

STRATEGIC HUMAN RESOURCE MANAGEMENT AT QUANTUM

Deborah Barber,¹ Mark A. Huselid, and Brian E. Becker

This article describes the HR Management system in place at Quantum. Key emphases of Quantum's HR management infrastructure include: (1) establishment and communication of the firm's mission, vision, and values; (2) team-based product development and operations teams; (3) behaviorally based structured interview processes; (4) rigorous and comprehensive performance management and incentive compensation processes; (5) highly automated and efficient HR infrastructure "fundamentals"; and (6) well developed soft asset due diligence processes for integrating mergers and acquisitions. Key challenges for the future include (1) managing explosive growth in a global environment, (2) employee development, (3) managing joint ventures and acquisitions, (4) hiring and retaining talent, and (5) expanding competence in change management processes. © 1999 John Wiley & Sons, Inc.

Introduction

The Quantum Corporation, based in California's Silicon Valley, is the leading global supplier of computer hard disks, with sales in excess of \$5.8 billion. Founded in 1980 and profitable from the outset, Quantum designs, manufactures, and markets storage products for PCs, net servers, workstations, high-end computers, and disk arrays. These products are purchased by end users and a broad range of original equipment manufacturers (OEMs) such as Apple, AT&T, Compaq, Dell, Fujitusu, Hewlett-Packard, NEC, Samsung, Sun Microsystems, and Unisys. Quantum differentiates itself from its competitors by offering a broad range of high quality products to a customer base that it knows and understands very well. For example, Quantum's design engineers often work directly with customers to meet the time-to-market goals of customers. As an example

of their level of commitment in this area, Quantum spends 5.4% of its sales on research and development activities and just 3.2% of revenues on sales and marketing activities. With the acquisition of Digital Equipment Company's hard disk business in 1994, employment increased overnight from 2,500 to 10,000 employees. After the recent spinoff of a large segment of their business as a joint venture with their Japanese partner Matsushita-Kotobuki Electronics Industries (MKE), total employment is now 6,800 non-union employees worldwide.

Quantum operates in an industry (computer peripherals) with extremely thin profit margins. This pressure on profits has been reflected in an industry consolidation from 55 firms in the 1980s to just six firms at present. Quantum has recently expanded its business from disk drives to tape drives, but as essentially a single-product business (85% of current revenue comes from disk drives), the

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firm is increasingly concerned about product obsolescence and diversification. In this industry with notoriously short product life cycles (9 to 18 months), "time to volume" is Quantum's top priority; the firm believes that "success here covers a lot of sins". Quoting from company materials:

In Quantum's view, being first-to-market does not mean being first to announce or demonstrate a product. What matters is that customers get the new products that they want, when they want them, in the quantities they require. Quantum calls this *time-to-volume*. . . . Time-to-volume means rapid product development without sacrificing quality, plus the ability to ramp new product production to meet customer needs.

Consistent with such a focus on speed and responsiveness, Quantum has developed a set of integrated management systems, including HR, that are focused directly on meeting these objectives. Quantum believes that people have a deep-seated need to be part of a value-based culture, and this drives much of the design and composition of its HRM system. Quantum can be described as having a very "value-rich" culture that places a significant premium on teamwork and results. Decision-making at Quantum is based on collaboration, strong interpersonal relationships, and trust. Promoting the *Value Behaviors* that are the foundation of such a culture is one of the principal activities of CEO, Mike Brown (39 years old), described by all as open, engaging, and accessible. As a result, people at Quantum feel that they "have some skin in the game", and want very much to contribute to the success of the firm. Quantum believes that people want to work for firms that are winners, that are growing, and that are part of something extraordinary. This translates into a penchant for action on the part of employees. As one senior manager put it, "If there is an issue that needs to be resolved at a plant somewhere in the world, then you are on the plane that night." Quantum's values are taken very seriously by employees, who use them to help guide their daily decision-making.

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HR at Quantum

Quantum's strategy can be described as an effort to consistently meet customers' needs across three critical dimensions—quality, time-to-volume, and being easy to do business with. The company is constantly changing and reinventing itself in support of these goals. Each of these elements has significant implications for the people employed by the firm, and they are reflected by design in Quantum's HR management systems. In part, this phenomenon is linked to Quantum's emphasis on product development and operations teams (see below), which frequently shift and change composition as products move through their life cycles. This "constant reorganization" places considerable pressure on the HR function to assist in the placement, evaluation, and reintegration of employees. To some extent all assignments at Quantum are temporary, and moving around a lot within the firm is considered the norm, but the "glue" that holds it all together is the firm's common culture.

Because of the very short product life cycles in this business, Quantum must continually push the technology envelope. In this context, and consistent with the firm's emphasis on engineering and product development, the firm has developed considerable competencies around systematically defining where they want to be as an organization. Recently the firm has collected some data about why people in high tech came to (and stayed at) Quantum. It was found that "interesting work" and the quality of the work environment were key attributes that reinforced Quantum's commitment to the way people are managed. Quantum, for example, has identified the development and maintenance of an *Extraordinary Environment* as a key driver in the implementation of its competitive strategy. The emphasis on the extraordinary environment emanates from CEO Mike Brown's office. Quantum disdains formal bureaucracy, with a number of respondents noting that "rules here are made to be broken". Moreover, it doesn't have formal policies and programs that one might usually associate with "progressive" organizations. There is no flextime scheduling; people just come and go as they please. There are no

empowerment programs—people are just empowered to do the job.

High Impact HR Policies at Quantum

Establishment and Communication of the Firm's Mission, Vision, and Values

The firm has gone to considerable lengths to develop and communicate its mission and values broadly throughout the firm. Quantum's history is interesting in this regard in that the firm's founders wrote their value statement before they wrote their business plan. That is, they decided how they wanted to deal with the "people" elements of the business before they began to focus on product specifications and capital requirements. In broad terms, Quantum's operational goals are the following:

1. Increase the value of the company
2. Increase market share
3. Build a company with an *extraordinary work environment*

As stated in company documents, the firm's notion of an "extraordinary environment" includes:

1. achieving long-term business success,
2. ensuring that Quantum's employees feel valued,
3. ensuring a sense of pride of association with the company,
4. instilling a sense of camaraderie and that "all of us are in this together",
5. ensuring that each employee has the opportunity to reach his/her highest potential personally and professionally, and
6. generating a sense of excitement and fun.

Core to this extraordinary environment, however, is a strong set of values, and everyone lives them. For Quantum, the development of an extraordinary environment is an outcome in and of itself, to be considered as valuable as increasing market value and market share.

Quantum has nine associated "key behaviors" that help support its values system and the creation of an *extraordinary environment*.

In addition, the firm has developed measurable attributes for each of these nine key behaviors. Key behaviors include the following:

- maintaining a results focus,
- making decisions with the best interests of Quantum in mind,
- working together collaboratively,
- finding problems and fixing them,
- setting high standards,
- being open, honest, and direct,
- staying flexible and adaptable,
- taking initiative for one's own development, and
- resolving issues in an objective manner.

The use of a series of key behaviors, as opposed to the more common set of competencies, is preferred by Quantum because employees are action oriented (i.e., tell me what you *did*, not what you *can* do). Quantum uses these key behaviors to direct and drive employee behaviors throughout the organization. They spend considerable effort in communicating these values to employees, including materials such as posters and laminated cards to carry the message; "all hands" meetings where the firm shares values, survey responses, and planned actions; an upward feedback process for employees to provide feedback to managers on the extent to which they are exhibiting the Value Behaviors; and perhaps most importantly, 50% of everyone's performance review is linked directly to the performance on the Value Behaviors.

Team-Based Product-Development and Operations Teams

Another key and defining factor for Quantum is its heavy reliance on product development and operations (production) teams. The competencies around team development, performance management, and employee development processes are nurtured company-wide—as is the single set of Value Behaviors. While Quantum has relied on teams since its inception, the current version of its team-based production system was introduced in 1989 and has since continuously been refined. Quantum employees take considerable (and

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justifiable) pride in the performance of its teams, noting that they “play a significant role in who we are”. Teams have total ownership of the product development process, and teams are rewarded based on the success of the products that they develop. The firm considers the performance of its teams to be business context-specific, requiring a holistic approach for successful implementation; this makes the work structure an inimitable source of competitive advantage. As evidence, the firm points to competitors who have unsuccessfully tried to copy its team processes. For Quantum, teams have become a process for managing and also a mechanism for teaching employees from a variety of disciplines to act like general managers.

The centrality of teams at Quantum has had a significant impact on a variety of the firm’s HR management practices. For example, most of the respondents interviewed indicated that if potential hires cannot operate successfully in a team-based environment, “they can’t work at Quantum”. Consequently, the firm screens heavily for the ability to work in teams. Significant care in selecting team members, placing them all in close proximity (co-location), and team-based performance appraisals are seen as key to making the process work. There is also a focus on training the “Quantum way” as a methodology for doing team work with processes in place for transferring learnings between teams and for providing help and support (OD consultants and others from HR) whenever necessary. Quantum believes that team skills cannot totally be “bought”, and that people have to be trained in the Quantum way, even if they have strong aptitude and skills coming in. As such, there is an extensive process of training and using simulations around team processes.

An important part of this process is the “co-location” of the team, or placing the team all together in the same physical location (teaming across locations is unusual at Quantum). As a result, people move their offices very frequently. They use “messy meetings” to bring the different cross-functional teams together to pass off learnings from one to another. The team-based structures significantly influence the performance management system as well: There is very little public rec-

ognition of individual achievements at Quantum but frequent recognition of team achievements or results.

Because of the centrality of team-based processes in Quantum’s production systems, the firm invests very significant resources in training these teams—Quantum is able to leverage learnings about the process of what makes the teams work and codify it and transport it to the other teams. Quantum believes that investments in this type of training pay substantial returns. The firm also invests heavily in the operations (manufacturing) teams, which are at the core of how the business is run. Teams at Quantum are able to make decisions very quickly but only because the firm has invested heavily in team-based training processes.

Core teams are generally comprised of 10 to 15 people, with many more individuals behind each team in supporting roles. Teams stay together for the life of the product, then move on to other assignments (teams). Intact teams often travel together to work on problems, and there is a significant amount of internal status associated with being part of a high performing team. The team development process generally begins with a several day “kick-off” meeting “for the good of the product”, (i.e., the focus is a general management perspective). During the first few days the team works on issues such as roles, responsibilities, and decision-making processes. Building trust is a key idea here—the metaphor of an “Open Kimono” is often invoked (e.g., not condescending and asking for a lot of feedback). Team leaders emphasize process. The issue is not *How do we solve problems*, but *How do we keep this from happening again?* Team leaders are supposed to avoid a functional allegiance (e.g., marketing) and take the larger view. They also have team leader meetings, where the team leaders will get together and share learnings across teams. OD consultants check in on them on a regular basis to see how they are doing, and they do interventions as needed.

Teams are described as requiring a lot of “care, feeding, and nurturance” at Quantum. The teams have support people from HR available to help with process issues. It is fair to say that teams have their own HRM systems, and they have full-time HR people in support

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of them. The firm's rapid growth has made this process more difficult, however, and has depleted much of the firm's bench strength in this area.

Selection Processes

Quantum has developed a series of behaviorally based, structured interview tools that are used both to select employees and to make decisions about team membership and promotions. Each of these tools is keyed to assessing the nine key behaviors that Quantum has identified. As a result of the confidence placed in these tools, new Quantum employees are respected and expected to contribute from their first day on the job. There is the belief that if you made it through the selection process, you must be the best, so "let's get to work". Said differently, there really is no honeymoon period at Quantum; new employees start at "merge speed". Linked closely to the selection procedures is an extensive new hire orientation process, and a coaching program channeled around "living the values".

Performance Management and Incentive Compensation Processes

Quantum also excels in integrating and improving its performance management and incentive compensation processes. The firm describes itself as very aggressive at giving feedback—upward as well as downward—for all managers. The expectation throughout the firm is that feedback be direct, open, and honest. The firm believes that it cannot "manage out" individual differences between people, so you have to be very clear about behavioral expectations. To facilitate the feedback and decision-making processes, the firm practices open book management, where financial data are available to everyone. While there is some recognition that sensitive data may be "leaked" to competitors, Quantum relies on its Value Behaviors to ensure that this won't happen, and so far the firm hasn't been disappointed.

Performance is managed at Quantum in a five-step process, including (1) performance planning, (2) coaching, (3) reviewing performance, (4) developing, and (5) rewarding. The performance criteria at Quantum are trans-

parent as well: One-half of an employee's bonus and merit pay is based on results, and one-half is based on his/her adherence to the Value Behaviors. For example, lying to a customer about order status or delivery dates is strictly forbidden, and the 50/50 mix between results (what you do) and process (how you do it) helps to make this explicit to employees, in their words, "You can't simply 'get results' too often while leaving a pile of dead bodies behind you." Setting "nested objectives" is also very important in this process; Quantum strives to have each employee's goals fit together with the subordinate's goals at each level. Facilitating this process requires (1) that each employee knows how her/his performance affects the next level in the chain, ending with firm performance as a whole, and (2) that each employee knows the goals and objectives for those around her/him. Quantum has worked hard to achieve each of these goals.

Similarly, performance management for teams is handled as a multi-step process. Each individual within the team is ranked (by multiple raters), and then the teams themselves are ranked (by senior managers). This rating and ranking process functions in addition to the separate all-inclusive bonus plan available to all Quantum employees. Team performance appraisals are based on input from the business unit managers on the team's overall performance (50%), peer feedback (25%), and team leader feedback (25%). These systems are taken very seriously by employees. Teams get a lot of visibility, and there is a strong incentive not to look bad *within* your team, and a similar incentive to help the entire team to do well; team members are generally very motivated to perform. Team members also spend a lot of time with peer feedback issues. The results can be interpersonally devastating, and they have to do a lot of nurturing around this concern.

All employees (6,800) are in the same bonus pool. Quantum conducted an internal study and found that Return On Total Capital (ROTC) is the primary driver of shareholder value, so this metric is the focus of the incentive pay plans. The bonus plan is very transparent to employees, in that all employees know what the payout percentage is and how their piece of it is determined. Quantum uses

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a lot of incentive pay with many employees having a 2X incentive opportunity. Wage compression has not been an issue for Quantum (yet), although with all the turnover and spiraling salaries, it may become an issue. A significant amount of differentiation based on performance and equity options serves to mitigate this problem. Quantum's stock purchase plan, available to all employees, can generate as much as 60 % additional income on an annual basis.

Fundamentals of HR Infrastructure

Quantum has also developed a highly automated and efficient HR infrastructure around the delivery of basic HR services. The firm has developed a highly routinized decision making process for such activities as placing employees on the payroll, a high degree of outsourcing of peripheral services, and a call center to handle employee questions. There is also a clear and organized *Staffing Guide* to speed managers to the correct source if they have a problem. This process also describes the roles and responsibilities of the various parties, including the hiring manager, the internal staffing consultant, and the HR function as a whole. Also in place is a *Retention Guide* to help the firm retain its key employees. In addition, the company has good information technology (IT) and human resource information system (HRIS) infrastructure in place, including automated staffing and performance management tools, and have placed these tools (policies and procedures, etc.) "on line" to help managers manage more independently. The ability to do competency modeling will also be added at some future point.

Mergers and Acquisitions

The acquisition of Digital Equipment's disk drive business three years ago was a significant event on a number of levels, not the least of which was the four-fold increase in the number of employees it represented. While the firm was able to move quickly to integrate management systems and infrastructures, at the time it would not have been considered a significant "HR success" (i.e., the firm was

relatively less successful in merging the divergent cultures). The process resulted in several important lessons, however, that strengthened HR's capability in this area. These include the importance of "soft asset due diligence" and moving quickly—post-acquisition—to reduce uncertainty among the firm's current and new employees.

Challenges Facing HR at Quantum

Managing Explosive Growth in a Global Environment

While much of Quantum's historical success can be attributed to product development teams and their "co-location" in the firm's Milpitas headquarters, the recent globalization of the firm has led to these processes occurring at multiple locations throughout the world. In addition, Quantum recognizes that competition in this industry is fierce, and that it needs to grow and evolve from a storage *maintenance* business (which is quickly becoming a commodity) to a storage *management* business. The firm's primary concern seems to be: How can Quantum maintain the advantages of a small, focused company (and its unique culture), while thinking and acting like a global company and growing revenues to \$20 billion? HR at Quantum will need to be at the forefront of any associated large-scale change processes (some of which are as yet unseen): The concern is how to structure the function to facilitate this process.

Employee Development

In an environment where talent is scarce and external opportunities are plentiful, Quantum believes that employees will stay with the firm only as long as they feel that their contributions are valued, and they are able to do meaningful work in a stimulating and challenging environment. While managers are to some extent held responsible for the development of their subordinates at Quantum, there is some concern that due to the speed of the firm's recent growth, this process is not occurring as quickly as it needs to, especially around the development of competencies for the firm's many types of teams.

Managing Joint Ventures and Acquisitions

Given Quantum's very short product development cycles (involving a lot of concurrent engineering) and intense focus on team-based product development processes, successfully implementing joint ventures and assimilating acquisitions provides a number of significant challenges. Quantum is concerned with several issues in this context: How can the firm improve the quality of its "soft asset due diligence" process prior to any acquisition or joint venture? Once a deal has been completed, how can Quantum accelerate the process of integration? The firm has found it best to formalize relationships and procedures as early as possible, which can be very difficult to do if the partner's capabilities are not very well known. How can the firm incorporate new ideas from the partner or acquired firm into Quantum? How should this process of knowledge transfer be structured? Finally, how can Quantum anchor the acquired firm more quickly on Quantum's Value Behaviors while still maximizing the transfer of learnings and "best practices"—in both directions?

Hiring and Retaining Talent

Low unemployment in the Silicon Valley, and a general scarcity of technical talent worldwide, renders sourcing and retaining talent a "critical success factor" in the successful implementation of Quantum's competitive strategy. While the firm feels that schools

aren't turning out technical talent in anywhere near the amounts required on an industry-wide basis, this problem is compounded by Quantum's very high selection hurdles; it simply must have technical talent with strong interpersonal and team-based competencies, and this significantly reduces an already small pool. While the firm is in the process of identifying key employee competencies and developing HR systems to help close the gap, a primary concern is that it doesn't have enough bench strength for these teams, and that there is a limited budget with which to develop them.

Expanding Competence in Change Management Processes

Change has been constant and unrelenting throughout Quantum, and the widely held view is that "Things will never stabilize here; we need to continually change the tires on this car while it is moving down the road." In this context the firm is concerned with whether or not it has developed a workforce with the appropriate levels of skills and flexibility to be able to respond to unforeseen (and perhaps unforeseeable) changes in the industry. While expanded competence in change management processes is seen as an important step in this process, Quantum operates in an environment where margins are very thin and resources for long-wave employee development are limited. Thus, building HR competencies to manage large-scale change processes in a cost-effective manner remains a significant challenge.

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DEBORAH BARBER is VP, HR and Corporate Services for Aspect Telecommunications, a global leader in mission-critical call center solutions. Before joining Aspect in 1998, Ms. Barber was VPHR for Quantum Corporation. Ms. Barber was also previously VPHR at Cray Research, Inc., and also held HR positions at Honeywell. Ms. Barber holds a B.A. degree in political science from Miami University in Ohio, and has completed coursework for a Masters degree in industrial relations at the University of Minnesota. She has been an active industry leader with the American Electronics Association, and is past chair of the Board of Directors of the California Strategic Human Resources Partnership. Ms. Barber is currently the chairman of the Junior Achievement Board of Santa Clara, and a fellow of the American Leadership Forum.

MARK A. HUSELID is an Associate Professor in the School of Management and Labor Relations (SMLR) at Rutgers University. He holds a Ph.D. in Human Resource Management, an M.A. in Industrial and Organizational Psychology, and an M.B.A. His current research and consulting activities focus on measuring and evaluating the impact of human resource management systems on firm performance. He has published widely on these topics and currently serves on the editorial board of five major academic journals. The recipient of numerous awards for his research, Huselid is on the Board of Directors of the *SHRM Foundation* and is a member of the Executive Committee of the Human Resource Management Division of the Academy of Management.

BRIAN E. BECKER (Ph.D., University of Wisconsin—Madison) is Professor of Human Resources, and Chairman of the Department of Organization and Human Resources, in the School of Management at the State University of New York at Buffalo. Professor Becker has published widely on the financial effects of employment systems, in both union and non-union organizations. His current research and consulting interests focus on the relationship between human resources systems, strategy implementation, and firm performance.

ENDNOTE

1. Deborah Barber was employed at Quantum during the preparation of this article.