

## Analysed\_400\_km

August 20, 2025

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[50]: import pandas as pd

# Example: Load Excel file
df = pd.read_excel("Registration_list_nonames_Bilbao_Final.xlsx")

# Apply the condition: if train_distance_route < 400, take train_co2_eq; else
# take flight_economy_CO2eq
df['selected_value'] = df.apply(
    lambda row: row['train_co2eq']*3.5 if row['train_distance_route'] < 400
    else row['flight_economy_CO2eq']*1.242,
    axis=1
)

count_rows = df['selected_value'].notna().sum()
total_people = 670
# Sum the selected values and multiply by 2.15
result = ((df['selected_value'].sum())*2/(count_rows))*total_people

print("Final result:", result)
print("Final result (per person):", result/total_people)
```

Final result: 884452.2385438067

Final result (per person): 1320.077967975831

```
[51]: import pandas as pd

# Example: Load Excel file
df = pd.read_excel("Abstracts_extracted_2017.xlsx")

# Apply the condition: if train_distance_route < 400, take train_co2_eq; else
# take flight_economy_CO2eq
df['selected_value'] = df.apply(
    lambda row: row['train_co2eq']*3.5 if row['train_distance_route'] < 400
    else row['flight_co2eq']*1.242,
    axis=1
)

count_rows = df['selected_value'].notna().sum()
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total_people = 650
# Sum the selected values and multiply by 2.15
result = ((df['selected_value'].sum())*2/(count_rows))*total_people

print("Final result:", result)
print("Final result (per person):", result/total_people)

```

Final result: 885259.4039673915  
Final result (per person): 1361.9375445652176

```

[49]: import pandas as pd

# Example: Load Excel file
df = pd.read_excel("Abstracts_extracted_2018.xlsx")

# Apply the condition: if train_distance_route < 400, take train_co2_eq; else
↳take flight_economy_CO2eq
df['selected_value'] = df.apply(
    lambda row: row['train_co2eq']*3.5 if row['train_distance_route'] < 400,
    ↳else row['flight_co2eq']*1.242,
    axis=1
)

count_rows = df['selected_value'].notna().sum()
total_people = 723
# Sum the selected values and multiply by 2.15
result = ((df['selected_value'].sum())*2/(count_rows))*total_people

print("Final result:", result)
print("Final result (per person):", result/total_people)

```

Final result: 815983.2552579088  
Final result (per person): 1128.607545308311

```

[52]: import pandas as pd

# Example: Load Excel file
df = pd.read_excel("Abstracts_extracted_2019.xlsx")

# Apply the condition: if train_distance_route < 400, take train_co2_eq; else
↳take flight_economy_CO2eq
df['selected_value'] = df.apply(
    lambda row: row['train_co2eq']*3.5 if row['train_distance_route'] < 400,
    ↳else row['flight_co2eq']*1.242,
    axis=1
)

count_rows = df['selected_value'].notna().sum()

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total_people = 1100
# Sum the selected values and multiply by 2.15
result = ((df['selected_value'].sum())*2/(count_rows))*total_people

print("Final result:", result)
print("Final result (per person):", result/total_people)

```

Final result: 1432851.0393650795  
Final result (per person): 1302.591853968254

```

[53]: import pandas as pd

# Example: Load Excel file
df = pd.read_excel("Abstracts_extracted_2022.xlsx")

# Apply the condition: if train_distance_route < 400, take train_co2_eq; else
↳take flight_economy_CO2eq
df['selected_value'] = df.apply(
    lambda row: row['train_co2eq']*3.5 if row['train_distance_route'] < 400,
    ↳else row['flight_co2eq']*1.242,
    axis=1
)

count_rows = df['selected_value'].notna().sum()
total_people = 635
# Sum the selected values and multiply by 2.15
result = ((df['selected_value'].sum())*2/(count_rows))*total_people

print("Final result:", result)
print("Final result (per person):", result/total_people)

```

Final result: 637139.3487687861  
Final result (per person): 1003.3690531791907

```

[54]: import pandas as pd

# Example: Load Excel file
df = pd.read_excel("Abstracts_extracted_2023.xlsx")

# Apply the condition: if train_distance_route < 400, take train_co2_eq; else
↳take flight_economy_CO2eq
df['selected_value'] = df.apply(
    lambda row: row['train_co2eq']*3.5 if row['train_distance_route'] < 400,
    ↳else row['flight_co2eq']*1.242,
    axis=1
)

count_rows = df['selected_value'].notna().sum()

```

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total_people = 690
# Sum the selected values and multiply by 2.15
result = ((df['selected_value'].sum())*2/(count_rows))*total_people

print("Final result:", result)
print("Final result (per person):", result/total_people)

```

Final result: 889300.2312145014  
Final result (per person): 1288.8409148036253

```

[55]: import pandas as pd

# Example: Load Excel file
df = pd.read_excel("Seoul.xlsx")

# Apply the condition: if train_distance_route < 400, take train_co2_eq; else
↳ take flight_economy_CO2eq
df['selected_value'] = df.apply(
    lambda row: row['train_co2eq_Seoul']*3.5 if
    ↳ row['train_distance_route_Seoul'] < 400 else row['flight_co2eq_Seoul']*1.242,
    axis=1
)

count_rows = df['selected_value'].notna().sum()
total_people = 583
# Sum the selected values and multiply by 2.15
result = ((df['selected_value'].sum())*2/(count_rows))*total_people

print("Final result:", result)
print("Final result (per person):", result/total_people)

```

Final result: 1385450.5032000002  
Final result (per person): 2376.415957461407

```

[56]: import pandas as pd

# Example: Load Excel file
df = pd.read_excel("Boston.xlsx")

# Apply the condition: if train_distance_route < 400, take train_co2_eq; else
↳ take flight_economy_CO2eq
df['selected_value'] = df.apply(
    lambda row: row['train_co2eq_Boston']*3.5 if
    ↳ row['train_distance_route_Boston'] < 400 else row['flight_co2eq_Boston']*1.
    ↳ 242,
    axis=1
)

```

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count_rows = df['selected_value'].notna().sum()
total_people = 470
# Sum the selected values and multiply by 2.15
result = ((df['selected_value'].sum())*2/(count_rows))*total_people

print("Final result:", result)
print("Final result (per person):", result/total_people)

```

Final result: 874554.0516000001

Final result (per person): 1860.753301276596

```

[57]: import pandas as pd

# Example: Load Excel file
df = pd.read_excel("Aarhus_analysed.xlsx")

# Apply the condition: if train_distance_route < 400, take train_co2_eq; else
↳ take flight_economy_CO2eq
df['selected_value'] = df.apply(
    lambda row: row['train_co2eq_Aarhus']*3.5 if
↳ row['train_distance_route_Aarhus'] < 400 else row['flight_co2eq_Aarhus']*1.
↳ 242,
    axis=1
)

count_rows = df['selected_value'].notna().sum()
total_people = 620
# Sum the selected values and multiply by 2.15
result = ((df['selected_value'].sum())*2/(count_rows))*total_people

print("Final result:", result)
print("Final result (per person):", result/total_people)

```

Final result: 758609.640863124

Final result (per person): 1223.5639368760064

```

[59]: import pandas as pd

# Example: Load Excel file
df = pd.read_excel("ENC2025_Co2calculation.xlsx")

# Apply the condition: if train_distance_route < 400, take train_co2_eq; else
↳ take flight_economy_CO2eq
df['selected_value'] = df.apply(
    lambda row: (row['flight_co2eq_San Francisco']*1.242*2)+40,
    axis=1
)
count_rows = df['selected_value'].notna().sum()

```

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car_sum = 3340
car_rows = 46
total_people = 700
# Sum the selected values and multiply by 2.15
result = ((df['selected_value'].sum()+car_sum)/
    ↪(count_rows+car_rows))*total_people

print("Final result:", result)
print("Final result (per person):", result/total_people)
```

Final result: 2080064.2244019138

Final result (per person): 2971.5203205741627

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