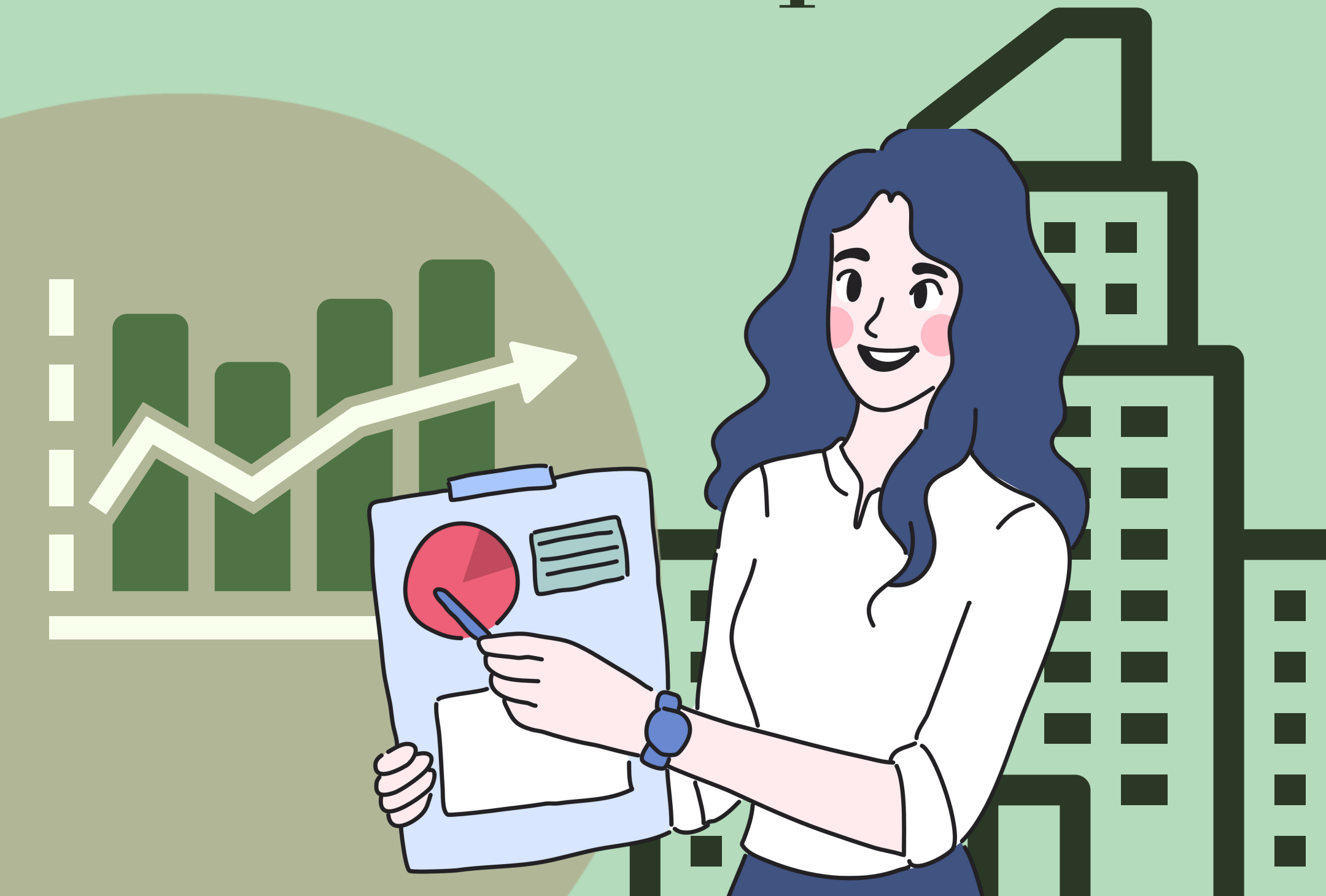
Data Report



COMPANY DETAIL

- Brand: **Delicious Food**
- Local: Safira city
- Product: Brazilian Food
- Delicious Food specialty: bread with meat filling and desserts
- New Product: **pão de queijo ("bread cheese")**
- Investment request (machines, new employees, others): 150.000,00 Kr

QUERY

We will invest 150.000,00 Kr in a new product?

RESEARCH ANALYSIS FOR INVESTING A NEW PRODUCT

Delicious Food Company

Hello Delicious Food customers!
As you already know, Delicious Food has the best meat-filled breads and desserts in the city of Safira/Brazil.
What's good can get even better!
Now Delicious Food wants to hear from you about cheese stuffed products - our new product.
It is very fast! We only need 2 minutes to show all your love (or hate) for cheese!
(DA/23 survey - Dátila)

Pão de queijo - bread cheese

CLEAR

```
[12] # RENAME
     data_clear = data_delicious_food.rename(columns={'Have you ever consumed any of our products?': 'new_old_customers','Where you live? (Please, Safira)': 'demographic',
                                'Are you vegan or vegetarian?': 'vegan_vegetarian', 'Are you milk allergic?': 'allergic', 'Do you prefer meat or cheese?': 'preference_meat_cheese',
                                'Would you like more bread or dessert options on our menu?': 'preference_bread_dessert', 'Are you milk allergic?': 'allergic', 'Timestamp': 'time',
                                'On a scale of  to , how likely are you to try a new flavor of bread with a cheese-filling?                                    is I dont want it and
```

```
[13] data_clear.head()
```

	time	new_old_customers	demographic	vegan_vegetarian	allergic	preference_meat_cheese	preference_bread_dessert	try_new_flavor
0	02/02/2022 13:09:35	Yes	Other	No	No	meat	bread options	9
1	02/02/2022 13:14:18	Yes	Safira/Brazil	No	No	Both	bread options	8
2	02/02/2022 13:15:06	Yes	Safira/Brazil	No	No	meat	bread options	10
3	02/02/2022 13:16:45	Yes	Safira/Brazil	No	No	meat	bread options	10
4	02/02/2022 13:21:06	Yes	Safira/Brazil	No	No	cheese	bread options	9

DISTRIBUTION DEMOGRAPHIC

DISTRIBUTION DEMOGRAPHIC

```
[19] #Counter
     absolute_frequency = Counter(data_clear.demographic)
     absolute_frequency
```

```
Counter({'Other': 13, 'Safira/Brazil': 17})
```

```
[20] #create a  DF index
     absolute_frequency = pd.DataFrame.from_dict(absolute_frequency, orient='index')
```

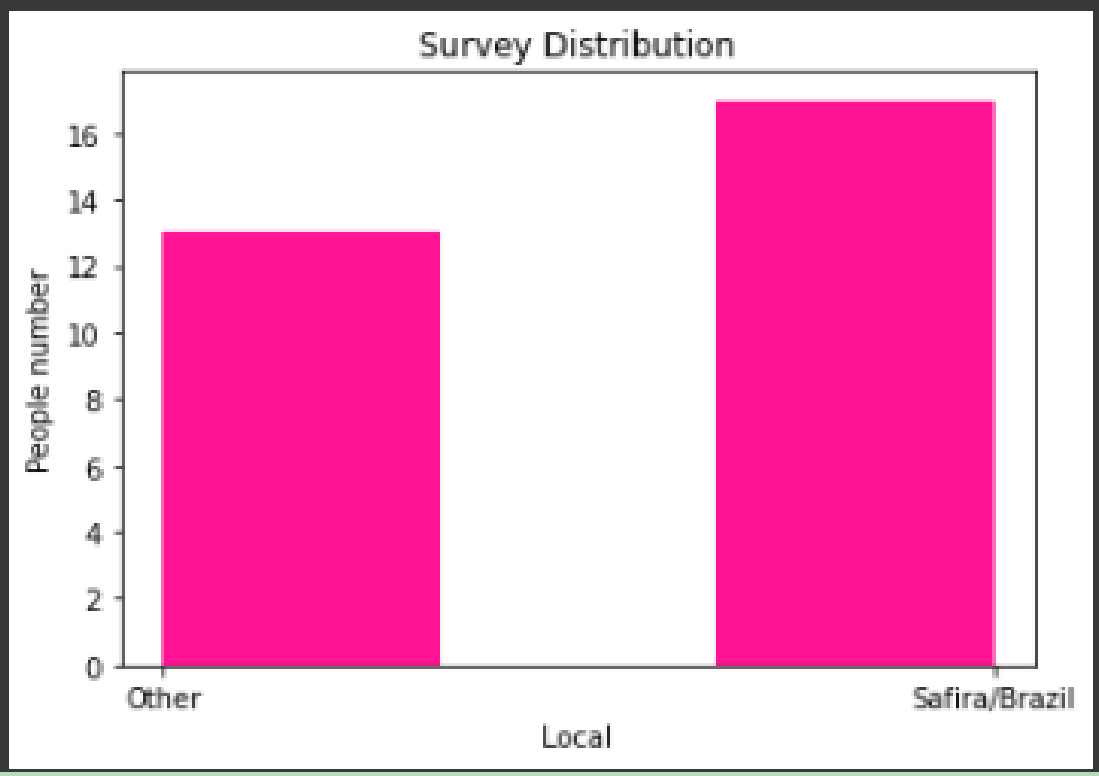
```
     #RELATIVE FREQUENCY: absolute_frequency / absolute_frequency(TOTAL SUM OF)
     relative_frequency = absolute_frequency / absolute_frequency.sum()
     relative_frequency
```

```
[22] #PORCENTAGE RELATIVE FREQUENCY IS RELATIVE FREQ * 100
     relative_frequency_perc = round(relative_frequency * 100,2)
     relative_frequency_perc
```

	0
Other	43.33
Safira/Brazil	56.67

HISTOGRAM - DISTRIBUTION DEMOGRAPHIC

```
#HISTOGRAMA
#his: histograma call
# bins: colum in histograma
plt.hist(data_clear.demographic, 3, rwidth=1, color='deeppink')
plt.title('Survey Distribution')
plt.xlabel('Local')
plt.ylabel('People number')
plt.show()
```



SEPARATE THE TARGET AUDIENCE: SAFIRA/BRAZIL

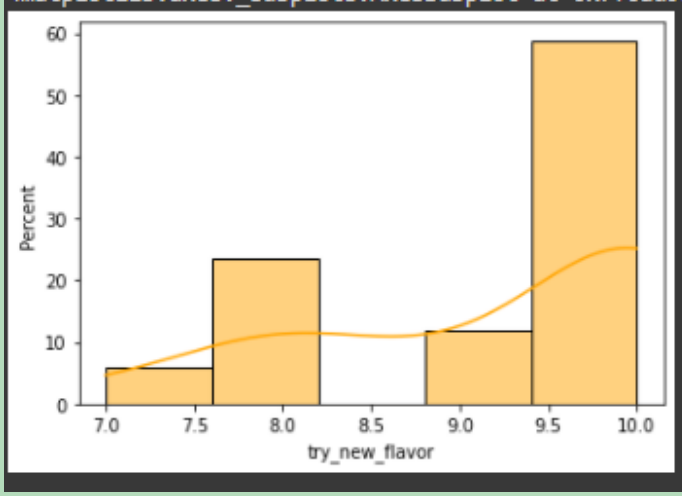
```
[24] #separate by demographic factor
     data_safira = data_clear.loc[data_clear.demographic == 'Safira/Brazil']
     data_safira.head()
```

	time	new_old_customers	demographic	vegan_vegetarian	allergic	preference_meat_cheese	preference_bread_dessert	try_new_flavor
1	02/02/2022 13:14:18	Yes	Safira/Brazil	No	No	Both	bread options	8
2	02/02/2022 13:15:06	Yes	Safira/Brazil	No	No	meat	bread options	10
3	02/02/2022 13:16:45	Yes	Safira/Brazil	No	No	meat	bread options	10
4	02/02/2022 13:21:06	Yes	Safira/Brazil	No	No	cheese	bread options	9
6	02/02/2022 13:23:37	Yes	Safira/Brazil	No	No	cheese	bread options	9

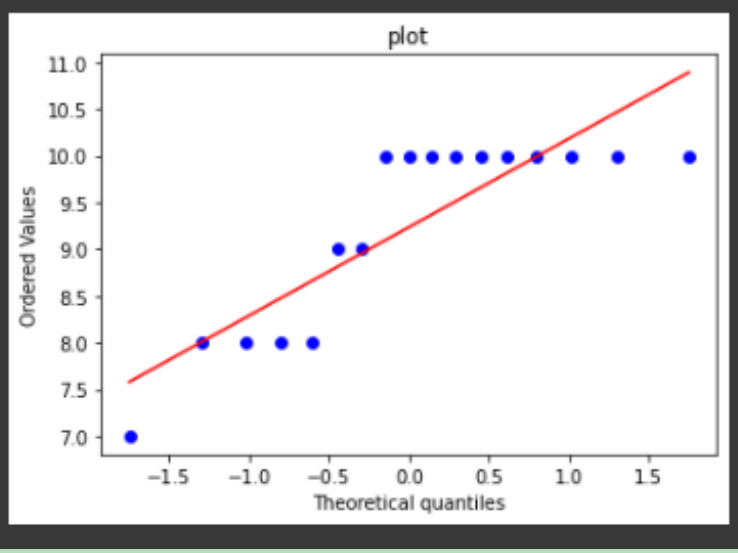
TASTY NEW FLAVOR

```
[27] prob_eat = data_safira.loc[data_safira.try_new_flavor > 5]

[28] #probability to try a new flavor > 5
     p = len(prob_eat) / len(data_safira)
     p

     1.0
```

```
#probability to try a new flavor > 5
sns.histplot(prob_eat, x = "try_new_flavor", bins=5, color="orange", kde=True, stat="percent")

<matplotlib.axes._subplots.AxesSubplot at 0x7f0ad99061d0>
```

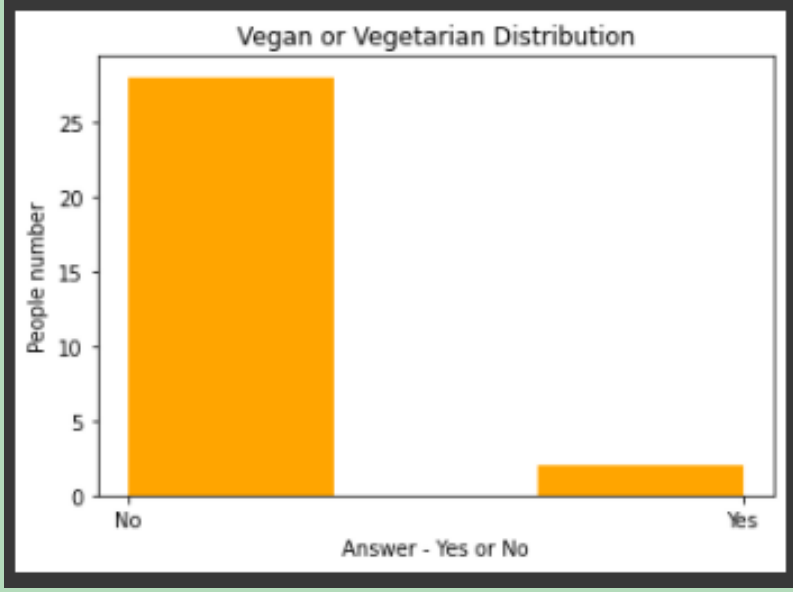



```
[30] #DISTRIBUTION
     stats.probplot(data_safira['try_new_flavor'], dist='norm', plot=plt)
     plt.title('plot')
     plt.show()
     #8, 9 AND 10
```

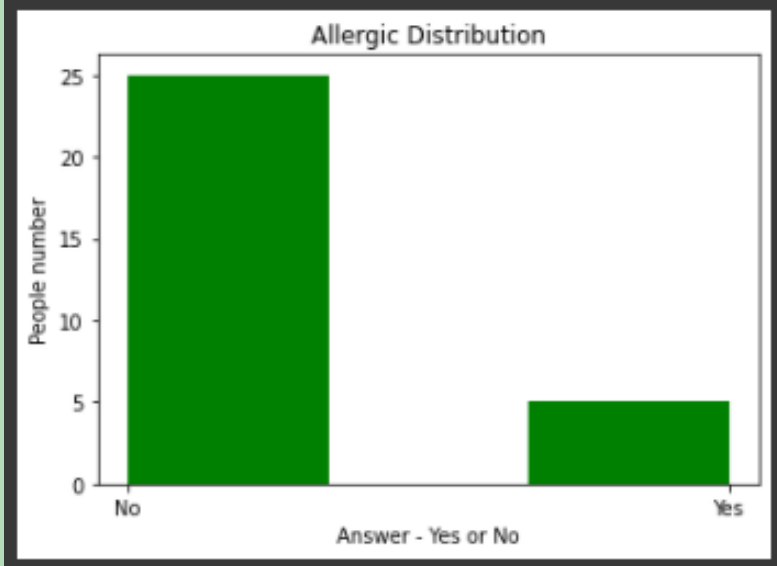


NEED SPECIAL PRODUCTS - VEGAN, VEGETARIAN OR NO MILK CONSUMPTION

```
#HISTOGRAMA
#his: histograma call
#vegan_vegetarian allergic
plt.hist(data_clear.vegan_vegetarian, 3, rwidth=1, color='orange')
plt.title('Vegan or Vegetarian Distribution')
plt.xlabel('Answer - Yes or No')
plt.ylabel('People number')
plt.show()
```




```
#HISTOGRAMA
#his: histograma call
#allergic
plt.hist(data_clear.allergic, 3, rwidth=1, color='green')
plt.title('Allergic Distribution')
plt.xlabel('Answer - Yes or No')
plt.ylabel('People number')
plt.show()
```



CONCLUSION

- WE HAVE GOOD ACCEPTANCE OF THE NEW PRODUCT IN SAFIRA/BRAZIL AND THE **INVESTMENT IS RECOMMENDED**
- TO REACH **NEW CUSTOMERS** WE CAN INVEST IN PRODUCTS FOR VEGAN, VEGETARIAN OR ALLERGIC
- WE HAVE CUSTOMERS IN OTHER REGIONS AND WE CAN STUDY THE **POSSIBILITY OF BRANCHES**