Marker Motion
Simulation Guide
Simulation Overview
• The purpose of the guide is to give you a thorough understanding of simulation. It is not a replacement of the details given within the simulation itself.

• The simulation has been designed to depict a realistic business scenario with the maximum possible accuracy.

• You need to approach the simulation as you would approach a similar task in real life.

• Please go through all the available data carefully before and after taking decisions.
You are a newly appointed chief executive officer (CEO) for Marker Motion, a company that manufactures inertial motion capture sensors.

You have to design and execute a marketing strategy to:

- Achieve a sustainable revenue stream
- Maximise cumulative profits
- Increase the market share
- Improve customer satisfaction
You will make decisions for 14 quarters every time you play the simulation. You will be allowed to play up to five times during the learning phase and up to five more times during the assessment phase.

Every quarter, you will need to determine which customer segments to target and how to allocate your resources to best position your company against competitors.

You will have multiple levers to pull, including product price, customer communications, market research, sales force, product development and production costs.

After you submit your decisions, you will receive customer feedback, based on which you can gauge the effectiveness of your marketing strategy.
Customers consider the following criteria while purchasing motion sensors:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size and weight</td>
<td>Some customers segments prefer small and lightweight sensors.</td>
</tr>
<tr>
<td>Battery life</td>
<td>Some customer segments prefer sensors with longer battery life.</td>
</tr>
<tr>
<td>Latency</td>
<td>Some customers prefer sensors with low latency.</td>
</tr>
<tr>
<td>Price</td>
<td>Some customer segments are price-sensitive.</td>
</tr>
<tr>
<td>Segment</td>
<td>Properties</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Segment A</td>
<td>This segment places a premium on the sensors’ battery life and generally requires a high level of sales support owing to its requirement for customisation.</td>
</tr>
<tr>
<td>Segment B</td>
<td>This segment places a premium on small and lightweight sensors and, in addition, values the market and technical knowledge of the manufacturer's sales representatives.</td>
</tr>
<tr>
<td>Segment C</td>
<td>This segment is the least price-sensitive of the large-volume customers, requires superior battery life, and small and easy-to-affix sensors.</td>
</tr>
<tr>
<td>Segment D</td>
<td>The segment is highly price-sensitive. Individuals in this segment buy sensors in bulk for large-scale studies.</td>
</tr>
<tr>
<td>Small customers</td>
<td>They are price-sensitive and purchase the sensors from distributors.</td>
</tr>
</tbody>
</table>
# Current Status of Marker Motion

## Product Properties

<table>
<thead>
<tr>
<th>Company</th>
<th>Battery life</th>
<th>Sensor Size</th>
<th>Latency</th>
<th>Price before discount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marker Motion</td>
<td>4 hours</td>
<td>60 grams</td>
<td>10 milliseconds</td>
<td>$142</td>
</tr>
<tr>
<td>Competitor</td>
<td>4 hours</td>
<td>60 grams</td>
<td>10 milliseconds</td>
<td>$132 (approximately)</td>
</tr>
</tbody>
</table>

## Market Share (in %)

<table>
<thead>
<tr>
<th>Company</th>
<th>Segment A</th>
<th>Segment B</th>
<th>Segment C</th>
<th>Segment D</th>
<th>Small customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marker Motion</td>
<td>21</td>
<td>4</td>
<td>4</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Competitor</td>
<td>79</td>
<td>96</td>
<td>96</td>
<td>93</td>
<td>88</td>
</tr>
</tbody>
</table>
The ‘PREPARE’ Section
The ‘PREPARE’ Section

- The PREPARE section gives you a lot of relevant details about Marker Motion, Inc.’s motion sensors as a product and the product’s customers.

- Read the information carefully before proceeding.
The ‘ANALYZE’ Section
• The ANALYZE section gives you inputs regarding the past trends and the present status of Marker Motion.

• Use the data available here to make your decisions.

• Each of the nine tabs has a different purpose.
The Dashboard tab gives you an overview of your company’s current status.
The Prices tab displays the history of prices set by you and your competitors for each customer segment.

You can choose to view the raw data instead of graphs on most tabs.
The Customer Purchases tab shows you the history of the number of units bought by each customer segment.

This implies that sales for Segment A have been falling over the previous two quarters.
The Sales tab shows the split between the new and existing customers, which gives you a sense of customer retention.

An increase or decrease in the lighter section implies an increase or decrease in customer loyalty, respectively.

An increase or decrease in the darker section implies an increase or decrease in customer acquisition, respectively.
The Financials tab helps you understand the overall financial health of your company.

View As
- **$ Volume**: Shows the overall financial report of each quarter.
- **Per Unit**: Divides all figures by the number of units sold. Helps you check the profits you are making for each unit.
- **Percentages**: Shows all figures as a percentage of revenue. Helps you identify major cost centers.
- **Gross Margin Detail**: Shows the gross margin earned from each customer segment. Helps you identify profitable segments.
This slide is a quick glossary for some financial terms you will come across.

<table>
<thead>
<tr>
<th>Term</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>Total money made by selling products</td>
</tr>
<tr>
<td>Variable Cost</td>
<td>Total money spent on manufacturing the products</td>
</tr>
<tr>
<td>Gross Margin</td>
<td>Total margin made by selling products (Revenue – Variable Cost)</td>
</tr>
<tr>
<td>SG&amp;A Expense</td>
<td>Total money spent on selling the products + general &amp; admin expenses</td>
</tr>
<tr>
<td>R&amp;D Expense</td>
<td>Total money spent on improving the product or manufacturing processes</td>
</tr>
<tr>
<td>Marketing Research Expenditures</td>
<td>Total money spent on market research</td>
</tr>
<tr>
<td>Other Operating Expense</td>
<td>Total money spent on other miscellaneous activities</td>
</tr>
<tr>
<td>Total Operating Expense</td>
<td>SG&amp;A + R&amp;D + Market Research + Other Operating Expenses</td>
</tr>
<tr>
<td>Net Income</td>
<td>Gross Margin - Total Operating Expense</td>
</tr>
<tr>
<td>Cumulative Profit</td>
<td>Sum of net income across quarters</td>
</tr>
</tbody>
</table>
The Research tab is only visible if you invest in market research. (Ensure that you check both the graph and data view.)

The data view shows you the properties desired by each customer segment. The ‘actual’ columns show your current offering.

<table>
<thead>
<tr>
<th></th>
<th>Battery Life</th>
<th>Sensor Size</th>
<th>Latency</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Desired</td>
<td>Actual</td>
<td>Desired</td>
<td>Actual</td>
</tr>
<tr>
<td>Quarter</td>
<td>A B C D</td>
<td>A B C D</td>
<td>A B C D</td>
<td>A</td>
</tr>
<tr>
<td>Y1, Q1</td>
<td>4.80 3.60 4.80 3.40</td>
<td>4.00 63.00 42.00 42.00 66.00</td>
<td>10.20 9.80 4.00 12.00</td>
<td>10.00</td>
</tr>
<tr>
<td>Y1, Q2</td>
<td>4.82 3.62 4.82 3.40</td>
<td>4.02 62.69 41.79 41.79 66.00</td>
<td>10.15 9.75 3.98 12.00</td>
<td>10.00</td>
</tr>
<tr>
<td>Y1, Q3</td>
<td>4.85 3.64 4.85 3.40</td>
<td>4.04 62.37 41.58 41.58 66.00</td>
<td>10.10 9.70 3.96 12.00</td>
<td>10.00</td>
</tr>
</tbody>
</table>

Check whether you are meeting the expectations.

Check if you are pricing your product correctly for your target audience.
The Performance tab shows you the performance of your product compared to your competitor’s.

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Battery Life</th>
<th>Sensor Size</th>
<th>Latency</th>
<th>Battery Life</th>
<th>Sensor Size</th>
<th>Latency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y1, Q1</td>
<td>4.00</td>
<td>60.00</td>
<td>10.00</td>
<td>4.00</td>
<td>60.00</td>
<td>10.00</td>
</tr>
<tr>
<td>Y1, Q2</td>
<td>4.02</td>
<td>60.06</td>
<td>10.00</td>
<td>4.00</td>
<td>60.00</td>
<td>10.00</td>
</tr>
<tr>
<td>Y1, Q3</td>
<td>4.04</td>
<td>60.12</td>
<td>10.00</td>
<td>4.00</td>
<td>59.90</td>
<td>10.00</td>
</tr>
</tbody>
</table>

Keep an eye out for what the competitor is doing!
The Customer Satisfaction tab shows you subjective feedback from each customer segment.

**Segment A**

Neutral

"We recently placed a large order for your sensors and we were reasonably satisfied with the price and quality. The experience we had with the sales and support staff, however, was pretty average. While I can’t point out exactly what was lacking, it just didn’t stand out either."

**Segment B**

Dissatisfied

"When we first contacted you, a sales representative set up a valuable consultation with the design engineers. We spent a lot of time explaining our specs, especially regarding dimensions. So we were surprised to receive a shipment of sensors built to quite different standards."

**Segment C**

Dissatisfied

"We’ve recently received a series of complaints from our ergonomic research team. They’ve stated that although the devices aren’t malfunctioning, they aren’t firmly affixed to the subject, resulting in extraneous movement. As a result, the data quality has been compromised. Since motor performance on both criteria is critical for us, we are canceling future orders from your company."
The Sales Force tab shows you the quantity and quality of the interactions between your salespersons and the customer segments.
The ‘DECIDE’ Section
The ‘DECIDE’ Section

• The DECIDE section helps you make all the decisions in the simulation.

• The effect of the decisions will be visible once you proceed to the next quarter.

• Try to understand the impact of all the levers available in this section in order to execute effective strategies.

• The impact of your decisions will reflect in your dashboard in the next quarter.
Move these bars to decide how much emphasis you want your sales force to lay on each customer segment.
Based on your analysis, set prices for each customer segment.

<table>
<thead>
<tr>
<th>Segment</th>
<th>Discount</th>
<th>Net Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Customer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>List Price</td>
<td></td>
<td>$142</td>
</tr>
<tr>
<td>The list price</td>
<td></td>
<td></td>
</tr>
<tr>
<td>of your base</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sensor package</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Segment A</td>
<td>12%</td>
<td>$125</td>
</tr>
<tr>
<td>Segment B</td>
<td>8%</td>
<td>$131</td>
</tr>
<tr>
<td>Segment C</td>
<td>4%</td>
<td>$136</td>
</tr>
<tr>
<td>Segment D</td>
<td>16%</td>
<td>$119</td>
</tr>
</tbody>
</table>

| Small Customer   |          |           |
| List Price       | $142     |           |
| Distributor      |          |           |
| Discounts        | 12%      |           |
| Distributors     |          |           |
| who sell your    |          |           |
| product to       |          |           |
| small customers  |          |           |
| Price to         | $125     |           |
| Distributor      |          |           |
| Profit Margin    | 5%       |           |
| Distributor      |          |           |
| Pass-Through     | 7%       |           |
| Small Customers  |          | $132      |
| Net Price        |          |           |

Increasing prices would increase the margin for each unit sold but may reduce the number of units sold.

Set your base price here.
The Pricing section allows you to set prices for each customer segment. 

The number of salespeople would affect your SG&A expenses.

Sales Budget

- Next Quarter's Sales Force: 11, $550,000
- Spending on Small Customers: 50%, $275,000
- Spending on Large Customers: 50%, $275,000
- Spending to Retain Large Customers: 50%, $137,500
- Spending to Acquire Large Customers: 50%, $137,500

Hire or fire your salespeople.
The Pricing section allows you to set prices for each customer segment.

These decisions affect your Marketing Research expenditures.

<table>
<thead>
<tr>
<th>Marketing Budget</th>
<th>$80,000</th>
<th>$80,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated Marketing Communication and Training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spending on Market Research</td>
<td></td>
<td>$50,000</td>
</tr>
<tr>
<td>Social Media Persuasion Spending</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Direct Customer Communication</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

Spend here to improve the productivity of your sales force.

Spend here to generate good publicity and combat bad publicity.

Spend here to enhance customer relations and retention.

Disabling ‘Spending on Market Research’ would disable the research section in the next quarter.
The Pricing section allows you to set prices for each customer segment.

<table>
<thead>
<tr>
<th>Product Development</th>
<th>Spend here to improve battery life.</th>
<th>Spend here to reduce variable cost.</th>
<th>Spend here to decrease sensor size.</th>
<th>Spend here to reduce latency.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery Life Feature Spending</td>
<td>$60,000</td>
<td>$0</td>
<td>$60,000</td>
<td></td>
</tr>
<tr>
<td>Manufacturing Efficiency Improvement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensor Size Feature Spending</td>
<td>$60,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latency Reduction Spending</td>
<td>$0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Improving manufacturing efficiency may reduce product performance. Improving battery life may increase sensor size and vice versa.
The ‘NEWS’ Section
- The NEWS section gives you relevant details of the recent happenings that may be relevant to decision-making.

- Please go through all the recent news items before taking a decision.

### Market News

<table>
<thead>
<tr>
<th>Y2, Q1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distributors, on average, are attempting to achieve a 7% profit margin.</td>
</tr>
<tr>
<td>Last quarter sales from existing customers increased by 12.3% and sales from new customers increased by 11.92%.</td>
</tr>
<tr>
<td>The battery life of our sensors is improving, but increasing the battery life and increased the weight, our design now has a larger sensor weight than it previously did.</td>
</tr>
</tbody>
</table>
End Notes
1. Do **NOT** try to force fit a theory unless you can contextualize it to fit the simulation scenario.

2. All decisions should be data-based.

3. Use the trial and error method to find how each lever in the DECIDE section affects your business.

4. Use your learning rounds to try different strategies and then determine which one works the best.

5. Decisions that are not sustainable will rarely be successful in the long run.
Q1: Why is the simulation based on a B2B scenario?

B2B scenarios have fewer variables. Also, B2B customers mostly make purchase decisions based on data. These properties make B2B simulations more accurate representations of real life.

Q2: While playing this simulation, which concepts will come in handy?

A thorough understanding of segmenting, targeting and positioning (STP) as well as the 4 Ps of marketing will go a long way in helping you get better results from the simulation.

Q3: What is the purpose of such a simulation?

The primary purpose is to learn. You will get to execute your own marketing strategy and see how it plays out.
Q4: The simulation needs me to make decisions outside the field of marketing as well. How should I proceed?

Real life is never limited to a single field. However, the non-marketing decisions in this simulation are simplified. They can be executed using the information provided in the guide.

Q5: I cannot seem to stay profitable. What should I do?

The simulation has been designed to maximise learning. Each time you run into the red zone, you need to figure out the reason behind it. Remember, the goal is not to win but to learn.
Thank You