

Business Request & User Stories

The business request for this data analyst project was an executive sales report for sales managers.

Based on the request that was made from the business we following user stories were defined to fulfill delivery and ensure that acceptance criteria's were maintained throughout the project.

Business Demand Overview:

- Reporter: Steven – Sales Manager
- Value of Change: Visual dashboards and improved Sales reporting or follow up or sales force
- Necessary Systems: Power BI, CRM System
- Other Relevant Info: Budgets have been delivered in Excel for 2021

User Stories:

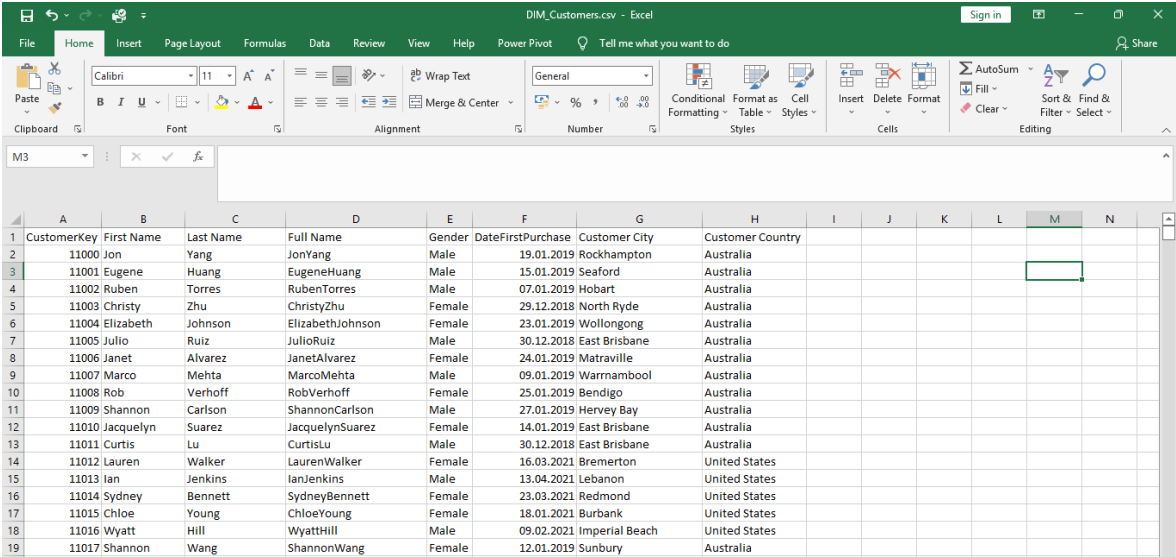
| No # | As a (role) | I want (request / demand) | So that I (user value) | Acceptance Criteria |
|------|----------------------|---|--|---|
| 1 | Sales Manager | To get a dashboard overview of internet sales | Can follow better which customers and products sells the best | A Power BI dashboard which updates data once a day |
| 2 | Sales Representative | A detailed overview of Internet Sales per Customers | Can follow up my customers that buys the most and who we can sell ore to | A Power BI dashboard which allows me to filter data for each customer |
| 3 | Sales Representative | A detailed overview of Internet Sales per Products | Can follow up my Products that sells the most | A Power BI dashboard which allows me to filter data for each Product |
| 4 | Sales Manager | A dashboard overview of internet sales | Follow sales over time against budget | A Power Bi dashboard with graphs and KPIs comparing against budget. |

Data Cleansing & Transformation (SQL)

To create the necessary data model for doing analysis and fulfilling the business needs defined in the user stories the following tables were extracted using SQL.

One data source (sales budgets) were provided in Excel format and were connected in the data model in a later step of the process. Below are the SQL statements for cleansing and transforming necessary data.

```
-- Cleaned DIM_Customers Table --
SELECT
  c.CustomerKey,
  -- ,[GeographyKey]
  -- ,[CustomerAlternateKey]
  -- ,[Title]
  c.FirstName AS [First Name],
  -- ,[MiddleName]
  c.LastName AS [Last Name],
  c.FirstName + ' ' + c.LastName AS [Full Name],
  -- ,[NameStyle]
  -- ,[BirthDate]
  -- ,[MaritalStatus]
  -- ,[Suffix]
  -- ,[Gender]
  CASE c.gender WHEN 'M' THEN 'Male' WHEN 'F' THEN 'Female' END AS 'Gender',
  -- ,[EmailAddress]
  -- ,[YearlyIncome]
  -- ,[TotalChildren]
  -- ,[NumberChildrenAtHome]
  -- ,[EnglishEducation]
  -- ,[SpanishEducation]
  -- ,[FrenchEducation]
  -- ,[EnglishOccupation]
  -- ,[SpanishOccupation]
  -- ,[FrenchOccupation]
  -- ,[HouseOwnerFlag]
  -- ,[NumberCarsOwned]
  -- ,[AddressLine1]
  -- ,[AddressLine2]
  -- ,[Phone]
  c.DateFirstPurchase,
  -- ,[CommuteDistance]
  g.City AS [Customer City], -- joint in Customer City from Geography Table
  g.EnglishCountryRegionName AS [Customer Country] -- joint in Customer City from Geography Table
FROM
  [AdventureWorksDW2019].[dbo].[DimCustomer] AS c
LEFT JOIN [AdventureWorksDW2019].[dbo].[DimGeography] AS g ON g.GeographyKey = c.GeographyKey
ORDER BY
  CustomerKey ASC -- Ordered by CustomerKey --
```

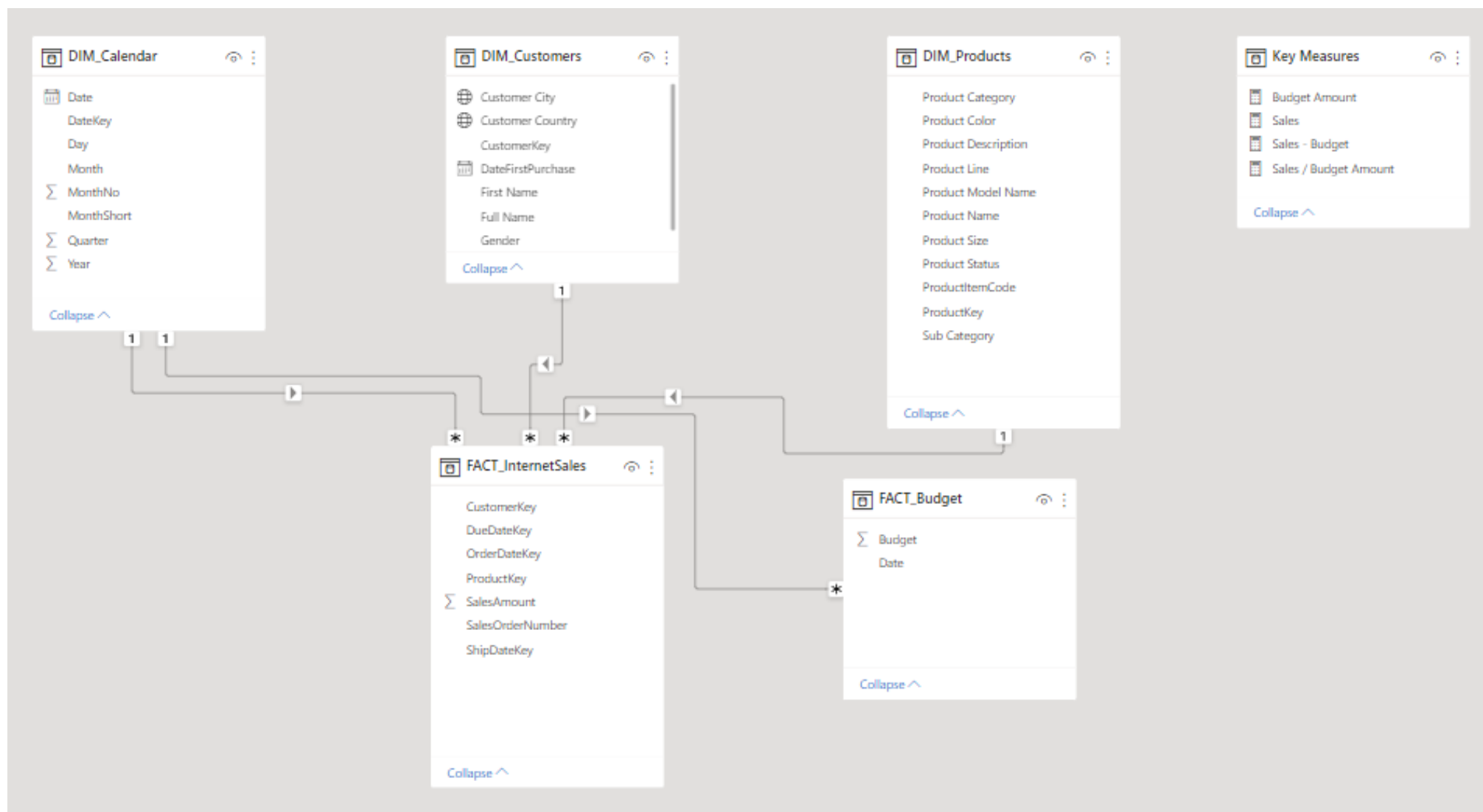


| | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
|----|-------------|------------|-----------|------------------|--------|-------------------|----------------|------------------|---|---|---|---|---|---|
| | CustomerKey | First Name | Last Name | Full Name | Gender | DateFirstPurchase | Customer City | Customer Country | | | | | | |
| 1 | 11000 | Jon | Yang | JonYang | Male | 19.01.2019 | Rockhampton | Australia | | | | | | |
| 2 | 11001 | Eugene | Huang | EugeneHuang | Male | 15.01.2019 | Seaford | Australia | | | | | | |
| 3 | 11002 | Ruben | Torres | RubenTorres | Male | 07.01.2019 | Hobart | Australia | | | | | | |
| 4 | 11003 | Christy | Zhu | ChristyZhu | Female | 29.12.2018 | North Ryde | Australia | | | | | | |
| 5 | 11004 | Elizabeth | Johnson | ElizabethJohnson | Female | 23.01.2019 | Wollongong | Australia | | | | | | |
| 6 | 11005 | Julio | Ruiz | JulioRuiz | Male | 30.12.2018 | East Brisbane | Australia | | | | | | |
| 7 | 11006 | Janet | Alvarez | JanetAlvarez | Female | 24.01.2019 | Matraville | Australia | | | | | | |
| 8 | 11007 | Marco | Mehta | MarcoMehta | Male | 09.01.2019 | Warrnambool | Australia | | | | | | |
| 9 | 11008 | Rob | Verhoff | RobVerhoff | Female | 25.01.2019 | Bendigo | Australia | | | | | | |
| 10 | 11009 | Shannon | Carlson | ShannonCarlson | Male | 27.01.2019 | Hervey Bay | Australia | | | | | | |
| 11 | 11010 | Jacquelyn | Suarez | JacquelynSuarez | Female | 14.01.2019 | East Brisbane | Australia | | | | | | |
| 12 | 11011 | Curtis | Lu | CurtisLu | Male | 30.12.2018 | East Brisbane | Australia | | | | | | |
| 13 | 11012 | Lauren | Walker | LaurenWalker | Female | 16.03.2021 | Bremerton | United States | | | | | | |
| 14 | 11013 | Ian | Jenkins | IanJenkins | Male | 13.04.2021 | Lebanon | United States | | | | | | |
| 15 | 11014 | Sydney | Bennett | SydneyBennett | Female | 23.03.2021 | Redmond | United States | | | | | | |
| 16 | 11015 | Chloe | Young | ChloeYoung | Female | 18.01.2021 | Burbank | United States | | | | | | |
| 17 | 11016 | Wyatt | Hill | WyattHill | Male | 09.02.2021 | Imperial Beach | United States | | | | | | |
| 18 | 11017 | Shannon | Wang | ShannonWang | Female | 12.01.2019 | Sunbury | Australia | | | | | | |

Data Model

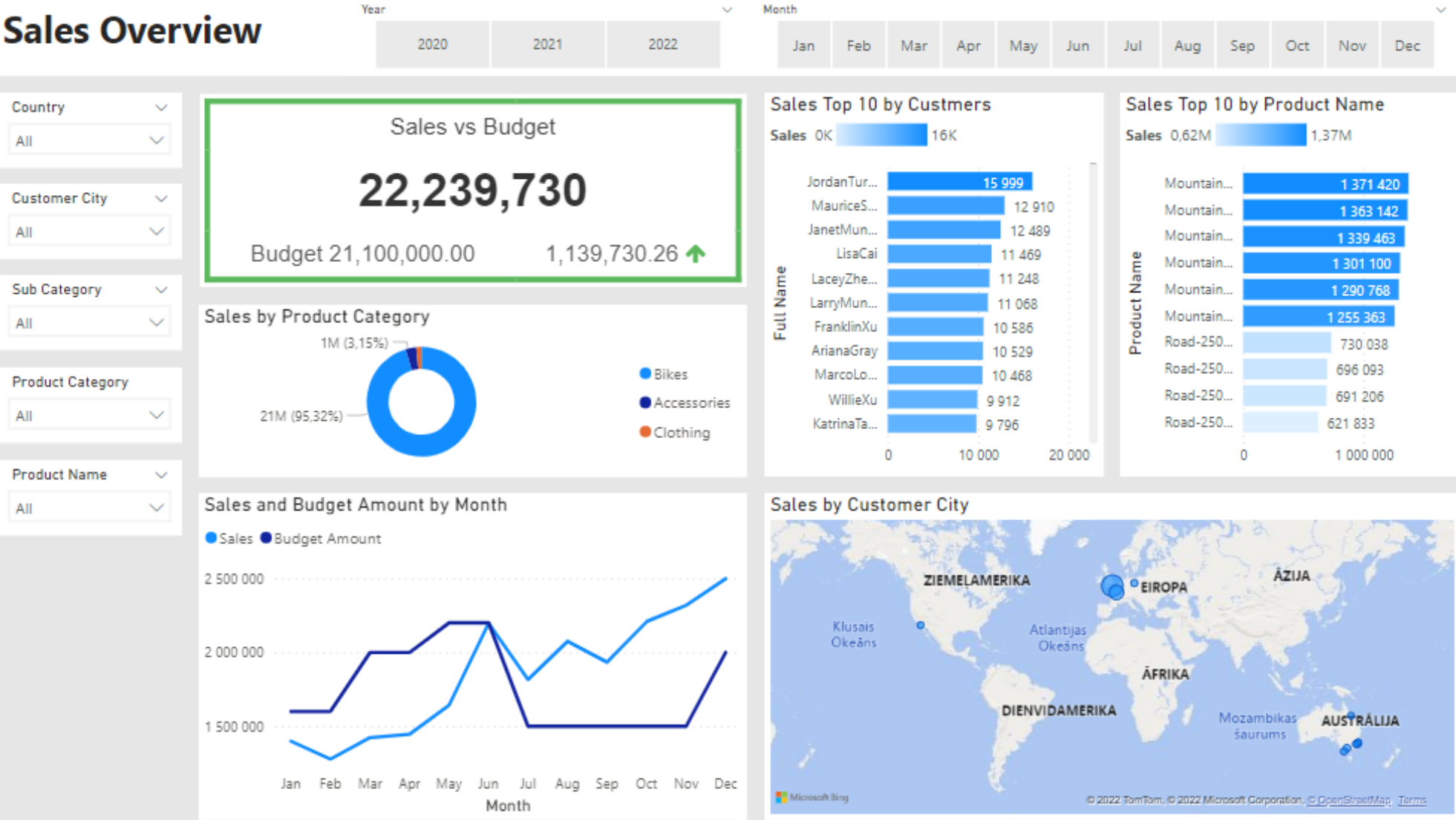
Below is a screenshot of the data model after cleansed and prepared tables were read into Power BI.

This data model also shows how FACT_Budget has been connected to FACT_InternetSales and other necessary DIM tables.



Sales Management Dashboard

The finished sales management dashboard with one page with works as a dashboard and overview, with two other pages focused on combining tables for necessary details and visualizations to show sales over time, per customers and per products.



Customer Details

Year

202020212022

Month

JanFebMarAprMayJunJulAugSepOctNovDec

Country

Australia

Customer City

All

Sub Category

All

Product Category

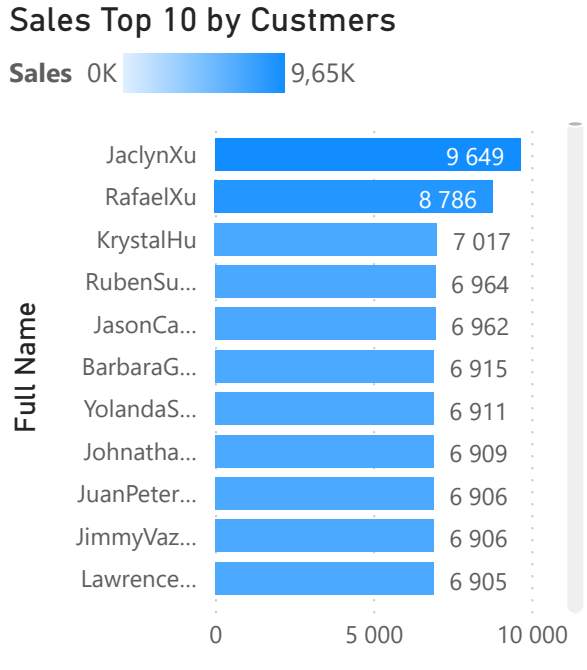
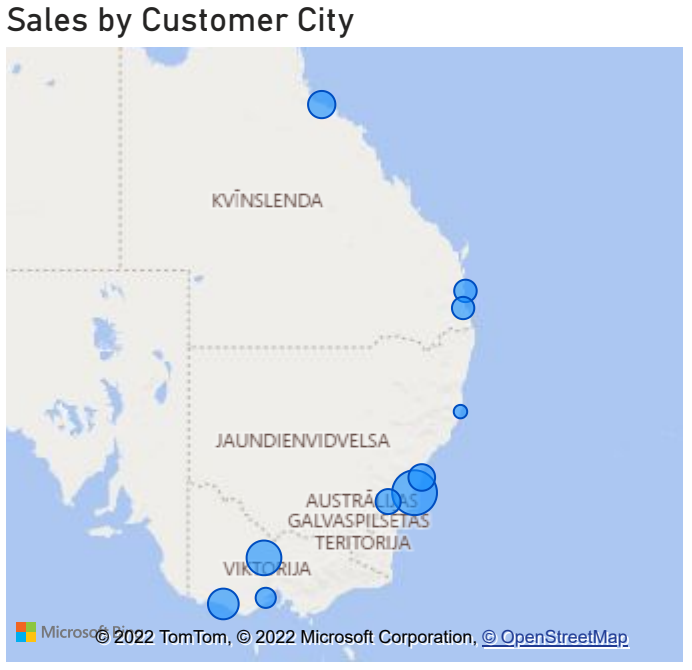
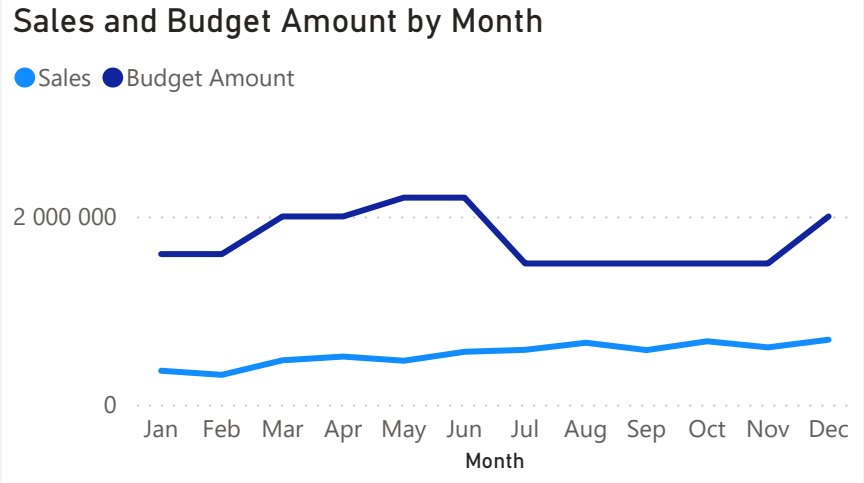
All

Product Name

All

6 476 359Sales

21 100 000Budget Amount



| Customer | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------|
| ZoeKelly | | | | | | | | | | | 40 | | 40 |
| ZacharyWilson | | | | | | | | | | 608 | | | 608 |
| ZacharyMiller | | | | | | | | | 848 | 2 071 | | | 2 920 |
| ZacharyJai | 114 | | | | | | | | | | | | 114 |
| YolandaShe | 24 | | | 2 | | | | | | | | | 27 |
| YolandaShan | | | | 2 049 | 2 389 | | | | | 2 473 | | | 6 911 |
| YolandaNara | | | | | | | 777 | | | | | | 777 |
| YolandaKumar | | | | | 77 | | | 9 | | | | | 86 |
| YolandaGoel | | | | | 783 | | | | | | 1 174 | | 1 957 |
| YolandaChander | | | | 1 174 | | | | | | | | | 1 174 |
| YolandaBhat | | | | | | | | | | 4 401 | | | 4 401 |
| YolandaAndersen | | | | | | | | | | | | 35 | 35 |
| Total | 360 092 | 316 492 | 470 976 | 510 485 | 466 243 | 561 446 | 582 312 | 657 539 | 579 451 | 673 131 | 608 541 | 689 648 | 6 476 359 |

Product Details

Year

2020

2021

2022

Month

Jan

Feb

Mar

Apr

May

Jun

Jul

Aug

Sep

Oct

Nov

Dec

Country

All

Customer City

All

Product Category

All

Sub Category

All

Product Name

All

22 239 730

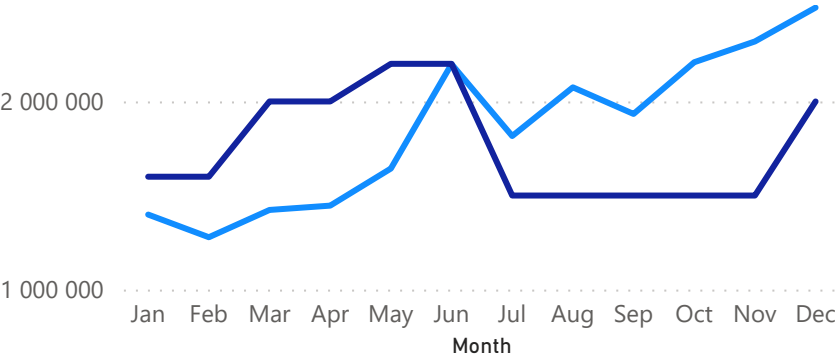
Sales

21 100 000

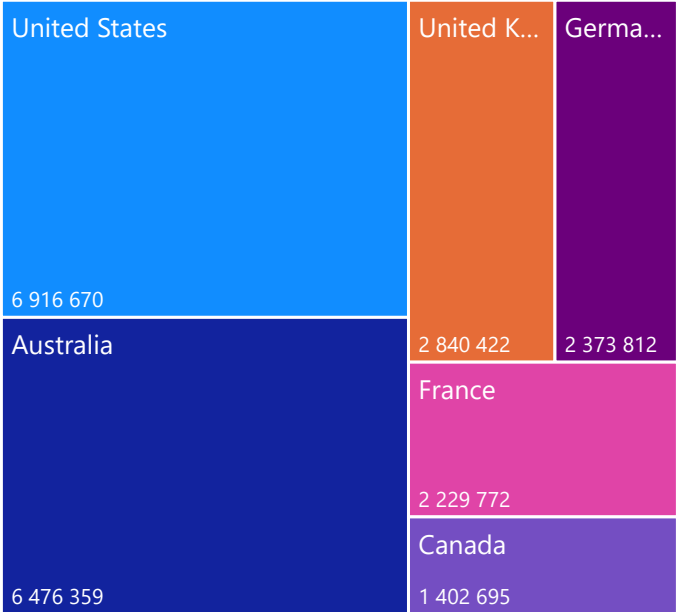
Budget Amount

Sales and Budget Amount by Month

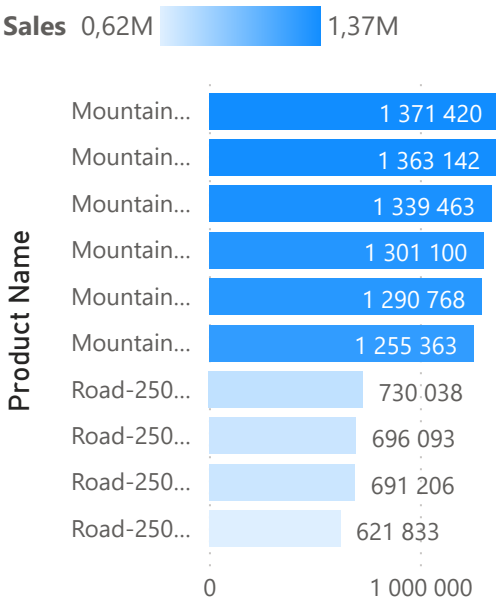
Sales Budget Amount



Sales by Customer Country



Sales Top 10 by Product Name



| Product Category | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| <div>Accessories</div> | 49 421 | 46 246 | 55 339 | 51 722 | 57 877 | 62 527 | 58 002 | 59 737 | 58 523 | 66 168 | 67 268 | 67 930 | 700 760 |
| <div>Bike Racks</div> | 3 960 | 2 520 | 4 200 | 2 160 | 3 000 | 3 120 | 2 400 | 3 120 | 3 240 | 3 360 | 4 560 | 3 720 | 39 360 |
| <div>Bike Stands</div> | 3 021 | 2 544 | 3 180 | 4 134 | 3 816 | 3 816 | 2 703 | 2 862 | 2 862 | 4 929 | 3 657 | 2 067 | 39 591 |
| <div>Bottles and Cages</div> | 3 481 | 3 436 | 3 958 | 3 976 | 4 325 | 5 500 | 4 798 | 5 403 | 5 069 | 5 534 | 5 191 | 6 126 | 56 798 |
| <div>Cleaners</div> | 549 | 477 | 580 | 541 | 549 | 668 | 747 | 612 | 485 | 556 | 700 | 755 | 7 219 |
| <div>Fenders</div> | 3 495 | 2 967 | 3 319 | 3 715 | 3 737 | 4 220 | 4 418 | 3 583 | 3 649 | 4 242 | 4 616 | 4 660 | 46 620 |
| <div>Helmets</div> | 14 171 | 14 591 | 16 725 | 15 641 | 18 300 | 21 064 | 17 985 | 19 210 | 19 559 | 21 729 | 22 778 | 23 583 | 225 336 |
| <div>Hydration Packs</div> | 2 695 | 2 365 | 3 519 | 3 079 | 3 079 | 3 189 | 3 519 | 3 849 | 3 684 | 3 024 | 3 849 | 4 454 | 40 308 |
| <div>Tires and Tubes</div> | 18 050 | 17 346 | 19 857 | 18 476 | 21 072 | 20 949 | 21 431 | 21 098 | 19 975 | 22 793 | 21 917 | 22 565 | 245 529 |
| <div>Bikes</div> | 1 325 275 | 1 210 791 | 1 341 256 | 1 369 240 | 1 559 031 | 2 106 386 | 1 728 746 | 1 985 411 | 1 847 522 | 2 108 602 | 2 221 454 | 2 395 484 | 21 199 198 |
| <div>Clothing</div> | 24 052 | 21 306 | 26 795 | 25 397 | 26 563 | 29 425 | 29 487 | 29 835 | 27 628 | 33 683 | 30 154 | 35 448 | 339 773 |
| Total | 1 398 749 | 1 278 343 | 1 423 390 | 1 446 358 | 1 643 471 | 2 198 338 | 1 816 234 | 2 074 983 | 1 933 673 | 2 208 453 | 2 318 876 | 2 498 862 | 22 239 730 |