



# 1 Introduction

You have just been transported to a parallel simulation where everything is familiar, but things are a little different. Why were you transported? You are going to have an opportunity to run a company of your own and demonstrate your business knowledge!

## 1.1 What's Different?

In your previous simulation, you might have worked as part of a group, bouncing ideas among your teammates. In Comp-XM Basix, you are the sole decision maker.

At the start of the simulation, all companies are *not* equal. You are running the Andrews Company, and it is behind the competition, so you have your work cut out for you.

In Comp-XM Basix, you will not have access to an Excel® spreadsheet. All decisions will be entered on a web-based spreadsheet available from the Open Simulation button on the Exam Dashboard (see Figure 4.2).

At the start of Comp-XM Basix, the segments are in the middle of the Perceptual Map.

## 1.2 What's the Same?

The segment names and products should be familiar. Although they are in the middle of the map, the segments will continue to drift to the lower right, just as they did before.

All decision areas are identical to your previous simulation, as are the reports.

## 1.3 Workflow

Comp-XM Basix has four decision rounds. Each round, you will enter a set of decisions via the web spreadsheet.

You might also be asked to complete a Mini Quiz. You can take the Mini Quiz any time during the simulation (Table 1.1).

Table 1.1 Standard Comp-XM Basix Schedule

Simulation	Mini Quiz
Round 1 Decisions	Can be completed any time prior to the deadline.
Round 2 Decisions	
Round 3 Decisions	
Round 4 Decisions	

Your instructor can configure Comp-XM Basix without a Mini Quiz.

# 2 Scoring

Scoring occurs in two parts, the results of your Mini Quiz, and the results of your simulation, which are assessed via a Balanced Scorecard.

## 2.1 Balanced Scorecard

Comp-XM Basix uses a Balanced Scorecard for simulation scoring. A Balanced Scorecard is a common analysis technique that allows companies to gauge their current performance and formulate future goals. Balanced Scorecards are divided into four areas:

- Financial
- Internal Business Process
- Customer
- Learning and Growth

Each Comp-XM Basix Scorecard is built from criteria which are assigned a weight— a level of importance. Criteria, weights and results for each round, along with criteria, weights and results for a final

## Mini Quiz

recap Scorecard, are available from the Exam Dashboard (see 4 Website Instructions).

As you enter decisions in the spreadsheet, projections of the Balanced Scorecard results for the upcoming year are available via the proforma menu. Scores from previous years are available from the Exam Dashboard.

Each round is assessed using one set of Scorecard criteria that reflects round over year performance. In addition, a “recap” scorecard analyzes performance using a different set of criteria across all rounds. Clicking the scorecard icons on your Exam Dashboard will display the point value for each round and for the recap.

## 2.2 Mini Quiz

The Mini Quiz asks questions about basic business knowledge. The quiz can be answered at any time in any round. You access the Mini Quiz from your Exam Dashboard. You can change your answers as often as you want until the Comp-XM Basix deadline established by your instructor.

# 3 Decision Summaries

Decision entries are identical to the ones you made in your other simulation. Please refer to your Team Member Guide for general information. A link to the online version can be found in the Comp-XM Basix Help area.

You might also want to review the Rehearsal Simulation, which is available from your previous simulation’s Getting Started area.

The Comp-XM Basix Industry Conditions Report, which is available from the Reports menu of the spreadsheet, will help you review the current customer buying criteria and the market segments’ current and future locations.

You will also want to study the Perceptual Map of the Comp-XM Basix industry newsletter, available from the Information Resource area of the Exam Dashboard, to get a quick overview of the positions of your products (the Andrews products which start with the letter A) and your competitors’ (their products start with the first letter of their company name).

If they were scheduled in your previous simulation, your Comp-XM Basix simulation will utilize the Human Resources and TQM (Total Quality Management)/Sustainability modules. Decisions made in these modules can have wide ranging effects, including influencing product demand, R&D cycle times, productivity, material costs, labor costs and administrative costs.

TQM and Human Resource drive the Learning and Growth section of the Balanced Scorecard. Documentation for HR and TQM is available from the Comp-XM Basix Help area.

## 3.1 Research & Development

### 3.1.1 Positioning Costs

Material costs are also driven by positioning. The higher the technology, the higher the cost.

### 3.1.2 MTBF (Mean Time Before Failure)

Each 1,000 hours of reliability (MTBF) adds \$0.30 to the material cost. A product with 20,000 hours reliability includes \$0.30 \* 20,000/1000 = \$6.00 in reliability costs.

## 3.2 Marketing

### 3.2.1 Promotion Budget

Promotion expenditures reach diminishing returns at \$3,000,000 for each product. Promotion buys awareness. You lose one third of your old awareness each year. Your promotion budget replaces lost awareness, and if the budget is high enough, makes gains towards 100% awareness. When a product reaches 100% awareness, promotion budgets of about \$1,400,000 are needed to maintain it.

### 3.2.2 Sales Budget

Sales budgets buy segment accessibility. Although you budget by product, any product within the segment’s fine cut contributes to accessibility in the segment. Diminishing returns are reached at a budget of \$3,000,000 for each product. Diminishing returns in the segment, however, are not reached until \$4,500,000. You need at least two products in the segment’s fine cut to reach 100% accessibility. You lose one third of your old accessibility each year. Your sales budgets replace lost accessibility, and if the budgets are high enough, make gains towards 100% accessibility. When a segment reaches 100% accessibility, sales budgets of about \$3,300,000 are needed to maintain it.

Sales budgets also allocate the time spent by the sales force selling the product. The higher the budget, the more time the sales force gives to the product. This can be useful if you wish to emphasize one product over another within the same segment. For example, if you are splitting a combined \$4,000,000 sales budget between two products, you might spend \$3,000,000 with one and \$1,000,000 with the other. Your salespeople would emphasize one product over the other.

### 3.3 Production

#### 3.3.1 Plant Purchases

Floor space for each unit of capacity is \$6.00. Add \$4.00 for each point of automation. Additional capacity at an automation rating of 10.0 would cost  $\$6.00 + (\$4.00 * 10.0) = \$46.00$  per unit.

#### 3.3.2 Plant Sales

When you sell plant, you get \$0.65 on each original dollar. Depending on the depreciated value of the plant, you could make a gain or a loss on the sale which will appear as a gain or loss on the income statement.

Comp-XM Basix uses a straight line depreciation method calculated over fifteen years.

#### 3.3.3 Second Shift/Overtime

Labor costs increase 50% when a second shift is hired or when the first shift works overtime.

#### 3.3.4 Automation

Increasing automation has a linear effect on labor costs. Between an automation of 1.0 (lowest) to 10.0 (highest), labor costs fall approximately 10% for each point of automation.

### 3.4 Finance

#### 3.4.1 Stock

Stock issues are limited to 20% of the company's outstanding shares. Stock will be issued at last year's closing price. You pay a 5% brokerage fee to issue stock.

#### 3.4.2 Current Debt

These are one year bank notes. Bankers will loan current debt up to about 75% of your accounts receivable (found on last year's balance sheet) and 50% of this year's inventory. They estimate your inventory for the upcoming year by examining last year's income statement. Bankers assume your worst case scenario will leave a three to four month inventory, and they will loan you up to 50% of that amount. This works out to be about 15% of the combined value of last year's total direct labor and total direct material, which display on the income statement.

There is no brokerage fee for current debt.

#### 3.4.3 Bonds

These 10 year notes carry an interest rate 1.4% higher than the current debt rate in the year they were issued. Bondholders are willing to lend amounts up to 80% of your fixed asset's (your production lines) depreciated value. You pay a 5% brokerage fee to issue bonds.

Companies with better bond ratings have lower interest rates than companies with poorer ratings.

If your company runs out of cash, you will receive an emergency loan, which carries a 7.5% penalty above the Current Debt interest rate. Emergency loans convert to Current Debt in the following year.

### 3.5 Human Resources

#### 3.5.1 Recruiting

Investing in recruiting a better quality employee increases productivity and decreases turnover, which will reduce your labor and HR Admin costs. The effect of investing in recruitment is cumulative. You can spend up to \$5,000 per person to hire better talent. The amount is added to the automatic recruitment charge of \$1,000 for every new employee.

Human Resources Recruiting Spend and Training budgets are *not* entered in thousands. To spend \$5,000, enter 5000.

#### 3.5.2 Training

Investing in training also increases productivity and decreases turnover. Each year, you can assign up to 80 hours of training per employee, which increases productivity. Each training hour costs \$20.00. When employees are in training they are replaced with other employees, so the Needed Complement will increase as training hours increase. The effect of investing in training is cumulative.

### 3.6 Human Resources Entries

Workforce Complement controls the number of workers employed by the company. Once production schedules are complete, the spreadsheet will display a Needed Complement. Having 100% of the Needed Complement ensures the company will have sufficient workers.

Having less than 100% results in worker overtime, which cuts into the efficiency of the workforce. Having significantly fewer workers than necessary will result in serious production shortfalls because labor will not be available to manufacture the sensors.

Recruit Spend allows the company to attract a higher caliber worker, which will increase the efficiency of the workforce as measured by the Productivity Index.

## TQM/Sustainability

Training Hours will also increase efficiency. However Training Hours increase the Needed Complement because workers are in the classroom, not on the production lines.

Investments in Recruiting and Training raise your Productivity Index, which in turn lowers your per unit labor costs. Scheduling overtime reduces any gains to the Productivity Index. The Productivity Index cannot go below 100%. Refer to the red flags on the Production and Human Resources spreadsheets, which activate pop-up explanation windows, for a thorough discussion of Human Resources entries.

Documentation for HR is available from the Comp-**XM** Basix Help area.

### 3.7 TQM/Sustainability

The TQM (Total Quality Management)/Sustainability Module allows companies to invest in several initiatives. Different initiatives return different benefits. For example, some initiatives will reduce labor and material costs, some will reduce R&D cycle time (allowing you to re-engineer products faster), some will increase product appeal and some will decrease administration costs. You don't have to invest in all initiatives. To maximize the effect, companies should find complementary initiatives and invest in each of them.

Differentiators might want to reduce R&D cycle times, to ensure their products are newer and better positioned. Cost leaders might want to reduce material and labor costs, allowing them to reduce prices while maintaining their margins.

Documentation for TQM is available from the Comp-**XM** Basix Help area.

## 4 Website Instructions

Login to the website with the User ID and Password from your previous simulation. Select Comp-**XM** Basix (Figure 4.1).



Figure 4.1

Review the brief introduction and continue through the Getting Started area.

The Help area has links to the documentation from your previous simulation, including instructions for HR and TQM and a detailed explanation of the Balanced Scorecard.

### 4.1 Exam Dashboard

When you complete the Getting Started introduction, the system will bring you to the Exam Dashboard (Figure 4.2), an area where activities and information are accessed.

### 4.2 Open Simulation

The Open Simulation button launches a web-based spreadsheet. All decision entries are made via this area.

### 4.3 Answering Mini Quiz Questions

Your Comp-**XM** Basix simulation might also include a Mini Quiz. A Mini Quiz will ask you business-related questions. Your Dashboard will notify you if a Mini Quiz is scheduled.

### 4.4 Round Schedules

To see round schedules, review the dates in the Dashboard's Deadlines column.

Only the final deadline is enforced for self-paced exams.

If Comp-**XM** Basix is not self-paced, the Dashboard will display:

- The date and time you can begin making simulation decisions and answering Mini Quiz questions;
- The date and time when simulation decisions and Mini Quiz answers are due.

### 4.5 Self-Paced Exams

In self-paced mode, you make simulation decisions within a time frame established by your instructor.

#### 4.5.1 Advancing Self-Paced Exams

The Exam Dashboard displays your progress. For example, whether decisions have been saved for the current round.

You will not be able to advance to the next round unless you have saved a set of decisions. To advance from Round 1 to Round 2:

- On the Exam Dashboard, click the Turn in Round 1 button;
- When the new page opens, click the button to confirm that you wish to advance to the next round.

Best of Luck with Comp-**XM** Basix!

[Course Page](#)[Exam Dashboard](#)[Help](#)[Getting Started](#)

## Exam Dashboard

### You are Currently in Round 1.

Current exam schedule: Self-pace \* with suggested dates and times

Upload a set of decisions for Round 1.





[Open Simulation](#) [Answer Mini Quiz](#) [Turn In Round 1 of 4](#) 

### Information Resource: Courier

After you have uploaded your decisions then you can advance to the next round.

Status: You have not uploaded decisions for round 1.

Status: You have answered 0 out of 9 questions.

	Deadlines	Decisions	Results/ Scorecards
Round 1	Inwork		
Round 2	Self-pace		
Round 3	Self-pace		
Round 4	*03/22/12 5:00PM EST		

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Figure 4.2 Exam Dashboard

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