

PROGRAM

DATA SCIENCE [DAY-7]

FGA KOMINFO 2022



RULE KELAS

FEEL FREE TO ASK

ACF

CALM AND LEARN TOGETHER

ACTIVE

TEKNIS

LOCAL

1. Install Anaconda, jika sudah klik Anaconda Prompt dibuka as administrator
2. Ketikan berikut ini di halaman prompt dengan update pip dengan:

```
python -m pip install --upgrade pip
```

4. Install jupyter notebook:

```
python -m pip install jupyter
```

5. Buka dengan mengetikan:

```
jupyter notebook
```

ONLINE

Jika kamu ingin akses secara online untuk pembelajaran python dapat melalui link dibawah ini ya!

[BIT.LY/BELAJARBERSAMAKOHKRIS](https://bit.ly/belajarbersamakoHKRIS)

CLASS PROGRAM [13 Sep – 20 Okt]

PROGRAM 1

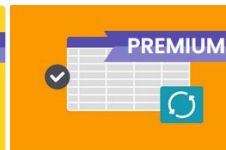
1. Introduction to Data Science with Python
2. Python Fundamental for Data Science
3. Fundamental SQL using Select Statement
4. Fundamental SQL using Function and Group By



Introduction to Data Science with Python



Python Fundamental for Data Science



Fundamental SQL with SELECT Statement



Fundamental SQL Using FUNCTION and GROUP BY

PROGRAM 2

1. Fundamental SQL using Inner Join & Union
2. Exploratory data analysis with Python for Beginner



Fundamental SQL Using INNER JOIN and UNION



Exploratory Data Analysis with Python for Beginner

PROGRAM 3

1. Fundamental Data Visualization with Python
2. Data visualization with Python Matplotlib for Beginner



Fundamental Data Visualization with Python



Data Visualization with Python Matplotlib for Beginner - Part 1



Data Visualization with Python Matplotlib for Beginner - Part 2

PROJECT CAPSTONE

[PRESENTATION 20 Okt]

TASK

1. Peserta membuat visualisasi terkait “Data Covid19 Indonesia”
2. Peserta menyampaikan materi dalam .pptx dan .ipynb
3. Peserta dibebaskan dalam melakukan visualisasi
4. Peserta diharapkan mempelajari berikut ini:



SUBMISSION

Tuliskan ceritamu tentang hasil
visualisasi yang kamu buat dan
tag DQlab, Mentor di LINKEDIN



Abel Kristanto Widodo
Researcher | Data Scientist | Renewable Energy Enthusiast | Fintech Enthusiast
Kyoto, Japan - [Contact Info](#)



DQLab
Belajar Data Science Online Kapan Saja dan Dimana Saja!
Professional Training and Coaching - Tangerang, Banten - 18,054 followers

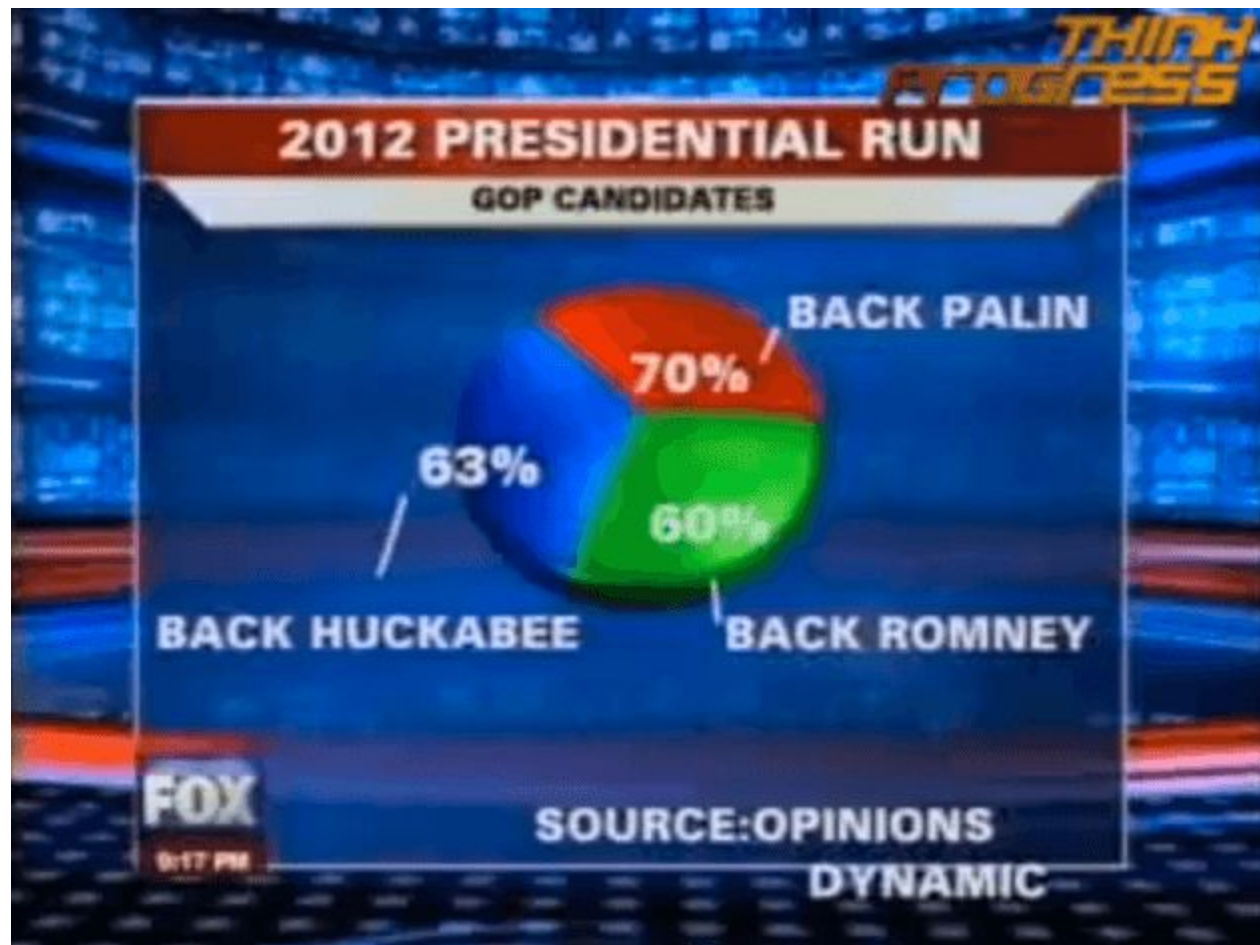


CLASS PROGRAM 3

OUR AGENDA

Fundamental Data Visualization
with Python

TEMUKAN YANG UNIK



MINT GRAPHITI

NO MEETING OF MINDS

I will use the word 'pyaar' and we will continue to look at it as something we are doing from our 'dil'.

S.N. SUBRAHMANYAN

MD and CEO, Larsen and Toubro



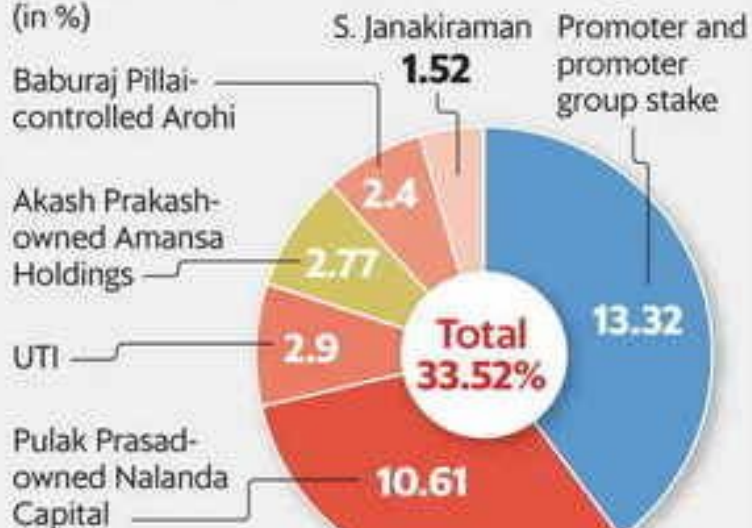
Whether the deal is done by reckless pursuit of scale or driven by ego is the question that needs to be answered.

ROSTOW RAVANAN

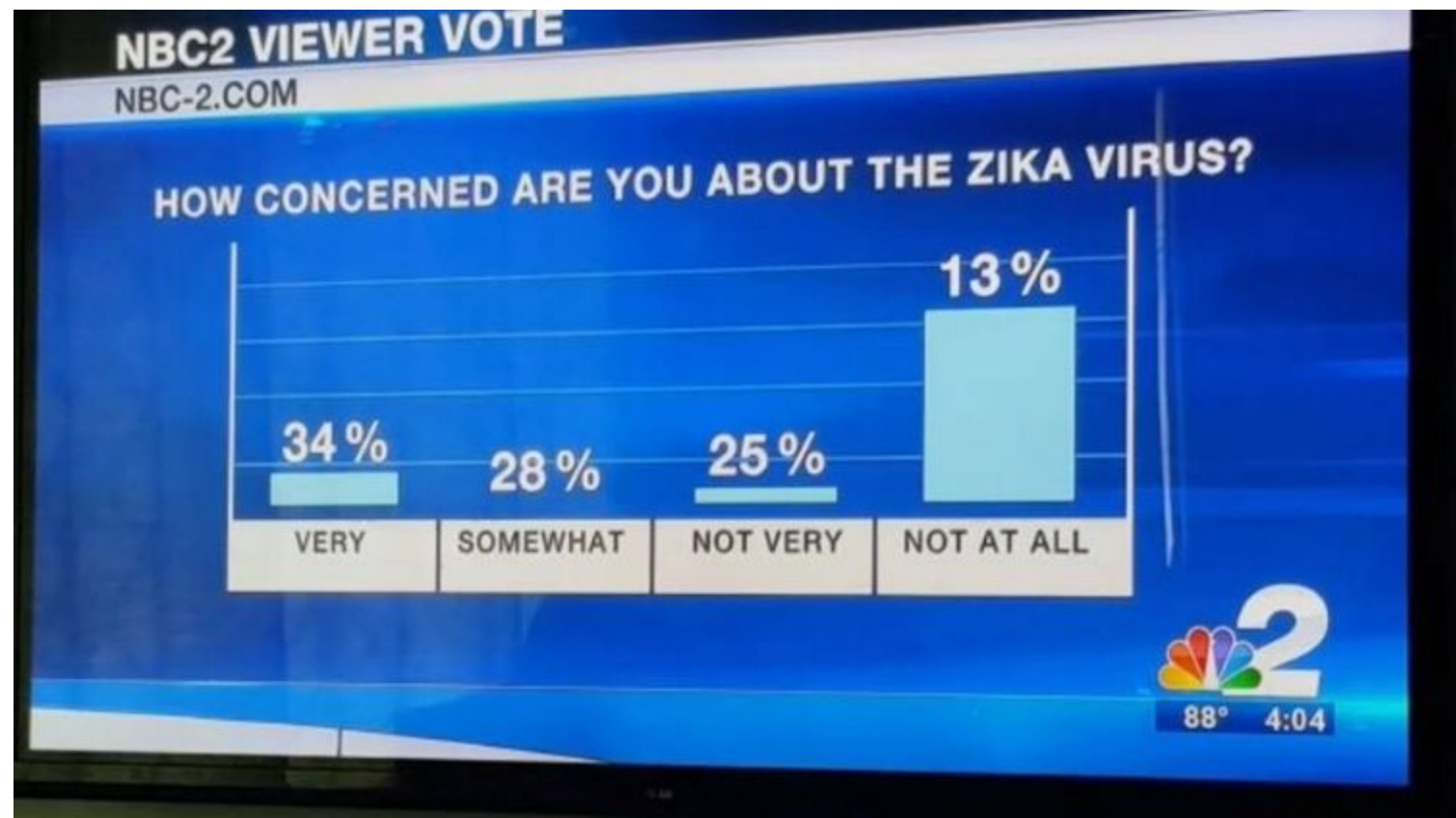
MD and CEO, Mindtree

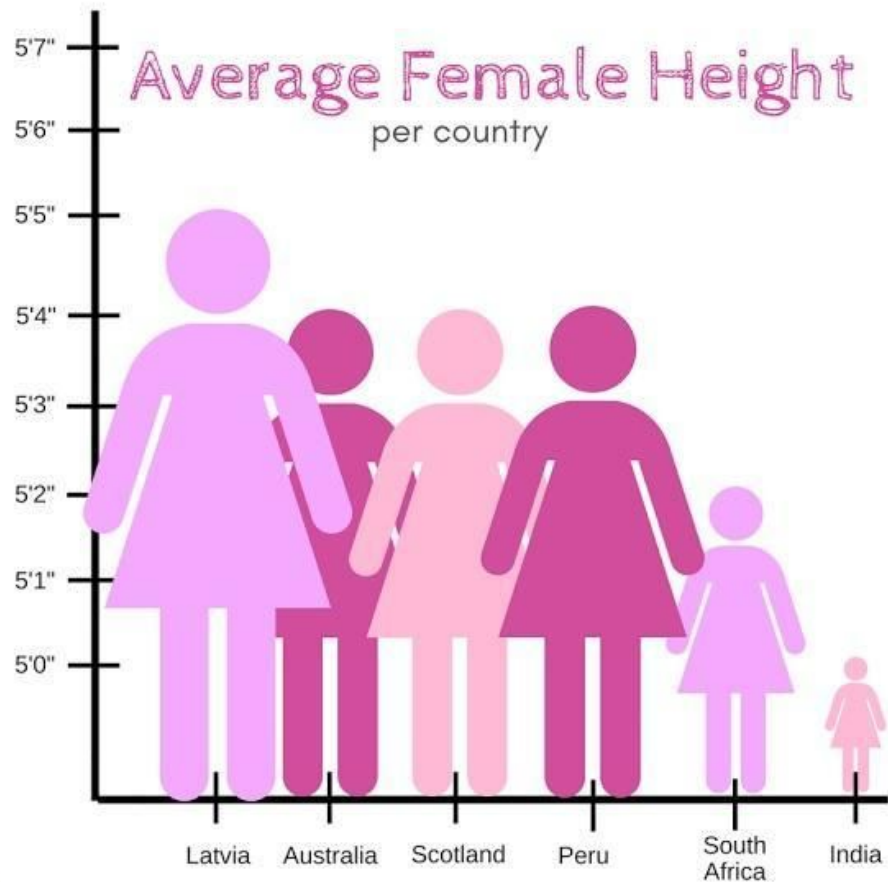
Mindtree promoters claim to have 33.52% shareholders' backing

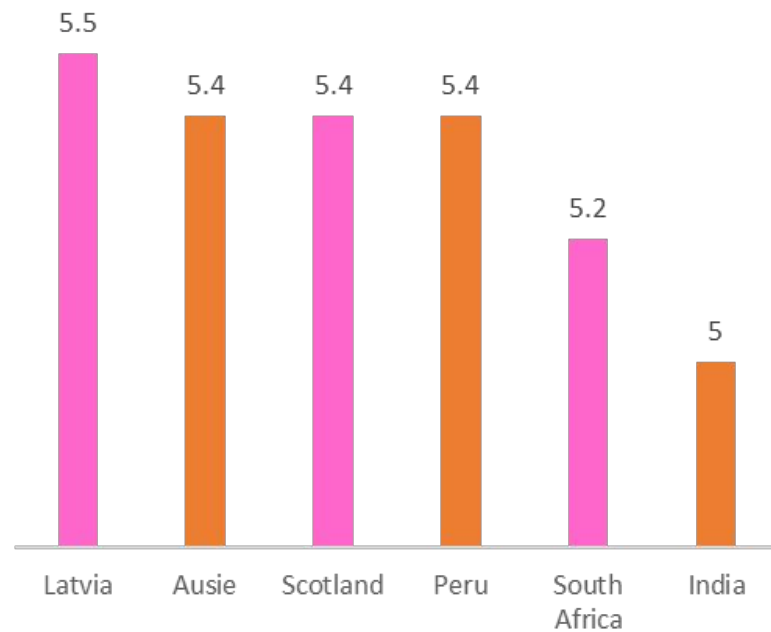
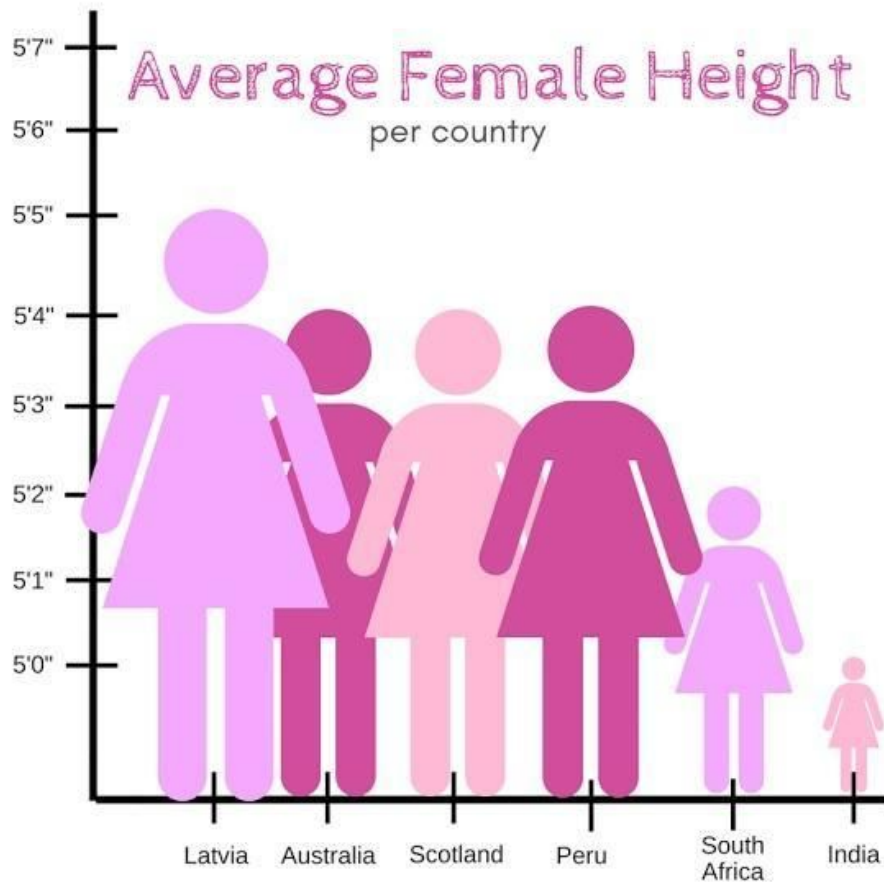
(in %)



Source: Bloomberg

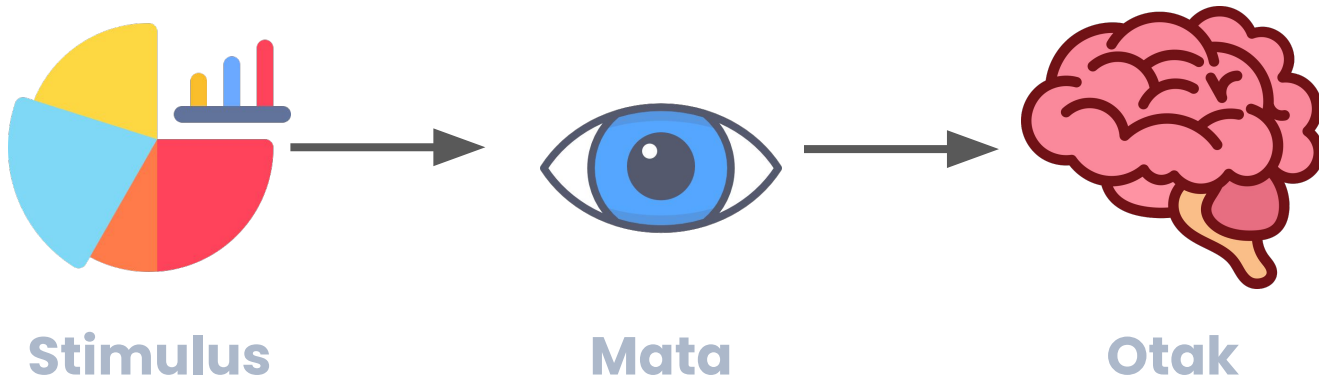






PERSEPSI VISUAL

PERSEPSI VISUAL



KEMANA MATA MEMANDANG







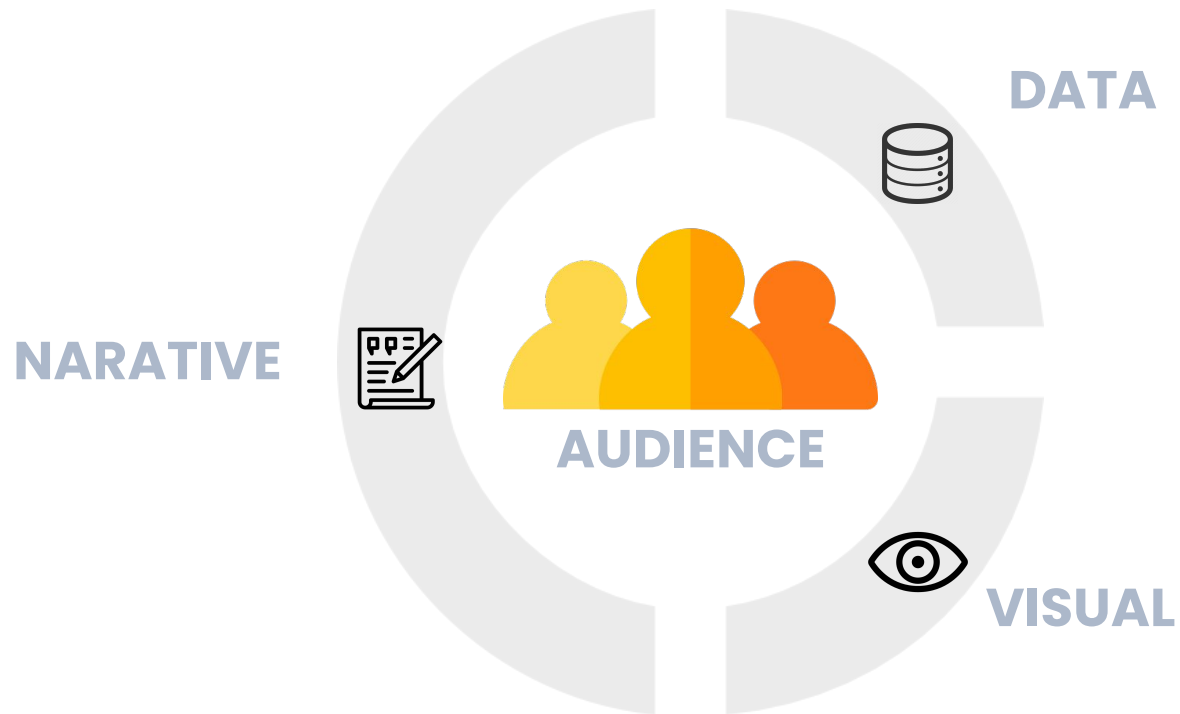


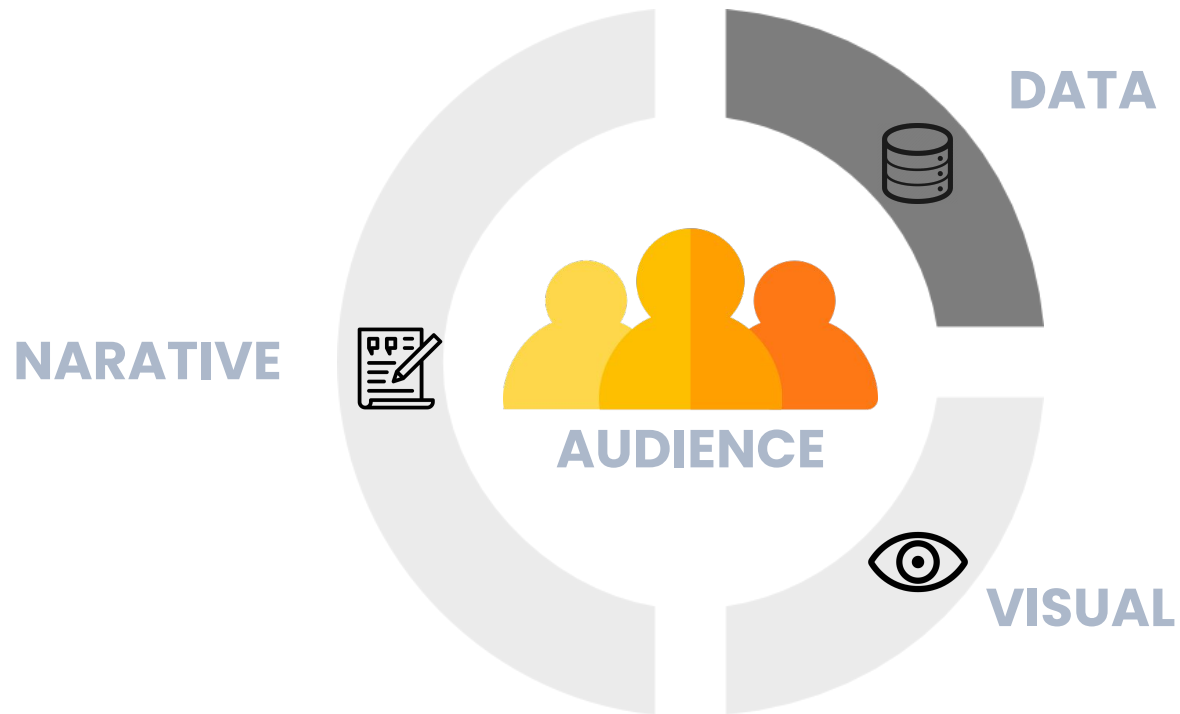
2	4	3	3	5	6	2	9	4	5	1
5	5	1	5	4	4	7	7	3	3	4
2	3	5	7	3	4	5	6	1	5	5
7	6	5	4	3	3	3	7	8	1	6
6	6	1	7	9	0	6	4	2	4	6
4	4	6	4	7	4	5	5	4	4	7

2	4	3	3	5	6	2	9	4	5	1
5	5	1	5	4	4	7	7	3	3	4
2	3	5	7	3	4	5	6	1	5	5
7	6	5	4	3	3	3	7	8	1	6
6	6	1	7	9	0	6	4	2	4	6
4	4	6	4	7	4	5	5	4	4	7

2	4	3	3	5	6	2	9	4	5	1
5	5	1	5	4	4	7	7	3	3	4
2	3	5	7	3	4	5	6	1	5	5
7	6	5	4	3	3	3	7	8	1	6
6	6	1	7	9	0	6	4	2	4	6
4	4	6	4	7	4	5	5	4	4	7

FRAMEWORK STORYTELLING DATA





DATA JOURNEY



COLLECT

1. Manual input
2. Database
3. Manipulation
4. Cloud
5. Others



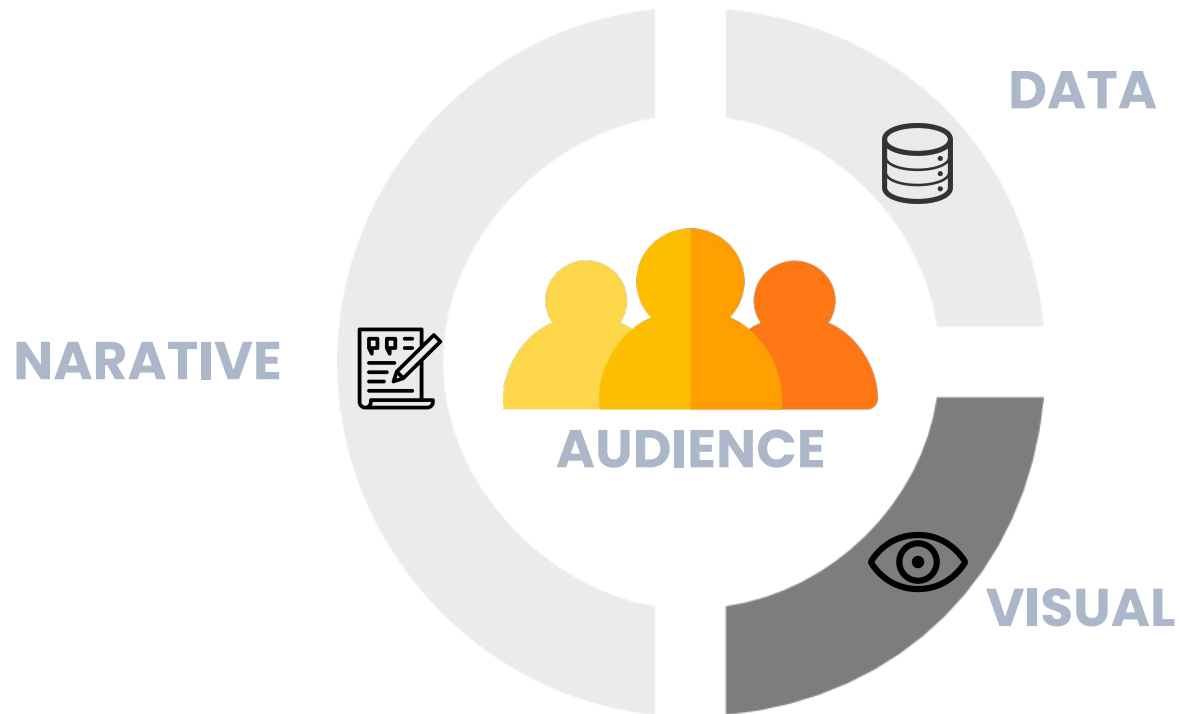
ANALYZE

1. Formula
2. Forecast
3. Modelling
4. Pivot



VISUALIZE

1. Charts
2. Story boards



ANATOMI PENYAJIAN DATA



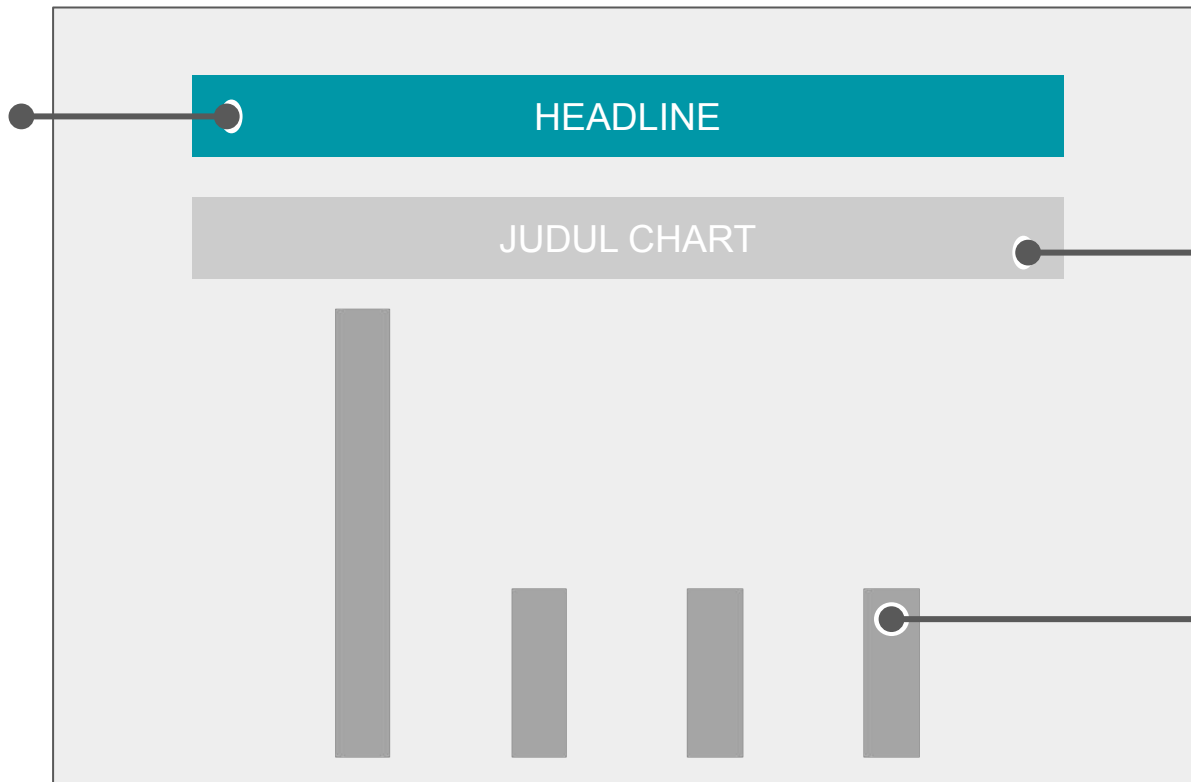
Tipe Chart

Pilih chart yang tepat jelaskan data

ANATOMI PENYAJIAN DATA

Headline

Statement rangkuman dari insight data



HEADLINE

JUDUL CHART

Judul Chart

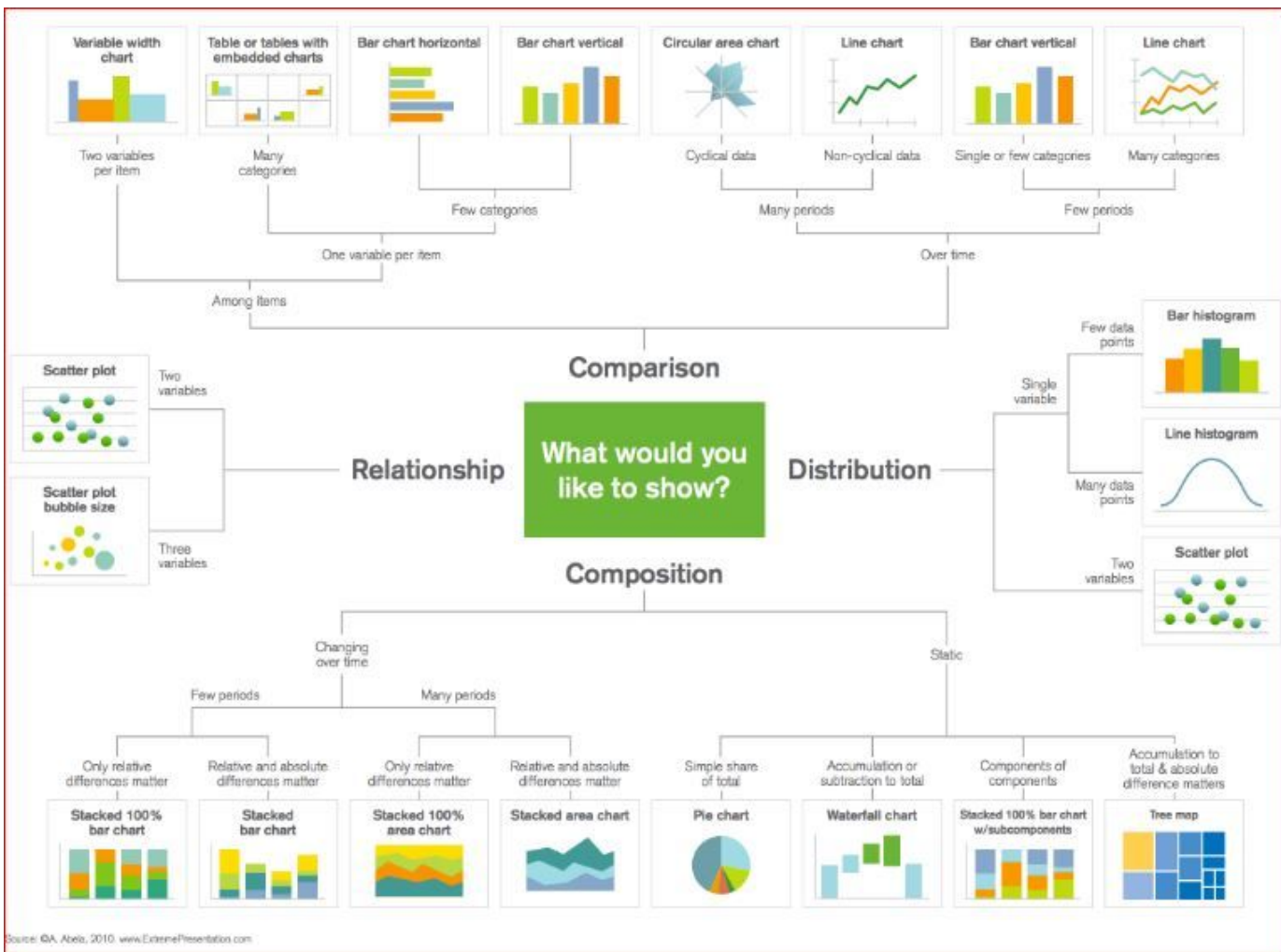
Penjelasan chart yang akan disajikan (What, When, Measurement)

Tipe Chart

Pilih chart yang tepat jelaskan data

TIPS MEMILIH CHART

Relasi | Komposisi | Komparasi | Distribusi



BIG NUMBERS / IMPACT METRICS

Jika hanya menampilkan sebagai summary



7%

YoY Growth
2020/2021



16%

YoY Data Process
2020/2021



1%

YoY Profit
2020/2021

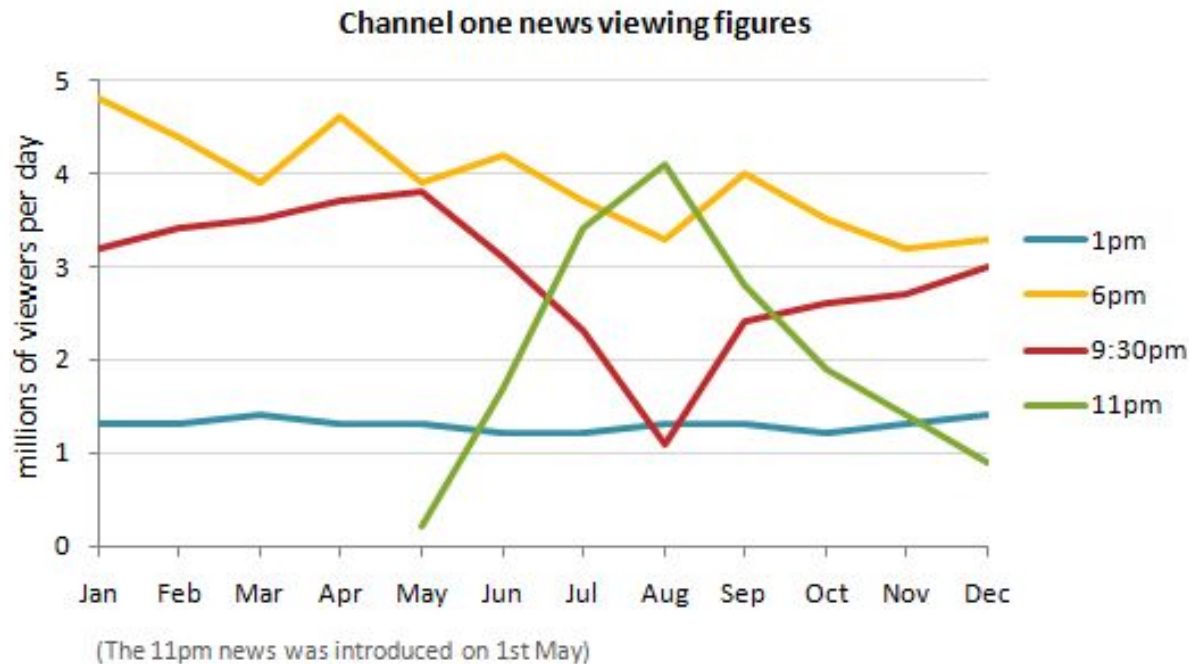
TABEL

Jika ingin menampilkan dengan metriks dan dimensionalnya

	Toko A	Toko B	Toko C	Total
Aug	87	16	8	111
Sep	98	20	9	127
Okt	105	34	9	148
Nov	117	44	8	169
Des	142	54	15	211

LINE CHART

Jika ingin menampilkan trend dan growth



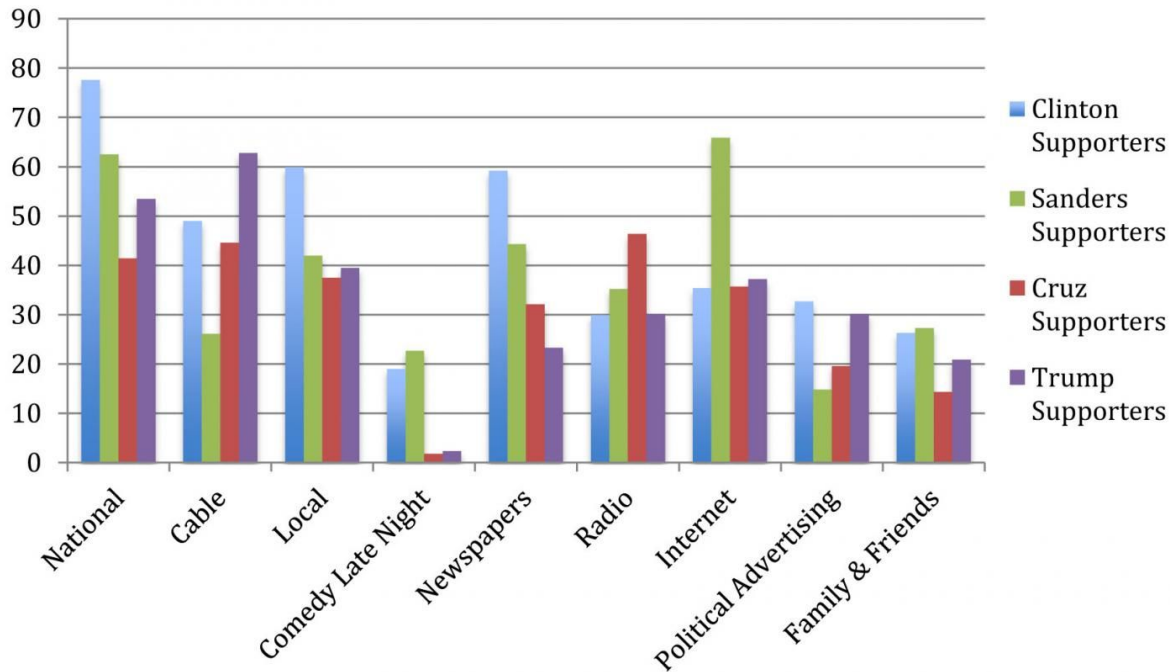
Hindari

1. Data Kategorikal
2. Garis terlalu banyak

VERTICAL BAR CHART

Jika ingin menampilkan growth dan perbandingan

Frequent Use of Media by Supporters



Hindari

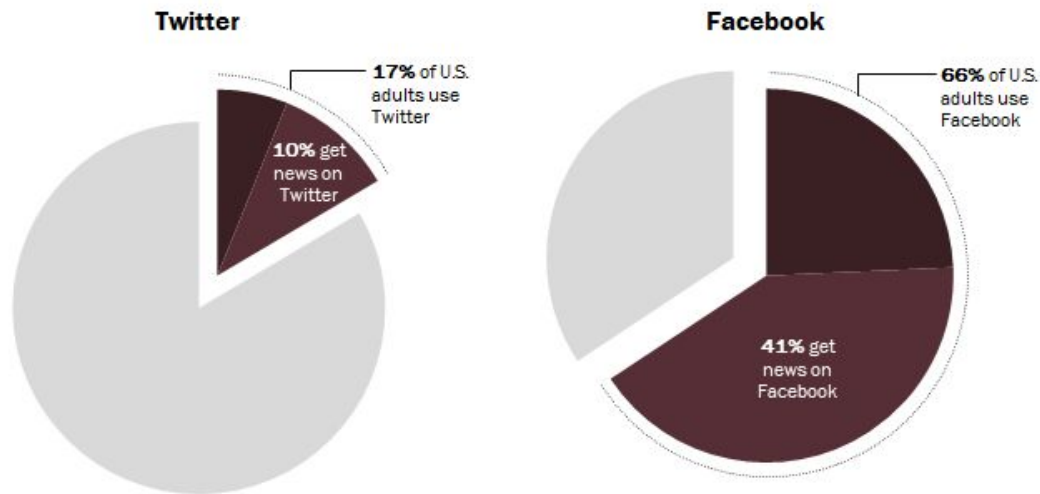
1. Ranking
2. Label sumbu X terlalu banyak

PIE/DONAT CHART

Jika ingin menampilkan komposisi atau proporsi data

One-in-Ten U.S. Adults Get News on Twitter, While About Four-in-Ten Get News on Facebook

% of U.S. adults who use and get news from each site



Social Media and News Survey, March 13-15 & 20-22, 2015. Q1, Q2, Q3, Q4.

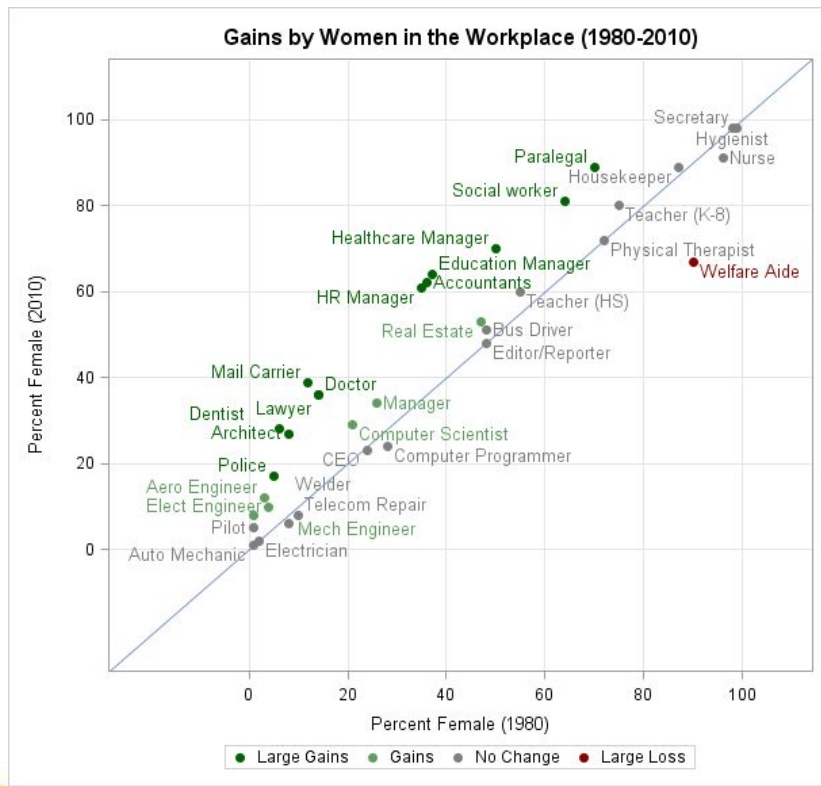
PEW RESEARCH CENTER

Hindari

1. terlalu banyak kategori
2. wajib menggunakan data label

SCATTER CHART

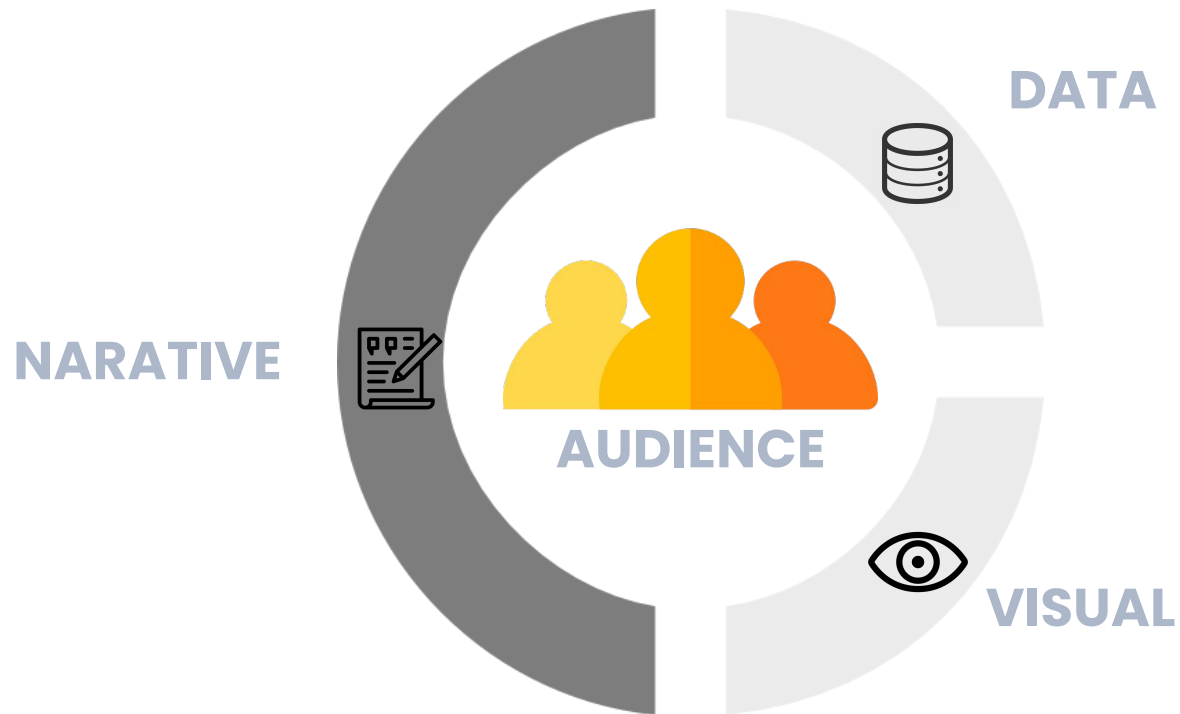
Jika ingin menampilkan korelasi



Hindari

1. dimensi tanpa korelasi
2. datasetnya minimum

**Tidak ada chart yang salah,
tetapi selalu ada chart yang
lebih baik**





**Pahami
Konteks**



**Memilih
Visual**



**Fokus
Audience**



**Buat
Story**



**Ada
Pertanyaan?**