



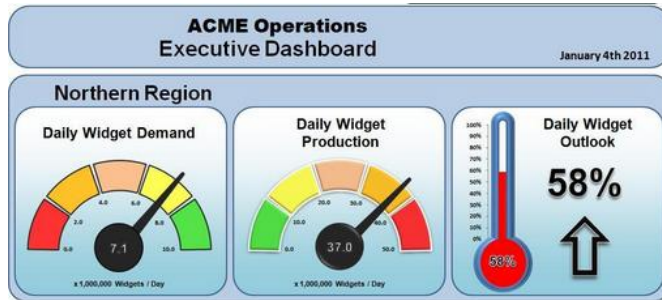
Business Intelligence

Aula 2 - Dashboards para BI, BI Lifeclyce, Arquitetura de DW e Introdução ao Tableau.

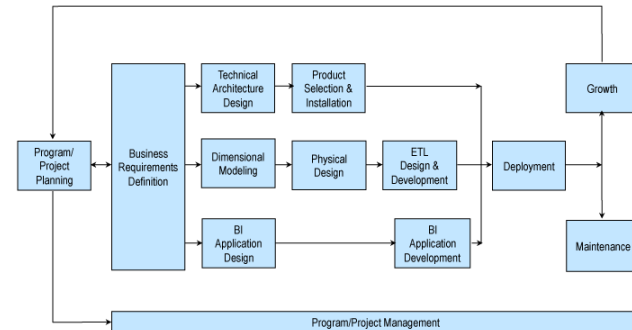
Prof. Leandro Guerra

E-mail: leandro.guerra@outspokenmarket.com.br IG: @leandrowar

Dashboards



BI Lifecycle



Arquiteturas de DW



Introdução ao Tableau



Gartner 2014- Quadrant for Business Intelligence and Analytics Platforms



Um pouco da aula anterior....

CRISP-DM

O CRISP-DM (Cross Industry Standard Process for Data Mining) é um modelo de processo para realizarmos mineração de dados, com o objetivo de termos um processo consistente, repetitividade e objetividade. O modelo do processo de mineração de dados proporciona uma visão do ciclo de vida do projeto, contendo as fases de um projeto, suas respectivas tarefas e as relações entre essas tarefas.

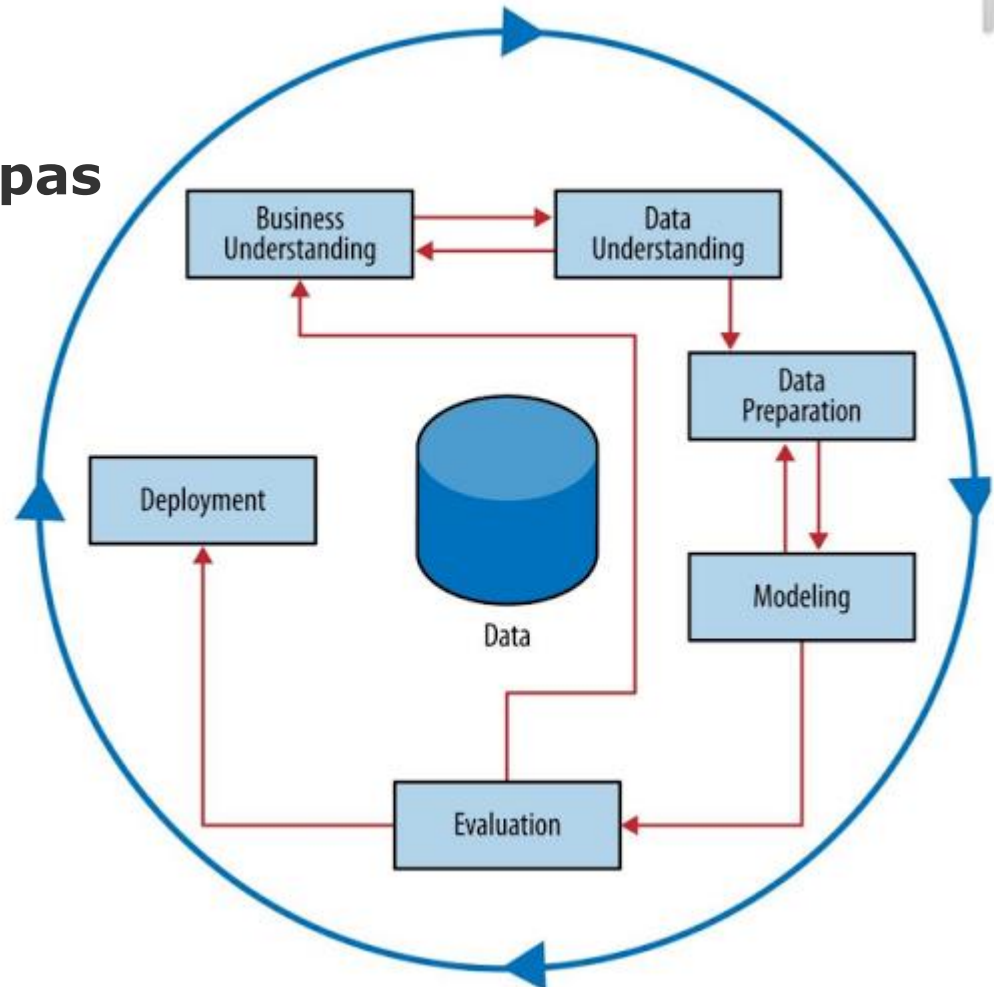
E como é composto este ciclo de vida de um projeto de data mining?

Um pouco da aula anterior....

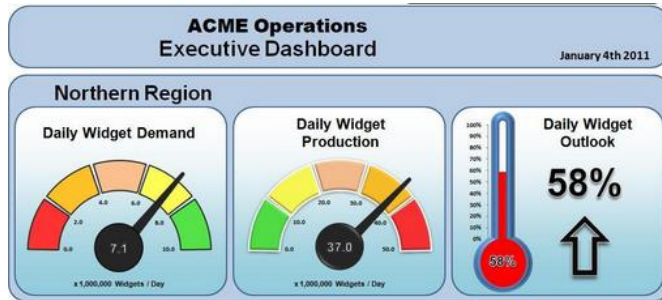
CRISP-DM

Ele é constituído de seis etapas

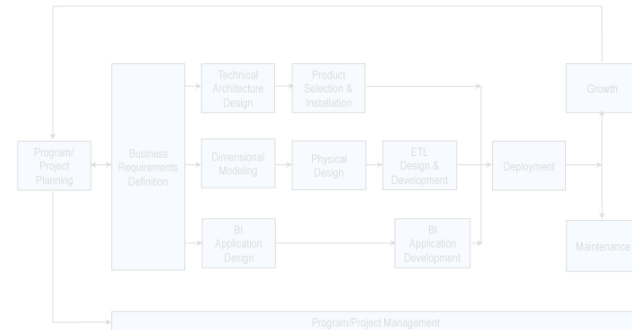
- Entendimento do Negócio
- Entendimento dos Dados
- Preparação dos Dados
- Modelagem
- Avaliação
- Entrega



Dashboards



BI Lifecycle



Arquiteturas de DW



Introdução ao Tableau



Dashboards

Definição

*“Um dashboard é uma exibição da informação mais importante e necessária para atingir um ou mais objetivos, consolidada e arrumada em uma única tela tal que a informação possa ser monitorada de uma só vez.”**

Dashboards

Exemplo



* SAP – McLaren Mercedes Dashboard

Dashboards

Tipos

Operational Dashboards

Utilizados para monitoramento de processos operacionais, eventos ou atividades que acontecem em tempo real.



Dashboards

Tipos

Tactical Dashboards

Mais utilizados para propósitos analíticos, como verificar a performance de atividades e processos de um departamento.

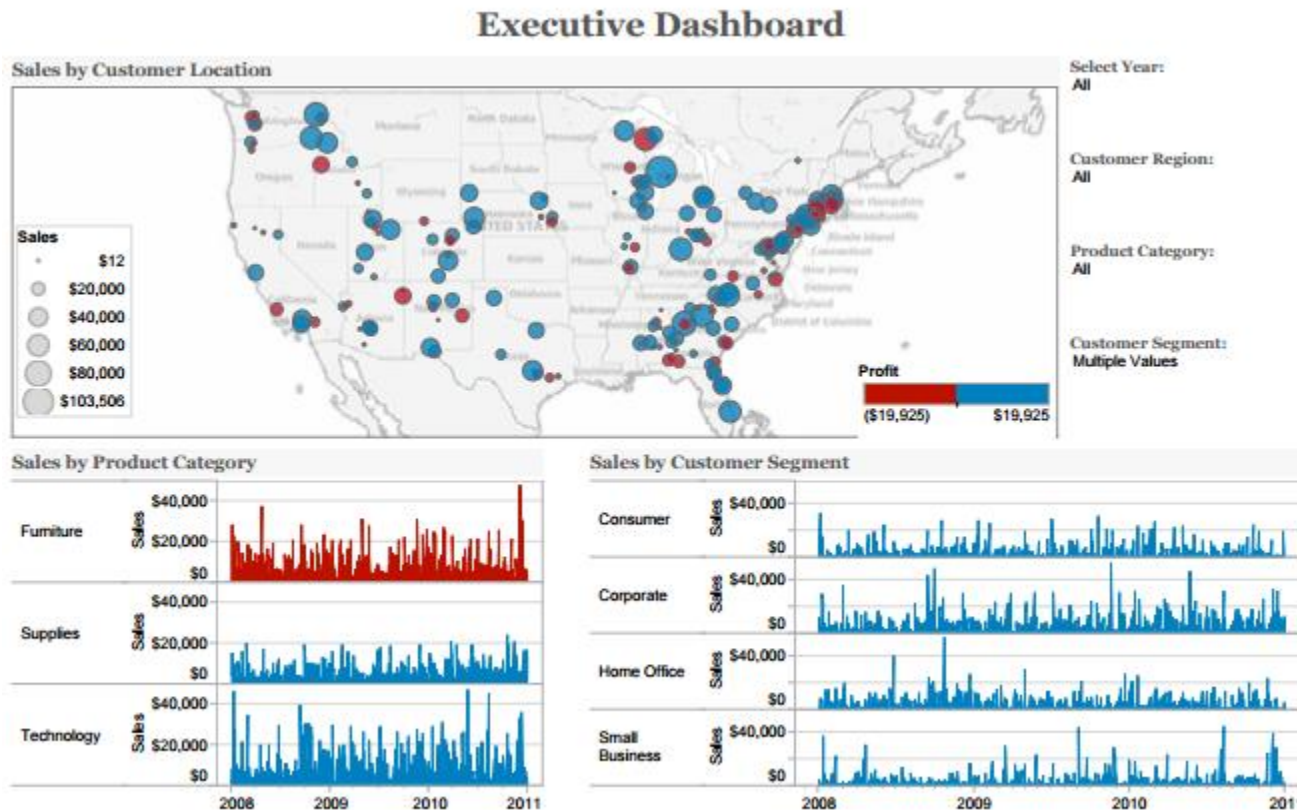


Dashboards

Tipos

Strategic Dashboards

Utilizados por executivos para monitorar o progresso e atingimento de objetivos mais estratégicos



Dashboards

Dentro da organização



Dashboards

Pré-requisitos

Integridade e
qualidade dos dados

Concentre a
informação em uma
única página
one screen shot

Dashboards são apenas
ferramentas

Fique apenas com as
métricas fundamentais

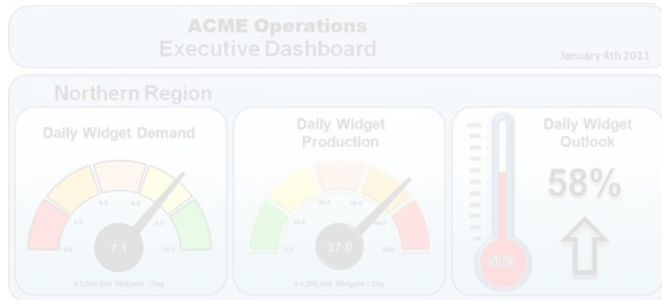
Um dashboard deve ser
visualmente claro

Mantenha as coisas
muito *simples*

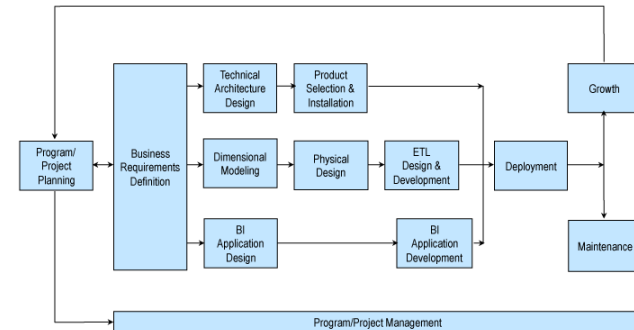
Tenha um *processo otimizado e
automatizado* para criar o dashboard



Dashboards



BI Lifecycle



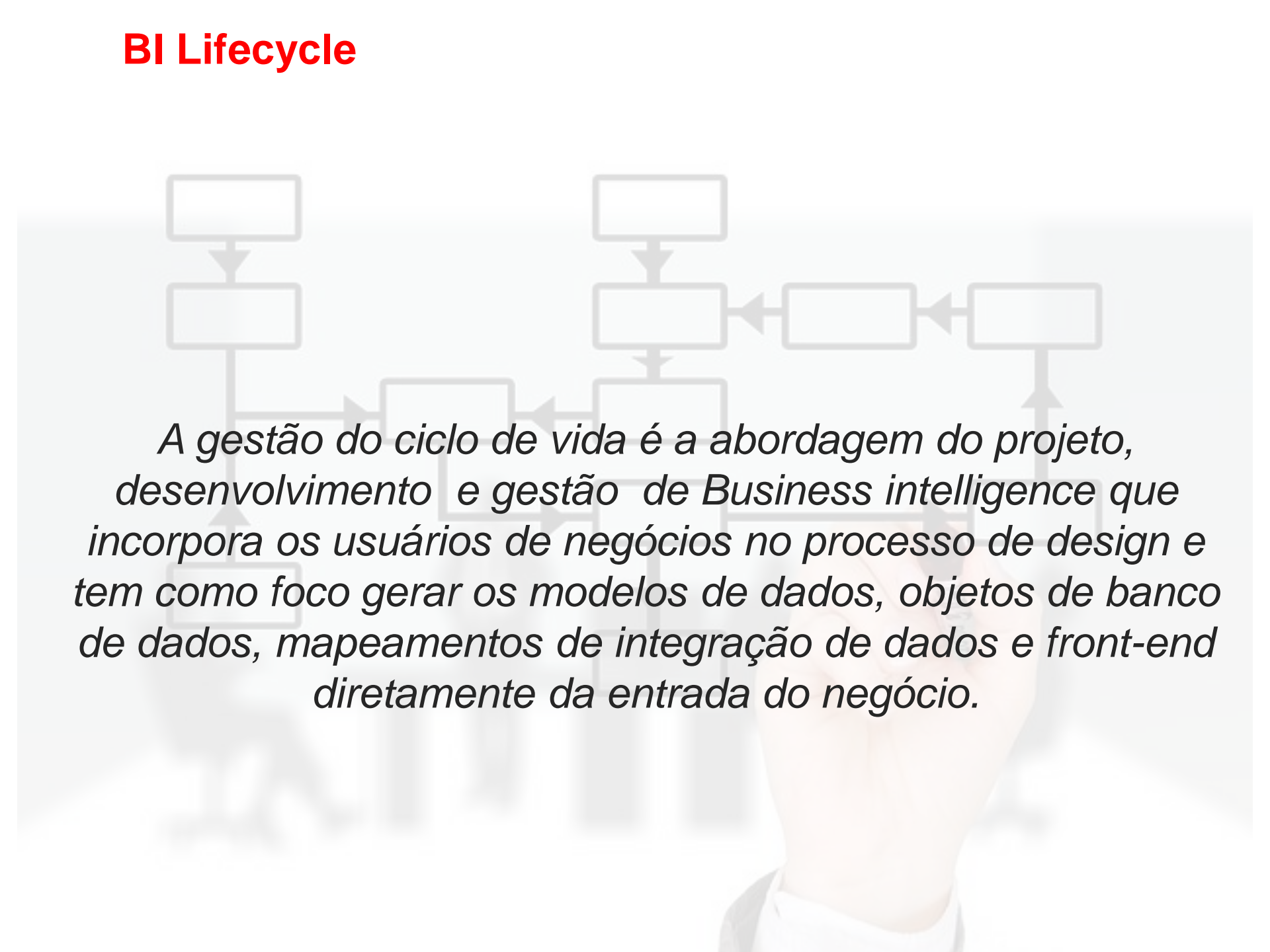
Arquiteturas de DW



Introdução ao Tableau

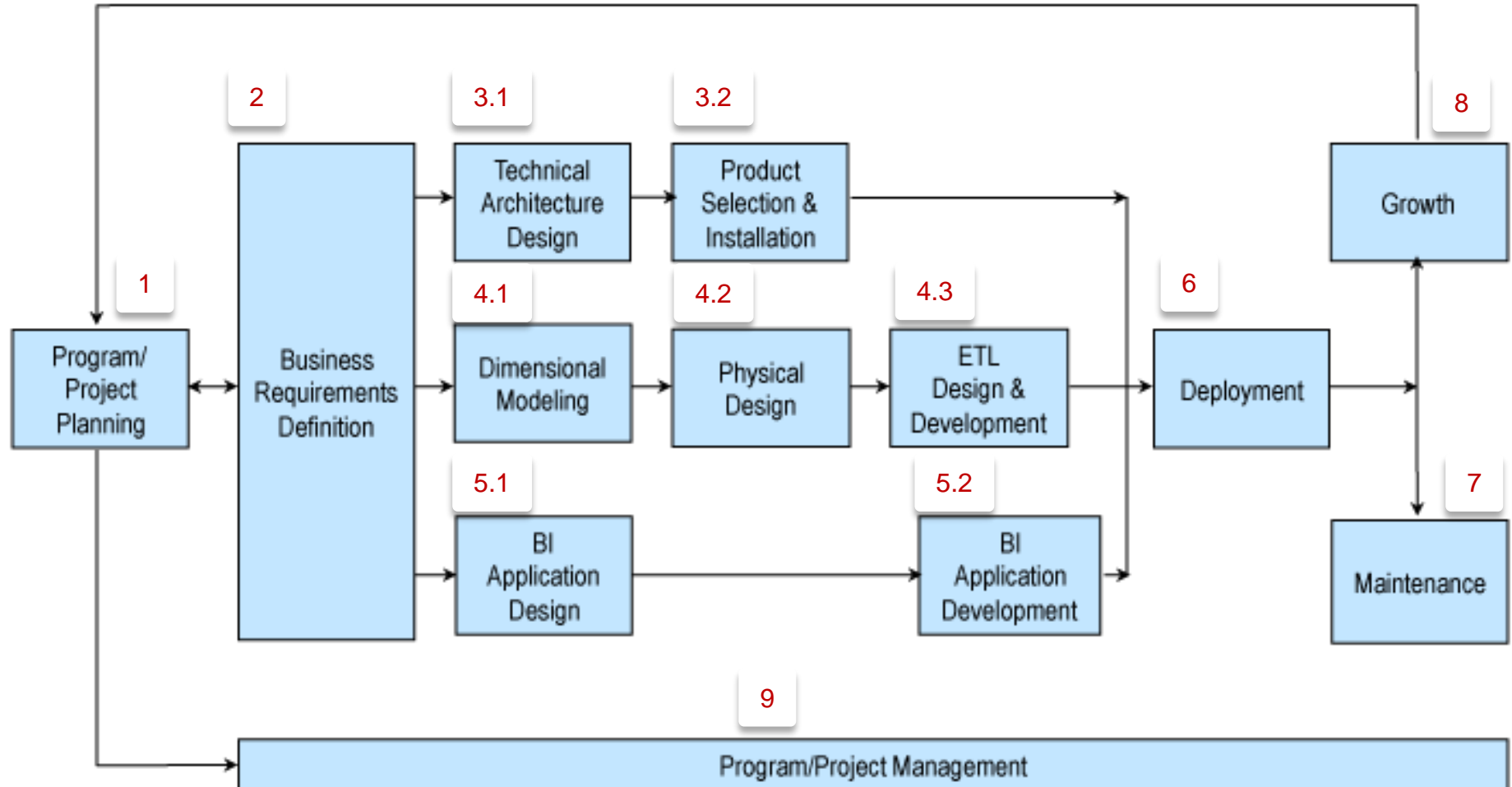


BI Lifecycle

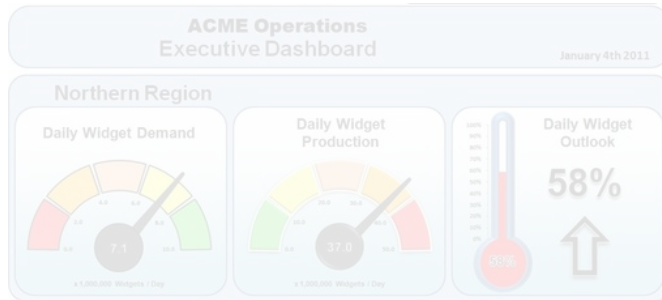


A gestão do ciclo de vida é a abordagem do projeto, desenvolvimento e gestão de Business intelligence que incorpora os usuários de negócios no processo de design e tem como foco gerar os modelos de dados, objetos de banco de dados, mapeamentos de integração de dados e front-end diretamente da entrada do negócio.

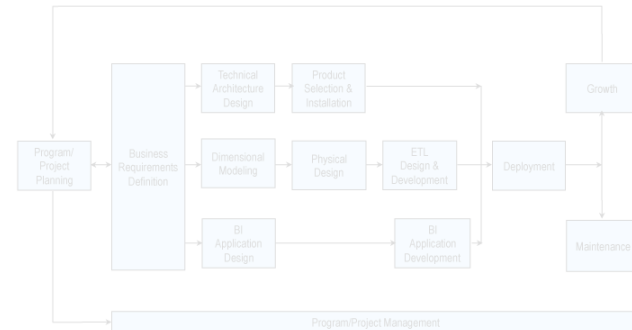
BI Lifecycle



Dashboards



BI Lifecycle



Arquiteturas de DW

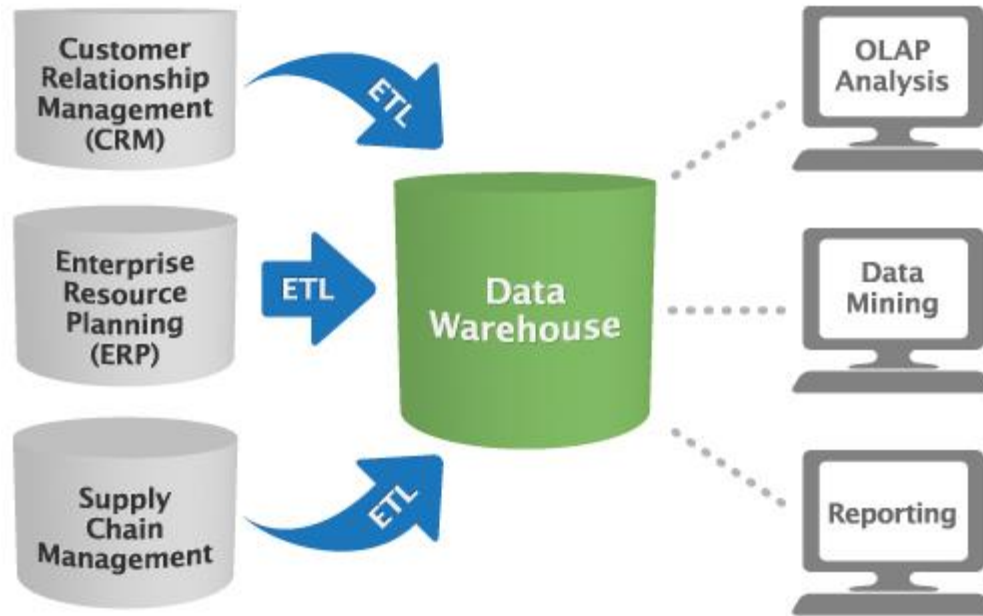


Introdução ao Tableau

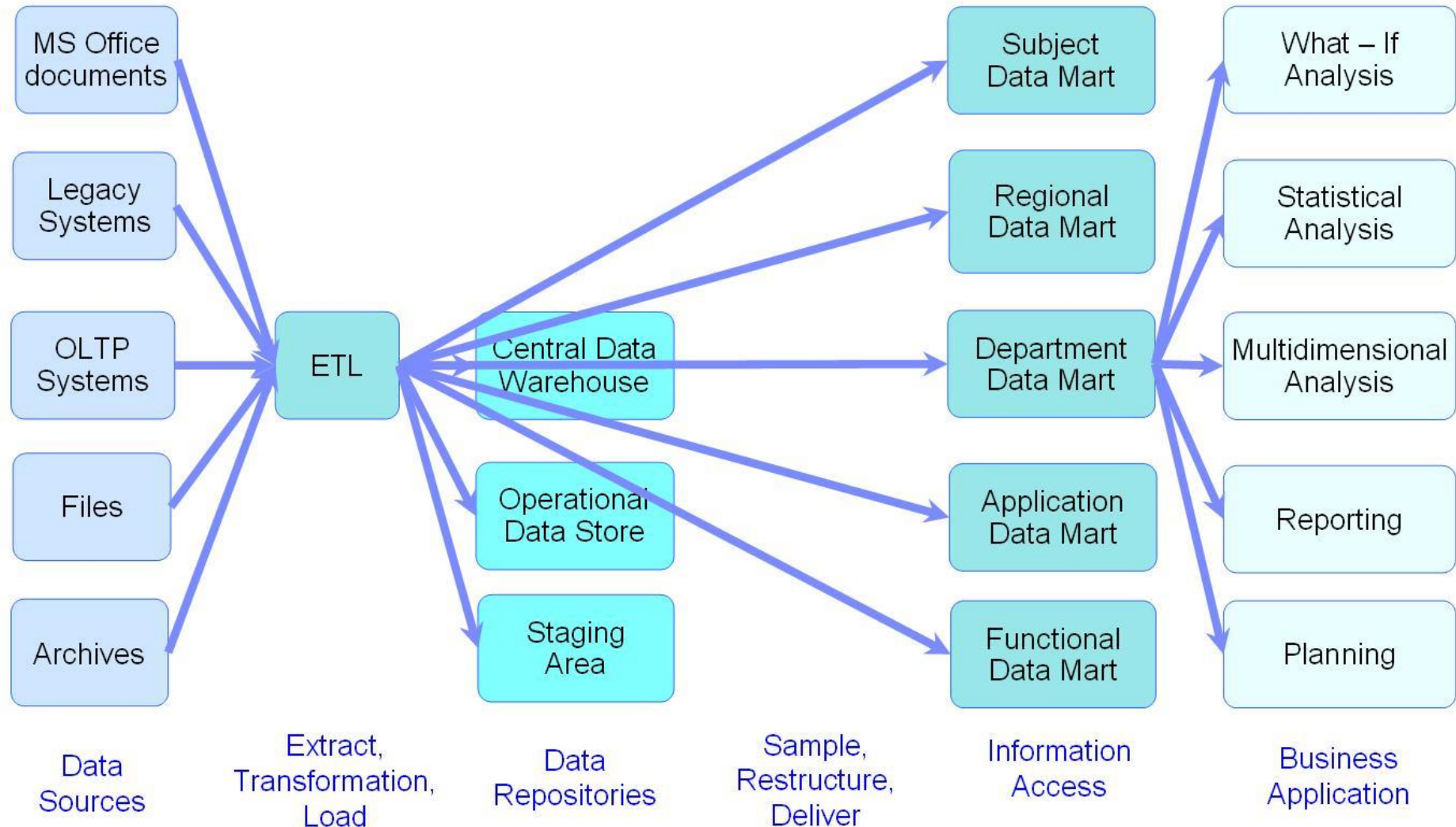


Arquiteturas de DW

Como vimos....



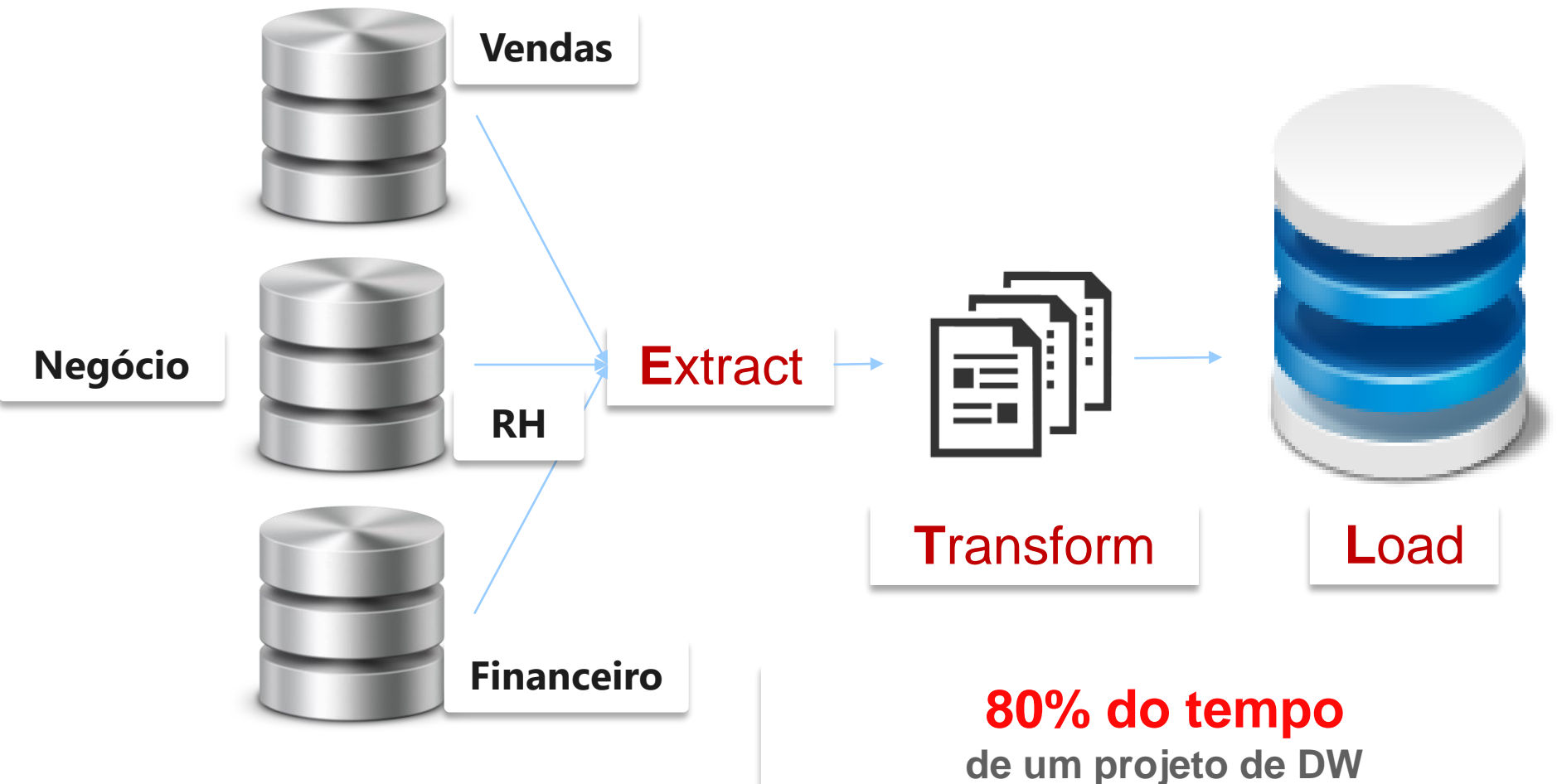
Arquiteturas de DW



Arquiteturas de DW

Um pouco mais sobre ETL...

Processo mais crítico e demorado na construção de um Data Warehouse



Arquiteturas de DW

Um pouco mais sobre Data Marts...



Arquiteturas de DW

Um pouco mais sobre Data Marts...

Independentes



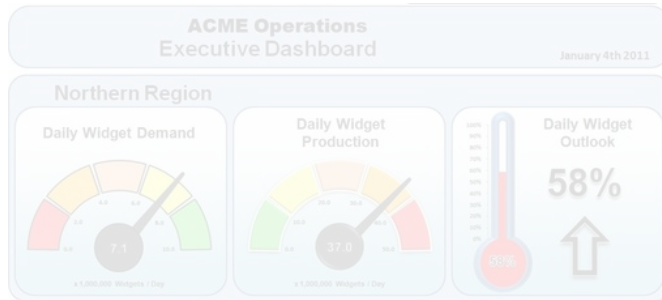
- Menos TI
- Menos corporativo e mais concentrado
- Implementação rápida
- Limitação em algumas decisões

Integrados

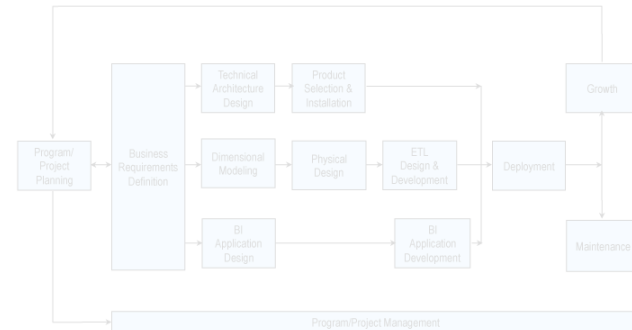


- Mais TI
- Mais corporativo - integração
- Implementação mais lenta
- Maior amplitude nas decisões

Dashboards



BI Lifecycle



Arquiteturas de DW



Introdução ao Tableau



Tableau

Primeiro contato com o Tableau Public



Create a viz now

1. Open your data (.xls or .txt)
2. Drag & Drop to visualize

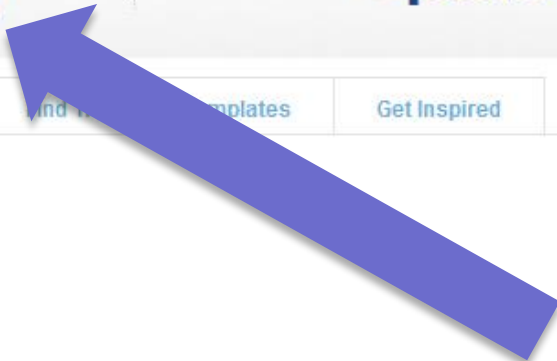
► Open Data

Open. Create. Share.

► Get Started

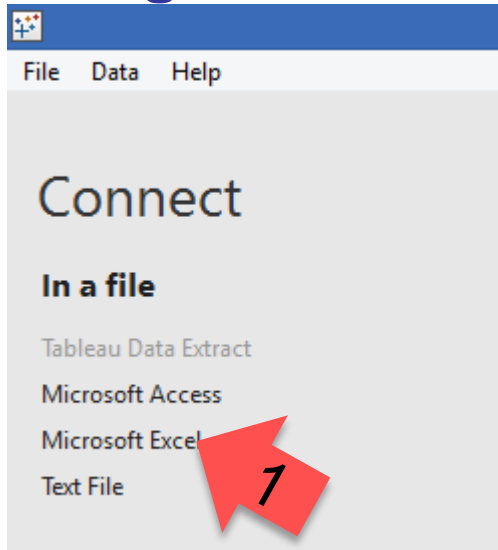
Find a template

Get Inspired



Tableau

Carregando a base Adventure Works Cycles




Adventure_Works_Cycles

Connected to Excel

Workbook

Adventure_Works_Cycles.xlsx


Sheets

 SALES_DATA



Drag sheets here

Copy

 Go to Worksheet

Tableau

Primeira visualização

SALES_DATA



Go to Worksheet

Copy

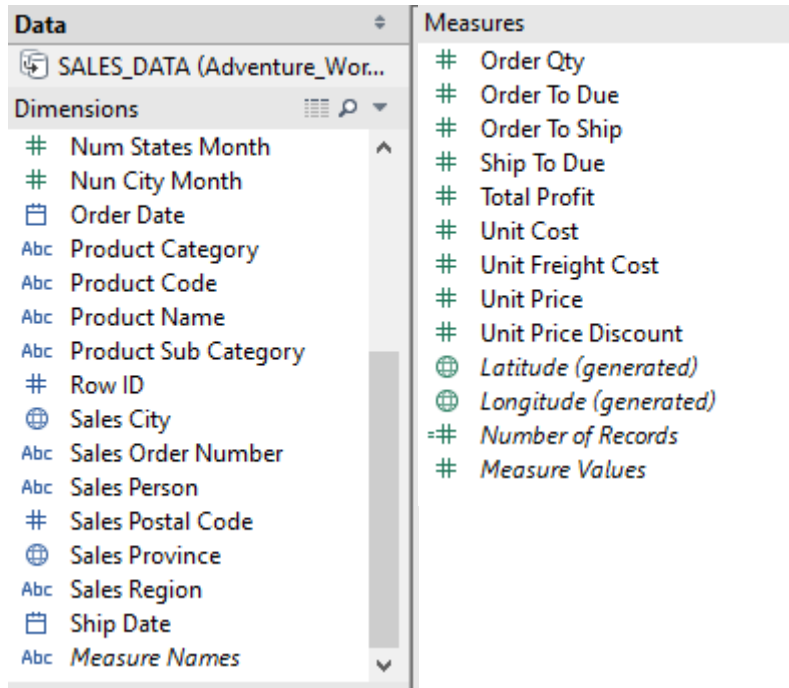
☐ Show hidden fields

Rows 10,000

Row ID #	Sales Order Number Abc	Order Date 📅	Due Date 📅	Ship Date 📅	Sales Person Abc	Sales Region Abc	Sales Province 🌐	Sales City 🌐
1	SO43671	01/07/2005	13/07/2005	08/07/2005	David Campbell	United States	Washington	Bellevue
2	SO43671	01/07/2005	13/07/2005	08/07/2005	David Campbell	United States	Washington	Bellevue
3	SO43671	01/07/2005	13/07/2005	08/07/2005	David Campbell	United States	Washington	Bellevue
4	SO43671	01/07/2005	13/07/2005	08/07/2005	David Campbell	United States	Washington	Bellevue
5	SO43671	01/07/2005	13/07/2005	08/07/2005	David Campbell	United States	Washington	Bellevue
6	SO43671	01/07/2005	13/07/2005	08/07/2005	David Campbell	United States	Washington	Bellevue
7	SO43671	01/07/2005	13/07/2005	08/07/2005	David Campbell	United States	Washington	Bellevue

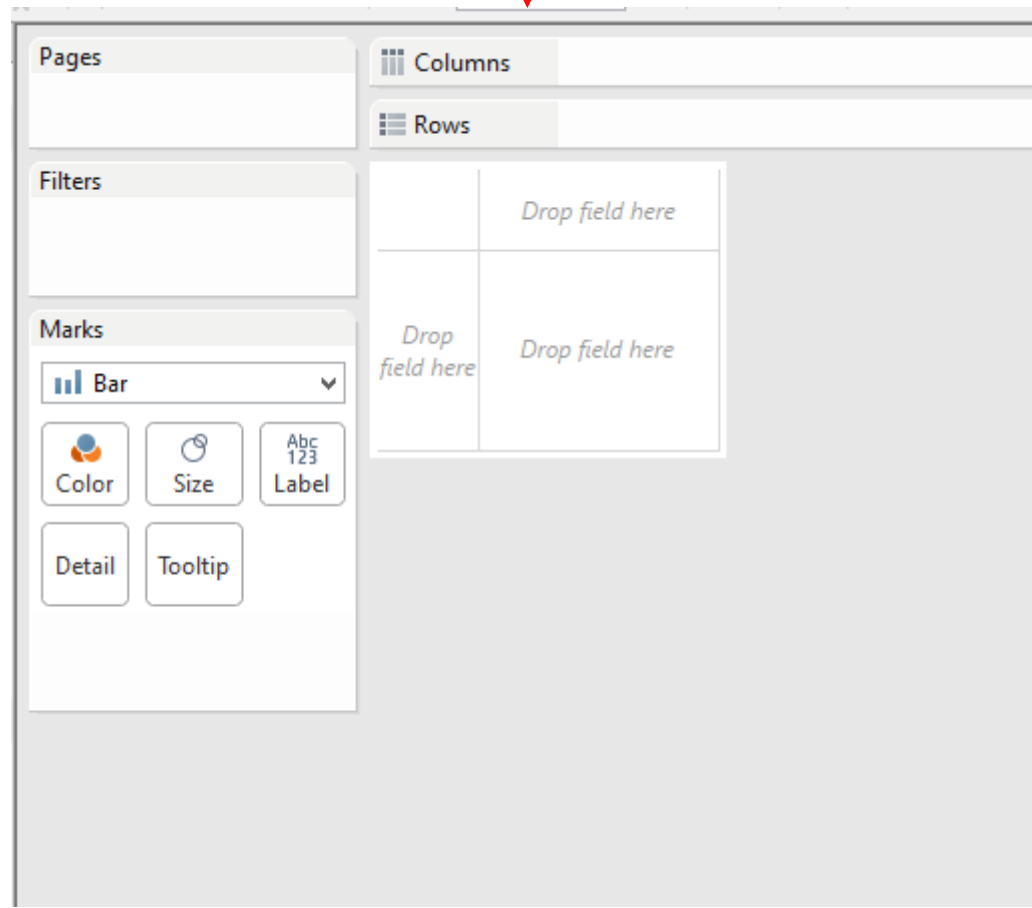
Tableau

Primeira visualização



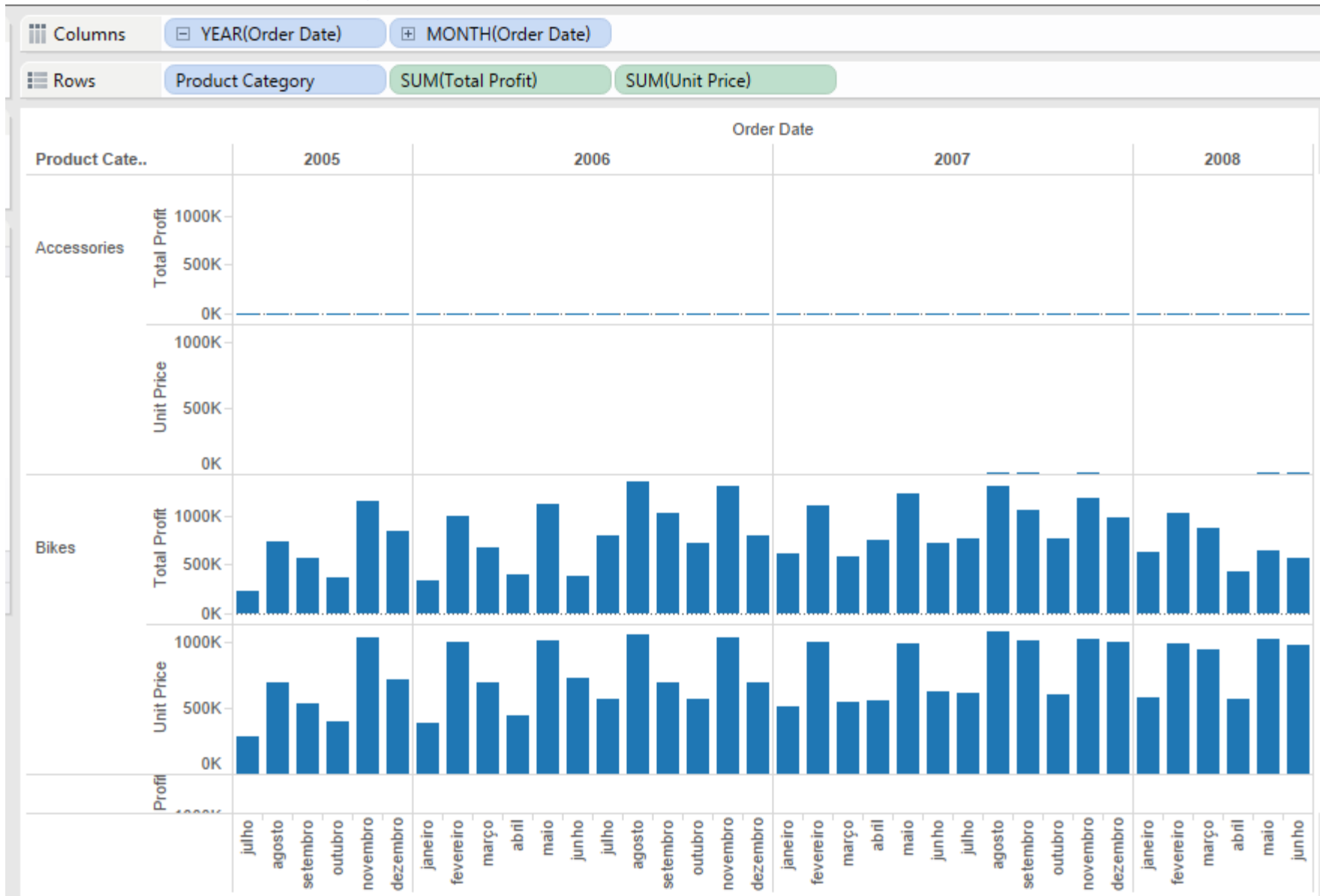
The screenshot shows the Tableau interface with the 'Data' pane on the left and the 'Measures' pane on the right. The 'Data' pane is expanded to show 'Dimensions' and includes fields like 'Num States Month', 'Nun City Month', 'Order Date', 'Product Category', 'Product Code', 'Product Name', 'Product Sub Category', 'Row ID', 'Sales City', 'Sales Order Number', 'Sales Person', 'Sales Postal Code', 'Sales Province', 'Sales Region', 'Ship Date', and 'Measure Names'. The 'Measures' pane lists fields such as 'Order Qty', 'Order To Due', 'Order To Ship', 'Ship To Due', 'Total Profit', 'Unit Cost', 'Unit Freight Cost', 'Unit Price', 'Unit Price Discount', 'Latitude (generated)', 'Longitude (generated)', 'Number of Records', and 'Measure Values'. A red arrow points from the 'Measures' pane towards the main visualization area.

Arraste os campos
para o painel



The screenshot shows the main Tableau visualization area. It features a 'Columns' shelf at the top right, a 'Rows' shelf below it, and a 'Marks' shelf at the bottom left. The 'Columns' shelf is currently empty. The 'Rows' shelf contains a 'Drop field here' prompt. The 'Marks' shelf is set to 'Bar' and includes prompts for 'Color', 'Size', 'Label', 'Detail', and 'Tooltip'. A red arrow points from the 'Measures' pane in the previous image to the 'Columns' shelf.

Primeira visualização



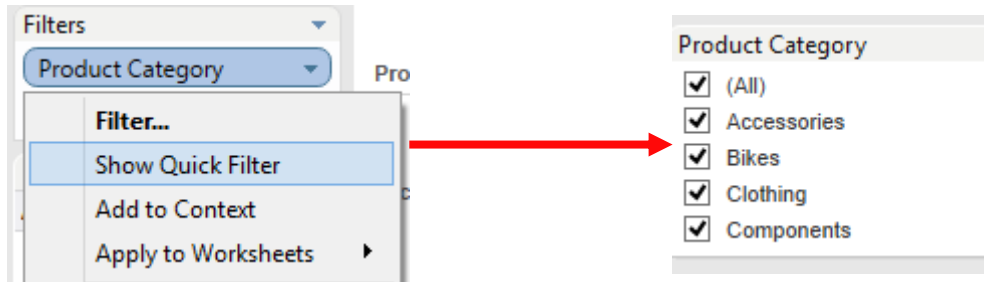
Tableau

Filtro por categoria de produto

The screenshot displays the Tableau interface with the 'Filter [Product Category]' dialog box open. The dialog box is titled 'Filter [Product Category]' and has a close button (X) in the top right corner. It features four tabs: 'General', 'Wildcard', 'Condition', and 'Top'. The 'General' tab is selected, showing the 'Select from list' radio button as the chosen option. Below this, there is a search bar labeled 'Enter Text to Search' and a list of product categories: Accessories, Bikes, Clothing, and Components, all of which are checked. At the bottom of the dialog, there are buttons for 'All', 'None', and 'Exclude' (which is unchecked). A 'Summary' section at the bottom of the dialog shows the following details: Field: [Product Category], Selection: Selected 4 of 4 values, Wildcard: All, Condition: None, and Limit: None. The 'Reset', 'OK', 'Cancel', and 'Apply' buttons are located at the bottom of the dialog. In the background, the Tableau interface is visible, showing the 'Data' pane on the left with the 'SALES_DATA (Adventure_Wor...' data source. The 'Dimensions' list includes Customer Name, Customer Postal Code, Customer Province, Customer Region, Due Date, Lineltem Id, Num Cust Month, Num States Month, Nun City Month, Order Date, Product Category, Product Code, Product Name, Product Sub Category, Row ID, and Sales City. The 'Measures' list includes Order Qty, Order To Due, Order To Ship, Ship To Due, Total Profit, Unit Cost, Unit Freight Cost, Unit Price, Unit Price Discount, Latitude (generated), Longitude (generated), Number of Records, and Measure Values. The 'Columns' shelf contains 'YEAR(Order Date)' and 'MONTH(Order Date)'. The 'Marks' shelf is set to 'All'. A red arrow points from the 'Product Category' dimension in the Data pane to the 'Filter [Product Category]' dialog box.

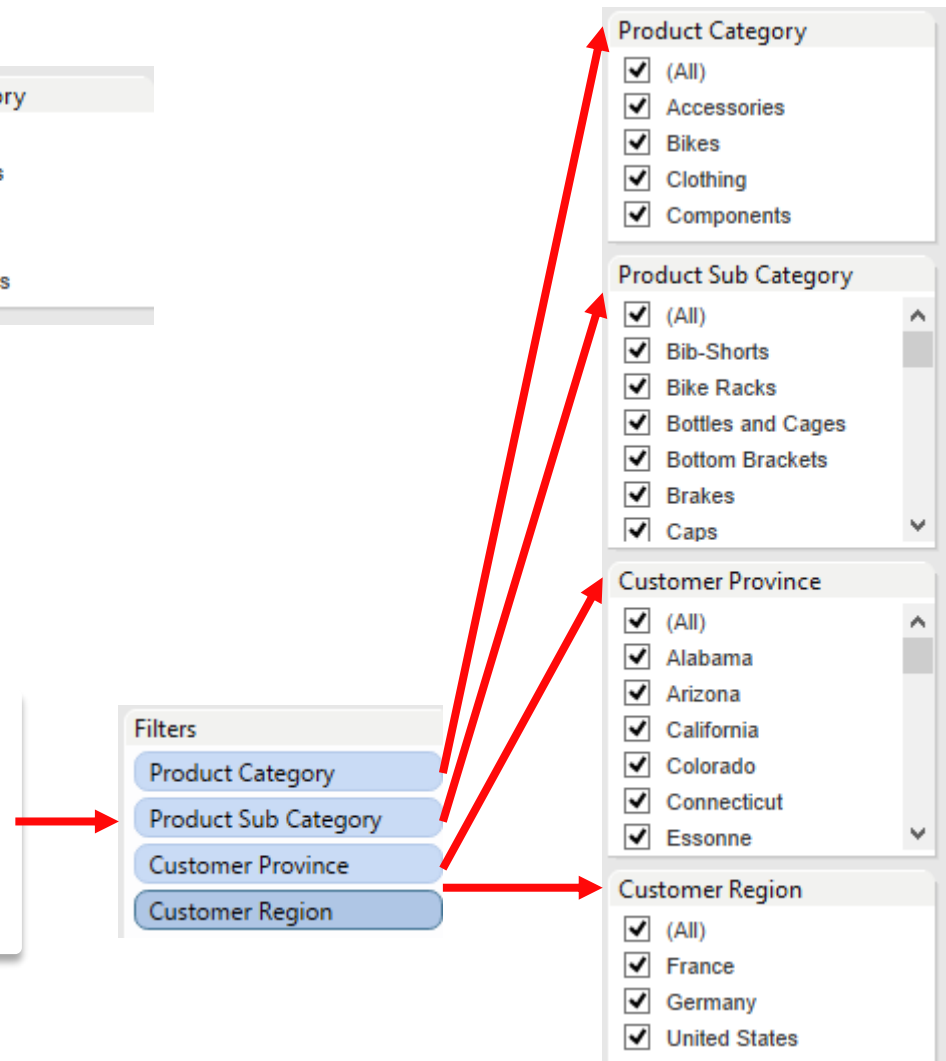
Tableau

Filtro por categoria de produto



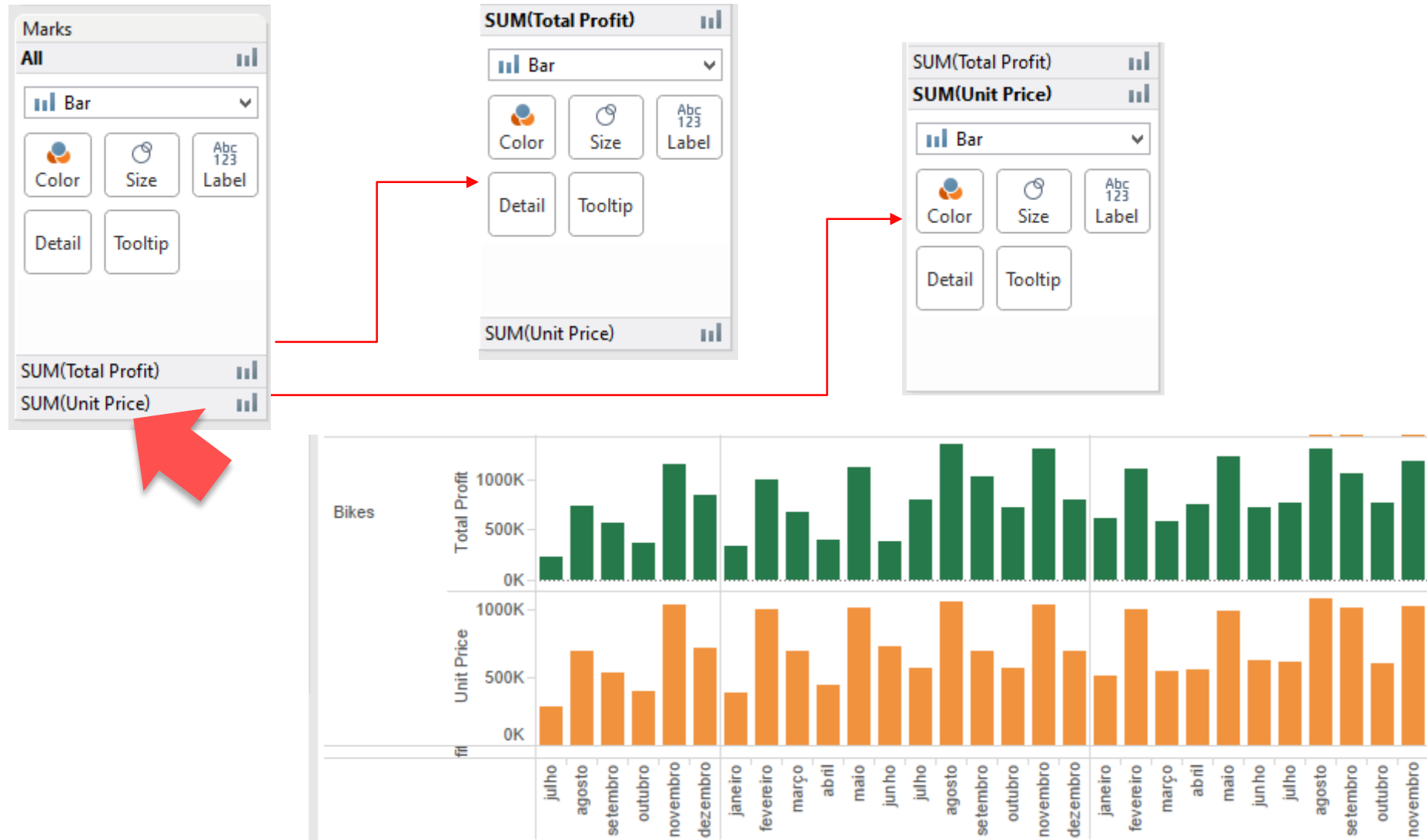
Adicionando mais filtros

- Subcategoria de produtos
- Província
- Região de Vendas



Tableau

Personalizando as cores



Tableau

Renomeando planilha e labels

The image shows a Tableau interface with a dashboard titled 'Customer Region'. The dashboard contains two bar charts: 'Total Profit' and 'Unit Price'. The 'Unit Price' chart is currently selected, and its axis is being edited in the 'Edit Axis [Unit Price]' dialog box.

Tableau Interface Elements:

- Customer Region** (Dashboard Title)
- Accessories** (Filter)
- Marks** (SUM(Total Profit), SUM(Unit Price))
- Columns** (julho, agosto)
- Rows** (Total Profit, Unit Price)

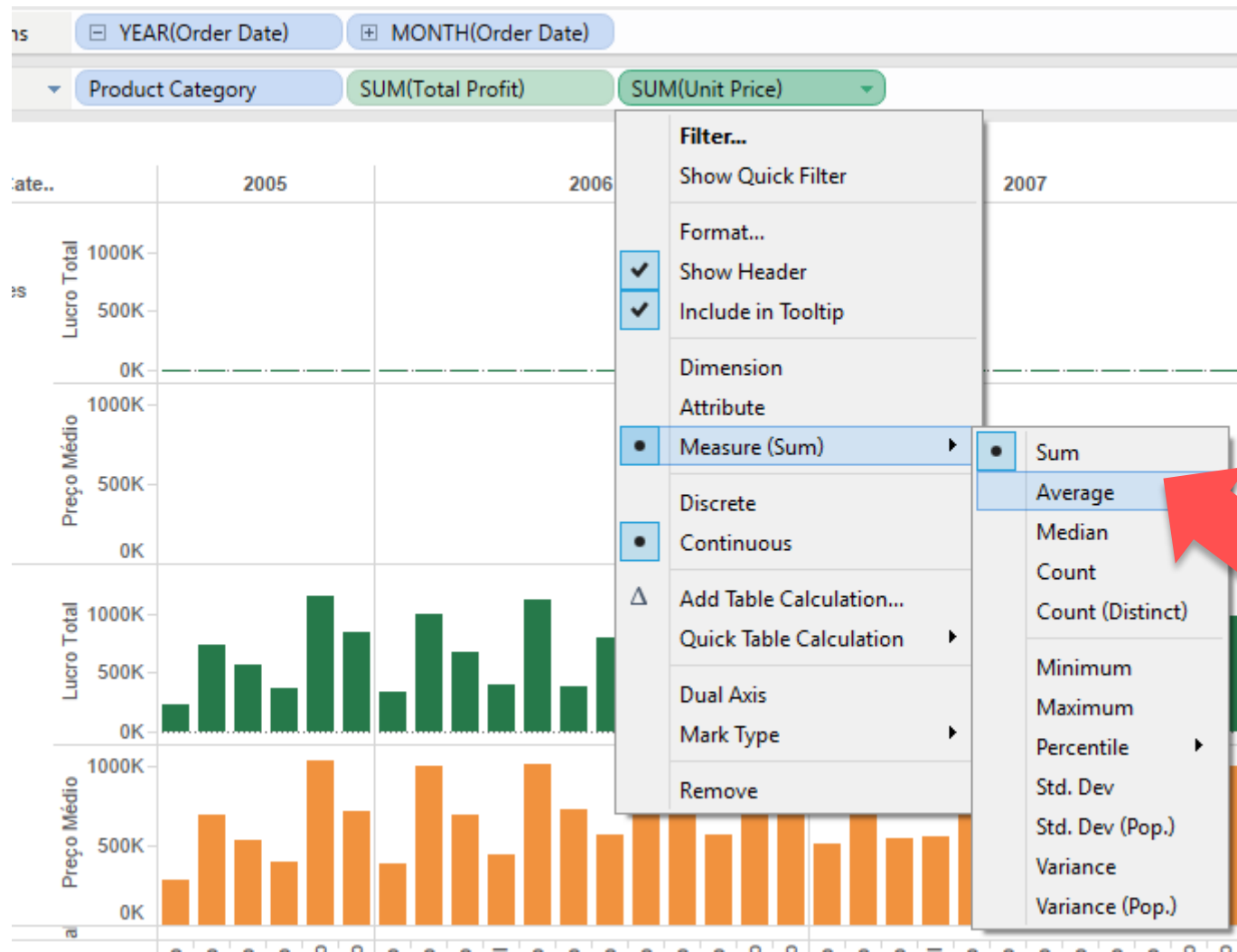
Edit Axis [Unit Price] Dialog Box:

- General** tab selected.
- Range** section:
 - ☒ Automatic (includes ☒ Include zero)
 - ☐ Uniform axis range for all rows or columns
 - ☐ Independent axis ranges for each row or column
 - ☐ Fixed
- Start:** 0
- End:** 1.136.180,8185
- Scale** section:
 - ☐ Reversed
 - ☐ Logarithmic
- Titles** section:
 - Title:** Preço Médio
 - Subtitle:** (empty)
 - ☒ Automatic

Buttons: Clear, OK, Cancel, Apply.

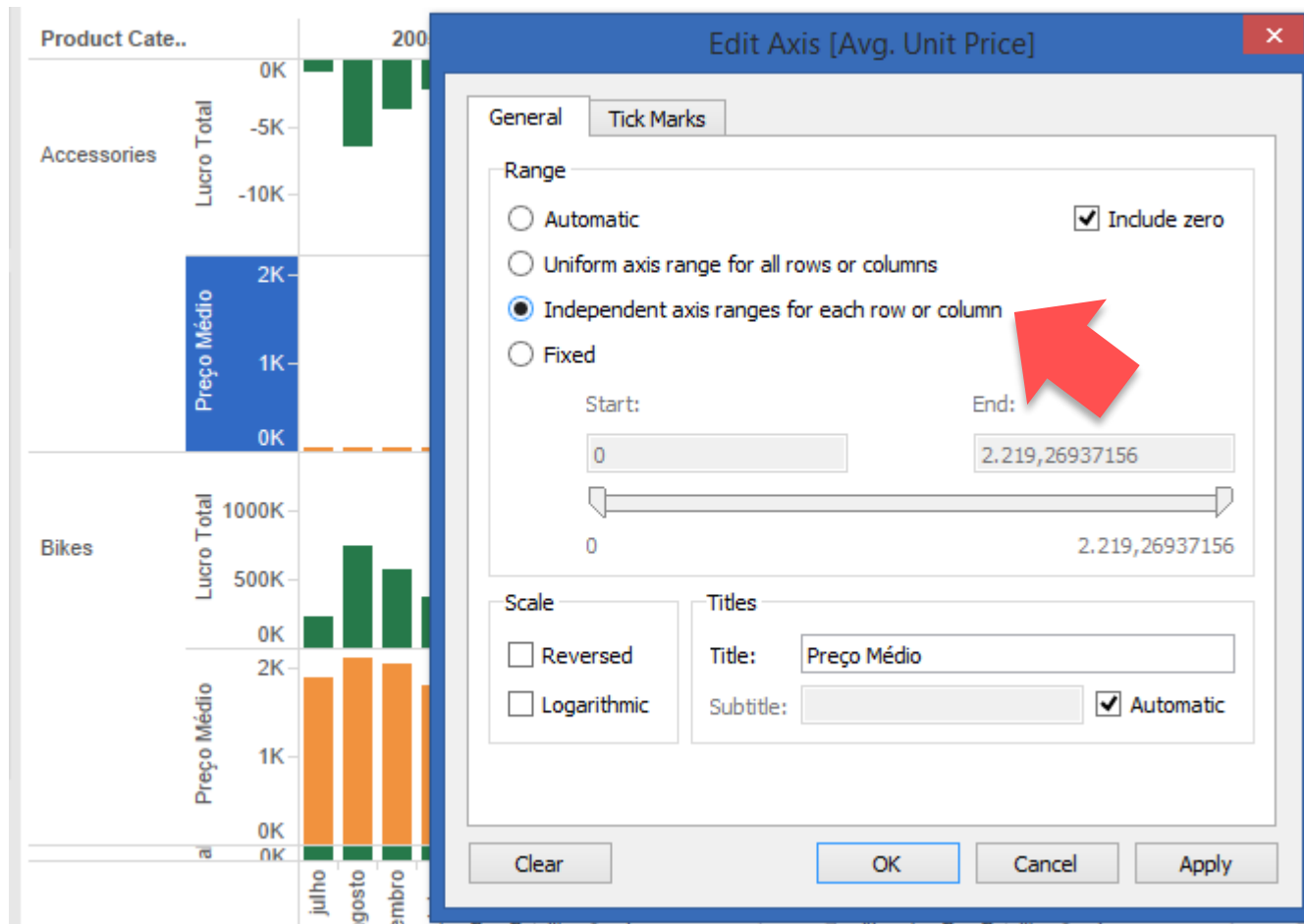
Tableau

Alterando tipo de medida



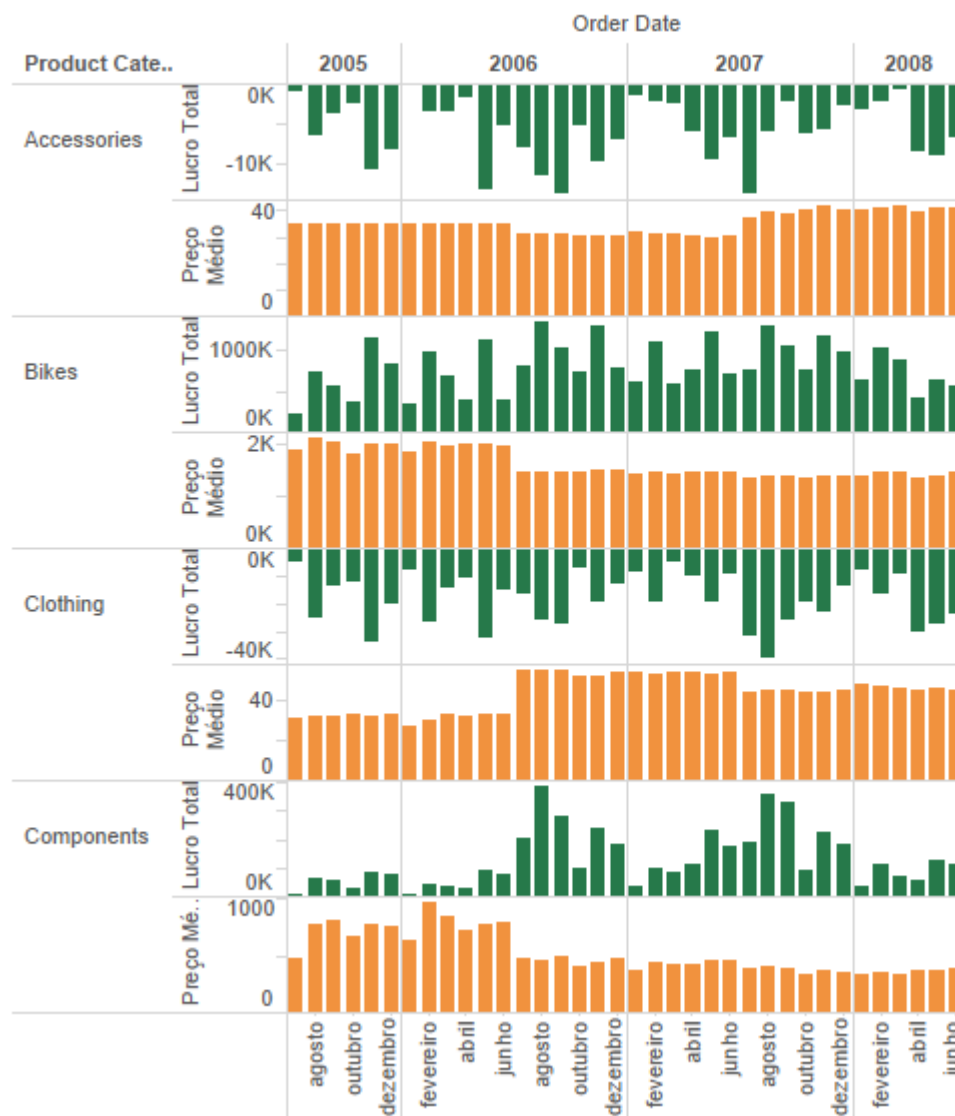
Tableau

Alterando as escalas dos eixos



Seu primeiro Dashboard!

Visão Geral



Product Category

- ☒ (All)
- ☒ Accessories
- ☒ Bikes
- ☒ Clothing
- ☒ Components

Product Sub Category

- ☒ (All)
- ☒ Bib-Shorts
- ☒ Bike Racks
- ☒ Bottles and Cages
- ☒ Bottom Brackets
- ☒ Brakes
- ☒ Caps
- ☒ Chains
- ☒ Cleaners

Customer Province

- ☒ (All)
- ☒ Alabama
- ☒ Arizona
- ☒ California
- ☒ Colorado
- ☒ Connecticut
- ☒ Essonne
- ☒ Florida
- ☒ Garonne (Haute)

Customer Region

- ☒ (All)
- ☒ France
- ☒ Germany
- ☒ United States

Business Intelligence