**DATA-DRIVEN**

**Table of Contents**

[Task 1: Introduction and project plan 2](#_Toc132318380)

[Task 2: Data preparation quality issues and remedies 3](#_Toc132318381)

[Task 3: Data Analysis 3](#_Toc132318382)

[References 9](#_Toc132318383)

# Task 1: Introduction and project plan

**Purpose of the report**

A scenario has been provided in which Cafe on the Sea (COTS) wishes to recruit young professionals with strategic and data analysis skills. The purpose of the report is to build ***a three-year strategic plan for the company*** and analyse different options for growth which includes expanding abroad and developing a new product.

**Overall Project Plan Using Data Analytics Framework**

The overall plan for the project should be done using a Data Analytics Framework using three steps. In the ***first step***, ***the key stakeholders who will be related to this project should be identified*** (Wood *et al.,* 2020). Considering the given scenario, the stakeholders related to this project should be the data analyst who will provide a plan on how to expand the business, the Sales Director of COTS and the potential customers. The ***second step includes conducting an estimated data analysis*** in which there will be an assumption on how many new customers can be targeted for the coffee projects. The ***third step*** includes the ***implementation of the plan***.

**Key Performance Indicators of COTS’ coffee shops**

The KPIs which should be considered in building the strategic plan of COTS’ coffee shops are:

**Profit margin:** The increase in profit margins is another indicator that a business will run efficiently (Stoyanov, 2021). One of the issues shown in the scenario is improving the profitability is Procurement manager wished to improve and simplify the menu by removing the products with the worst sales performance. Hence, the focus is increasing the profit margin by removing the non-profitable products.

**Number of new customers attracted:** The number of new customers reached is another performance indicator of whether a business is gaining popularity (Ghahremani-Nahr and Nozari, 2021). The target of COTS’ management is to deliver coffee products by partnering with Deliveroo, a food delivery company. Hence this performance indicator should analyse the number of new customers who will order its products in the Blackpool area.

# Task 2: Data preparation quality issues and remedies

**Explanation and identification of generic data problems**

One of the generic issues identified by the data analysts while collecting information on the potential customers is ***inaccurate information***. Considering the above scenario, there is a chance of obtaining inaccurate data for the strategy. The reason being the best three coffee shops of COTS’ namely Blackpool, Portsmouth and Southhampton may not keep a track on which of their products have been sold widely in the past year.

Another issue which may be faced by COTS’ data analyst in the collection of the relevant information in building the expansion strategy is obtaining ***ambiguous data*** (Jahja *et al.,* 2021). It is mentioned that a competitive analysis needed to be done of COTS’ three potential rivals namely Starbucks, Cafe Nero and Costa. However, there is a chance that they may not reveal authentic information regarding the particular products which have been sold in abundance in their annual report, which may create an issue for the COTS data analyst.

**Dataset problems identified in the COTS dataset and ways of addressing them**

The first issue identified by the Corporate Strategy manager is the ***worst sales performance on certain products***. Hence, there is a requirement of editing the menu card by removing the loss-making items. The second issue identified is the ***questionable performance of COTS’ food delivery service***. This problem can be solved by exploring options using data analysis on whether this service can be expanded to other chains outside Blackpool. The third issue identified is the ***lack of knowledge regarding the sales value of the three coffee shop branches***. This issue can be resolved by evaluating how to expand the floor area of the shops.

# Task 3: Data Analysis

|  |  |  |
| --- | --- | --- |
| **Row Labels** | **Sum of Sales Value** | **Sum of Sales Volume** |
| **Japan** | **16256108.94** | **11035** |
| **1** | **1301626.41** | **874** |
| 2018 | 561141.46 | 374 |
| 2019 | 386202.12 | 267 |
| 2020 | 354282.83 | 233 |
| **2** | **1422365.49** | **957** |
| 2018 | 597202.44 | 410 |
| 2019 | 407984.87 | 284 |
| 2020 | 417178.18 | 263 |
| **3** | **1466826.06** | **996** |
| 2018 | 588628.26 | 404 |
| 2019 | 474859.78 | 341 |
| 2020 | 403338.02 | 251 |
| **4** | **1146549.39** | **775** |
| 2018 | 459900.01 | 313 |
| 2019 | 360162.89 | 252 |
| 2020 | 326486.49 | 210 |
| **5** | **1186900.59** | **765** |
| 2018 | 446995.76 | 287 |
| 2019 | 374574.65 | 244 |
| 2020 | 365330.18 | 234 |
| **6** | **2349485.35** | **1499** |
| 2018 | 632293.34 | 414 |
| 2019 | 1141522.03 | 705 |
| 2020 | 575669.98 | 380 |
| **7** | **1187671.31** | **796** |
| 2018 | 371828.8 | 252 |
| 2019 | 543552.21 | 358 |
| 2020 | 272290.3 | 186 |
| **8** | **1105959.72** | **769** |
| 2018 | 383935.24 | 261 |
| 2019 | 446181.25 | 318 |
| 2020 | 275843.23 | 190 |
| **9** | **1886903.64** | **1346** |
| 2018 | 748629.27 | 519 |
| 2019 | 720015.56 | 528 |
| 2020 | 418258.81 | 299 |
| **10** | **850046.14** | **618** |
| 2018 | 362264.41 | 254 |
| 2019 | 315370.55 | 233 |
| 2020 | 172411.18 | 131 |
| **11** | **904252.1** | **647** |
| 2018 | 346979.6 | 247 |
| 2019 | 326886.99 | 226 |
| 2020 | 230385.51 | 174 |
| **12** | **1447522.74** | **993** |
| 2018 | 621267.78 | 433 |
| 2019 | 505298.62 | 329 |
| 2020 | 320956.34 | 231 |
| **United Kingdom** | **5986848.79** | **7133** |
| **1** | **404086.28** | **504** |
| 2018 | 142361.44 | 175 |
| 2019 | 134524.85 | 168 |
| 2020 | 127199.99 | 161 |
| **2** | **441337.53** | **558** |
| 2018 | 147666.9 | 190 |
| 2019 | 147368.28 | 193 |
| 2020 | 146302.35 | 175 |
| **3** | **547343.19** | **692** |
| 2018 | 180837.14 | 212 |
| 2019 | 174668.5 | 240 |
| 2020 | 191837.55 | 240 |
| **4** | **474038.76** | **588** |
| 2018 | 173459.94 | 235 |
| 2019 | 139317.63 | 161 |
| 2020 | 161261.19 | 192 |
| **5** | **641215.14** | **708** |
| 2018 | 175217.13 | 190 |
| 2019 | 171058.84 | 189 |
| 2020 | 294939.17 | 329 |
| **6** | **712934.21** | **818** |
| 2018 | 218395.94 | 239 |
| 2019 | 197675.15 | 217 |
| 2020 | 296863.12 | 362 |
| **7** | **523748.8** | **611** |
| 2018 | 153640.75 | 179 |
| 2019 | 139843.78 | 174 |
| 2020 | 230264.27 | 258 |
| **8** | **482152.57** | **591** |
| 2018 | 153129.72 | 184 |
| 2019 | 145706.68 | 177 |
| 2020 | 183316.17 | 230 |
| **9** | **695861.4** | **777** |
| 2018 | 219548.69 | 251 |
| 2019 | 217025.22 | 289 |
| 2020 | 259287.49 | 237 |
| **10** | **281178.93** | **330** |
| 2018 | 91848.78 | 111 |
| 2019 | 64149.64 | 85 |
| 2020 | 125180.51 | 134 |
| **11** | **347859.77** | **419** |
| 2018 | 98771.77 | 123 |
| 2019 | 110368 | 145 |
| 2020 | 138720 | 151 |
| **12** | **435092.21** | **537** |
| 2018 | 178127.36 | 214 |
| 2019 | 152710.52 | 209 |
| 2020 | 104254.33 | 114 |
| **US** | **604067.44** | **478** |
| **1** | **135430.49** | **101** |
| 2020 | 135430.49 | 101 |
| **2** | **468636.95** | **377** |
| 2020 | 468636.95 | 377 |
| **USA** | **11917691.53** | **10913** |
| **1** | **956191.47** | **869** |
| 2018 | 424444.16 | 371 |
| 2019 | 353886.85 | 322 |
| 2020 | 177860.46 | 176 |
| **2** | **860834.59** | **758** |
| 2018 | 432511.96 | 361 |
| 2019 | 428322.63 | 397 |
| **3** | **942370.8** | **862** |
| 2018 | 290456.91 | 269 |
| 2019 | 299259.19 | 289 |
| 2020 | 352654.7 | 304 |
| **4** | **418387.82** | **661** |
| 2018 | 216890.37 | 199 |
| 2019 | 262668.88 | 231 |
| 2020 | -61171.43 | 231 |
| **5** | **1139144.28** | **985** |
| 2018 | 354909.57 | 286 |
| 2019 | 384326.27 | 354 |
| 2020 | 399908.44 | 345 |
| **6** | **1504904.76** | **1281** |
| 2018 | 494758.07 | 378 |
| 2019 | 436374.12 | 411 |
| 2020 | 573772.57 | 492 |
| **7** | **1188059.98** | **1060** |
| 2018 | 382542.87 | 323 |
| 2019 | 344925.96 | 327 |
| 2020 | 460591.15 | 410 |
| **8** | **1017553.01** | **905** |
| 2018 | 353224.67 | 322 |
| 2019 | 340454.31 | 298 |
| 2020 | 323874.03 | 285 |
| **9** | **1180023.51** | **1070** |
| 2018 | 412673.36 | 374 |
| 2019 | 292980.25 | 276 |
| 2020 | 474369.9 | 420 |
| **10** | **746992.69** | **700** |
| 2018 | 235353.67 | 222 |
| 2019 | 248829.52 | 242 |
| 2020 | 262809.5 | 236 |
| **11** | **889228.16** | **814** |
| 2018 | 346338.54 | 319 |
| 2019 | 238143.45 | 226 |
| 2020 | 268499.64 | 243 |
| 2030 | 36246.53 | 26 |
| **12** | **1074000.46** | **948** |
| 2018 | 475302.57 | 430 |
| 2019 | 362619.27 | 330 |
| 2020 | 236078.62 | 188 |

**Table A**

(Source: Self-developed)

|  |  |  |
| --- | --- | --- |
| **Sum of Sales Volume** | **Sum of Sales Value** | **Sum of Year** |
| **574** | **1039799.48** | **135298** |
| 14 | 19182.1 | 22198 |
| 120 | 214843.53 | 40380 |
| 440 | 805773.85 | 72720 |
| **10** | **2500** | **2018** |
| 10 | 2500 | 2018 |
| **11039** | **9760081.23** | **218052** |
| 2572 | 2263344.7 | 72648 |
| 3653 | 3220874.21 | 72684 |
| 4814 | 4275862.32 | 72720 |
| **11160** | **15648748.47** | **201892** |
| 5029 | 6969882.4 | 72648 |
| 4191 | 5943247.95 | 72684 |
| 1940 | 2735618.12 | 56560 |
| **406** | **496136.13** | **12120** |
| 406 | 496136.13 | 12120 |
| **4019** | **5611880.76** | **216044** |
| 1725 | 2266753.64 | 70630 |
| 1147 | 1562376.94 | 72684 |
| 1121 | 1746503.65 | 70700 |
| 26 | 36246.53 | 2030 |
| **7** | **12601.21** | **2018** |
| 7 | 12601.21 | 2018 |
| **14** | **14634.34** | **2019** |
| 14 | 14634.34 | 2019 |
| **2318** | **2164925.98** | **214013** |
| 968 | 939214.6 | 72648 |
| 910 | 833842.34 | 70665 |
| 440 | 391869.04 | 70700 |
| **12** | **13409.1** | **2020** |
| 12 | 13409.1 | 2020 |

**Table B**

(Source: Self-developed)

|  |  |
| --- | --- |
| **Sum of Sales Volume** | **Sum of Sales Value** |
| **11035** | **16256108.94** |
| 4168 | 6121066.37 |
| 4085 | 6002611.52 |
| 2782 | 4132431.05 |
| **7133** | **5986848.79** |
| 2303 | 1933005.56 |
| 2247 | 1794417.09 |
| 2583 | 2259426.14 |
| **478** | **604067.44** |
| 478 | 604067.44 |
| **10913** | **11917691.53** |
| 3854 | 4419406.72 |
| 3703 | 3992790.7 |
| 3330 | 3469247.58 |
| 26 | 36246.53 |

**Table C**

(Source: Self-developed)

# References

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