**Project Name:** CCenter

**Sample Only**

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**Document Title:** User Guide

**Revision Number:** 1.0

**Name and E-mail Address:** -

1. **Location and meaning of all input parameters and input streams**

The entire model’s input parameters and steams are located on the ‘Inputs’ worksheet. Cells that can be modified by the user have been highlighted in yellow and green (see details on section three of this document). The model’s input parameters and streams have been categorized into the following six sections: employee, customer, sales, inventory, overhead expenses and financial.

*Employee Section:*

This section defines input parameters and streams related to the call center’s employees.

Hours Per Shift: The average number of hours an employee works in a workday.

Average days per Month: The average number of days an employee works per month.

Average Percentage of Out-of-Office Time: The percentage of time per month that an employee is not working due to vacation, sickness, maternity leave or jury duty.

Number of Sales Agents: The number of sales agents working at the CallMe center on January 1st.

Target Occupancy: The maximum allowed percentage of time that a sales agent should be busy on the phone in a given shift when he is sitting in his desk. Target Occupancy should be lower than 100% to allow agents to be available and waiting for a new phone call.

Stock Agent Compensation per Hour: The hourly wage for a stock agent.

Temporal Agent Compensation per Hour: The hourly wage for a temporal agent. Temporal agents are hired only for the month in which they are needed.

Average Shrinkage Percentage: The projected percentage of time per month that an employee is not working due to meetings and training sessions. This is a 12 month stream.

*Customer Section:*

Customer Base: The number of customers the CallMe center serves on January 1st.

Customer Base Percentage Increase: The expected monthly growth of the CallMe center’s customer base.

Average Call Length in Minutes: The average length of time in minutes that a sales agent engages a customer per customer call.

Average Number of Calls Per Customer: The projected average number of calls that a customer places per month. This is a 12 month stream.

*Sales Section:*

Sales Commission: The earnings of the CallMe center as a percentage of the value of a product sold.

Upgrade Price Increase: The average percentage price increase for a product’s upgrade.

Steady State Product Upgrade Success Rate: Percentage rate of phone calls answered by stock sale agents that will result in a product upgrade after the learning curve transient has decayed.

Temporal Product Upgrade Success Rate: Percentage rate of phone calls answered by temporal sales agents that will result in a product upgrade.

Average Product Price: The projected average price of the products sold by the CallMe center. This is a 12 month stream.

Learning Curve: The average stock agent’s success rate of selling a product upgrade after a given number of months at the CallMe center. This 12 period stream represents the tenure of the stock agents at the CallMe center.

*Inventory Section:*

Initial Sales Agent Equipment Sets: Number of complete equipment sets (desks, chairs, phones, headsets, and computers) owned by the CallMe center on January 1st.

Equipment Cost: The cost to purchase each of the items included in the equipment set (order defined: desks, chairs, phones, headsets, and computers).

*Overhead Expenses Section:*

Overhead as a Percentage of Monthly Compensation: The sum of all other costs to run the CallMe center as a percentage of the labor cost.

*Financial Section:*

Depreciation Term in Months: The number of months in which the equipment will be fully depreciated using linear depreciation.

Corporate Tax Rate: The tax rate applied to the CallMe center’s operating income.

1. **Location and meaning of all outputs**

The entire model’s output parameters and steams are located on the ‘Outputs’ worksheet. The cells that contain output data have been highlighted in light blue. The model’s output parameters and streams have been categorized into the following four sections: performance metrics, hiring requirements, purchasing requirements, and financial data.

*Performance Metrics Section:*

Occupancy: The model’s projected monthly occupancy of the sales agents working at the CallMe center for a calendar year. The projected occupancy should always be equal to or lower than the defined target occupancy.

*Hiring Requirements Section:*

Total Temporal Agents Used: The model’s projected total number of temporal agents hired during the calendar year.

Total Stock Agents Hired: The model’s projected total number of stock agents hired during the calendar year.

Temporal Agent Hires: The model’s projected number of temporal agents needed for a specific month during the calendar year.

Stock Agents Hires: The model’s projected number of stock agents to be hired per month during the calendar year.

*Purchasing Requirements:*

Equipment Sets to be Purchased: The model’s projected number of equipment sets to be purchased per month for the calendar year.

*Financial Data Section:*

Net Cash flow: The model’s projected change in cash per month for the calendar year.

Net Income: The model’s projected net income per month for the calendar year.

Net Change in Assets: The model’s projected change in assets per month for the calendar year.

NOTE: The output streams in the financial data section are to be used to generate/update the current financial statements.

1. **Guide to visual cues and naming conventions**

The CCenter model uses the following cell coloring convention:

Yellow: Denotes input parameters and streams that can be changed by the user. Only found on the ‘Inputs’ worksheet.

Green: Denotes input parameters and streams that can be changed by the user and have been selected to change a scenario. Only found on the ‘Inputs’ worksheet.

Light Blue: Denotes output streams and output parameters. Streams and parameters that are highlighted in light blue outside the ‘Output’ worksheet denote that they are referenced in the ‘Output’ worksheet.

Light Orange: Denotes named ranges that are called by other worksheets.

Pink: Denotes named parameters and ranges.

White: Denotes non-named streams.

Gray: Denotes titles.

Throughout the model, all the named rages are based on their heading names (highlighted in gray to the left of the parameter or stream) using camel case. Note that the stream Equipment Cost in the ‘Inputs’ worksheet is a vertical stream, so its heading is in the cell Inputs!E54.

Streams that required calculations in which the first value has a different formula are easily identified by a square around the first value.

1. **Step-by-step use of the model**

The primary goal of the CCenter model is forecast the costs to operate the calling center, the hiring requirements to keep the calling center properly staffed and the necessary equipment purchases needed to for the new hires to perform their duties. The main drivers of these forecasts are the initial customer base (Customer Base), the monthly increase of the customer base (Customer Base Percentage Increase), the call volume per month (Average Number of Calls per Customer), the average duration of a customer call (Average Call Length in Minutes), the initial number of sales agents (Number of Sales Agents), and the desired occupancy level of the sales agents (Target Occupancy). The following steps describe how to create a new scenario:

1. Make a copy of the existing model and assign a descriptive name to the new file. Perform all the following steps in the newly made copy.
2. Adjust the customer base (Customer Base on Inputs!E23). This parameter will directly impact hiring requirements and revenue; it will indirectly impact expenses through hiring requirements.
3. Change the initial number of sales agents (Number of Sales Agents on Inputs!E9). This parameter should have a relationship with the customer base because the call center should be properly staffed. This parameter will affect the hiring requirements during the calendar year.
4. Adjust the target occupancy (Target Occupancy on Inputs!E10). This will change how many sales agents are needed to satisfy a given demand. The higher the target occupancy, the less sales agents will be needed.
5. Adjust the customer base percentage increase (Customer Base Percentage Increase on Inputs!E24). The model increases the stock sales agents at the same rate as the customer base is increasing; therefore, this percentage directly impacts the hiring schedule.
6. Adjust the average call length in minutes (Average Call Length in Minutes on Inputs!E25) and the average number of calls per customer (Average Number of Calls per Customer on Inputs!E29:P29). The mentioned parameter and stream link the customers with the sales agents, i.e. how much time the customers require from the sales agents.
7. After adjusting all the above described inputs, proceed to the ‘Outputs’ worksheet to obtain the required staffing needs and equipment purchases, and the associated financial statement reports.