.”

Our study led us to become increasingly aware that for TQM to be successful, we had to integrate three complementary components (see Figure 4): a technical, a behavioral, and a managerial one. All three are absolutely necessary to become successful.

To address this new concept, various TQM models and frameworks, such as the European Foundation for Quality Management (EFQM) Excellence Model (Figure 5), were introduced in the early 1990s. We took these elements into account, and they became very helpful in our continuous journey toward business excellence.

Next, a company-wide self-assessment led us to develop a “policy deployment” methodology, which is designed to communicate and deploy top management’s goals throughout the organization, while also reformulating them at each level into understandable and specific goals that can be worked on by cross-functional teams. This gave top management the assurance that every employee knows his or her own objectives and how he or she fits into the overall objective of the company. It also means that people’s performance can be evaluated and they can be rewarded for their contribution to the achievement of corporate goals, not only as an individual, but also as part of a team. In doing so, the human resources function became more
integrated and supportive of the achievement of corporate strategic objectives.

This evolution in our thinking about work then led to a proactive approach in environmental matters. Instead of directing our thought processes toward ways to “minimize” environmental impact, research was done to develop alternative processes to avoid the use of some harmful consumables to begin with. Moreover, “closed-loop processes” were developed to eliminate all environmental impact. This proactive approach, combined with new and more advanced technologies, also led to a strengthening of Bekaert’s competitive position. Our evolution has now grown to the point, as the new century began, where our thinking about the role of our company in the world—our philosophy—includes being “sustainability driven,” as well as product, process, and management driven. Figure 6 diagrams this thinking, in what we call our “organic evolution” matrix.

<table>
<thead>
<tr>
<th>Environment</th>
<th>Social</th>
<th>Quality</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>1970s</th>
<th>1980s</th>
<th>1990s</th>
<th>2000s</th>
</tr>
</thead>
</table>

The new dimension of TQM includes CSR

Globalization, good corporate governance, reputation management, fast technological evolution, growing interest of the investment community in ethical business behavior, and a better balance between business and family life have all given a new dimension to the quality, the responsibility, and the required style of management. This “Corporate Social Responsibility” (CSR) is not really so new to Bekaert. It is just a further step forward on our journey to business excellence. We always have paid attention to the three P’s: Profit, People, and Planet. It is now just more pronounced, clearly stated, adapted, and more balanced. Also, the EFQM model pays attention to the three P’s in its results, namely in “people results,” “society results,” and “key performance results.” Quality of the products or the processes is no longer an objective; it just has become a condition sine qua non to remain in business. As is being described in the renewed code of conduct, we expect every employee to be a “good Bekaert corporate citizen” showing, in addition to all required business competencies, the right attitude and the willingness to cooperate with all colleagues and to learn from others.

Conclusion

It is our firm belief that this CSR approach will create sustainable value and growth for all stakeholders in Bekaert. It has made us a better-performing organization that optimally uses its resources and shows increased profitability. It has strengthened our brand image and hence improved our customer relations and
Conclusion, continued

loyalty. It has fostered our reputation, which makes it possible to attract the best people in the market. It has brought us a safer and cleaner work environment. It has improved our relations with the investment communities and also increased shareholder value. It has made Bekaert a better place to work.

And yet, despite our strong belief in CSR, we should be careful and ask where CSR for a business leader begins and ends. It is my feeling that society at large has somewhat forgotten the key role of business, which is to create sustainable value, wealth, and prosperity—and, as a consequence, jobs, too. This becomes increasingly important in a period of slowing economic growth, where one rightly looks to business leaders to crank up the economy. We must be careful not to fall back into the old “paternalistic” situation where the “boss” took care of everything for “his” people. This is not what we want. Business leaders should not take over the responsibilities of democratically elected politicians; they should stick to business, but in a socially responsible way.

Author information

Julien De Wilde started in 1969 as a research engineer in the Texaco European Research Center, Gent, and after several functions became General Manager of the Information and Communication Department of Texaco for Belgium, the Netherlands, and France. In 1984 he was appointed Deputy General Manager, Marketing and Refining, Texaco Belgium.

In 1987 he became a member of the European Management Board of Texaco Europe in New York. In 1988 he became head of the research and business development department of Recticel. In 1989 he joined the Alcatel Group as a member of the Management Committee and became President and Chief Executive Officer of Alcatel Bell in 1995. From 1996 he also held the position of Area President for Northern and Eastern Europe. In 1999 he was appointed Executive Vice President of Alcatel for Europe, the Middle East, Africa, and India, and became a member of the Alcatel Executive Committee (Paris). Additionally, he is Honorary Chairman of the Board of Directors of Agoria.

He has an engineering degree from the Catholic University of Leuven.

About this article

This article was developed from Mr. De Wilde’s keynote address given at the closing of the European Organization for Quality’s forty-seventh congress on Friday, June 6, 2003, in The Hague.
Performance Management and Work/Life Balance

Author
Eddy Vandersmissen, Area Human Resources Manager, Borealis, Beringen Office, Belgium

About Borealis
Borealis, with headquarters in Denmark, is one of the world’s largest producers of polyolefins, a family of plastics that includes polypropylene and polyethylene. Borealis produces more than three million tons of polyolefins annually. The company has about 5,000 employees, and its 2002 sales was approximately 3.5 billion kroner.

Borealis was founded in 1994, when the petrochemical divisions of the Norwegian oil company Statoil merged with the former Finnish oil and gas group Neste. Borealis today is the result of several mergers. Each of the companies involved came with different backgrounds, policies, and procedures. The challenge has been to integrate all those influences and corporate cultures into one company—an integration process that is still going on today.

The most human-friendly company in Belgium
Borealis has four sites in Belgium, including the Beringen plant where I work. Borealis places a great deal of emphasis on employee relations, and the Belgian offices have been especially energetic about putting Borealis’ people-friendly policies to work. We have also developed a powerful and effective reward system for employees. In March 2002, Mieke Vogels, the Flemish Minister of Health and Welfare, named Borealis the most human-friendly company in Belgium. In 2003, Borealis was chosen as one of Belgium’s best employers, and Leon Vliegen, country human resources manager for Borealis, was declared HR manager of the year.

Goals and values
Borealis’ primary goals are to be a leading, profitable, integrated polyolefin supplier. To reach these goals, we focus on four values: responsibility, respect, exceeding customer expectations, and “nimblivity”—our trademark term for being fit, fast, and flexible.

Borealis practices responsibility by being a leader in health, safety, and the environment; by being a good neighbor; and by doing business according to high ethical standards. We gain respect by involving employees and others in decision-making and by communicating in a straightforward way. We also work together, acting as one company, while building on our diversity. We exceed expectations by considering our customers’ and owners’ successes as part of our business, and by delivering what we promise, plus a little bit more. Nimblivity means we are quick to create and capture opportunities and to seek smart and simple solutions.

HR goals support values
Borealis’ human resources goals must support the company’s values. One of the main challenges for HR management is the relationship between the expecta-
HR goals support values, continued

tions of the employer and those of the employee. For this reason, Borealis attaches a high degree of importance to what we call the psychological contract, which links those employer and employee expectations.

Clarity in expectations is key for good employer/employee relations

The human resources department at Borealis works to contribute to the clarity, competence, and commitment of the employees in our organization. Employees need to be clear about what they must do, they must be able to do it, and they must be committed to doing it.

Borealis company personnel believe that it is important not only to tell people about the statutory regulations of their contract (e.g., salary), but also to manage expectations. This means clarifying what management believes employees should achieve, the competencies they should possess, and the values they should uphold in return for their pay and the opportunity to work and develop their skills. It is also very important for management to know what employees expect from Borealis in return for this contribution.

“The Deal” enhances commitments

To make the psychological contract more explicit, Borealis introduced what we refer to as “The Deal,” a contract in which Borealis and employees make commitments. To meet the long-term needs of the company and our shareholders, Borealis and its employees engage in creating a relationship in which mutual commitments between the two partners are in balance. For example, Borealis commits to providing an employment relationship based on business and individual needs and performance.

While the company values long-term relationships, we cannot promise job security. But we can help people maintain employability by providing the opportunity to develop skills and experience while at Borealis. That way, each employee is sure to have an up-to-date portfolio of competencies at any time so he/she can achieve internal and external marketability.

The psychological contract can create stress

The psychological contract illustrates a shift from an employee's external motivation to his/her internal motivation. This situation creates freedom but also uncertainty. Uncertainty increases stress and might influence the overall performance of individuals and companies. Borealis tries to deal with these issues of stress by being transparent and fair in its communications and dealings.

Four people-friendly HR principles

Our people-friendly policy, which supports the psychological contract, is based on four principles: employee welfare, a flexible organization of work, growth/development possibilities, and a consultative culture. These principles are underscored by our desire for employees to maintain a balance between their private life and their work. They are the basis on which Borealis was recently declared the most human-friendly company in Belgium.
Borealis’ first HR principle—employee welfare—is underscored by an intensive policy aimed at securing the health and safety of its employees and environment. Because a safe environment positively influences the profitability of a company, Borealis tries to operate without accidents or other incidents.

To effect this, we launched worldwide safety programs, such as “Take 2” (see Figure 1 below), which is designed to increase the safety awareness of all employees both on and off the job. The Take 2 program teaches workers various exercises and observation techniques that help make them more alert to potential risks.

The considerable investment Borealis makes in behavioral security pays for itself because of fewer employee absences due to illness and stress, and a higher overall motivation level.

Another one of Borealis’ well-being programs is safe-driving training. This program covers company car drivers and employees whose jobs require them to drive more than 5,000 kilometers annually on company business. It includes aspects such as defensive driving, night-time driving, first aid, and individual “lifestyles,” both before and when driving.

Outside help for problems is available

Borealis has also developed support for employees suffering from problems such as stress, harassment, and alcohol or drug abuse. To do this, Borealis works closely with a company doctor, medical staff, and psychologist, all of whom employees can consult if problems at work or at home should occur.

The second cornerstone of human-friendly policies at Borealis is a flexible organization of work, which includes working hours, work location, and the work itself. As much flexibility as possible is given to employees. Arrangements include part-time work, shared work, and so forth. Blue- and white-collar workers alike can use flexible working hours. Executives, who tend to put in a lot of overtime, receive partial compensation for it. A number of employees work at home or use satellite offices in another Borealis location two or three days per week.
**Time-credit agreements give workers a choice**

We have made agreements about time credits with employee representatives in the works council. These agreements are aimed toward harmony in work and private life. Inasmuch as is legally possible, Borealis gives some groups of workers a choice between being paid for holidays or giving up that pay to save additional days for reduced working hours.

**Shiftwork and workplace satisfaction investigated**

Below is an example of how all parties can work together at Borealis to increase the well-being of the employees and the organization.

According to an inquiry we made in 2002, there is a need for a new shift system in Beringen—one that doesn't disturb the balance between work and private life too much and doesn't harm the health of employees. A study group consisting of employees and a management delegation worked out an alternative shift system. In Flanders, an external independent expert examined the shift systems, their impact on the health and social life of employees, and their economic feasibility. After the investigation, a number of alternatives were proposed to the shift workers.

**HR principle 3: Growth/development possibilities**

The third human-friendly principle at Borealis involves an employee's growth and development possibilities, which go hand in hand with performance management. Through feedback and coaching, employee performance is evaluated. Performance contracts for all employees are formulated with explicit goals, targets, and weights of goals. The evaluation of employees is based on multiple sources of feedback, including managers, individuals, and clients.

Performance management also supports and facilitates the assertive management of non-performance. When non-performance occurs, internal and/or external possibilities are offered for improvement. Figure 2 below shows how we classify employees with regard to plans for future growth and development.

**Figure 2. Growth and Development Matrix for Employees.**

<table>
<thead>
<tr>
<th>The Better Employee</th>
<th>The Outstanding Performer</th>
<th>The Recognized Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain or upgrade skills to ensure long-term employability.</td>
<td>Work with employee to set and achieve mutual goals.</td>
<td>Increase position responsibility; perhaps promote.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Solid Performer</th>
<th>The Core Employee</th>
<th>The Growth Employee</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>The Question Mark</th>
<th>The Employee in Trouble</th>
<th>The New Arrival</th>
</tr>
</thead>
<tbody>
<tr>
<td>Find another job inside or outside that better fits the employee.</td>
<td>Begin performance improvement effort, perhaps reassign.</td>
<td>Stress job skills training to achieve required performance.</td>
</tr>
</tbody>
</table>
HR principle 4: A consultative culture

The fourth cornerstone of human-friendly principles at Borealis is our consultative culture, outlined in Figure 3 below. Borealis pursues an ethics-based policy with standards such as confidence, responsibility, and respect, and seeks to integrate these standards with each another.

This company value, coupled with a high sense of social responsibility, greatly affects our HR policy: Employees are important stakeholders, and the company respects this. We practice open communication in both directions with all our stakeholders, including employees, unions, authorities, and neighbors.

You could say that the consultative culture within Borealis is based on mutual respect. The “power distance” between management and blue- and white-collar workers is very short. There is also open communication in both directions between Borealis and employees, Borealis and trade unions, Borealis and authorities, and Borealis and its environment.

Figure 3. Building a Consultative Culture Based on Mutual Respect and Open Communications in Both Directions.

- Employer and Employees
- Employer and Social Partners
- Employer and Public Authorities
- Employer and Neighbors, Environment

Employee involvement makes change more acceptable

Such close involvement between company and employees makes change, when it does occur, more acceptable to employees. We strive for open communication about everything going on within the company. Employees are involved in decision-making processes, and they help set directions and seek solutions. Since renewal, changes, and improvements are among the main objectives of the company, employees must be able to take them in stride.

During the past ten to fifteen years, we have undergone a number of reorganizations within Borealis in an effort to become a more profitable and customer-oriented company. Throughout all the changes, our employees have learned that Borealis is an employer that treats them with respect, even in difficult times. We find jobs for those employees who have become redundant. As a result, employees find changes of this kind less threatening.

Rewards are based on year-long performance

Our underlying process of competence management is designed to support the policy of continuous improvement of both individual and organizational company objectives. Individual performance discussions, or “performance reviews,” are held at the beginning of the year. Everybody’s work, developments, and objectives for the next year are discussed and planned at this time.

To support this effort, Borealis has started a development program for middle management, called the Consortium Management Development Learning Programme (CMDLP), together with a group of companies under the guidance of the Vlerick Leuven Gent Management School in Belgium. This program, which
Rewards are based on year-long performance, continued

The training runs for eighteen months, is designed to make an optimal combination of the methodology of the Middle Management of Vlerick consortium and the process-driven approach of the CIGO programme of the K.U. Leuven. This program, which stands for “Consultancy in Groups and Organisations,” is a post-academic training that focuses on coaching and support of change in organizations. The emphasis falls strongly on experience-oriented learning and the removal of blind spots in participants’ knowledge. The training ends with a project in the manager’s own company.

Rewards involve much more than financial compensation

Rewards at Borealis involve much more than money. The reward system consists of four factors: pay, benefits, learning and development, and work environment. Pay includes base salary, variable salary, stock, and recognition. Benefits include health care, retirement, savings, and time off. Learning and development include career development, learning experiences, performance measurement, succession planning, and training. Work environment involves the organizational climate, leadership, performance support, and work/life balance. All these factors are guided by the psychological contract.

The reward principles that we use at Borealis are especially aimed at the performance of the individual and the team. Ideally, compensation fulfills the needs of both the individual and the organization.

Challenges continue at Borealis

It would be wrong for me to present our story as 100% successful. Some negative factors exist. The collective labor agreement, for example, was accepted by only 51% of the workers. Also, employees continue to have greater expectations. To remain competitive, however, we must temper some of our employees’ expectations regarding extra free time. Although today we manage to balance private life and work, more free time could result in an imbalance at the expense of working time.

Strategic management pays off

The annually repeated process of performance steering and pursuit, with its coaching and feedback, lays the foundation for a strategic management process that never loses sight of the whole picture. The strategic management process is one of the signposts used to guide the company toward the right strategy and organizational decisions. This process is flanked by objectives, the assignment of means and competencies, the development process, performance management, and the reward policy. These are all continuous processes, with the strategic objectives as their driving spirit. One of the results of this human-
Strategic management pays off, continued

friendly policy is that Borealis enjoys a negligible staff turnover and, by its own account, succeeds in attracting good employees in a tight labor market (see Figure 4 on the previous page).

Respect and caring

Borealis has the reputation of being a caring company. When we announce layoffs, for example, all laid-off employees are given opportunities internally and externally. We inform our redundant employees about an impending layoff before it takes place. We first try to find an alternative within the company. If this is not possible, we offer outplacement services to help these employees to find another job. Thus far, almost every employee who has left Borealis has found another job before the end of his/her notice period.

It’s also important to realize in these situations that the impact of reorganization is actually strongest on the employees who remain with the company. By stressing the image of a company that cares even in tough situations, we create more certainty for those employees who are not laid off.

The importance of respect is clear—it is one of our main values. Borealis also stresses the importance of recognition along with the respect. “Treat people the way we want to be treated ourselves” is one of our mottos.

Author information

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About this article

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The No Child Left Behind Act: Challenges and Opportunities to Achieve Success

G. Thomas Houlihan, Ed.D., Executive Director, Council of Chief State School Officers, Washington, D.C.

The Council of Chief State School Officers (CCSSO) is a nationwide nonprofit organization composed of public officials who lead the departments responsible for elementary and secondary education in the United States, the U.S. extra-state jurisdictions, the District of Columbia, and the Department of Defense Education Activity. In representing the chief education officers, CCSSO works on behalf of the state agencies that serve pre-K–12 students throughout the nation.

The CCSSO is dedicated to the improvement of education and provides leadership advocacy and technical assistance to the states. The vision of the Council is to have an impact on each and every child, and the mission of the organization is to help chief state school officers achieve the each-and-every-child vision.

The federally mandated goal of No Child Left Behind (NCLB) is going to lead to a transformation of public schools across this country. It’s an important challenge, and a serious one.

NCLB refers to the Elementary and Secondary Education Act, or ESEA, which is one of those alphabet-soup names used a lot in government. ESEA is federal legislation that was originally passed in 1964. It is the main federal K–12 education law that every four or five years or so has been reauthorized, tweaked, and changed. This year there was a complete overhaul of the program, with No Child Left Behind as its main goal.

ESEA is not a single program. It’s forty-five different programs that operate in our schools, in our states, and were funded at a level of $22 billion in 2002. It was increased by about $1.6 billion in 2003, and we’re looking for another small increase for fiscal year 2004.

I want to emphasize that most of the programs in NCLB, or ESEA, are focused on the lowest-performing students, mostly high-poverty or disadvantaged students, across the country.

NCLB is often described as a mix of conservative and liberal strategies around an “all kids” agenda, and the Act was passed in Congress overwhelmingly. By “conservative strategies,” I mean supplemental services, choice of schools, and those things that are traditionally associated with the conservative view of education. When combined with a focus on all kids, regardless of race, wealth, or handicapping condition, this legislation receives equal support from many politicians on the left.

NCLB expands the role of the federal government in education by including all students, not just those served by federal programs. Through annual state testing of reading and math in grades three through eight, schools must show adequate yearly progress.
The No Child Left Behind Act: Challenges and Opportunities to Achieve Success

Key aspects of NCLB, continued

progress by 2005. The goal of the bill is 100% proficiency for all students in reading and math within twelve years. This legislation also seeks to ensure that all students can read by the end of third grade. Other aspects include requiring a certified teacher in every classroom by 2005, and assigning funds to the recruitment and professional development of teachers and administrators. If schools do not show adequate yearly progress as defined by the state for two consecutive years, they are identified as needing improvement.

America's education system wasn't designed for 100% proficiency

The goal of all students becoming proficient within twelve years seems pretty simple, doesn't it? Yet the fact that we now have a national goal of 100% proficiency in reading and mathematics for all children within twelve years has sent shivers down the spines of lots of people across the country.

The truth is that we don't know how to meet this goal of 100% proficiency because the current system of education in America is not designed to achieve 100% proficiency. Our system is designed around a bell-shaped-curve theory that says a certain portion of every group is going to excel, a certain portion will fail, and the majority will be somewhere in the middle.

It was a system designed to select and sort. The best and brightest went on to college. When I graduated from high school in Bluffton, Indiana, in 1968, out of a class of ninety-some kids, a small percentage of us went to college. And that was average. We were selected and sorted throughout that system, which produced exactly what it was designed to produce.

Let me give you one example of what happens. Our system, in which I have been a teacher, principal, and superintendent, has allowed kids not to learn to read at a proficient level by the end of third grade. Yet studies have shown over and over again that if a child does not learn to read by the end of third grade, he or she rarely if ever catches up by the time he or she finishes school.

Here's another example. When I was a teacher in the early 1970s, if I didn't fail as many kids as I gave As, I was not considered a "tough" teacher. The system was set up to force conformity to the bell-shaped curve because it was believed that each group of kids had to look that way. So instead of assuming that every child could learn and be proficient, and that the "system's job" was to bring out that learning in every child, we "knew" that we must have a small group of kids who really did well and a small group of kids who would really do poorly, and that the vast majority would fall in between. So this new requirement, that all children be proficient in reading by the end of third grade, is a huge new systems goal for the education community across this country.

Under NCLB, school systems will have to demonstrate "adequate yearly progress (AYP)." Without going into minute detail, the bottom line on AYP is that every school, every school system, every state system, has a set of what are called subgroups of population. African-American might be one subgroup. Hispanic or Latino might be another. Special education kids might be yet another. Limited-
Adequate yearly progress, continued

English-proficient kids might be still another. Some schools or districts could have as many as eight or nine different subgroups.

Under this legislation, each and every one of these sub-groups must make adequate progress toward the goal of 100% proficient in twelve years. And if those kids do not make adequate yearly progress, then a whole series of consequences kick in. And if the right results aren't shown within a set period of time, the faculty, the administration, and other major changes must occur as a result of this legislation.

That's where we come back to the all-kids agenda. This is the number-one concern of educators in your communities. No longer is it going to be okay for large groups of kids who might be minority, or poor, or limited-English-speaking to move through the system. No longer is it going to be acceptable for them not to make progress toward proficiency in reading and mathematics in our public schools.

Studies have been done across the states aimed at figuring out where they all stand. In some states as many as 70% of the schools will not meet this AYP requirement. In other words, upwards of 70% of the schools in some states are expected to be unable to initially show demonstrated improvement of all subgroups as they move forward.

This is such a huge challenge because it's partly statistical—schools must show this improvement on a continuous basis, and they will be judged on a two-year time frame over the next eleven years. And while it presents a huge challenge for many it is also, I contend, probably the only way that we in education would be able to take seriously the idea of all kids achieving high standards of proficiency in twelve years. In other words, without the "all children" and "all subgroups" requirement, it is so easy to hide behind a curtain of whole-population averages. It is so easy to ignore subgroups of kids if the overall proficiency level for your school or your system is at a high-enough level. That is not the way we're going to be able to reach all kids.

Full impact and backlash are yet to come

The impact of this legislation has not yet been felt at the local and school level the way it will be felt in the future. In many of our local school communities, we might hear educators and others using slang terminology for this legislation ("nicklebee"), and I suspect there is a great deal of confusion about the accountability provision of the law. There are lots of articles about it, and wailing and gnashing of teeth, but the real impact hasn't hit yet. When people begin to see the data on their performance levels, and start to face the reality of 2005, there's going to be a major backlash in this country. People are going to say, "we can't do it," and "this is impossible," and "the system cannot handle all this."

We need this challenge to create an environment where all can improve

How do we react, how do we cope with this sea change in education policy at the national level? Because this legislation forces us to address the learning of all students it can be most exciting; it gives us license now to find new ways of reaching those kids because we have to. And I don't mean that in a negative way. It gives us license to really find ways to reach kids in ways we haven't done before. There are many people who want to do this, who've always wanted to do this, who believe in this. There are lots of challenges. There are lots of opportunities.
We need to design an effective system, and the Baldrige criteria can help to make it happen.

We must look at this need for change as a systems issue, not a finger-pointing one. If we’re going to radically change performance in education—and I don’t mean tweak it or make it just a little bit better—it will require a new system. That will require a new approach, and new ways of thinking and doing. The Malcolm Baldrige National Quality Program Criteria—the ideas of work processes, core values, missions, and visions—represent the kind of effort we need to achieve the NCLB goal of 100% proficiency in our public schools across this country.

If we don’t bring in these principles we will not change the system of education. During my thirty years in the education business, I’ve seen many reform movements come and go. Vouchers are not going to solve everything. A certain reading program is not going to fix everything. If we think we just need to take care of the teachers, or the principals, or whatever other segment of the system it might be, that’s tweaking. Dealing with the individual parts of the system is all necessary, but we are not going to produce an effective system of education for all children unless we design a whole system to do that, and not just “fix” certain parts.

So how do we take this system that’s been operating for over 100 years and transform it into a system for all? It won’t be easy, but we can make progress. I believe there is hope. There are demonstrated examples of how we can move forward, and I’ll tell you about one with which I’ve been involved.

Example: North Carolina Partnership for Excellence

The North Carolina Partnership for Excellence (NCPE) is an organization that has helped local school people, through significant training and in conjunction with the business community, to achieve incredible gains in student achievement for all kids.

The business leadership in North Carolina created NCPE in 1997. Some of those businesses were practicing the Baldrige concepts and brought those concepts to more than 50% of the schools in North Carolina. And at the risk of sounding like I’m bragging, of the states in this country that have shown the greatest improvement in student achievement in any category during the decade of the nineties, you will find that North Carolina is by far the number-one state in overall gains.

Objective: Continuous improvement + breakthrough improvement

NCPE is not based on traditional performance improvement, but rather on a combination of continuous improvement—getting better day after day and year after year—and also on the concept of “breakthrough improvement,” which is the process of identifying and achieving something that will produce a substantial improvement for the whole system. That’s where our big opportunity and challenge is. We cannot achieve the vision of “no child left behind” unless we help our educators learn and work in a system that focuses on breakthrough performance.

Example of setting breakthrough improvement targets

In a study recently released in North Carolina, a statistician took a look at the forty school systems that established a breakthrough performance goal for reading and mathematics in grades three to eight, and then worked to achieve it from 1997 through 2002.
Figures 1 and 2 show the results achieved in math and reading proficiency during this five-year period. You will see that the breakthrough performance level was achieved in reading and exceeded in mathematics.

Here’s an important point: You cannot achieve breakthrough performance statistically unless you are reaching all children, unless there is a major improvement at the lowest levels of student performance in those systems.

Clearly an all-children agenda in terms of breakthrough performance is a strong corollary as we move forward. No longer is it going to be okay for large groups of kids who might be minorities, poor, or limited-English-speaking simply to move through the system. No longer is it going to be acceptable for them not to make progress toward proficiency in reading and mathematics in our public schools. This legislation forces us to deal with those students and, most exciting, it gives us license to find new ways of reaching those children because we have to show that they are learning.

“"No child left behind" is predicated on a change in the mission of the public schools of this country. The mission is now about high quality for all—obviously for our students, but also for our teachers and for our principals. When we take away that idea that every class and every school and every school system has to display a
Conclusion, continued

bell-shaped-curve look, we are indeed talking about high quality for all.

NCLB presents many challenges for us. We know that. But we also know that the goal is to be applauded, even though it will be a struggle. States, districts, and schools must now work together in ways never before imagined to make this happen, and the education community will need the support of businesses and other interested groups to help us transform this system of education in America.

Let me also say, not as a lament but to add a sense of reality and scope, that no country in the world is attempting to do what we are with the NCLB legislation. In most industrialized countries, at grade seven, eight, or nine, the educational system splits, and a small group of children goes into higher education, and the rest goes into trade, vocational, and other kinds of schools. High levels of academic performance at the end of twelve years are only for a certain group of kids. Yes, many of these countries have better overall systems, but no one in the world is attempting to do what we are trying to do in this country right now.

I do hear a lot of complaining at times, so I’d like to offer a broader perspective on life. If we’re feeling down at times, if we feel like we’re overwhelmed with challenges, consider these points:

• If you woke up this morning more healthy than sick, you are more blessed than the million people who will not survive this week.
• If you have never experienced the danger of battle, loneliness, imprisonment, agony, torture, or pangs of starvation, you are ahead of 500 million people in the world.
• If you can attend a church meeting without fear or harassment, arrest, torture, or death, you are better off than three billion people around the globe.
• If you have food in the refrigerator, clothes on your back, a roof overhead, and a place to sleep, you are richer than 75% of the people in the world.
• If you have money in the bank, in your wallet, and spare change in a dish someplace, you are among the top 8% of the world’s wealthy.

We do have lots of challenges and issues to deal with, but we also have many blessings. I count among those blessings the opportunity to encourage you to get involved with your schools, to make a difference, to do more than just pay lip service, or to be in the PTA. Let’s all work together to transform the system of education in this country, and let’s bring a shining example of freedom and democracy to every child, in every community, in every school, in every classroom.

G. Thomas Houlihan is Executive Director of the Council of Chief State School Officers, Washington, D.C. He serves on numerous boards and commissions, including the Center for State Scholars, National Center for Educational Accountability, and the State Leadership Initiative, and has served as the International Evaluation Association’s U.S. Delegate. He previously served as President/CEO of the North Carolina Partnership for Excellence, and senior education advisor to North Carolina Governor James B. Hunt, Jr.

Dr. Houlihan received the state’s highest civilian honor, the Order of the Long Leaf Pine, was selected Superintendent of the Year in North Carolina, and was one of four finalists for national Superintendent of the Year. He has a B.S. in history and psychology from Indiana University, a M.Ed. in guidance and personnel services from North Carolina State University, and an Ed.D. in administration and curriculum from the University of North Carolina-Chapel Hill.

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About this article

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Introduction
This article contains a brief discussion of the five kinds of changes that, based on my experience with a large number of corporations, are required for an enterprise to attain or retain a leadership position in today's competitive environment. Very few organizations have made all of these changes. Some have made a few.

But first, to provide you with a clear understanding of what I say subsequently, I will explain the way I understand a few key concepts.

Definition of a system
A system is a whole that is defined by its function in a larger system of which it is a part. It is never defined by the function it performs for something internal to it. For example, an automobile is defined by its function in society's transportation system, and an HMO by its function in society's healthcare system. This defining function is the product of the interaction of a system's essential parts, all of which are connected either directly or indirectly. Therefore, the whole cannot be divided into independent parts or groups of parts.

A system's essential parts are those without which it cannot perform its defining function. For example, an automobile's motor is essential, but its ashtray is not. A car can move people from one place to another without an ashtray, but not without a motor. Furthermore, the essential parts of a system lose their essential properties when removed from the system of which they are a part. When a motor is removed from a car, the motor cannot move anything, including itself.

The interaction of a system's essential parts produces the properties of the system. Therefore, when the system is taken apart, it loses its defining properties, and so do its parts. If a car was brought into a room and disassembled, even if every part was kept in that room, it would no longer be a car. A car is the interaction of its parts, not the sum of the actions of its parts taken separately.

We must change our pattern of thought
Analysis is a three-step process that consists of (1) taking apart that which we want to know or understand, (2) trying to know or explain the behavior of the parts taken separately, and (3) trying to integrate what is learned about the parts to gain knowledge or understanding of the whole. Analysis is the major mode of thought in the Western world, and for 400 years it has been synonymous with thinking. It is the way we conduct inquiries into the nature of things.

It is commonly believed that if you want to understand something, you must analyze it, and therefore begin by taking it apart. To gain complete understanding...
you must keep taking the parts apart until you reach indivisible parts, or elements (e.g., atoms [in the past] and cells). This doctrine is called reductionism.

A system cannot be explained, hence understood, by analysis because when a system is taken apart it loses all of its essential properties, and so do its parts. Therefore, understanding a system requires development of a pattern of thought other than analysis, even though analysis is the prevailing pattern of thought in our culture. Analysis can reveal how a system works; it can provide know-how, or knowledge; but it cannot produce understanding. Therefore, the difference between knowledge and understanding is critical.

Albert Einstein once wrote, “Without changing our pattern of thought, we will not be able to solve the problems we created with our current pattern of thought.” Explanation of a system requires a shift in thinking from analysis to a different pattern of thought known as synthesis.

If you want to know how a system works, you have to analyze it. If you want to find the part of a car that has become defective, you must take the car apart. But if you want to understand why the British drive on the left side of the road, you will never find the answer by taking British cars apart. Nor, by taking cars apart, can you explain why typical American cars manufactured before World War II were built to carry six passengers. Why wasn’t it eight, or five, or two? Why six?

The understanding of a system, which is gained by explanations—answers to questions that begin with why—can never be found within the system. Understanding can be found only in the function that a system performs in the larger system of which it is a part. Understanding deals with functions and roles; knowledge deals with structure. Knowledge tells us how a system works. Understanding tells us why it works the way it does. Understanding a system requires synthetic thinking.

Synthetic thinking, like analytical thinking, is a three-step process, but each step is the opposite of the corresponding step of analysis. In the first step of analysis, the system to be explained is taken apart; in the first step of synthesis, the system to be explained is not taken apart but is seen as a part of a larger system. In the second step of analysis, the behavior and properties of the parts of the system are described and explained; in the second step of synthesis, the behavior and properties of the containing system are described and explained. In the third step of analysis, the knowledge and understanding of the parts are aggregated into knowledge and understanding of the whole; in synthesis, knowledge and understanding of the containing whole are disaggregated, which leads to identifying the function or role of the (smaller) system to be explained.

The progression from understanding to wisdom involves evaluation of the role or function of the system. The nature of wisdom is best revealed in a wonderful statement Peter Drucker once made. He said that there is a difference between doing...
Progressing from understanding to wisdom, continued

things right and doing the right thing. Efficiency involves doing things right; effectiveness involves doing the right things in the right way. Knowledge and understanding enable us to increase efficiency, but wisdom enables us to increase effectiveness.

We fail to deal effectively with many, if not most, social problems confronting us today because we are trying to do the wrong things right. If we make a mistake doing the wrong thing and correct it, we become wronger. If we do the right thing wrong and correct it, we become righter. Therefore, it’s better to do the right thing wrong than to do the wrong thing right. But, as mentioned earlier, our approach to problems is analytical and focuses on efficiency, hence knowledge. In contrast, understanding and wisdom require synthetic thinking.

Below are a few brief examples of efforts to do the wrong thing righter. The United States has repeatedly failed to develop a national healthcare system, and the country’s current system has deteriorated continuously over the last several decades. Despite what politicians say, we in the United States do not have the best system in the world. According to the World Health Organization, we rank thirty-seventh in the world in quality of health care. France, which has universal coverage and ranks much higher than the United States, spends $2100 per capita per year, whereas we spend $3724. Japan, which ranks tenth, spends only $1750 per capita per year, and its citizens have an average life expectancy that’s four and a half years longer than that of U.S. citizens. We are the only developed country that does not have universal coverage; approximately 42 million people have no health insurance.

What’s wrong with our system? Analyzing it won’t provide the answer. One must look at how it functions in the larger system of which it is a part. What do U.S. patients pay a doctor or a hospital for? Taking care of them when they are sick or disabled. Thus, it’s a sickness-and-disability-care system, not a healthcare system. In fact, the worst thing that could happen to this system would be for everybody to be healthy. If that were to happen, the current system would not exist. So, despite the declared and good intentions of the individuals and institutions that provide so-called healthcare services in the United States, the system is actually dedicated to preserving and creating sickness and disability.

That horrible fact is becoming apparent. A recent study showed that about 120,000 preventable deaths and one million injuries occur during the course of medical treatment each year. A study we did in Great Britain a number of years ago showed that more than 25% of the people in the hospital were there because of what the hospital did to them the last time they were there. Over 50% of the surgery performed in the United States is suspected of being unnecessary. There is also evidence that a good deal of illness is due to the interactions of prescribed drugs, interactions of which most doctors have no knowledge. And there are numerous other errors in the system.

A real healthcare system would require payment to the servers for keeping a
Examples of efforts to do wrong things “righter,” continued

Examples of efforts to do wrong things “righter,” continued

person healthy, not for taking care of sickness. A design for such a system is available, but the wisdom required to adopt it is not.

The automobile is another example of trying to do the wrong thing righter. More than 90% of the energy consumed by an automobile is used for moving the automobile, not its passengers. In traffic on American roads, the average number of occupants per automobile is 1.2. Why do we need 6-passenger cars? We did back when the typical American car served as a family vehicle, and the average family contained 5.6 people. Today, the average is just over 3. The average speed of the automobiles traveling in most urban areas of the United States is only a small fraction of the cars’ capabilities. Why do we need cars that can go more than twice the highest posted speed limit?

We need to have a different kind of automobile for urban use; it does not have to be the same as the kind designed for interurban use. Most U.S. households already have two or more cars. Drive-it-yourself, two-passenger, coin-operated urban automobiles are now in use in several European cities. In addition to reducing congestion, they significantly reduce pollution!

The American education system provides another example of trying to do the wrong thing righter. Educators don’t understand the difference between teaching and learning. Being taught is a major obstruction to learning. Most of the things you know and use (like language and the technology involved in your work) were never taught to you. You learned them in practice. We can better learn most of what we need to know by serving as apprentices rather than by being students.

Furthermore, everyone who has taught knows that the one who learns the most in a classroom is the teacher, not the students. We’ve got schools upside-down. Students ought to be teaching. What university faculty members know how to do is learn. (It’s what distinguishes them from most grade school teachers.) Therefore, faculty members ought to be resources that enable students to learn how to learn and motivate them to do so continually. What students learn is largely irrelevant because most of the material that they are taught, even in a university, is material that they never use. It’s irrelevant or obsolete.

Five kinds of change for an organization to remain in a leadership position in this century

Now that I’ve covered some basic concepts and my way of looking at things, I can move on to the five kinds of change that I believe are required for an organization to gain or retain a leadership position in the new century. The first change concerns the prevailing concept of planning.

The principal way of planning employed in the United States is predict and prepare. It begins by forecasting the future and then, given that forecast, preparing a vision of where the planners would like to be in five or 10 years. Their plan then
Change 1: interactive planning, continued

describes the path they hope to take from here to there to achieve fulfillment of the
vision. Most plans produced this way are never completely implemented. Something
happens that was not anticipated, and it throws the plans out of whack. In a rapidly
changing environment of increasing complexity, forecasts deteriorate rapidly.
Therefore, planning based on forecasting is unlikely to be effective. We have to deal
with the future in some other way and reconceptualize the planning process.

Using the conventional mode of planning, the planner stands in the present,
predicts the future, and then sets objectives in the form of a vision that takes the
plan from where s/he is to where s/he wants to be. Concerning this process, I once
heard a vice president of a major corporation ask two questions. His first was "How
can you know where you want to be five or 10 years from now if you don't know
where you would be right now if you could be wherever you wanted?" Therefore, he
said, planning should begin with the question of where you would be right now if
you could be wherever you wanted. Furthermore, there is one thing about the future
you can be absolutely sure of: no matter where you say you want to be in the future,
you will not want to be there once you get there.

His second question was "If you don't know what you would do if you could
do whatever you wanted to, with no or few constraints, how can you know what to
do when you are constrained?" These two questions lead to an entirely different
concept of planning, which is called interactive planning.

In interactive planning, the planner no longer begins from where s/he is. S/he
begins from where s/he would ideally like to be. Then s/he plans backward from
where s/he wants to be to where s/he is. Why? First of all, planning backward
reduces the complexity of the planning process by an order of magnitude. Children
know this, but adults are not smart enough to realize it. Have you ever watched a
child solve a maze? A child quickly learns that it is easier to work backward from the
exit and go toward the entrance.

Back in the 1950s, Richard Bellman, a professor at the University of Southern
California, developed Dynamic Programming, which showed that whenever you
have a known origin and a known destination and want to find the best path
between them, it is always better to work from the destination back to the origin.

For example, suppose 64 players enter a tennis tournament. How many
matches will have to be played? Starting at the beginning: the first round consists of
32 matches, then 16, 8, 4, 2, and 1. They add up to 63. Now start at the end of the
tournament. How many losers would there have to be? Sixty-three! There it is, right
there. And it is just as easy to use this technique when the number of entries is not a
multiple of two. Planning should start with where you would ideally like to be.

An idealized redesign of a system is a design that starts with the assumption
that the system to be planned for has been destroyed. It no longer exists, but its
environment remains as is. The planners then decide what features they would
Include if they could have whatever they wanted, constrained by just three requirements. First, the design must be technologically feasible, no science fiction; second, it must be able to survive in the current environment but need not be implementable in it; and third, it should be capable of learning and being improved over time from within and without. When the design is completed, the designers should determine the closest approximation to that design that can be attained. Designers are almost always surprised to see how close to their ideal they can actually get. Planning to get there is the realization phase of planning.

When you stand where you are and look out to where you want to be, you see all kinds of obstructions. But when you stand where you want to be and look backward, you don't see the same obstructions— for a very important reason. The principal obstruction between where we are and where we want to be is always us. But we see obstructions differently; we attribute them to the environment, the law, the boss— usually to something over which we think we have no control. But when we stand where we want to be and look backward, it becomes apparent that we are the obstruction; what appears to be an obstruction is at most a hurdle that can be jumped over or averted.

Consider a very simple example. Once while I was visiting friends in England, their next-door neighbor came in, hopping mad. She said, “You know what that store on the corner did to me this morning? Every weekday morning since I’ve been living here, I’ve stopped there and cashed a check in order to do my shopping. When I got there this morning, they told me they have a new policy: they won’t cash checks anymore.”

She encountered what could be an externally imposed obstruction, one that appeared to prevent her from doing what she wanted to do. But that is not the end of this story. She had a mischievous smile on her face, so I asked her what she did. She said, “I got around them. I went to the dress department, bought a dress, paid for it by check, took it to the return department, and got a cash refund.”

In this case, the obstruction really was her inability at first to see how to beat the system. Beating the system is an essential part of systems thinking, and that can occur only when we’re looking at the situation from where we want to be rather than from where we are.

In sum, then, the first necessary change for an organization to compete effectively in the new environment is to utilize interactive planning, which starts with an idealized design of the system and then identifies the closest approximation to it that is thought to be possible. The planners must then move into the future continually trying to close the gap between where they are and where they would be right now if they could be wherever they wanted. The time to reduce or close the gap between where you are now and where you want to be now is right now. This has an important consequence.
Planning should be a continual process, continued

Consider the organization you work in and the major differences between what it is now and what it was 10 years ago. Then ask yourself this question: What produced these differences? Was it something that was done to the organization, or was it something that the organization did? You will find that, by far, most of the changes that have occurred are the result of what the organization did or did not do, not the result of what was done to it.

The present is largely created by what was done in the past; therefore, the future will largely be created by what is done in the present. The continual effort to close the gap between where you are and where you want to be now is a way of creating the future. Furthermore, it means that planning should be a continual process, not an off-again, on-again process. Planning is a motion picture; a plan is a still photograph. You can’t judge a motion picture by a snapshot taken from it. Planning has to go on continually for an organization to adapt and learn how to do things better. Otherwise, implementation will be aborted.

Forecasts vs. assumptions

Determining what should be done now always involves consideration of the future, but consideration of the future need not be based on forecasts. It can be based on assumptions about the future, and these differ significantly from forecasts. For example, we carry a spare tire in our cars because we assume a flat tire is possible, but we forecast that one is unlikely to occur during our next trip. Forecasts are about probabilities; assumptions are about possibilities. Assumptions about the future are handled by contingency planning, which involves deciding what to do now to handle any contingency that might arise—like carrying a spare tire.

Change 2: democratizing organizations

The second necessary change for an organization to compete effectively in today’s competitive environment involves the nature of management and derives from a series of considerations. The first consideration is that academic disciplines are anti-systemic concepts. Experience and reality are not organized the way universities are. There are no such things as financial problems, marketing problems, social problems, health problems, and so on. Every problem a doctor looks at is a medical problem, and every problem an economist looks at is an economics problem. But these disciplines are points of view, not categories of reality.

Limitations of managing by discipline

What’s so bad about this? We have a habit of identifying problems by the discipline of the person who formulates them. For instance, if a marketing man sees a deficiency in sales, he says, “Uh-oh, I’ve got a marketing problem.” But in over 90% of the cases I’ve ever been involved with, problems are best solved someplace other than where they are recognized.

Here is a simple example: When you get a headache, do you have brain surgery? Of course not. You put a pill in your stomach. Why? Because you know the pill contains a substance that will dissolve in your stomach and enter the bloodstream, which will carry it to the brain and deposit it on the pain center. You (or the
Limitations of managing by discipline, continued

person who suggests taking the pill) understand the interaction of the parts of the system and exploit that knowledge in treating the problem. So a headache is a perceived pain in the head that we treat by putting something in the stomach.

But we don’t manage organizations that way. Instead, we manage them within disciplinary silos—production, marketing, finance, personnel, and so on—as though problems fall into those categories, but they don’t. Problems should not be viewed as the property of any part of a system, but of the system as a whole. Therefore, all problems should be viewed from a variety of disciplinary perspectives to find the best way of treating them.

The effects of workers’ educational levels on management

Another consideration that the second necessary change derives from is what has happened to the educational level of the work force. In 1900, the average educational level of the American worker was low—grade school. Many workers were immigrants who at best were barely literate. By World War I, because of compulsory public education, the average level rose to about eighth grade. Today, most workers have had some or a great deal of college. We have a highly educated work force, but we continue to manage it exactly the same way we managed the illiterate, ignorant work force of yesterday.

It is currently estimated that about 95% of the people employed in 1900 could not do their jobs as well as their bosses, because their bosses previously had been the best at doing their jobs and were promoted for this reason. This is no longer the case. Today most people employed in the United States can do their jobs better than their bosses can, but we continue to manage them as if the opposite were true. When managers who can’t do their subordinates’ jobs as well as their subordinates can try to tell them how to do their jobs, morale, productivity, and the quality of what is produced all suffer.

Several years ago, a study done at Volvo showed that workers were permitted to use only about 25% of what they knew that was relevant to their jobs. Volvo’s CEO pointed out that firms that used any other resource that poorly would not survive.

Managing interaction

The great challenge before management is to determine how to use what people know more effectively—how to manage knowledge, understanding, and wisdom. This requires a different kind of management. Its nature is revealed by an extreme case. Where is the most educated work force in the world? In universities, because a high percentage of their employees have a Ph.D. Can the president of a university run it? Of course not. Nobody ever ran a university. The president or provost of a university cannot tell its faculty what to teach, how to teach, and when to teach because s/he doesn’t know enough about what they know to direct them. The administration’s job is to manage the way subordinates interact, not how they act; the way the departments and colleges interact; and the way the institution as a whole interacts with its environment. The deficiency of universities and the education they provide derives from a lack of effective interactions, not actions.
Authority vs. ability to influence

Of relevance here is the tremendous difference between management’s exercise of authority, which is power over, and its ability to influence, which is power to. I was consulted by the Shah of Iran before the revolution on a problem that reflects this difference. The Shah was the most powerful ruler on earth because he was the only head of state who was not subordinate to a constitution. His responsibility was only to God. Therefore, if he made a decision you didn’t like, the only recourse you had was prayer.

Nevertheless, a colleague and I spent two and a half hours with his queen discussing a problem that he asked her to discuss with us: Why couldn’t he get any of his programs implemented? The reason was that he had sent more than 400,000 Iranians to the United States and Europe for higher education, brought them back, and, since there was no place to employ them except the government, put them all to work there. And lo and behold, they didn’t like his policies, so they sabotaged them. Why? Because they knew a lot more than he did about the effects they would have. There is nothing a manager can do that his subordinates can’t undo, particularly when they are better educated than s/he is.

Autocratically run organizations are not effective

An organization that contains educated people cannot be run effectively if it is run autocratically. If you try to build a house in New York and tell the carpenters how to do the framing, or the electricians how to wire it, they’ll laugh at you. However, if you’re working with a group of aborigines in New Guinea and want to build a house, you’d better be prepared to tell them how to do it because they don’t know how. You should not manage people who know how to do their job better than you do in the same way you manage people who don’t. But most managers do.

Business Week had an interesting issue about two years ago. The cover story was about the question “Who owns the firm?” One CEO said that ownership is a matter of investment of resources. He went on to say that we consider shareholders to be owners because they’ve invested money. However, on reflection, money is not the most important resource because, among other things, it’s renewable. If you lose money, you can always replace it. The one resource that we can never replace is time. The CEO went on to ask, “Who invests the most time in the company?” The employees do. They have the largest stake in the company and are most affected by its success or failure. Therefore, he argued, they should be treated as owners. He went on to say that shareholders should be treated as investors, not as owners.

The four different types of systems

This way of thinking about an enterprise also becomes relevant when you consider the four different types of systems. One type is a system that, together with its parts, can make no choices. This is a deterministic system; for example, a mechanism such as a clock or an automobile. An automobile makes no choices; drivers do— and the motor, fuel pump, battery, and other parts do not make choices either.

One step up the ladder of complexity is an animate system, which can make choices but whose parts can’t. These are systems of which human beings are an
The four different types of systems, continued

Example: a social system

Let's look more closely at a social system. When the United States was industrialized in the nineteenth century, enterprises were conceptualized as mechanisms. They were thought of by the general public in exactly the same way as Newton thought of the universe, as a machine created by God to enable Him to do His work. God, in this case, was the owner of the enterprise. At that time, owners were completely unconstrained by laws, regulations, or unions. The function of an enterprise thus conceptualized was to provide its owner with a satisfactory return on his investment and make a profit.

Little skill was required of workers, and labor was in plentiful supply. If people did not work, there was no form of social security to take care of them. Unless there were others who could support them, they would be destitute. As a result, most were willing to work under any conditions because they had no alternative source of support. Despite such conceptualization of enterprises and treatment of workers in the second half of the nineteenth century, our economy developed rapidly.

The disappearance of God and emergence of the biological organism

By World War I, the United States began to go through a transformation. To obtain as much growth as possible, corporations needed more capital than profit could provide. They acquired the capital they desired by going public and issuing stock. When they went public, God (i.e., the owners) disappeared. God now consisted of a widely scattered group of shareholders whom workers couldn't see or talk to. How could one communicate with this God? Young Peter Drucker told us how, when he said that this was the same problem the West had about 2000 years ago when God disappeared. How did mortals handle it? They created institutions to serve as communication links between man and God: churches.

Then they created professional administrators to run the churches: the clergy. After World War I, the institution of management was created to serve as a link between the workers and the owners. The administrators in corporations who corresponded to the churches' clergy were called managers. How did a manager know the will of the owners? The same way the clergy claimed to know the will of God—by revelation. How else?
And so we entered a period of looking at a company as a biological entity—not mechanistic, but animate. It made choices; the principal ones were directed at survival through growth. Profit, like oxygen, came to be viewed as necessary for an enterprise's survival, but not the reason for it. Even the language used to talk about an enterprise was changed. The leader of an organization came to be called its head. This is a biological concept. We never talk about the head of a machine.

Stafford Beer wrote two famous books, The Brain of the Firm and The Heart of the Enterprise. A company that went public came to be called a corporation. This word derives from corpus, which means body. The law declared the corporation to be a person in its view. The parts were treated as organs having no purposes of their own; only their health and safety were relevant to management. Corporations were thought of as healthy or sick. The biological analogy was complete.

During World War II, a large part of the American work force was absorbed by the military and replaced by women, many of whom were on allowances provided by the government because the men on whom they had been dependent had been drawn into the military. For the first time, the United States had a work force that was not primarily motivated by economic factors. Management had to look at these workers as people whose interests had to be served if they were to be as productive as desired.

So “Tilly the Toiler” and “Rosie the Riveter” were a turning point in American economic history. And, after the war, the returning soldiers, who had been forced to put up with the strict discipline of the military, were not going to put up with it at work. Managers began to look at corporations as systems that consisted of parts that had purposes of their own, and these had to be satisfied.

More important, the parts viewed themselves this way. Different interest groups organized and protested the poor way by which systems of which they were a part were serving their purpose. The civil liberties movement, women's liberation, the generation gap, third-world problems, and the alienation from work (identified by the Department of Health, Education, and Welfare as the most serious problem confronting our country) are all situations that arose when parts of systems began to feel that the system had obligations to them. Such a system is not an organism; it is a social system. It has purposes of its own, has parts that have purposes of their own, and is part of larger systems that have purposes of their own. And these larger systems contain other systems whose interests have to be taken into account. A social system is a system that floats in a sea of purposes that are often inconsistent within and between levels.

Today, however, the dominant mode of thinking about corporations remains organismic. Social systemic thinking is still in its infancy. Herein lies the rub! An enterprise that is looked at as a social system is not an organism; it is a community.
Enterprises need to be viewed as communities, not as organisms, continued

Creating a Competitive Strategic Advantage

This is a fundamental conceptual change. To see why, consider the city of Boston. Boston is a community. Who owns Boston? Nobody. Ownership is an irrelevant concept when you look at a system as a social system, because its function is to serve its parts and the larger system of which it is a part.

A lack of democracy

The United States is a country that is dedicated to the pursuit of democracy. Although we don't claim to be perfect, we're certainly getting a little better at it. But how come almost all the institutions within the United States—corporations, schools, hospitals, and government agencies—are run autocratically? Many are run by what could be called dictators. How does one explain the incompatibility between the way we run the parts and the way we run the whole? The answer lies in the fact that it was necessary to do so when the work force was ignorant and had to be told what to do. But we did not adapt to the rising level of education in the work force. Today we have to manage workers' interactions, not their actions.

In sum, then, the second fundamental change required to attain or retain leadership in the new century is to democratize our organizations. How can we convert autocratically managed organizations, particularly enterprises, into ones that are democratically managed? Designs for doing this—called democratic hierarchies, or circular organizations—are available but are seldom used as yet.

Change 3: using an internal market economy

The third change required for an organization to be an effective competitor in the new century derives from a series of problems I have run into over the years. The first one is transfer pricing. This occurs when an organization has two parts, one of which produces something that the other one uses. If each part is a profit center, the one that buys something from the other must pay for it. A higher level of authority usually establishes this transfer price so that the profitability of each part taken separately can be measured.

Why the use of transfer prices causes problems

In a number of cases, I've been asked to come into a company and make the transfer prices fair. I'll let you in on a secret: there is no such thing as a fair transfer price. All transfer pricing is inherently unfair and produces conflict from which the organization as a whole suffers. It has to; it's the wrong concept. Therefore, trying to make it right is trying to do the wrong thing righter.

For example, there is a company whose largest single business unit makes small motors that are used in household appliances, such as dishwashers and refrigerators. It is a major producer of such motors. It has a small number of appliance manufacturers as customers, which account for most of its revenue. This business unit was working seven days a week in three shifts to fill orders. It was very profitable.

There is another division of this company that supplies replacement parts to electrical manufacturing distributors located in just about every city in the United States. They supply replacement parts for machinery, including small motors. This distributor-supply division was required by top management to buy the motors it
Why the use of transfer prices causes problems, continued

sold from the motor-producing division at a specified transfer price. These two profit centers were at war.

The CEO asked my colleagues and me to see if we could settle their differences. This is what we found. Let’s say the transfer price was set at $100 per motor. The motor-producing unit could sell all the motors it made to other customers for $110, and therefore lost $10 for each one it was required to send to the distributor-supply unit. Little wonder that it hated that unit. Meanwhile, the distributor-supply unit could frequently buy an equivalent motor from an external producer for $80. So every time it had to pay $100 for an internally produced motor, it lost $20. Therefore, it hated the motor-producing unit.

While reviewing the cause of the conflict, we began to think that we were addressing the wrong problem. The right problem was not to do the impossible—set a fair transfer price—but to eliminate the need for one and to benefit the objectives of the organization as a whole. This turned out to be a relatively easy problem to solve. Our suggestion was as follows: allow the selling department to sell whatever it wants at whatever price it wants to whomever it wants, subject to an override (discussed on the next page). Let the buying department buy whatever it wants wherever it wants at whatever price it wants, also subject to an override. The lowest-level executive to whom these two units report can override their decisions to buy or sell, just as the government can override IBM’s desire to sell computers to a national enemy. But the overriding executive must pay the motor-producing unit the $10 it loses by selling units internally, and pay the distributor-supply unit $20 for every unit it pays $100 for when it could have paid only $80. Therefore, the two units never have to receive or pay more than they would if they were operating in a completely free market.

What about that executive? He incurs costs, but he is also considered to be the owner of the two units involved. He gets a share of their profits one way or another. Therefore, he has an incentive to make overriding decisions that improve the performance of the whole. He manages the interaction of the two divisions rather than their actions taken separately.

We have a problem organizing and managing enterprises

How do we generalize—and, as in this case, introduce—such a market economy into organizations in place of the centrally planned and centrally controlled economies that currently pervade? We live in a nation that believes in the free market at the national level, but most of our organizations within it operate with the same kind of economy that the Soviet Union had before its dissolution. When I point this out to a group of executives, their usual response is, “Oh, come on. How do you explain all the successful corporations? Look at them.”

I think most executives have no idea of how badly corporations are managed and organized. I once read that 23 new corporations must be started each year to produce one that will survive that year. The average life of an American corporation
We have a problem organizing and managing enterprises, continued

Improvements of the parts must also improve the whole

Management of interaction is critical

Change 4: organizing multidimensionally

is only about 20 years. Over 50% of the corporations listed in the Fortune 500 just 25 years ago don’t exist anymore. Today, the Dow Index contains only one of its original corporations. All the others have disappeared.

We are terrible at creating viable corporations. But we look at the few that succeed and say, “Look how good we are.” This is like somebody’s evaluating baseball batters by looking at Mark McGwire and saying, “Boy, those guys can really hit,” but ignoring all the others who are hitting in the .100 and .200 percentage ranges. The fact is that we are not very good at organizing and managing enterprises.

In sum, the third requirement for attaining or retaining leadership in the new century is for firms to adopt an internal market economy and regulate it to serve the interests of the whole as well as the parts. With this type of economy, it is possible to override decisions made by the parts, but only when it is judged that the whole is improved by doing so, and that overall performance is improved as well.

One of the most important systems principles is never to improve performance of a part unless it improves the whole. When you improve the performance of the parts of a system taken separately, it is very unlikely that the performance of the system as a whole will be improved.

For example, suppose you placed one each of every available automobile model in a large garage, hired the best automotive engineers available, and asked them to determine which car had the best motor. They might agree it is the one in the Rolls Royce. Then suppose you asked the engineers to determine which car had the best transmission, followed by which one had the best fuel pump, and so on, until you considered every essential part of an automobile. Once they were finished, suppose you asked the engineers to remove each “best essential part” from the automobile of which it was a part and to assemble them into the “best possible automobile.” Would you get the best automobile available? Of course not; you wouldn’t even have a bad automobile, because the parts don’t fit. The performance of a system is not the sum of the performance of its parts; it is the product of their interactions. This is why the management of interaction is critical.

If you have a car that is underpowered—say, a Hyundai—and you try to replace its motor with one from a Rolls Royce, do you get a better car? No. The motor doesn’t fit into the vehicle, and even if it did it would not perform well, because the other essential parts are not designed to work well with it. Therefore, it is critical that the focus of management must not be on the way the parts perform taken separately, but on how they perform interactively, or together. An internal market economy facilitates such management.

The fourth change required for an organization to attain or retain leadership in the new century concerns the way corporations are organized. Divert for a moment and try to identify who said the following, and when: “We trained hard, but it
Change 4: organizing multidimensionally, continued

 seemed that every time we were beginning to form up into teams, we would be reorganized. I was to learn later in life that we tend to meet any new situation by reorganizing, and a wonderful method it can be for creating the illusion of progress while producing confusion, inefficiency, and demoralization.” It was the Roman satirist Petronius Arbiter, who lived during the first century A.D.

Repeated reorganization is not a new problem. I estimate that the average time between reorganizations in American corporations is about four years: it takes approximately two years to overcome the last reorganization, and two years to get ready for the next one. I’ve estimated that 2% of the total resources, time, and effort that corporations consume is in the continual process of reorganization.

A few years ago, W. C. Goggin, the CEO of Dow Corning, asked a very sensible question: Why do organizations have to continually reorganize? The answer: to adapt to changing conditions. When AT&T was a monopoly, it could ignore the customer. But not so once it was deregulated. Then it had to begin to focus on the customer and marketing. So the reason for its reorganization at that time was clear.

Goggin went on to ask if there is some way for an organization to adapt to change without reorganizing. Is it possible to design an organization that never has to restructure itself? The answer is yes, but it requires a complete revision of the prevailing concept of organization.

Division of labor

Consider what an organization is. First, it is a system in which there is a functional division of labor. If six people are in a car that stalls on a highway and they want to get it off the road, if all six get out and push, they don’t form an organization, but an association. If one person stays in the car to steer it, one gets out to direct other cars to pass safely, and the remaining four push it, then they have formed an organization because they have divided the labor functionally.

Coordination of labor

The second requirement of an organization is that its divided labor must be coordinated. If there are a large number of coordinators, they, too, must be coordinated; hierarchy is the consequence. So an organization consists of functionally divided labor and its coordination. The horizontal dimension in a typical organization chart shows the division of labor. The vertical dimension shows the distribution of authority and how labor is coordinated.

How do we divide labor?

The critical point here is that there are only three ways of dividing labor. This is true of every type of organization, regardless of its nature. The three ways of dividing labor are by inputs, outputs, and users.

An input-defined unit of an organization is a unit whose output is primarily or exclusively consumed within the organization. It is normally defined functionally. Examples are accounting, data processing, buildings and grounds, computing,
How do we divide labor? continued

human resources, and research and development.

An output-defined unit is a unit whose output is primarily consumed externally. The Chevrolet, Pontiac, Oldsmobile, Buick, and Cadillac divisions of GMC are output-defined units because their products go outside the corporation.

User-defined units are ones based on classes of those who ultimately use and consume the product or service provided; for example, a corporation might have North American, Latin American, European, Asian, and African divisions. Many ways of classifying customers are possible; for example, catalog buyers, retail store buyers, wholesale buyers, Internet buyers, and so on.

Implicit in the way every organization is structured is an ordering of the importance of these three criteria. Starting at the top of an organization, the CEO, and going down to the next level, the question arises: How should the vice presidential level be organized? By function, by product, by market, or some combination of these? The division of labor at this level identifies the criterion or criteria that are judged to be the most important. If a company is going global, for example, it is likely to organize by markets defined geographically. If an organization produces several products and sells them to a homogeneous market, it probably organizes by products, often as strategic business units. Companies that produce a single type of product are likely to organize functionally. In every organization, you will find some ordering of these three criteria: input, output, and user.

Obtaining a multidimensional organization

All major reorganizations consist of reordering these three criteria. When the reason for reorganizing is recognized, it becomes possible to conceptualize an organization in a completely new way, doing away with the manner in which we usually represent an organization’s structure on a flat surface.

Let me explain. I used to conduct a little experiment with groups of executives who worked for the same company. I’d divide them into smaller groups and send them to breakout rooms, to which they were not permitted to carry anything. The breakout rooms contained nothing but a table and chairs—no blackboard, notepads, nothing. I asked them to come back with a redesign of their corporate structure. Shortly after each group entered the breakout room, invariably someone would ask for something on which to draw. We don’t seem to be able to talk about an organization without a surface to draw on.

How many dimensions are there on a piece of paper? Two: up-down, which, on an organizational chart, shows authority, and across, which shows responsibility. Our entire theory of organization derives from the fact that we insist on representing organizations on a two-dimensional surface and ignoring the way the parts interact. But is there anything about the nature of an organization that requires it to have only two dimensions?

When this requirement is dropped, we can obtain a Multidimensional Organization. One dimension is the input units, the second dimension is the output units, and the third is the market, or user, units. And these three types of units each occur...
Creating a Competitive Strategic Advantage

Obtaining a multidimensional organization, continued

at every level of the organization. This cannot be represented in a conventional tree-like diagram; it requires a three-dimensional diagram—like a cube—that makes it possible to show all the possible internal interactions.

Adapt by reallocating resources instead of reorganizing

Now consider how such an organization adapts to change. Its structure need not be changed. Adaptation consists of a reallocation of resources to units. In this way, an emphasis can be placed on the particular dimension that the organization wants most to develop: function, product or service, or markets and marketing. Furthermore, units of each type can easily be added or subtracted without changing the structure. This design has many variations, but the fundamental idea is that at each level of an organization all three types of units appear.

If an internal market economy and democratization are combined with a multidimensional structure, one obtains an incredibly powerful organization. The effect is multiplicative, not merely additive.

Change 5: a learning and adaptation support system

Now for the fifth and final change required of organizations to attain or retain leadership in the new century. I introduce it by describing the question I am most frequently asked by managers after presenting the ideas I have presented thus far: “If this stuff is as good as you say it is, why aren’t more organizations using it?” This is a very good question. Put another way in a more general form, why do organizations resist change? All kinds of trivial answers are given to this question; for example, people don’t like change. This is not an answer, but a restatement of the problem.

Why don’t managers like change? It took me a long time to find out. The explanation begins with this observation: the primary source of learning is experience, and you learn from it only by making mistakes. When you do something right, you already know how to do it. Nevertheless, most organizations disapprove of mistakes and those who make them.

We measure errors of commission but ignore errors of omission

There are two kinds of mistakes. One occurs when you do something you shouldn’t have done. This is called an error of commission. The other occurs when you don’t do something you should have done. This is an error of omission. Errors of omission are more important than errors of commission.

Look at organizations that fail or are in trouble. Is it because of what they did or because of what they didn’t do? For example, think of IBM in the 1980s. Did it get in trouble because of what it did, or because of what it didn’t do? What about Eastman Kodak or Sears?

The troubles of all three companies came from what they didn’t do. IBM ignored the development of small computers and the software they required. Fortunately for IBM, it made a recovery later. Eastman Kodak didn’t buy Xerox when it could have done so and waited to develop digital photography. Although errors of omission are more important than errors of commission, the type of accounting that pervades in the Western world makes note of only errors of commission. When a...
We measure errors of commission but ignore errors of omission, continued

A learning and adaptation support system is needed

Manager does something wrong, it will eventually appear in the books, however hidden or disguised it may be. But if a manager doesn't do something s/he should have done, it never appears in the books. So Kodak's failure to buy Xerox doesn't show up in its books. But its costly purchase of Sterling Drugs does.

Suppose you are a member of an organization that holds making a mistake against you, and in which the only mistakes that are recorded are errors of commission. Then all you have to worry about is not doing something you shouldn't have done. In such an organization, what is the best strategy for a manager who wants to maintain his or her personal security?

Don't do anything.

This is the reason why managers and organizations resist change.

If organizations are to adapt to change rapidly and effectively, errors of both types must be recognized and identified, their causes must be determined, and they must be corrected. Only by so doing can the likelihood that errors will be repeated be reduced. Furthermore, every time an effort is made to correct an error and it fails—that is, a second-order error occurs—and we correct this effort to correct, we increase our ability to learn: we learn how to learn.

Every decision is made for only one of two reasons. Either we do it to make something happen that we think will not otherwise happen, or we do it to prevent something from happening that we think will otherwise happen. Whenever the decision is made to do something or not to do something, the expectation and the assumptions on which the expectation is based should be made explicit. For example, if you want to increase advertising, record the increase in sales you expect and when you expect it.

All expectations are based on assumptions that should be made explicit. For example, if you increase advertising, you undoubtedly assume that certain responses from competitors will or will not occur. Then the decision should be monitored to determine whether the expectations are realized and the assumptions are correct. Whenever what actually happens deviates from an assumption or expectation, a correction in the decision should be made. When this is done, learning or adaptation takes place. These are the elements of a learning and adaptation support system. There are such systems in operation now. General Motors recently put one into place.

I've heard of a corporation that gives an annual prize for the best mistake made during the last year. Isn't that wonderful? The best mistake is defined as the one from which the organization learned the most. I once heard the CEO of a major corporation say to the vice presidents who reported to him, “If you didn't make a serious mistake last year, you didn't do your job, because you didn't try anything new. But if you ever make the same mistake twice, you won't be here the next year.”

He had it right. There needs to be a high tolerance for mistakes, but no tolerance for failure to learn from them. This is the only way one can learn.
A summary of the five kinds of changes required

To conclude, here is a quick summary of the five kinds of changes that are required for an organization to be an effective competitor in the new century:

1. Utilizing a different kind of planning, called interactive planning, in which you plan backward from where you ideally want to be to where you are.

2. Democratizing the organization so people can use all they know and develop a new capacity for doing things.

3. Using an internal market economy to facilitate the management of interactions and to maximize freedom of choice among the parts.

4. Organizing multidimensionally to create a type of organization that doesn't require continuous reorganization; making it possible to adapt to change by reallocation of resources.

5. Using a learning and adaptation support system that identifies errors, diagnoses and corrects them, and learns how to learn from errors more effectively.

For further reading


Author information

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Dr. Ackoff is a charter member and former president of the Operations Research Society of America, a founding member and former vice president of The Institute of Management Sciences, and former president of the Society for General Systems Research. He has a bachelor's degree in Architecture, and a Ph.D. in Philosophy of Science, from the University of Pennsylvania.

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