Quantum Corporation Essay, Research Paper

Overview

In the past two decades, Quantum Corp.

of Milpitas, California, has become one of the leaders in the design,

manufacturing, and marketing of digital storage products including hard

disk drives and digital tapes. By following its own path and making decisions

criticized by the rest of the industry, Quantum has managed, not only

to survive in an industry that has destroyed lesser companies, but to

thrive and be recognized as one of the industry’s quality leaders.

Quantum Corporation was founded in 1980 as a manufacturer of 8-inch disk

drives. Not long after its establishment, it moved into also manufacturing

5 ?-inch drives. Its business was to provide OEM (original equipment manufacturers)

like Apple and IBM with the drives they needed to produce their computers.

By 1987, sales of 5 ?-inch and 8-inch disks were falling and Quantum

was losing business to competitors who were able to get new products to

market faster and in greater quantity. Although the HardCard, an add-on

disk drive being produced by the Japanese company Matsushita-Kotobuki

Electronics Industries, Ltd. (MKE) for Quantum, was doing well, Quantum

needed to move into the 3 ?- inch disk drive market or lose its customers

to the competition. Because of Quantum’s successful relationship

with MKE and its own lack of resources to start up or rework a manufacturing

facility for the new smaller drives, Quantum entered into an agreement

with MKE which would allow Quantum to focus on design and marketing while

MKE produced the disk drives.

This wasn’t a very popular move with some other American manufacturing

firms. Quantum was accused of selling out to the Japanese and providing

them with valuable technological information. Many thought Quantum was

signing its own death warrant by giving up control of its manufacturing.

Some industry insiders felt Quantum should have followed the lead of other

disk drive manufacturers, like Seagate, and opened its own manufacturing

plants in the Far East rather than give up control of its manufacturing

to the Japanese.

At first it appeared that some of these criticisms might be accurate.

Quantum was late getting into the market and then couldn’t meet the

demand for its products. But Quantum persevered in its decision and, eventually,

the high quality of the products coming out of MKE swung the tide in Quantum’s

favor. By 1989, Quantum’s 3 ?-inch disk was gaining acceptance in

the industry. In late 1991, Quantum was listed as the best California

large business by California Business magazine, following a three year

revenue increase of over 135 percent and a net income increase of over

265 percent.

Another major problem Quantum faced was its historical dependence on

only a few customers. For several years, orders from Apple Computer constituted

80 percent of Quantum’s business. But when Quantum couldn’t

supply the quantity of 3 ?-inch disks Apple needed, the computer company

began to look elsewhere. Once well back in the 3 ?-inch disk drive business,

Quantum realized it couldn’t rely on just a few customers but needed

to expand its client list. It began developing new relationships with

major companies in the industry and soon its client list included companies

like AT&T, Hewlett-Packard, Intel Corp., NEXT Inc., Sun Microsystems

Inc., and Unisys Corp., as well as others in Europe and the Far East.

In late 1994, Quantum acquired most of Digital Equipment Corporation’s

storage business, including its hard disk drive and tape drive manufacturing

plants in Colorado, Massachusetts, Malaysia, and Indonesia. Quantum hoped

to use this $400 million dollar purchase to enhance its standing as a

major supplier of high-end disk drives (2, 4, and 9 gigabyte drives) for

use in mainframes, minicomputers, and other large computer systems. But

after spending hundreds of millions of dollars, Quantum realized the high-end

disk market was not making money. In 1995, Quantum made the painful decision

to close the Colorado plant and move the remainder of its disk drive manufacturing

to its plant in Malaysia. By early 1996, Quantum closed its disk drive

plants in California and Malaysia and transferred all of its disk drive

manufacturing to MKE.

But not all of Quantum’s acquisitions from DEC were unsuccessful.

In another former DEC plant in Colorado, Quantum found it needed to expand

its blossoming tape drive business. Tape drives store data on magnetic

tape and are generally used for back-up storage or archiving of data off

of a computer network. Many large computer companies, like Hewlett-Packard,

Digital, and Compaq used the drives in their computer systems. With the

massive amounts of data being generated every day, companies across the

country and the world were clamoring for back-up storage tapes. Quantum

had found a new niche.

Not only was 1995 the year that Quantum began changing its business strategies,

but the company also changed its executive line-up. With a new CEO, Michael

Brown, the company is changing the way it looks at the future. The company’s

emphasis will be on developing and selling disk drive and tape storage

units, but will leave the disk drive manufacturing up to MKE. It will

also try to expand its customer base by going into the general consumer

market with drives designed to expand the capacities of desktop PCs. Industry

insiders predict that growth in the PC disk-drive market will compound

annually at 20 percent to 25 percent over the next five years, eventually

even outstripping PC sales, as people upgrade and add memory to existent

equipment.

As part of its DEC acquisition, Quantum received an 81 percent share

of Rocky Mountain Magnetics Inc., a joint venture with Storage Technology

Corporation in the development of magneto-resistive (MR) heads. By incorporating

MR head technology into its disk drives, Quantum was able to increase

areal density (the number of data bits per square inch). This allowed

Quantum to increase drive performance and reduce the cost per megabyte

by putting more data under a single head. Quantum was the first independent

supplier to combine MR heads and Partial Response Maximum Likelihood (PRML)

technologies in a hard disk drive. Through their joint connection, Quantum

also partnered with StorageTek to supply Quantum DLT 7000 tape drives

to the StorageTek TimberWolf family of automated robotic tape storage

libraries.

In March, 1997, Quantum and Exabyte Corporation announced the Exabyte

18D, Exabyte’s first automated DLT library. The library uses Exabyte’s

robotics and Quantum’s DLT 4000 or DLT 7000 tape drives to provide

backup, remote storage, and automated archiving of digital tape cartridges.

After a few years making up for the heavy expenditures from the DEC acquisition,

Quantum reported substantial income increases in the beginning of 1997.

Growth and increase in income was attributable to the success of Quantum’s

switch in emphasis from hard disk drives to back-up tape drives.

Quantum now manufactures and sells 5 ?-inch and 3 ?-inch hard disk drives,

solid state disks, and tape drives. Its customers include large domestic

and international OEMs, like Apple Computer, Compaq, Digital, Hewlett-Packard,

and IBM and, through commercial and industrial distributors, to smaller

OEMs, system integrators, value-added resellers, dealers and retailers

in more than 25 countries. Quantum provides products for use in minicomputers,

disk arrays, servers, workstations, and entry-level to high-end desktop

PCs. Quantum’s manufacturing partner, MKE, has plants in Japan, Ireland,

and Singapore for producing the high-volume products. Quantum produces

solid state disks, DLT tape drives, and mini-libraries at its facilities

in Colorado Springs, Colorado Initial design and production of magnetic

disks, MR heads DLT drives, and mini-libraries also take place in Shrewsbury,

Massachusetts and Louisville, Colorado. The Penang, Malaysia, plant continues

to produce disk drives.

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