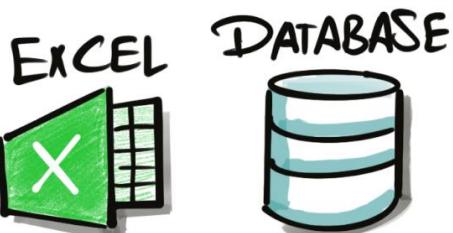
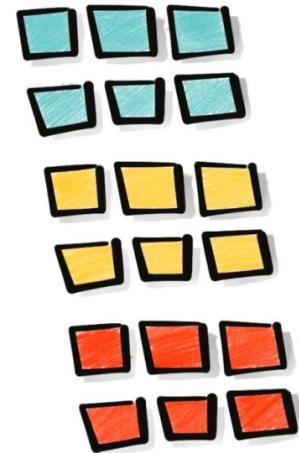


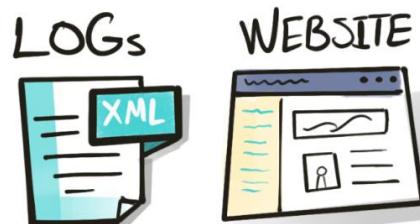
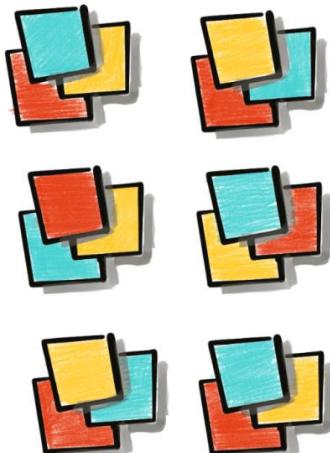


VARIETY

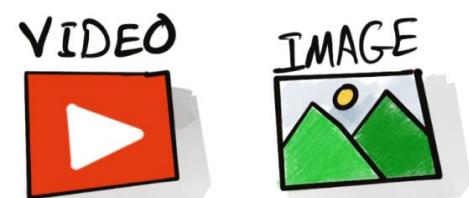
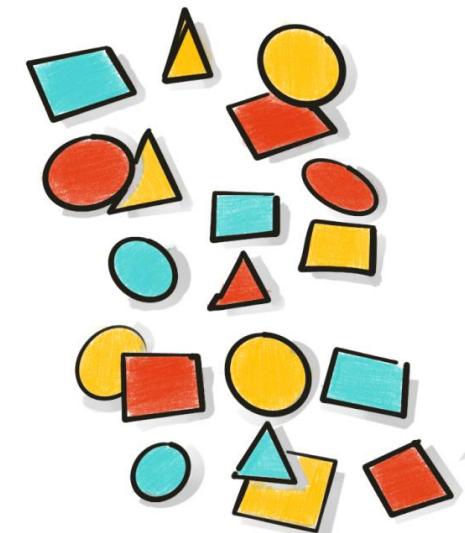
STRUCTURED



SEMI-STRUCTURED

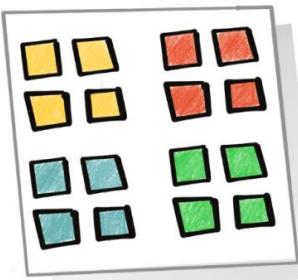


UNSTRUCTURED



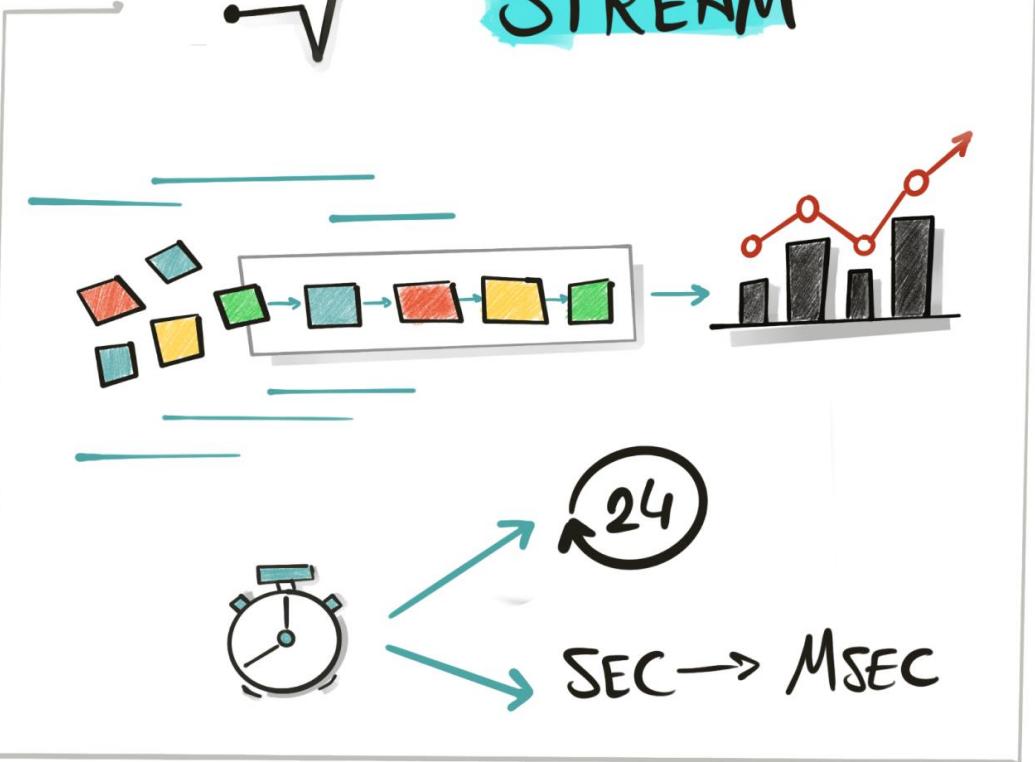


VELOCITY

**BATCH**

once a day

Hours → Mins

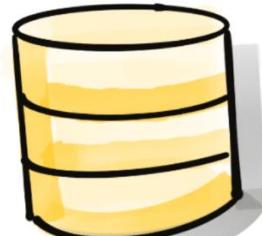
**STREAM**



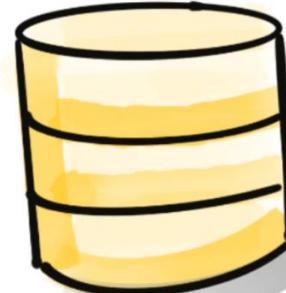
VOLUME



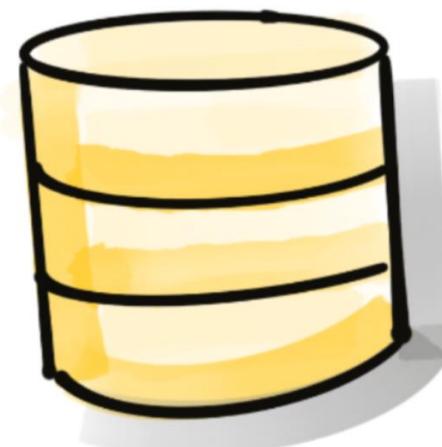
MB



GB



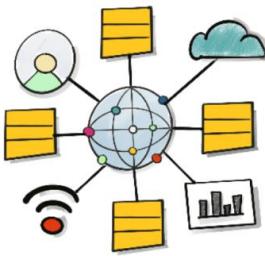
TB



PB

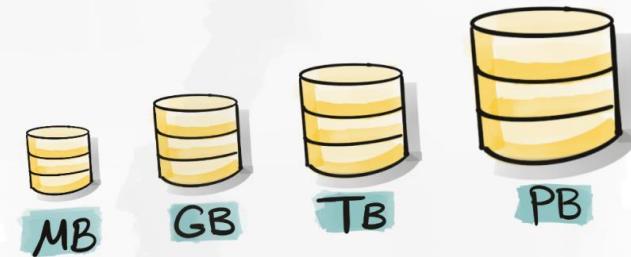


VELOCITY



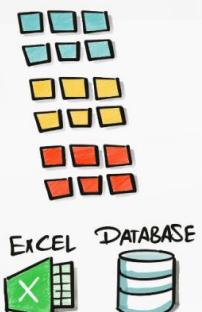
BIG DATA

VOLUME

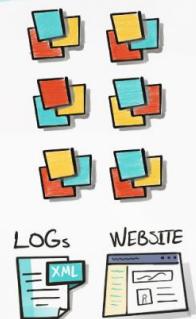


VARIETY

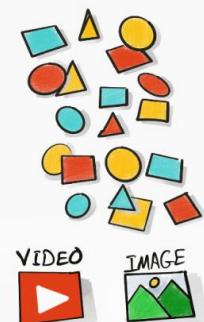
STRUCTURED



SEMI-STRUCTURED



UNSTRUCTURED





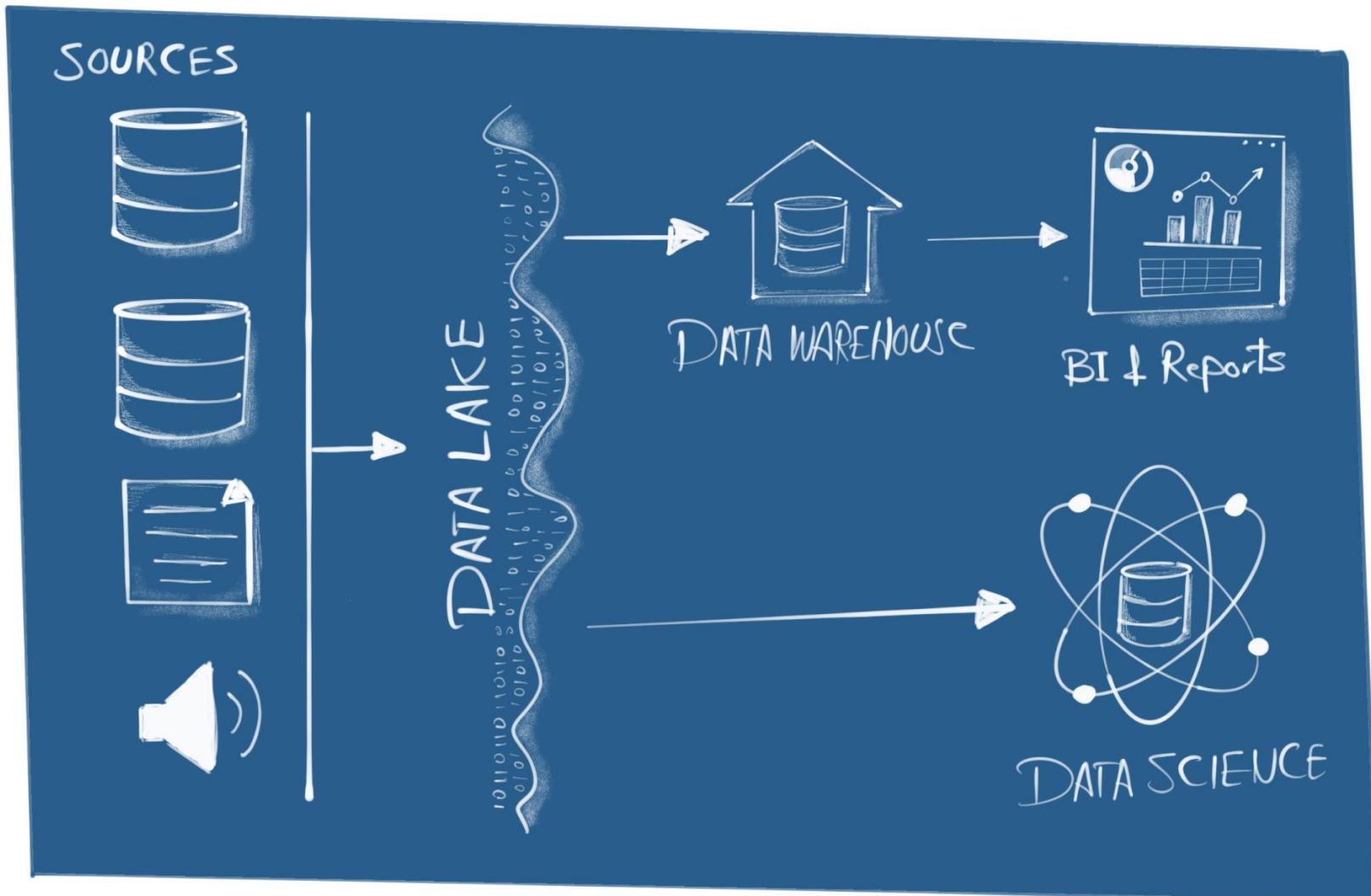
+ a b | e a u

DATA ARCHITECTURE

DATA WITH BARAA



Blueprint





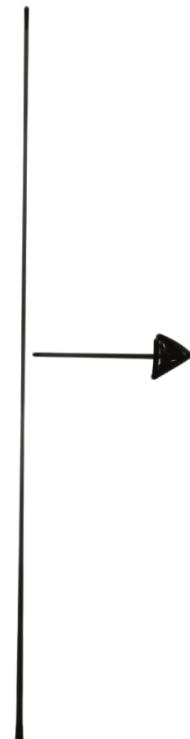
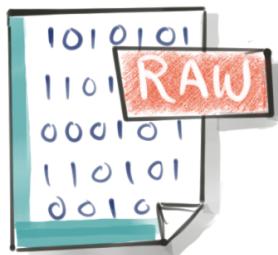
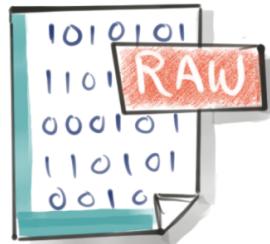
+ a b | e a u

DATA MODELING

DATA WITH BARAA

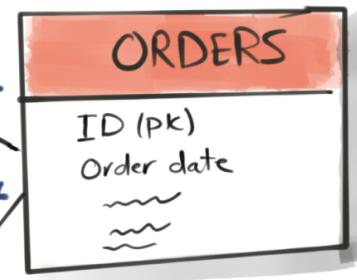


RAW DATA



1

DATA MODEL
Logical



*

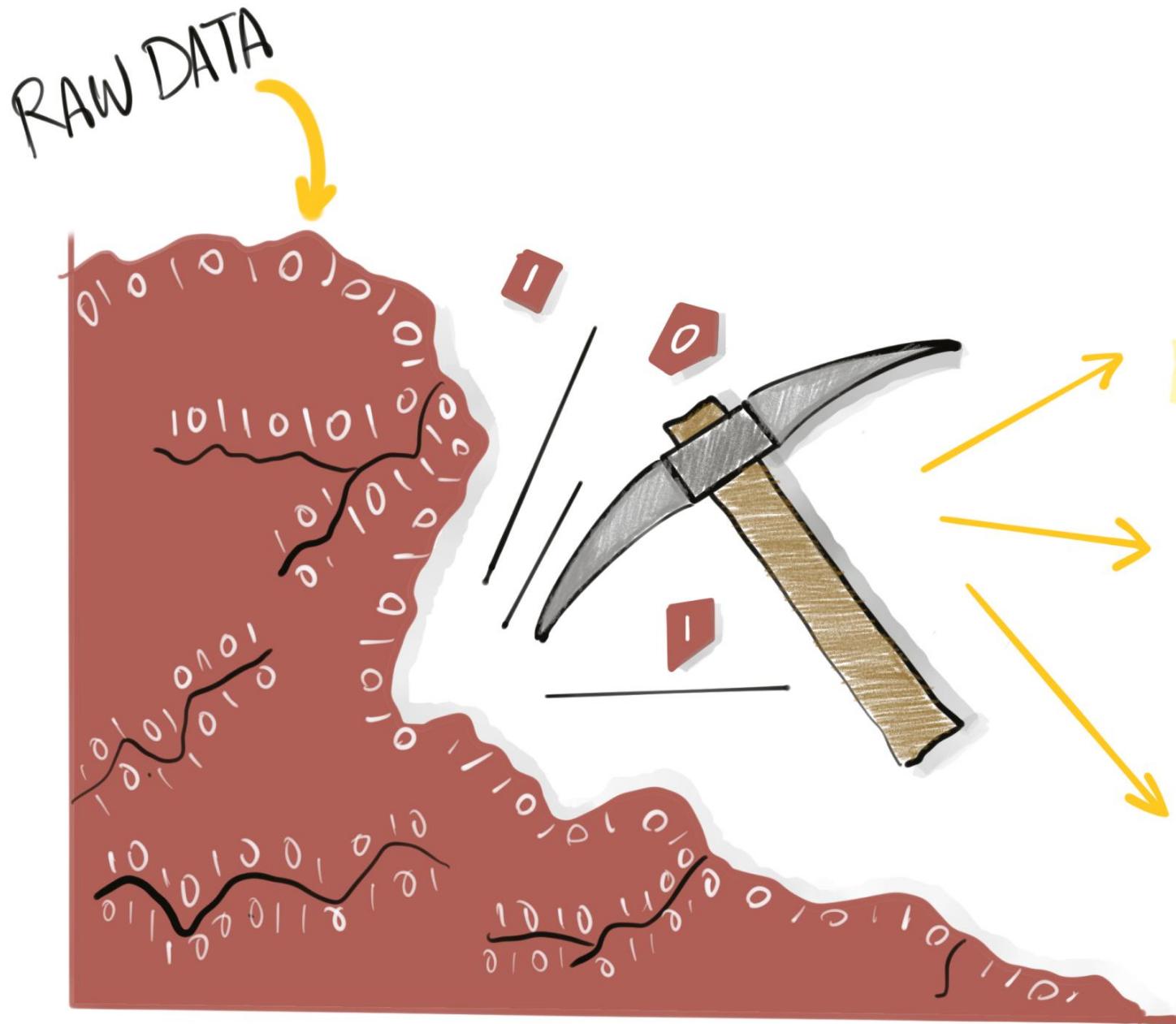
*



+ a b | e a u

DATA MINING

DATA WITH BARAA





+ a b | e a u

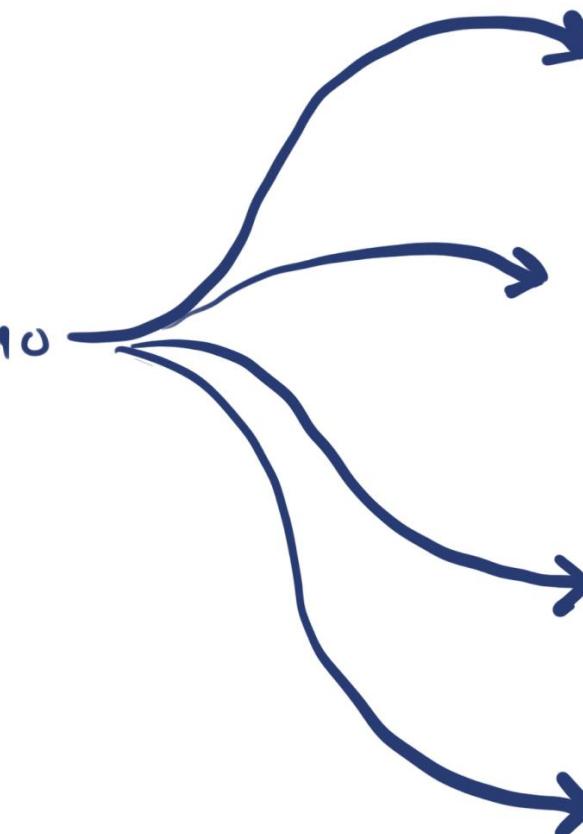
DATA VISUALIZATION

DATA WITH BARAA

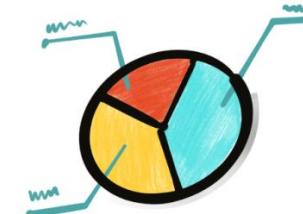


RAW DATA

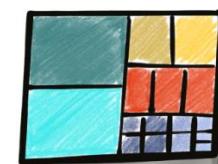
101101010010101010



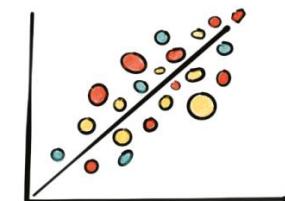
BARS



PIE



TREE



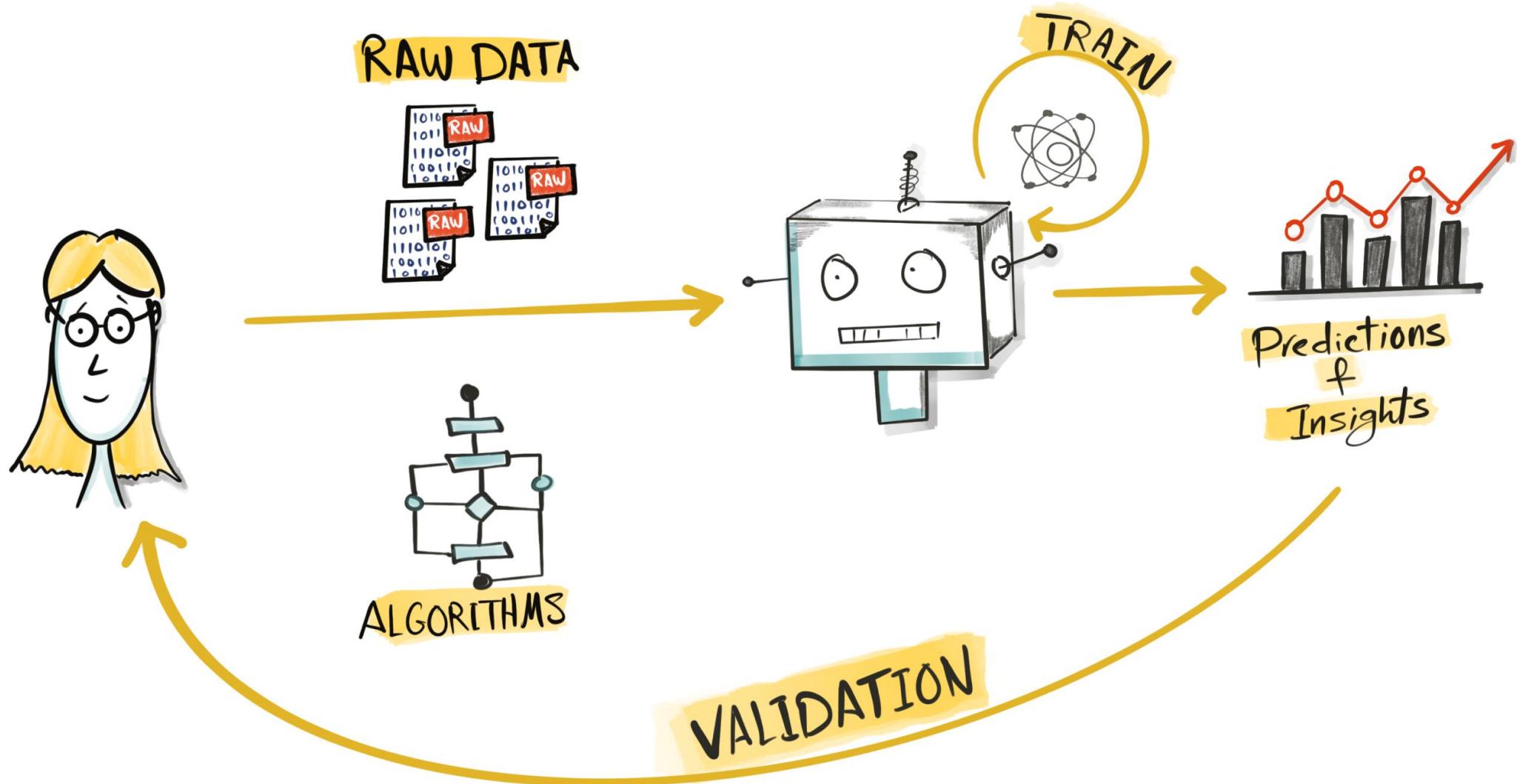
PLOTS



+ a b | e a u

MACHINE LEARNING

DATA WITH BARAA





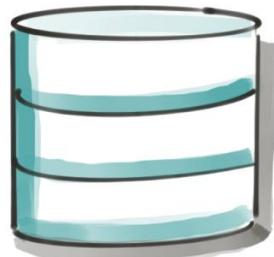
DATA STORAGE



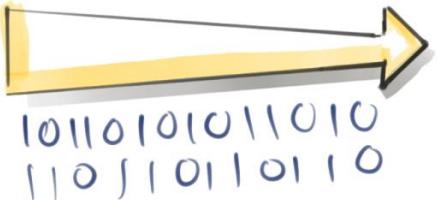
DATA PIPELINE



SOURCE

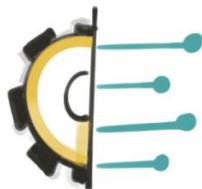


EXTRACT

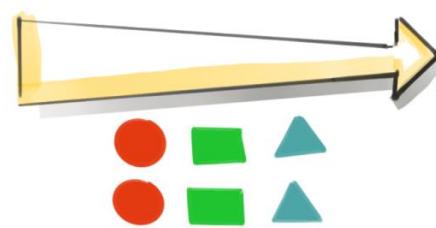


ETL

TRANSFORM



LOAD



TARGET

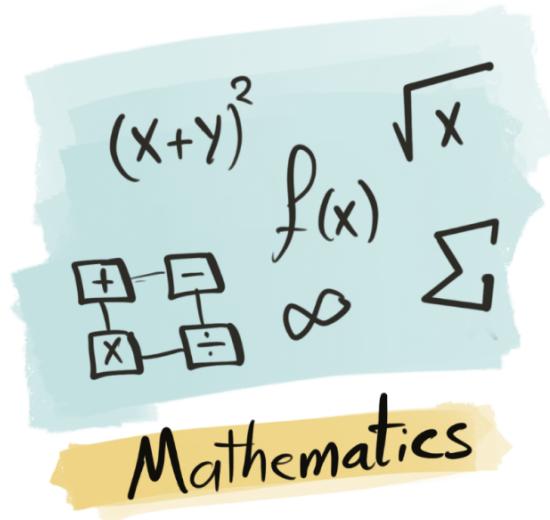




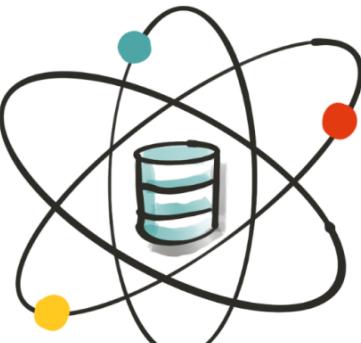
+ a b | e a u

DATA SCIENCE

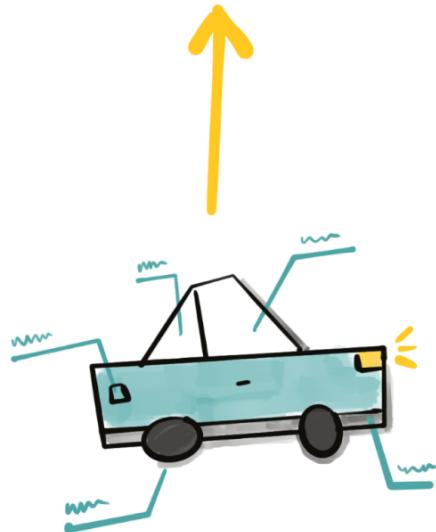
DATA WITH BARAA



Knowledge



Programming Languages



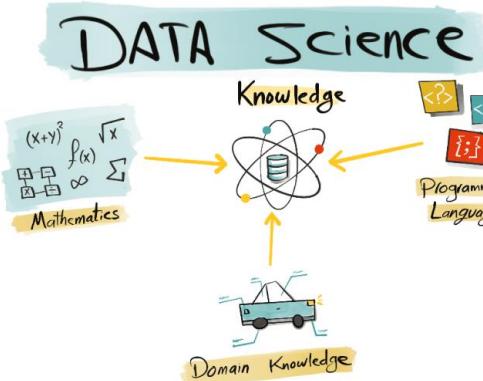
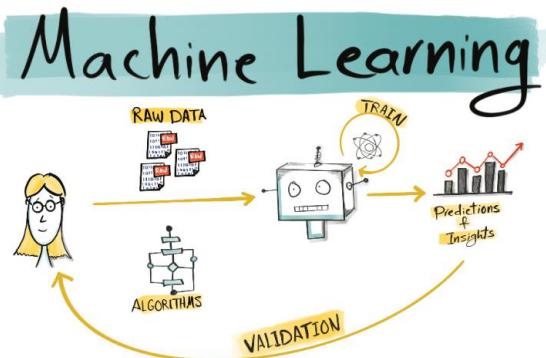
Domain Knowledge



+ a b l e a u

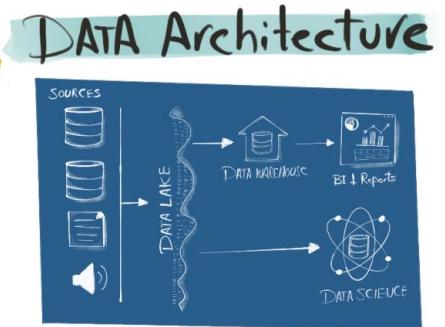
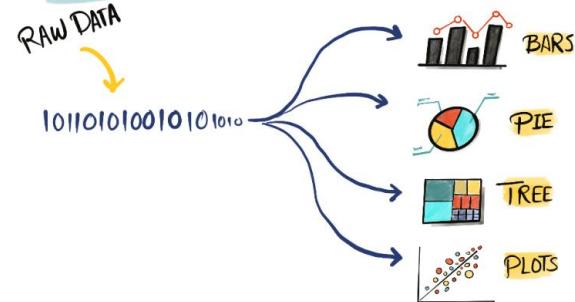
DATA BUZZWORDS

DATA WITH BARAA

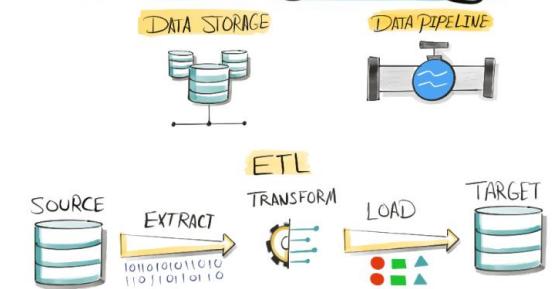


0101010001100101
RAW DATA

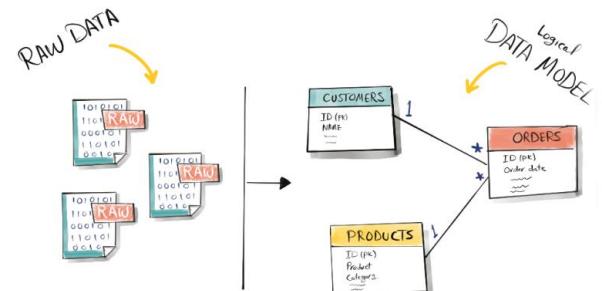
DATA Visualization

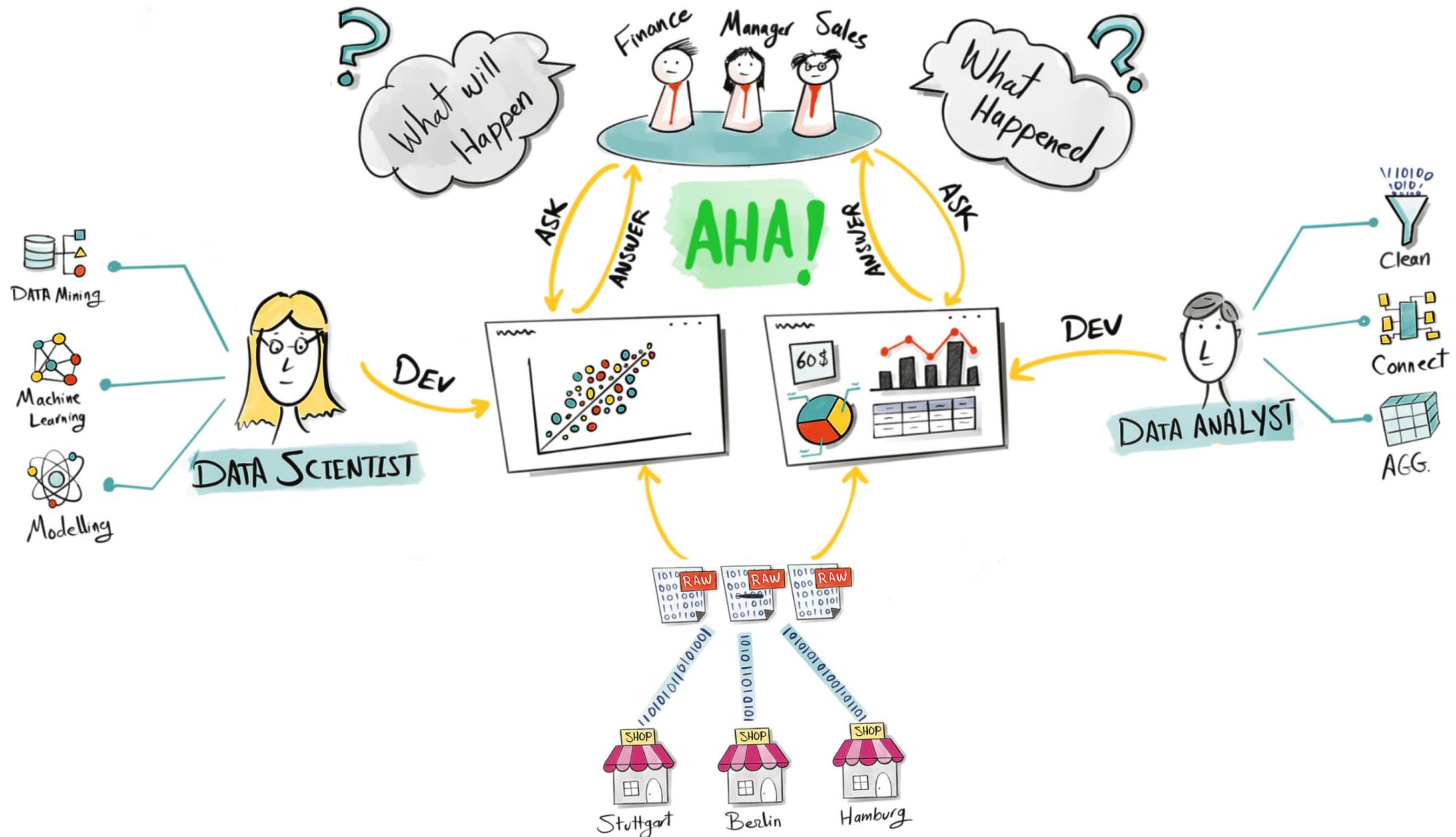


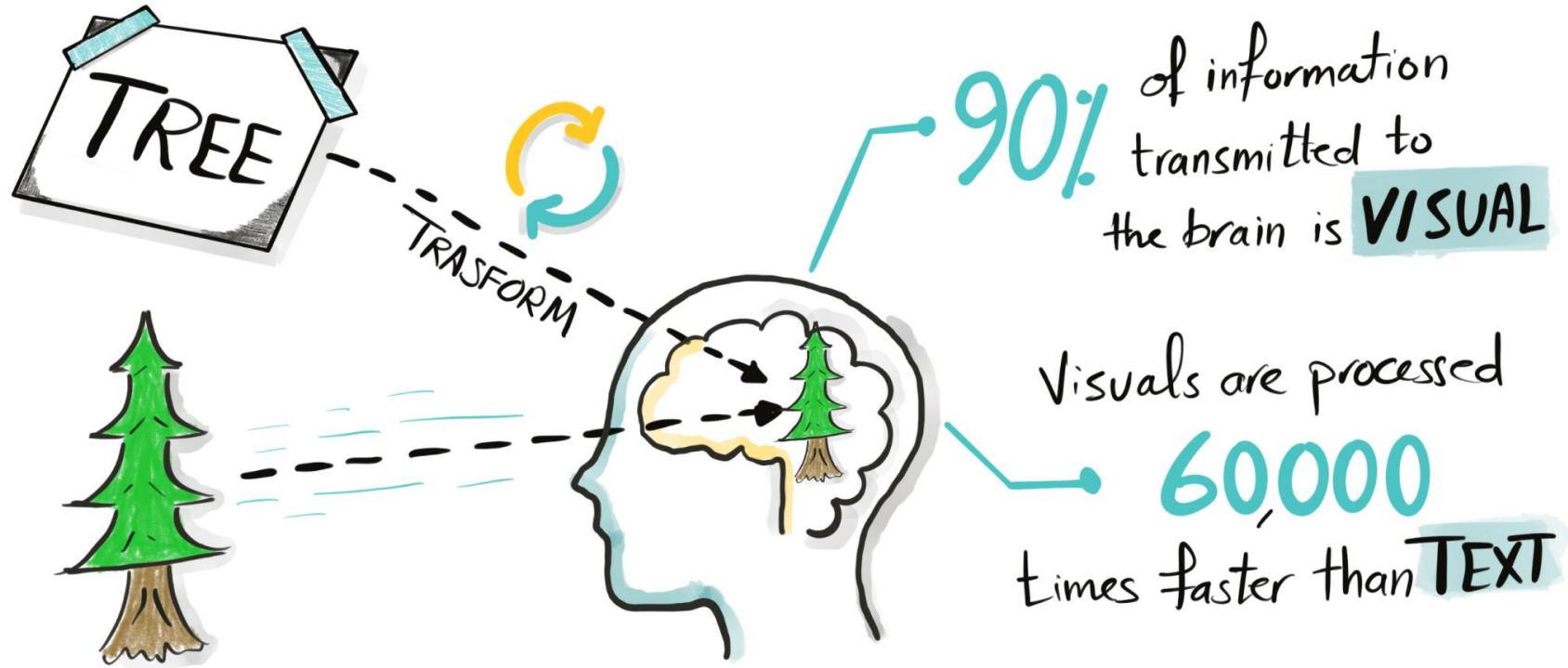
DATA Engineering



DATA Modeling







We remember ...



10%

20%



80%





Increase Engagement

Discover Unknown Facts

Faster & Smarter Decisions

Telling a Story

Seeing Big Picture

Tracking Trends

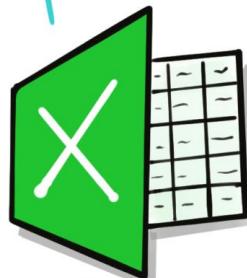




~1 Billion users

People ❤️ EXCEL

Planning Tool
DATA Entry
DATA Analysis
DATA Visualization

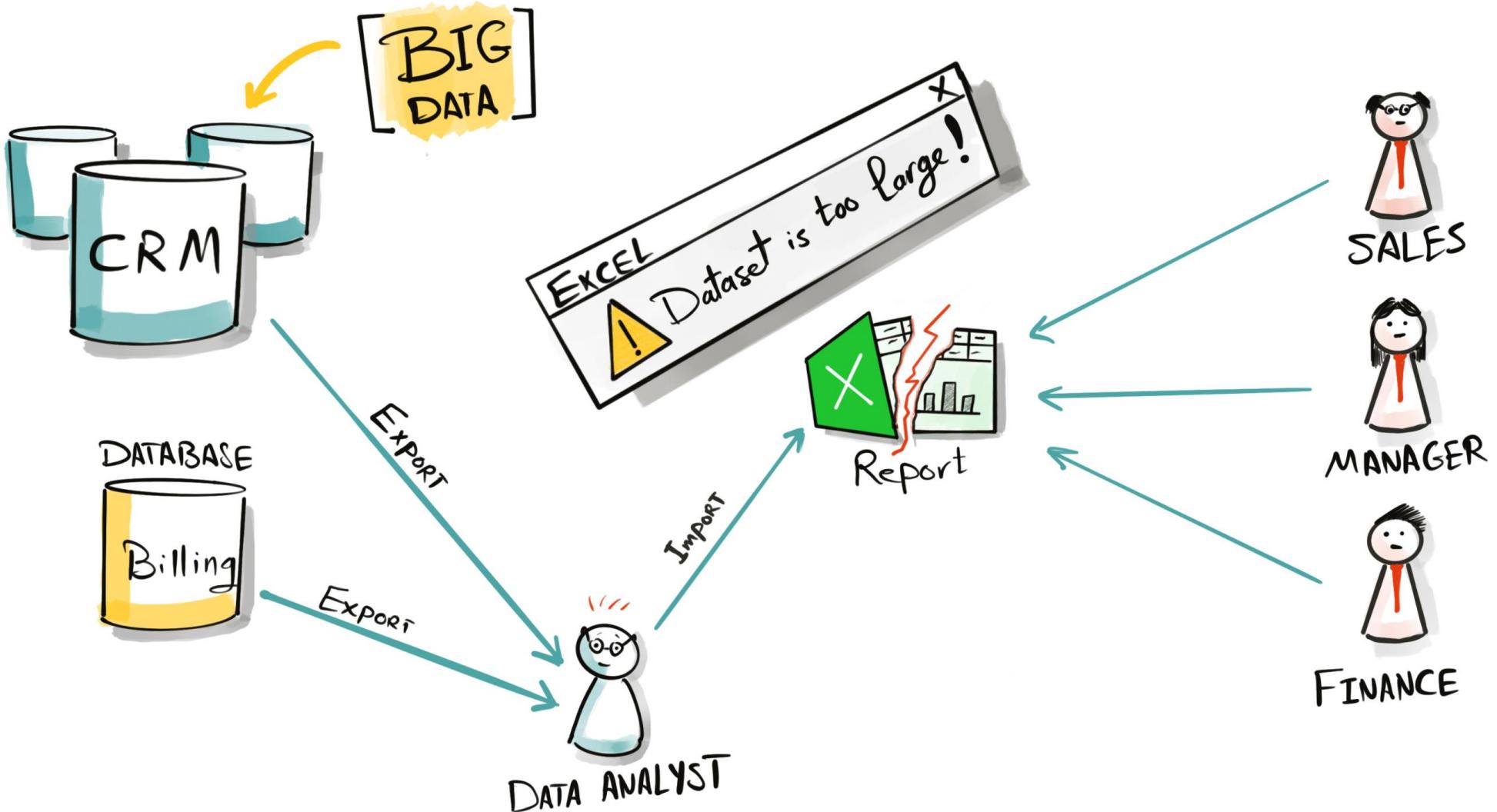


DATA
VIZ

tableau

Power BI

Qlik

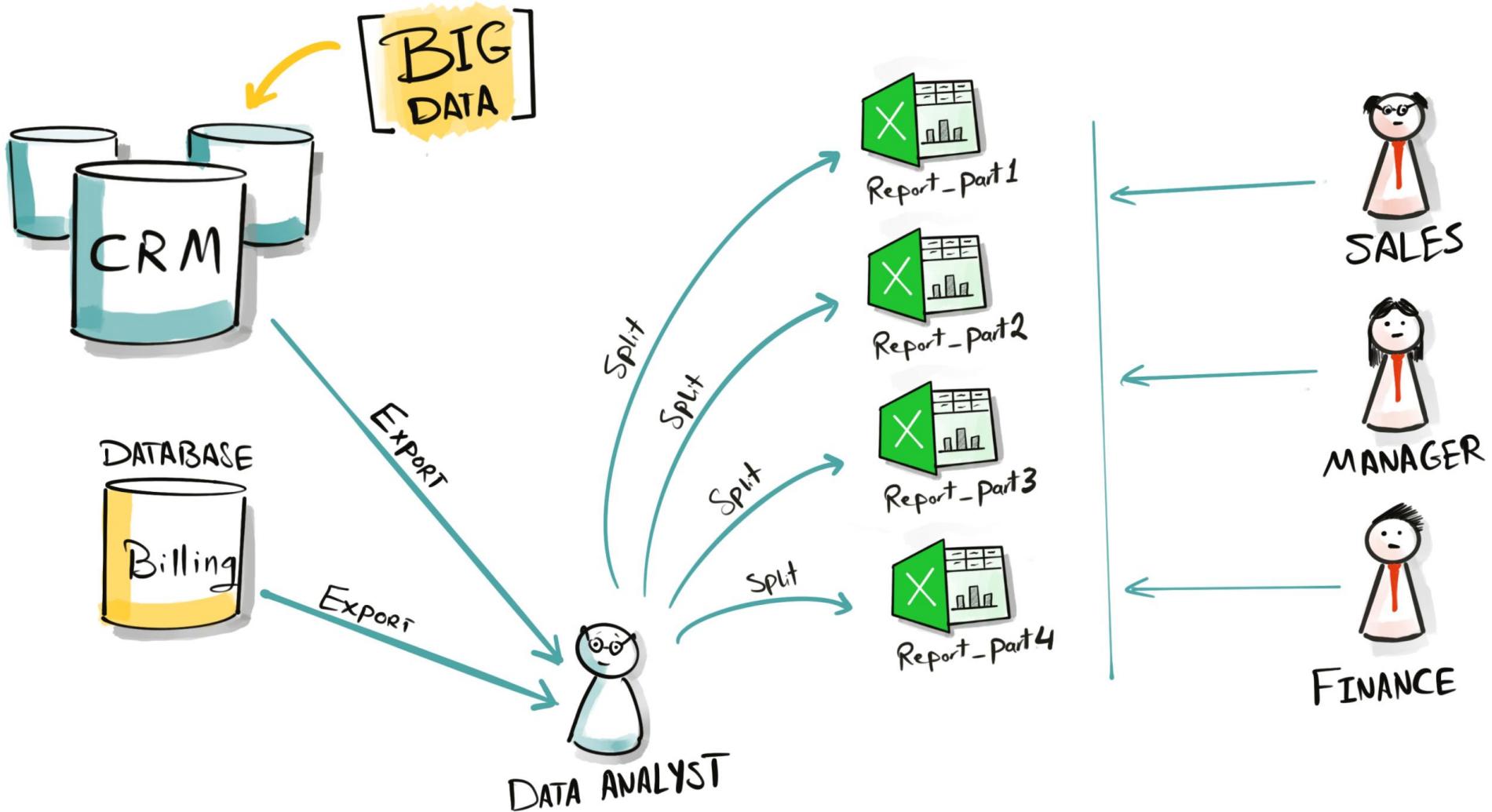


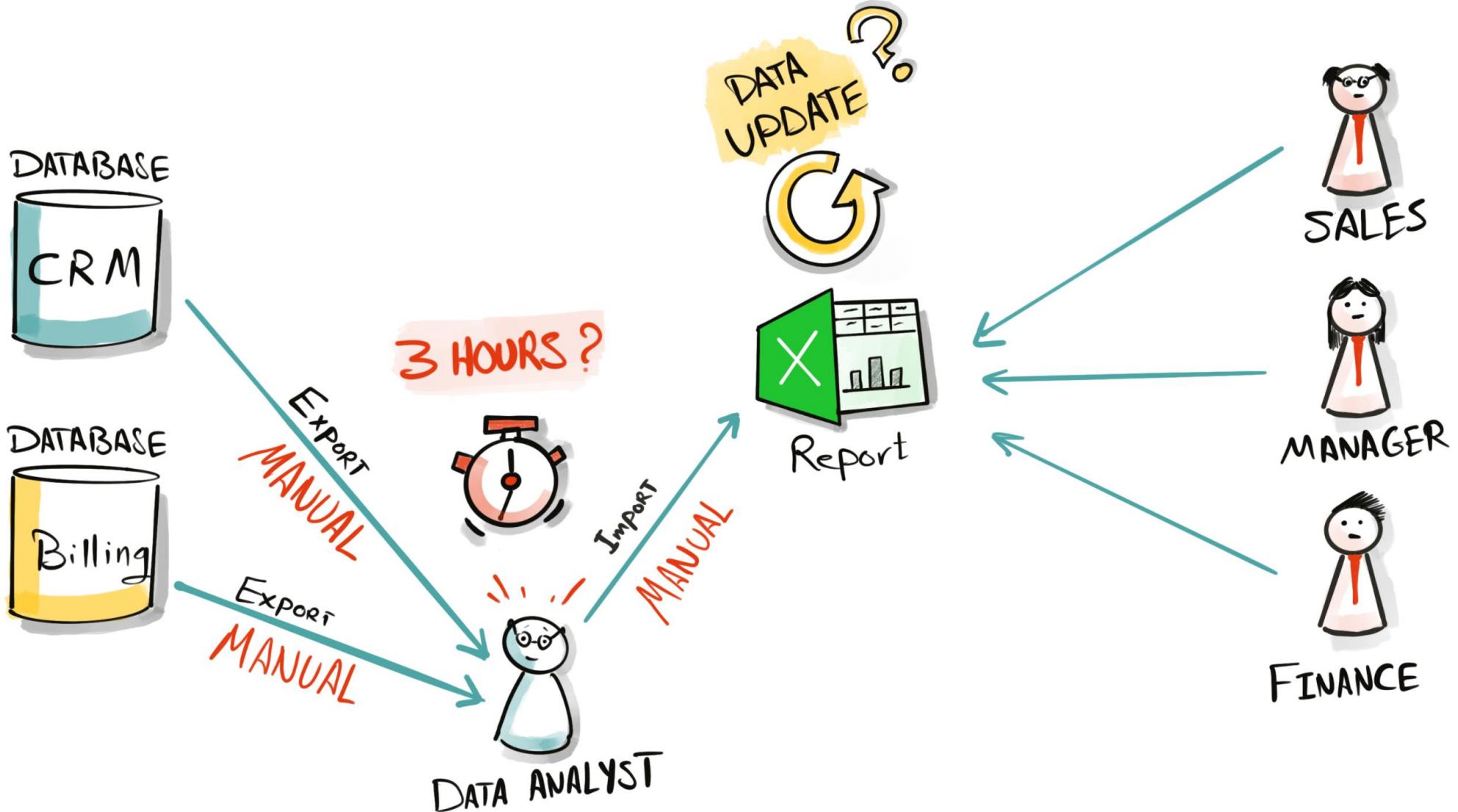


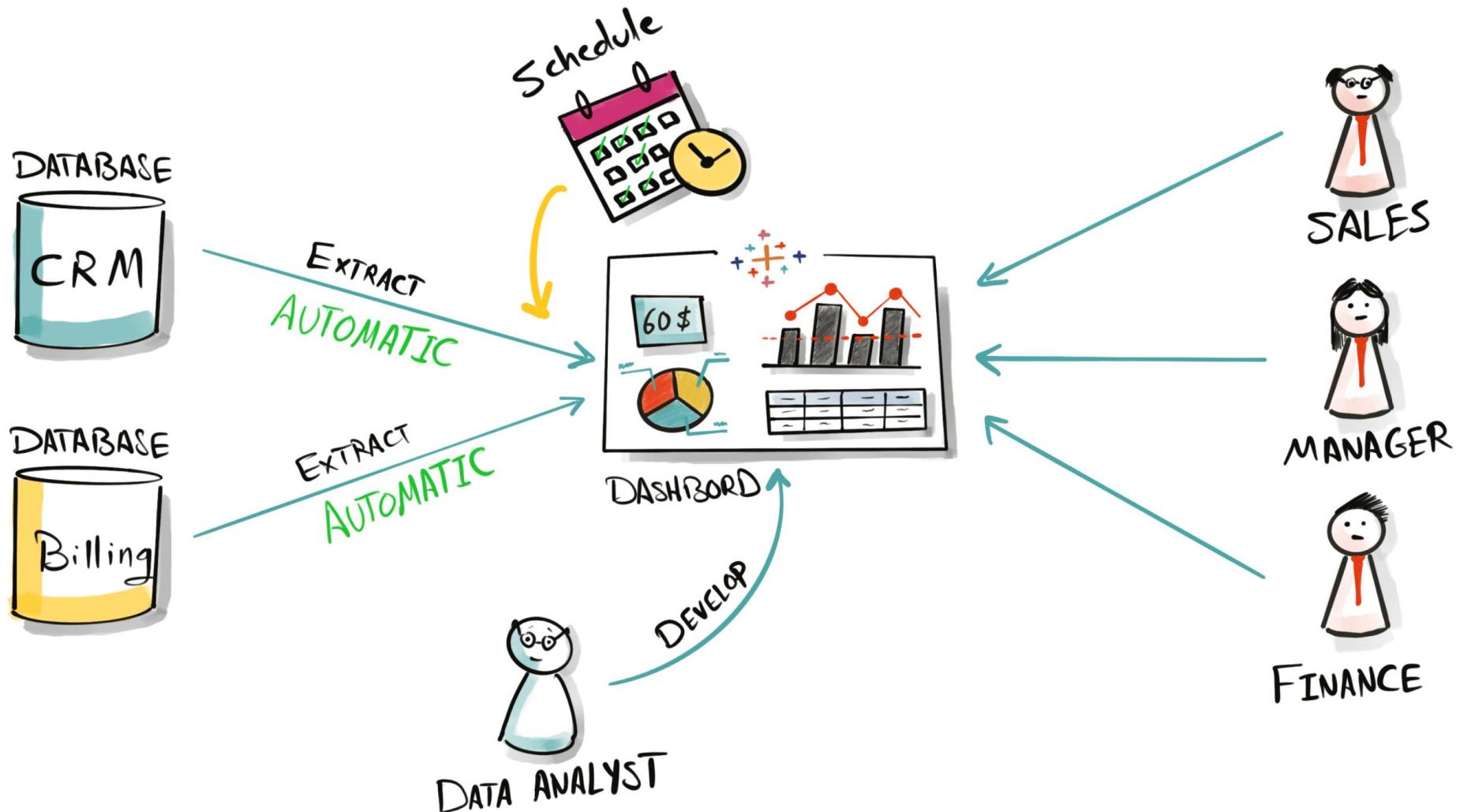
+ a b | e a u

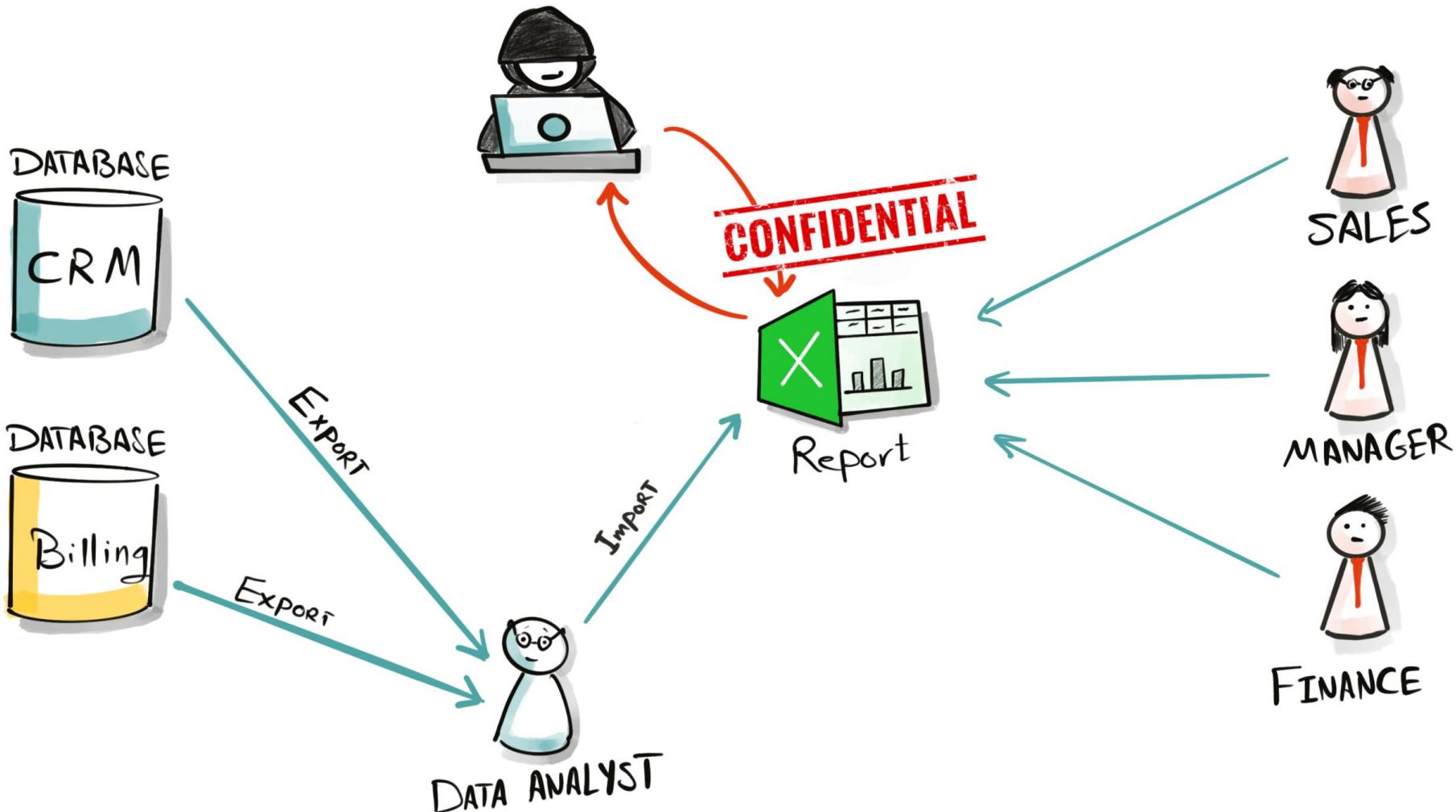
BI with Excel | Big Data

DATA WITH BARAA







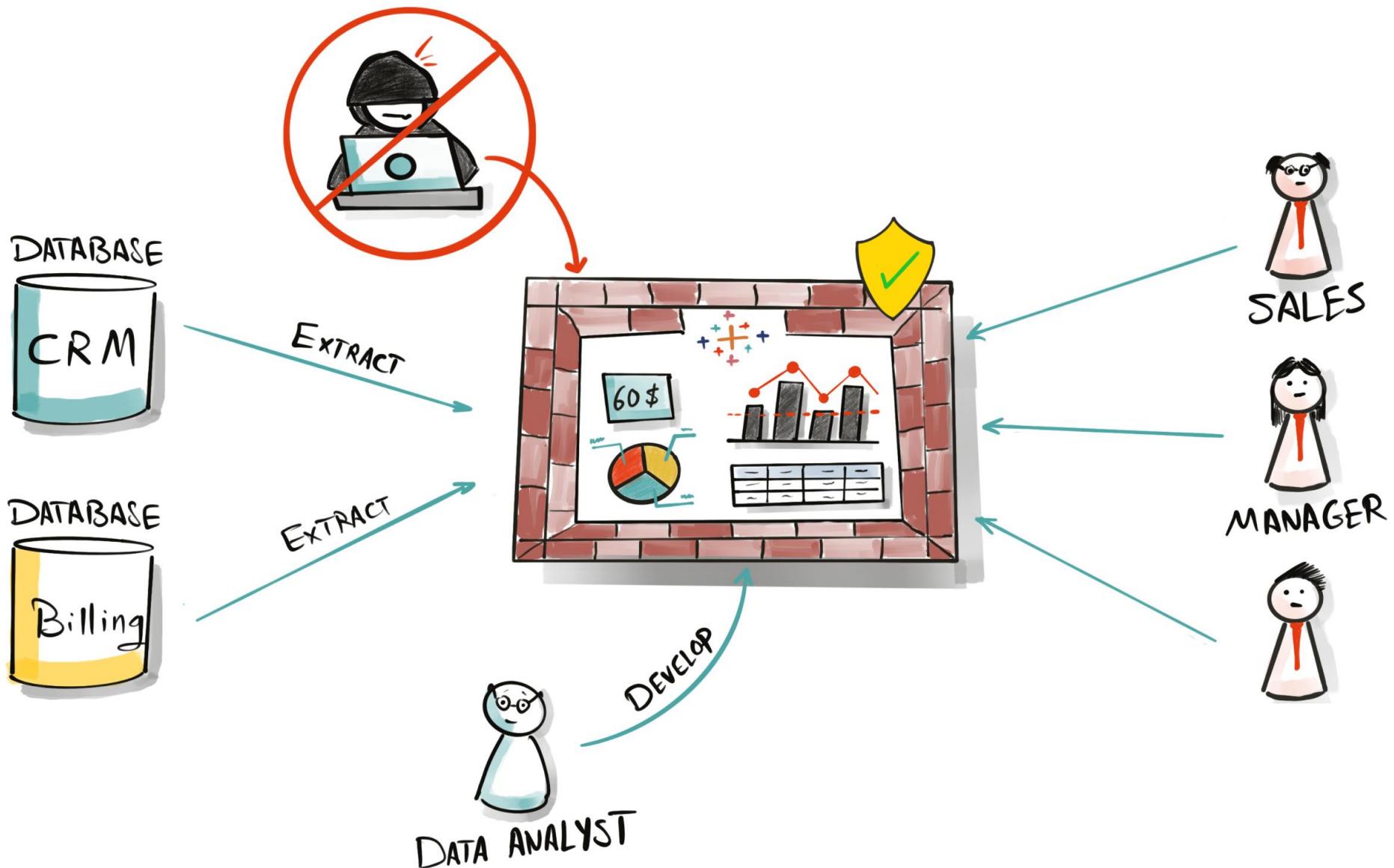




+ a b | e a u

BI with Excel | Security

DATA WITH BARAA





Row-Level-Security (RLS)



UserName	Country	Sales
Baraa	USA	9000
Baraa	Germany	8000
Maria	USA	6500
John	France	10000
John	USA	7500
Peter	Spain	5900

All Rows in Sales



UserName	Country	Sales
Baraa	USA	9000
Baraa	Germany	8000



Baraa's View

UserName	Country	Sales
John	France	10000
John	USA	7500



John's View



+ a b | e a u

BI with Excel | Row-lvl-Security

DATA WITH BARAA



DATA with BARAA

CONFIDENTIAL



[NEED-TO-KNOW]

DATA ANALYST

Import

Import

Import

Export

Export



Sales_Report



Manager_Report



Finance_Report



SALES



MANAGER



FINANCE

**CONFIDENTIAL**

DATABASE



[NEED-TO-KNOW]

EXTRACT

DATABASE



EXTRACT

DATA ANALYST

DASHBOARD

DEVELOP



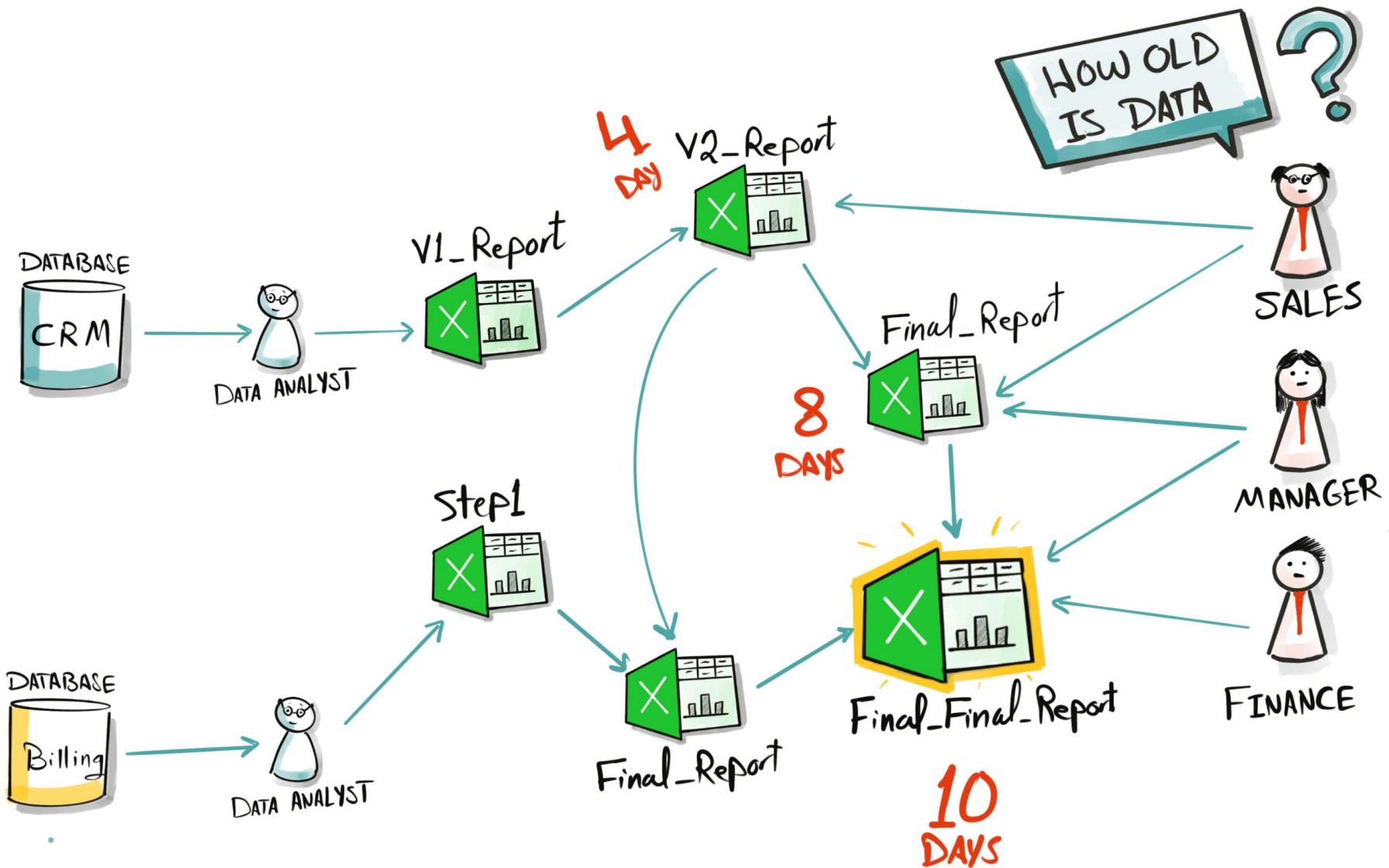
SALES



MANAGER



FINANCE

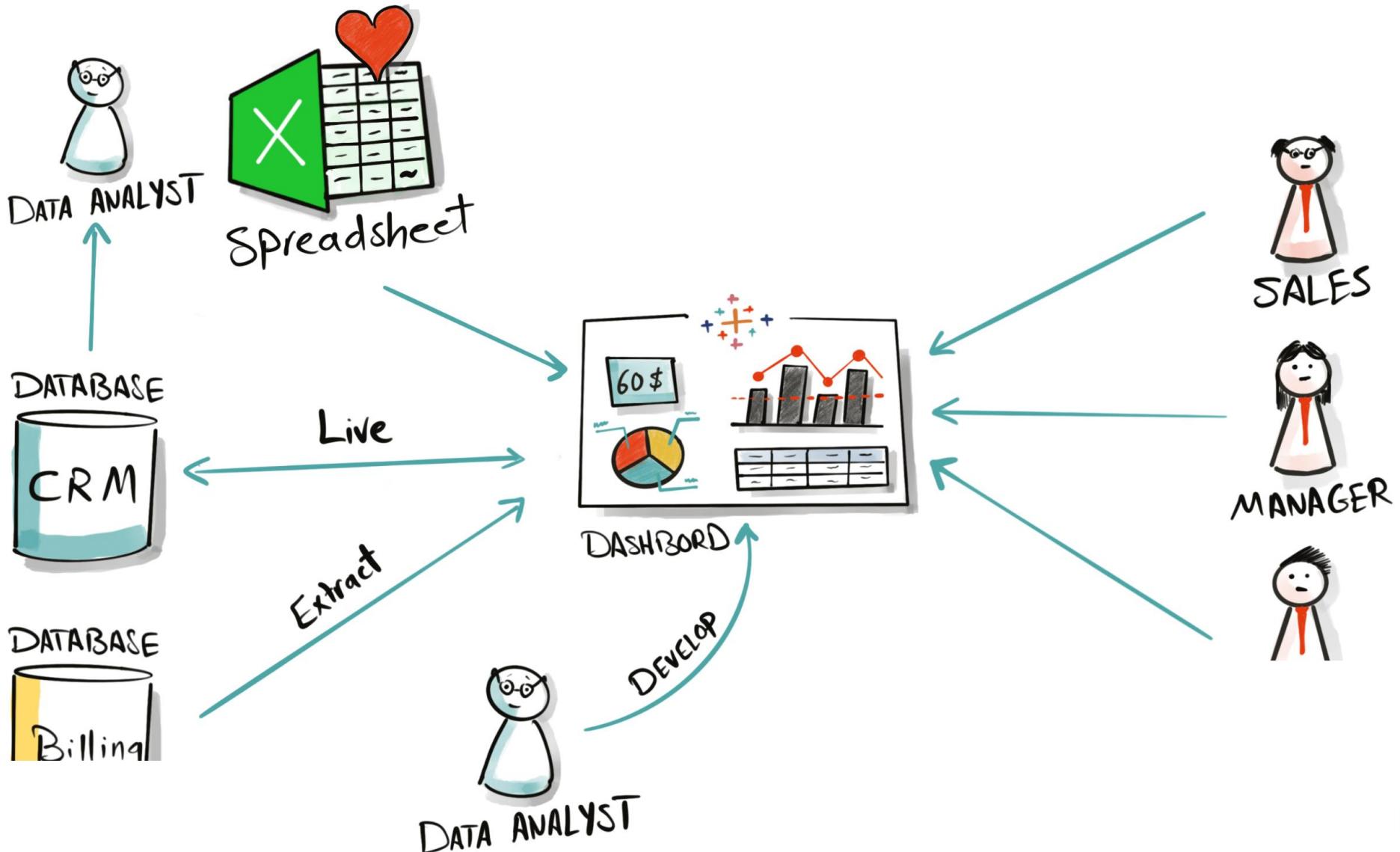




+ a b | e a u

BI with Tableau & Excel

DATA WITH BARAA





Benifits of Tableau vs Excel



Automation ✓



Security ✓



BIG DATA ✓



Interactive ✓





+ a b | e a u

Tableau History

DATA WITH BARAA

