

# ROOMME'S PERFORMANCE INDICATORS

Key performance indicators (KPIs) refer to a set of quantifiable measurements used to gauge a company's overall long-term performance. KPIs specifically help determine a company's strategic, financial, and operational achievements, especially compared to those of other businesses within the same sector.

At the heart of KPIs lies data collection, storage, cleaning, and synthesizing. The information may be financial or non-financial and may relate to any department across the company. The goal of KPIs is to communicate results succinctly to allow management to make more informed strategic decisions.

As a startup, Roomme requires specific metrics to track performance and growth. Ordinarily, revenue and sales would be the most important metrics to monitor, but since there isn't much information available, we must develop alternative metrics or indicators that show how well-run Roomme is as a business.

Roomme is comprised of 4 major departments, and 2 not-so-major ones, these include;

- Marketing
- Content creation
- Technical Development
- Product Design
- Human Resources (not-so-major)
- Analytics (not-so-major)

This isn't an opinion piece, so I won't say that marketing and content creation should be merged, or that analytics should be a separate department with its own staff and structure, instead I'll talk about the various metrics I've thought of to track performance and growth.

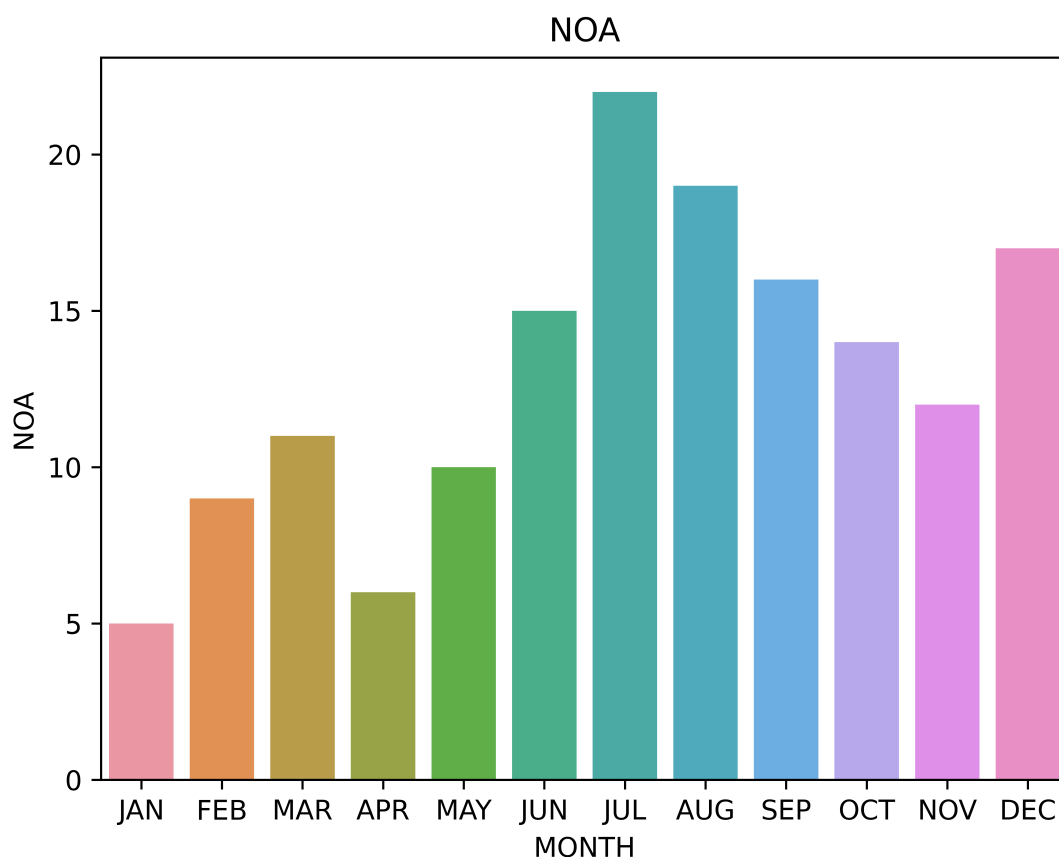
## 1. Number of Onboarded Apartments per month

Number of onboarded apartments, or NOA for short, refers to the most basic unit of housing that can be assigned to a person or people living together. The distinction between NOA and number of apartments per agent is important because, for example, if a real estate agent has 6 apartment buildings in their portfolio and they onboard them onto our platform, each apartment unit is considered as a separate entity. This gives us a better understanding of how many potential sales we have. I believe that tracking NOA per month enables us to observe possible trends and align our marketing strategies towards utilizing such highs and lows as the data may suggest. I shall give an example below.

**TABLE 1.1**

MONTH	NOA
JAN	5
FEB	9
MAR	11
APR	6
MAY	10
JUN	15
JUL	22
AUG	19
SEP	16
OCT	14
NOV	12
DEC	17

**FIG 1.1**



From the above chart, it is evident that there's a spike in NOA from April till July and a dip till November, we could observe whether this occurs as an annual trend or maybe this could just be an outlier. Assuming survivorship bias we could develop and focus the appropriate marketing strategies to maximize the NOA spikes and minimize the dip.

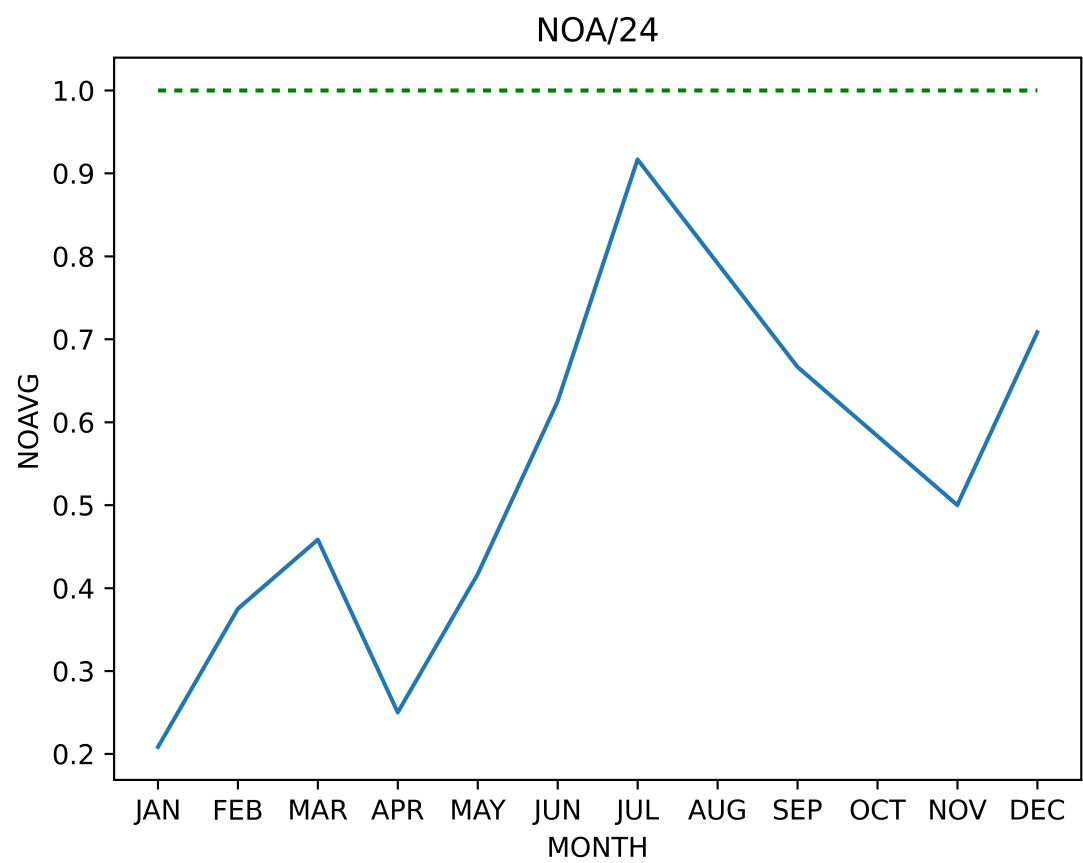
## 2. Number of Onboarded Apartments Averaged by 24

I had to put some thought into this particular metric. You might be wondering, 'why 24?' Well, that represents the hypothetical average number of apartment units we can onboard in a month. This metric works by taking the NOA of each month and dividing by 24. Taking our current situation into perspective, I needed a value that wasn't too unrealistic to achieve and after discussing it with other stakeholders we came up with 24. Now dividing the NOA by 24 gives a number possibly within the range of 0 and 1, this number serves as the success rate of whatever marketing strategies we employ in order to get people to onboard their apartments with us while 1 serves as the benchmark/goal we should achieve at least in this early stage. Using the NOA table from the previous metric I shall give another example.

**TABLE 2.1**

MONTH	NOA	NOAVG
JAN	5	0.208
FEB	9	0.375
MAR	11	0.458
APR	6	0.250
MAY	10	0.417
JUN	15	0.625
JUL	22	0.917
AUG	19	0.791
SEP	16	0.667
OCT	14	0.583
NOV	12	0.500
DEC	17	0.708

FIG 2.1



The chart presented serves as an example, and it doesn't represent Roomme's current numbers which actually fall below the dotted line. Therefore, I suggest using the aforementioned metric as a performance indicator temporarily. As we grow, we can adjust the parameter (24) accordingly. Hence, our current goal should be to increase our NOAVG number to 1 or higher by employing the right marketing or advertising strategies.

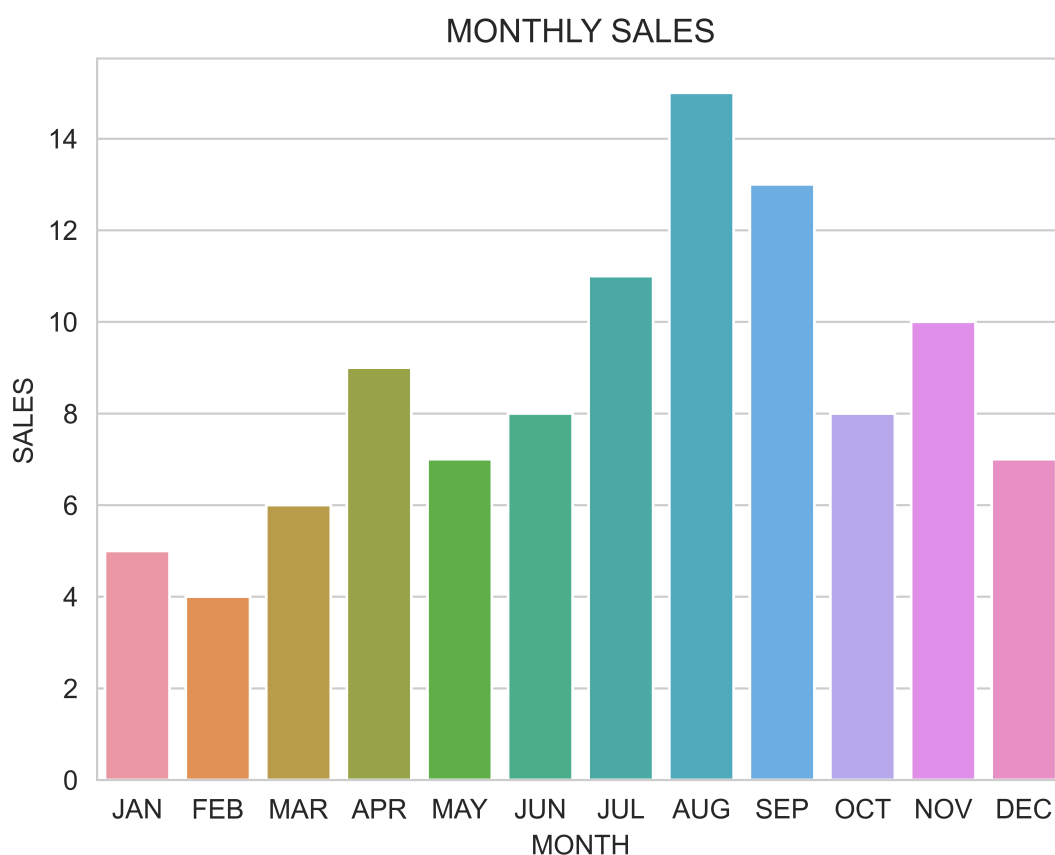
### 3. MONTHLY SALES (NOA\_SALES)

This refers to either the number of apartment units on our platform we can find residents for or the number of roommate seekers that we can successfully match with a roommate on a monthly basis. As these two have similar structure, they are isomorphic to one another, and the metrics used to measure one can be used to measure the other. Therefore, in this discourse, I will only refer to the former. Measuring Roomme's monthly sales will allow us to evaluate our historical performance. It's a clear indication of whether our business is growing, degrading, or stagnating. It also enables us to see patterns and identify the periods where there may be seasonal fluctuations or other factors affecting our sales. By tracking and analyzing our monthly sales data, we can make informed decisions about the selection and promotion of our apartment listings, roommate matching services and marketing strategies. This allows us to better understand our customers' preferences and needs, and adjust our offerings accordingly to improve our overall performance. I will give another example below.

**TABLE 3.1**

MONTH	NOA	NOA_SALES
JAN	5	5
FEB	9	4
MAR	11	6
APR	6	9
MAY	10	7
JUN	15	8
JUL	22	11
AUG	19	15
SEP	16	13
OCT	14	8
NOV	12	10
DEC	17	7

**FIG 3.1**



From the above chart, it can be concluded that the period between July and September, inclusive, is the peak season for sales. This information can be used to inform our marketing strategies and inventory management, ensuring that we are prepared to meet the increased demand during this period.

#### 4. THE MONTHLY SALES PER LEFTOVER APARTMENTS RATIO

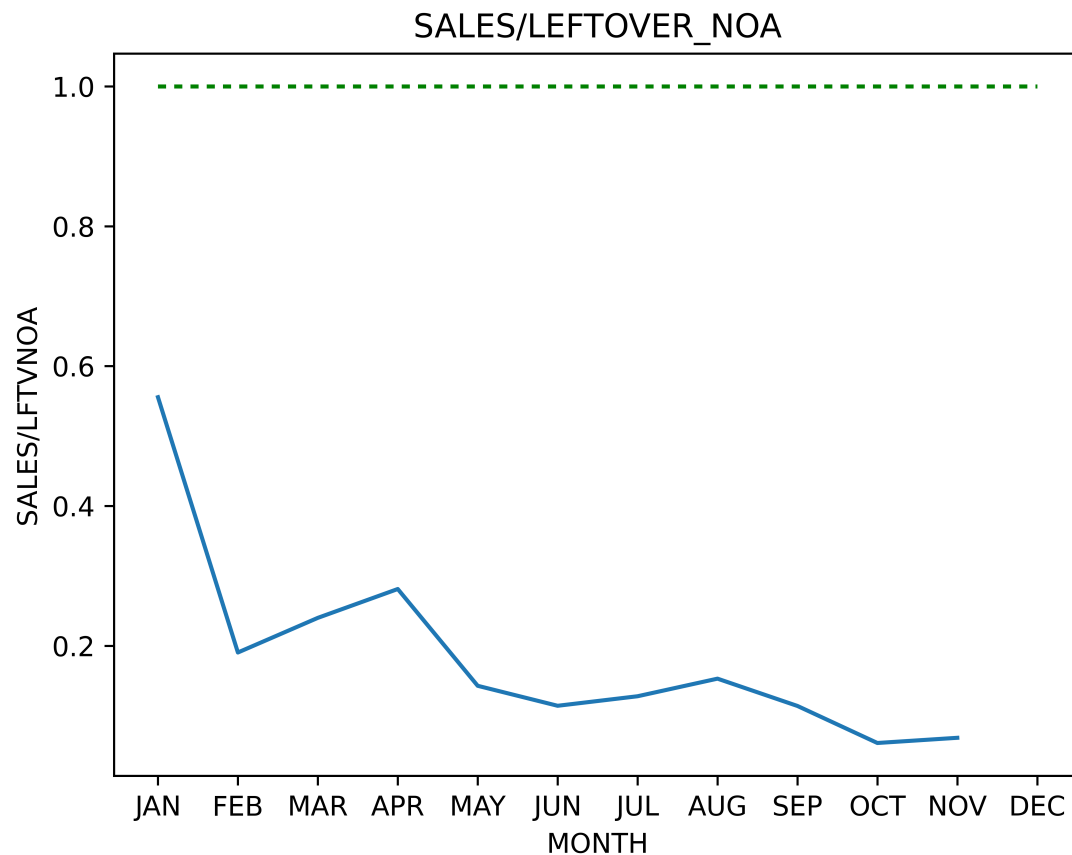
The intuition behind this particular metric is a bit convoluted, but it goes this way. We have data on how many newly onboarded apartment units we get each month, but these particular figures are localized per month and does not paint the full picture of what our inventory contains, so to make it reflect in other months I find the cumulative sum of the NOA per month, doing this reflects for example, January inventory in February, January and February inventory in March and so on. But this alone still does not give the full picture on how NOA and sales relate because if we sell some of January's inventory this does not reflect in the cumulative in February. Therefore in order to get the full picture of our inventory vs sales, I subtract the  $i$ th sales from the  $i + 1$  cumulative NOA, this gives the leftover apartment units for each month. Dividing sales by the leftover inventory per month gives a ratio bounded between zero and one, this ratio gives us an idea of how our marketing strategies aimed towards roommate seekers differs from strategies aimed towards agents or landlords. Our goal as a business should be to try and get as close to one as possible. I will give an example below.

**TABLE 4.1**

MONTH	NOA	CUMULATIVE NOA	NOA_SALES	LEFTOVER NOA	SALES/LEFTOVER NOA
JAN	5	5	5	9	0.5556
FEB	9	14	4	21	0.1905
MAR	11	25	6	25	0.2400
APR	6	31	9	32	0.2813
MAY	10	41	7	49	0.1429
JUN	15	56	8	70	0.1143
JUL	22	78	11	86	0.1279
AUG	19	97	15	98	0.1531
SEP	16	113	13	114	0.1140
OCT	14	127	8	131	0.0611
NOV	12	139	10	146	0.0684
DEC	17	156	7	NAN	NAN

**NOTE:** The December values for Leftover NOA and the Sales/Leftover NOA ratio are NAN because they are both dependent on the next year's January data which is currently unavailable

**FIG 4.1**



As a company, our goal should be to approach 1 as closely as possible. This can be achieved by effecting the right strategies.

## 5. CUMULATIVE AVERAGE CYCLE TIME

This refers to the total amount of time needed to complete a process from start to finish. For instance, in Roomme, a process could refer to the totality of onboarding an apartment unit up until assigning that apartment unit to an individual or it could be a person signing up on our platform to find a roommate up until the person being assigned a roommate. The cumulative average cycle time refers to the average of the total time of a cycle, this average is compounded per unit apartment. I shall give an example below.

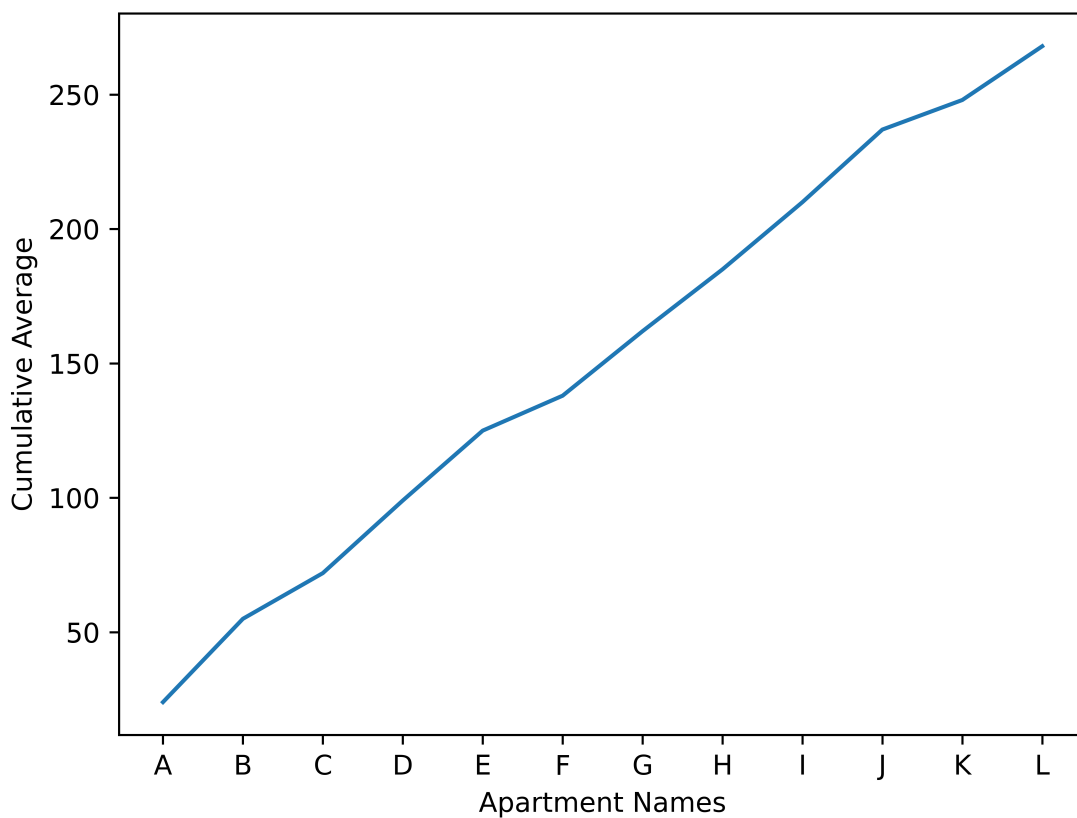
**TABLE 5.1**

Apartment Name	Onboard Date	Sold Date	Days to Sell	Cumulative Average
Apartment A	31-01-2023	16-02-2023	24	24
Apartment B	28-02-2023	31-03-2023	31	55
Apartment C	31-03-2023	17-04-2023	17	72



Apartment D	30-04-2023	27-05-2023	27	99
Apartment E	31-05-2023	26-06-2023	26	125
Apartment F	30-06-2023	13-07-2023	13	138
Apartment G	31-07-2023	24-08-2023	24	162
Apartment H	31-08-2023	23-09-2023	23	185
Apartment I	30-09-2023	25-10-2023	25	210
Apartment J	31-10-2023	27-11-2023	27	237
Apartment K	30-11-2023	11-12-2023	11	248
Apartment L	31-12-2023	20-01-2024	20	268

**FIG 5.1**



Our goal should be to make this gradient as smooth as possible or even have a negative slope.


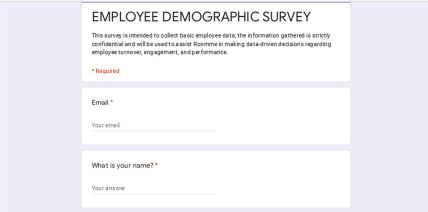

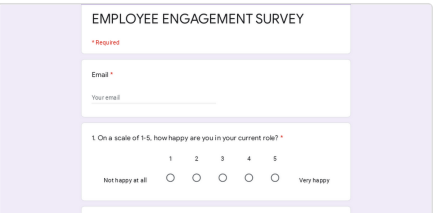
## 6. EMPLOYEE SATISFACTION AND TURNOVER RATE

Employee satisfaction and turnover rate are two important metrics that measure the success of a company in retaining and engaging its employees. Employee satisfaction is a measure of how happy employees are with their jobs and the workplace environment. It is typically measured using surveys that ask employees to rate various aspects of their job, such as job satisfaction, work-life balance, compensation and benefits, and company culture.

Turnover rate, on the other hand, is a measure of how many employees leave a company over a given period of time, usually expressed as a percentage of the total workforce. High turnover rates can indicate issues such as low employee morale, poor job satisfaction, lack of career advancement opportunities, or inadequate compensation and benefits.

By tracking and analyzing these metrics, companies can gain valuable insights into the effectiveness of their human resources policies and make informed decisions to improve employee retention and engagement. For example, if a company has a high turnover rate and low employee satisfaction, it may consider investing in employee training and development programs, improving compensation and benefits, or enhancing the company culture to create a more positive work environment.

So with regards to the above I have prepared an employee demographic and satisfaction survey, the links are below.

<b>EMPLOYEE DEMOGRAPHIC SURVEY</b>  This survey is intended to collect basic employee data; the information gathered is strictly confidential and will be used to assist Roomme in making data-driven decisions regarding employee turnover, engagement, and performance.   <a href="https://forms.gle/YjxujvMdyZZZJmT9">https://forms.gle/YjxujvMdyZZZJmT9</a>	 <p>EMPLOYEE DEMOGRAPHIC SURVEY</p> <p>This survey is intended to collect basic employee data; the information gathered is strictly confidential and will be used to assist Roomme in making data-driven decisions regarding employee turnover, engagement, and performance.</p> <p>* Required</p> <p>Email *</p> <p>Your email</p> <p>What is your name? *</p> <p>Your answer</p>
<b>EMPLOYEE ENGAGEMENT SURVEY</b>   <a href="https://forms.gle/T5QMqSyFVGArWfmR9">https://forms.gle/T5QMqSyFVGArWfmR9</a>	 <p>EMPLOYEE ENGAGEMENT SURVEY</p> <p>* Required</p> <p>Email *</p> <p>Your email</p> <p>1. On a scale of 1-5, how happy are you in your current role? *</p> <p>1 2 3 4 5</p> <p>Not happy at all ○ ○ ○ ○ ○ Very happy</p>

In conclusion, the metrics proposed in this plan are designed to help Roomme achieve its strategic objectives by providing measurable and actionable insights into our performance. By regularly tracking and analyzing these metrics, we can identify areas of strength and opportunities for improvement, and make data-driven decisions to optimize our operations and drive growth. With the right KPIs in place, we can ensure that our efforts are aligned with our vision and mission, and that we are delivering value to our stakeholders.

The Python library Seaborn was utilized to generate the charts in this piece, while Pandas and NumPy were used to calculate the various metrics. To implement the above, access to Roomme's API or Roomme's database will be required.

I also included below the code used for this piece.

[https://s3-us-west-2.amazonaws.com/secure.notion-static.com/9b42bef7-8161-47d8-8564-203dd295a71d/Performance\\_Metrics\\_2.0.py](https://s3-us-west-2.amazonaws.com/secure.notion-static.com/9b42bef7-8161-47d8-8564-203dd295a71d/Performance_Metrics_2.0.py)