HYDRITE CHEMICAL INC.

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This case is about performance measurement in a multi-division company using return on investment (ROI). Opportunities are available in the case for expanded discussions about the role of accounting information in management control systems. The case provides information to evaluate a District Manager at a chemical services company and to evaluate an investment proposal forwarded by the District Sales Manager. The case can be used effectively to introduce or to review management control systems in undergraduate or graduate cost management courses. Flexibility is provided in the case teaching notes to use the case in a first semester or advanced course.

INTRODUCTION

Bart Williams, president and CEO of HyDrite Chemical prepared to meet with HyDrite district managers to discuss performance of each district. District managers' incentives are based on attaining ROI levels established in the plan at the beginning of the year for each district. His first meeting was with Ethel Richards, manager of HyDrite's Cleveland District.

Overall, Williams was reasonably satisfied with HyDrite's past performance but felt that higher sales and profits were attainable. He wasn't sure if the current system inhibited managers from pursuing the company's goals of aggressive growth and above average return on investment (compared to industry).

THE CHEMICAL SERVICES INDUSTRY

HyDrite was a chemical products service center. The company bought raw materials in large lots from suppliers, such as Abbott and S.C. Johnson, and then sold to end users in smaller lots with shorter lead times. Service centers, such as HyDrite, added value by providing just-in-time (JIT) service and reducing order fulfillment cost.

The chemical distribution industry was generally considered mature, fragmented, and highly competitive. But the industry had still experienced significant recent growth. Over the last year, shipments through service centers accounted for 30.0%

of chemical and allied product shipments in the US, up from 18.0% ten years earlier. Industry observers expected sustained growth over the coming years.

HYDRITE'S STRATEGY

Established thirty years ago as a local distributor, HyDrite had grown to a national firm with sales over $300 Million. The company's fundamental strategy is to focus sales efforts on high-technology users in the specialty agricultural products market. HyDrite has a long-term commitment to provide exceptional service to their customers and seeks to develop marketing programs that increase their market share. To this end, HyDrite assists customers to set up JIT systems and coordinates with their material resource planning (MRP) systems. Moreover, they offer a range of processing services, such as blending, compounding, formulating, and re-packaging. They are able to provide these specialized services at lower cost than their end-user customers by processing higher volumes.

ORGANIZATIONAL STRUCTURE AND PERFORMANCE MEASUREMENT

HyDrite operates in 83 locations, organized into 3 regions, with 4 districts in each region. Direct reports to a district manager include managers of the sales, credit and purchasing functions, and warehouse superintendents. Capital expenditures exceeding $300,000 require corporate approval. Corporate-level staff departments provide accounting, marketing, some logistics, and human resources services. The cost of these service departments is assigned to users with cause-effect cost drivers. Taxes on corporate income and common cost for corporate services, such as executive management, are not allocated to districts.

District managers are responsible for attaining plan ROI levels. The incentive system, described in Exhibit 1, is based on ROI and established for each district manager at the beginning of the year as part of the planning process. The investment base for ROI calculations includes the following, all at period-end valuation:

- Land, warehouse buildings, and related equipment at original cost.
- Leased land, warehouse buildings, and related equipment at original capitalized lease value.
- Leased trucks are not capitalized. The lease payment is deducted as an operating expense.
- Cash is included since most treasury functions are handled by the districts.
- Period-end inventory is at replacement cost using current mill cost schedules.
- Balances in accounts receivable, current and long term liabilities are included since related decisions are made at the district level.

CLEVELAND DISTRICT MANAGER

Ethel Richards, manager of the Cleveland District, has been identified as a fast-tracker. Her district had been earning ROI well above 25.0% (pre-tax) in recent years. In contrast, HyDrite company’s ROI has not exceeded 15.0% in any of the previous 10 years.

For the current year, 2020, the Cleveland District management team prepared an aggressive budget but felt that the ROI based on their submitted plan was attainable, based on expected market opportunities. Thus, the target return for the Cleveland District was set based on the plan. Actual District results, along with the plan for the district are shown in exhibit 2.

INVESTMENT PROPOSAL

The sales manager submitted an investment proposal to Richards, "Our analysis indicates that there is demand in the district for custom enzyme reformulation. I have prepared a proposal that shows earnings of $500,000 pre-tax, which is $0.23 per share. This is more than the EPS increase that was the highlight in last year’s annual report." The investment proposal from the Cleveland District sales manager is detailed in exhibits 3 and 4.

EXHIBIT 1:
Incentive system bonus formula

step 1:	If actual investment exceeds target, multiply the excess by target ROI and charge the amount against district income. If actual investment is less than target, multiply the difference by target ROI and credit the amount to district income.
step 2:	incentive income = adjusted income (from step 1) less 90% of target income
step 3:	payout rate = incentive income/90% of target income
step 4:	bonus payable = payout rate*manager's base salary
step 5:	maximum bonus is 75% of base salary

EXHIBIT 2:
Cleveland District Financial Statements

Income Statement 2020 (000s)

	plan	**actual**
sales	\$17,650	\$19,000
variable cost of goods sold	3,830	3,990
variable sales and admin.	519	570
contribution margin	\$13,301	\$14,440
fixed cost of goods sold	7,113	7,410
fixed sales and admin.	3,038	3,230
income	\$3,150	\$3,800

Balance Sheet 2020 (000s)

	plan	**actual**
Assets:		
cash	\$780	\$800
accounts rec.	1,450	1,900
inventories (repl. cost)	4,120	6,000
total current	\$6,350	\$8,700
plant and equip.	9,650	9,700
accum. depreciation	2,450	2,400
total assets	\$13,550	\$16,000
Liabilities and Equity:		
accounts payable	\$1,400	\$1,700
current portion of LT debt	1,600	1,750
total current	\$3,000	\$3,450
LT debt	1,650	1,900
total liabilities	\$4,650	\$5,350

EXHIBIT 3:
Investment Proposal

To: Cleveland District Manager
From: Jack Erickson, Cleveland District Sales Manager
Re: processing equipment proposal

Our analysis indicates that there is demand in the district for custom enzyme reformulation. Please review the enclosed proposal. Annual cash flows are calculated by adjusting incremental earnings for depreciation (straight-line). Selling price will be \$60.00 per unit and we expect sales of 100,000 units. Earnings will be \$500,000 pre-tax.

EXHIBIT 4:
Investment Proposal

1. projected investment (100,000 units sales):

cash	$50,000
accounts receivable	250,000
inventories (repl. cost)	400,000
PPE (straight-line depr.)	2,100,000
investment	$2,800,000

2. cost data (annual capacity of 120,000 units):

variable cost per unit	$30.00
annual direct fixed cost	2,500,000

PERFORMANCE EVALUATION

Based on the plan and actual data available, Richards prepared for her meeting with Williams to discuss her district's performance. She needed to carefully study her ROI results to anticipate issues that may be raised by Williams. Richards understood that ROI provides information about district performance beyond a simple return. Although she realized that ROI is the decisive metric used by Williams and that ROI will determine her annual bonus payment, Richards wondered if a strict application of financial accounting measures, such as ROI, adequately reflected her efforts in the district.

Richards also planned to take time to evaluate the recent project proposed by Erickson, the sales manager. A cursory review indicated the project had the potential to increase district earnings but she wasn't sure the sizable investment was justified by the earnings increase. Further analysis is also needed to consider the strategic implications of the project. A final important concern was the effect of the project on her district's ROI, since that is the focus of performance evaluation information used by HyDrite.