Anagene inc.

Anagene is a biotechnology firm started by Mark Hansen and Harold Bergman in 1993. Hansen and Bergman planned to combine microelectronics and molecular biology to develop products that would have broad commercial applications in genomics and other fields. Anagene's mission was to facilitate breakthrough genetic analysis. The company went public in the year 1998 and raised $42. 9 million. The company's core product was a cartridge which had to be analyzed with a Anagene-designed workstation. Management anticipated a long string of cartridge sales following the sale of each Anagene workstation. Product Information

WORKSTATION Anagene's first major product was a proprietary platformtechnology– The Anagene Molecular Biology Workstation. This included a loader (which could load four cartridges at a time), a reader (which read and analyzed one cartridge at a time) and a disposable cartridge that contained the company's proprietary microchip. The product was priced at $160, 000 – each workstation shipped with four cartridges. CARTRIDGES Anagene also sold disposable cartridges – priced at $150 each. Each cartridge contained an electronic chip that held test sites laid out in a geometric grid called an array.

Cartridges could perform up to 99 tests on any single sample. As the company sold more workstations, it expected the demand for its cartridges to increase rapidly. MANUFACTURING Anagene's management decided to outsource the production of workstations to Hitachi. Hitachi and Anagene would work together to cut costs through value engineering thereby enabling the transfer price to continually decrease. Initially, the final testing would be

performed at Anagene’s facilities. As the company grew, this activity would also be outsourced to Hitachi.

Anagene built its own manufacturing facility for the cartridges in order to capture the profits from the very high forecasted sales of its product. STANDARD COSTING SYSTEM AT ANAGENE DURING 2000 Anagene’s cost system calculated standard costs once a year. The process started by estimating the budgeted variable costs per unit – materials, direct labor, outside processing (several manufacturing steps had been outsourced), and scrap. Plant level overhead costs were allocated among cartridge manufacturing, instrument manufacturing, and R&D.

These assignments were determined by the manufacturing department. The cost driver that was used to obtain overhead cost per unit was “ budgeted production volume”. Machines used in the production process were assigned to different manufacturing steps which allowed for easy allocation of depreciation as an overhead expense. The standard cost per cartridge was then calculated by adding up the direct material, direct labor and overhead costs. Some other costs associated with the sale of cartridges included the unit cost of royalties and estimated returns expense.

These standard costs were used for financial reporting purposes, assessing product costs and profitability. ISSUES Because of the infancy of the company and the genomics market, it was difficult for Anagene’s management to correctly forecast the company’s future sales volumes and thereby their gross margins. This led to frequent revisions to previously submitted estimates. In one instance, the company revised its estimate for

the FY2001 that showed standard costs increasing by 40% and gross margins dropping from 65% to 45%.

One of the main reasons identified for this reduction in margins is the increase in overhead costs due to reduction in budgeted volume. In the early quarters, sales are difficult to forecast and the company has experienced fluctuating production volumes and unpredictable gross margins, which has upset the board of directors. The purpose of thecase studyis to determine a new costing approach based on capacity. With large amounts of unused capacity, the decision of how to apply capacity costs is critical to the company's management and its reporting strategy with analysts.

DIFFERENT TYPES OF CAPACITIES Essentially, there are four different kinds of capacity. Theoretical Capacity: -This is the volume of activity that could be attained under ideal operating conditions, with minimum allowance for inefficiency. It is the largest volume of output possible. Practical Capacity: - It is the highest activity level at which the factory can operate with an acceptable degree of efficiency, taking into consideration unavoidable losses of productive time (i. e. , vacations, holidays, and repairs to equipment).

Normal Capacity:-It is the average level of operating activity that is sufficient to fill the demand for the company's products or services for a p of several years, taking into consideration seasonal and cyclical demands and increasing or decreasing trends in demand. Master-Budget Capacity :- It is similar to normal capacity, except it is a short-run level based on demand, it minimizes under- or over applied overhead but does not provide a consistent basis for assigning overhead cost.

Per-unit overhead will fluctuate because of short-term changes in the expected level of output. Currently, Anagene is using this method. THE GAME PLAN Strategic cost management dictates the use of “ practical capacity of resources rather than budgeted manufacturing volumes when calculating standard costs. If forecasted activity levels are used to calculate cost driver rates, a death spiral may launch in an organization. That is if the cost base (the overhead expense) is fixed, then any decrease in the activity level (the cost driver) will lead to a higher overhead cost per unit.

This is a simple arithmetic response to a decrease in the denominator with an unchanged numerator. Using this new high cost driver rate to compute costs will lead to lower gross margins. This may lead the company to set higher prices. These high prices may cause product demand to lower leading to lower activity rates which are again fed into the system causing the cost driver to go up. This creates a vicious cycle. The cost driver rate should reflect the underlying efficiency of the process which is measured better by recognizing the capacity of resources being supplied.

Anagene should use practical capacity which could be estimated by subtracting from the theoretical capacity the expected time required for normal maintenance, repairs, startups, and shutdowns. The case provides numbers on equipment depreciation, machine capacity, and manufacturing overhead to allow calculations for different overhead rates based on assumptions about how the plant's capacity costs should be assigned to production quantities.