# Advanced Data Analytics

#### Agenda

- 1. AWS Academy Lab:
  - Accessing and Analyzing Data by Using Amazon S3

- 2. Analysis vs Analytics
- 3. Business & Data & Data Science
- 4. Questions

# Analysis vs Analytics

#### Analysis vs Analytics

# Analysis = Analytics

there is a lack of a transparent understanding of both

## Data Analysis - 1

# Analysis

Past

Explain

How? Why?





#### Data Analysis - 2

Dividing data into components that are easier to understand

- Examining how different parts relate to each other
- Performed on past data, explaining 'how' and 'why':
  - the story ended in the way that it did
  - something happened

## Data Analytics - 1



#### Data Analytics - 2

- The application of logical and computational reasoning
  - to the component parts obtained in an analysis
- We look for patterns and explore what we can do with them in the future

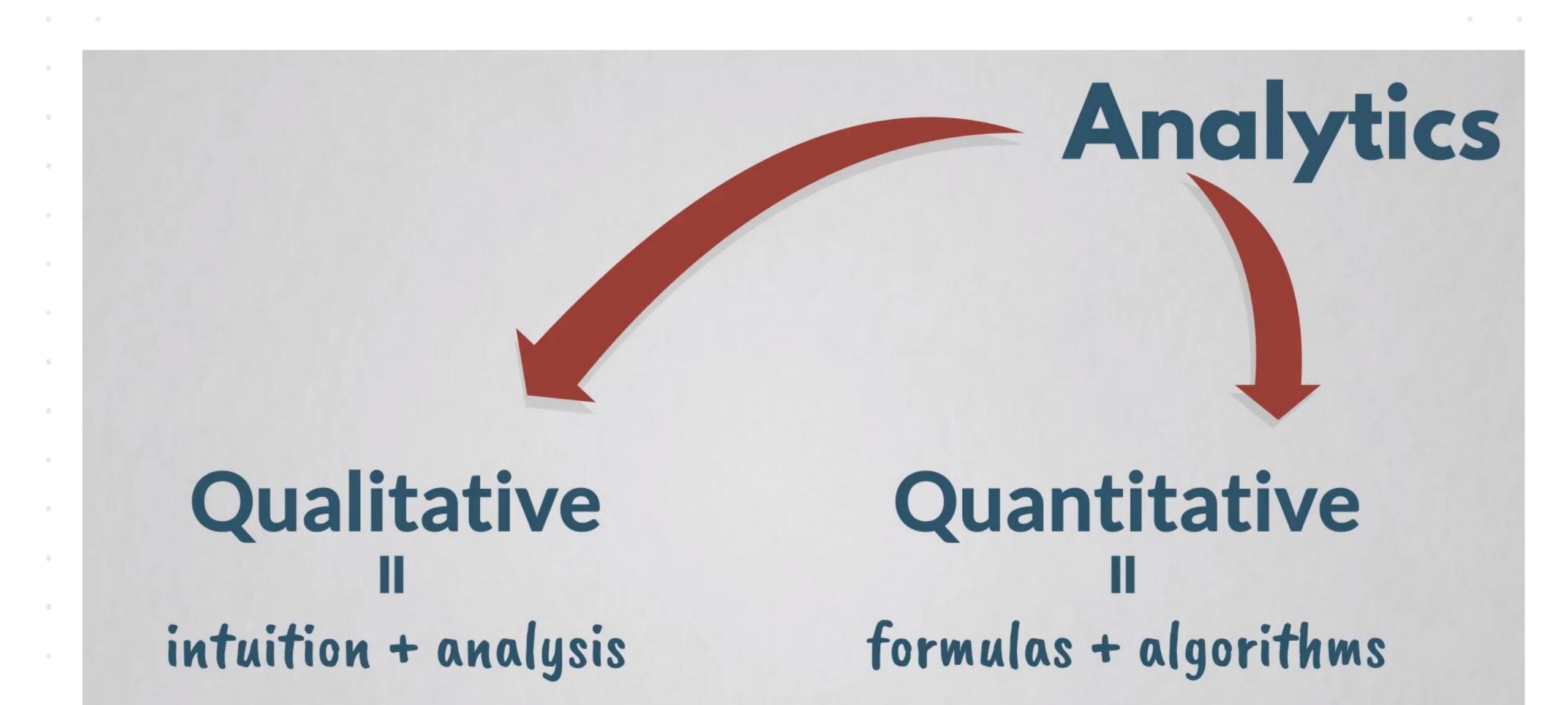
#### Analysis vs Analytics

#### Analysis vs Analytics - Note

Analytics has become a term comprising both:

- Analysis
- Analytics
- which is something confusing in practice

#### Quantitative Analytics vs Qualitative Analytics



#### Quantitative Analytics vs Qualitative Analytics

#### Quantitative Analytics

Applying formulas & algorithms to numbers we have gathered from analysis

#### Qualitative Analytics

Using intuition & experience + analysis to plan next business move

#### Quantitative Analytics Example

- When to introduce the new collection?
  - Relying on past sales data and UX data,
  - we could predict in which month it would be best to do that

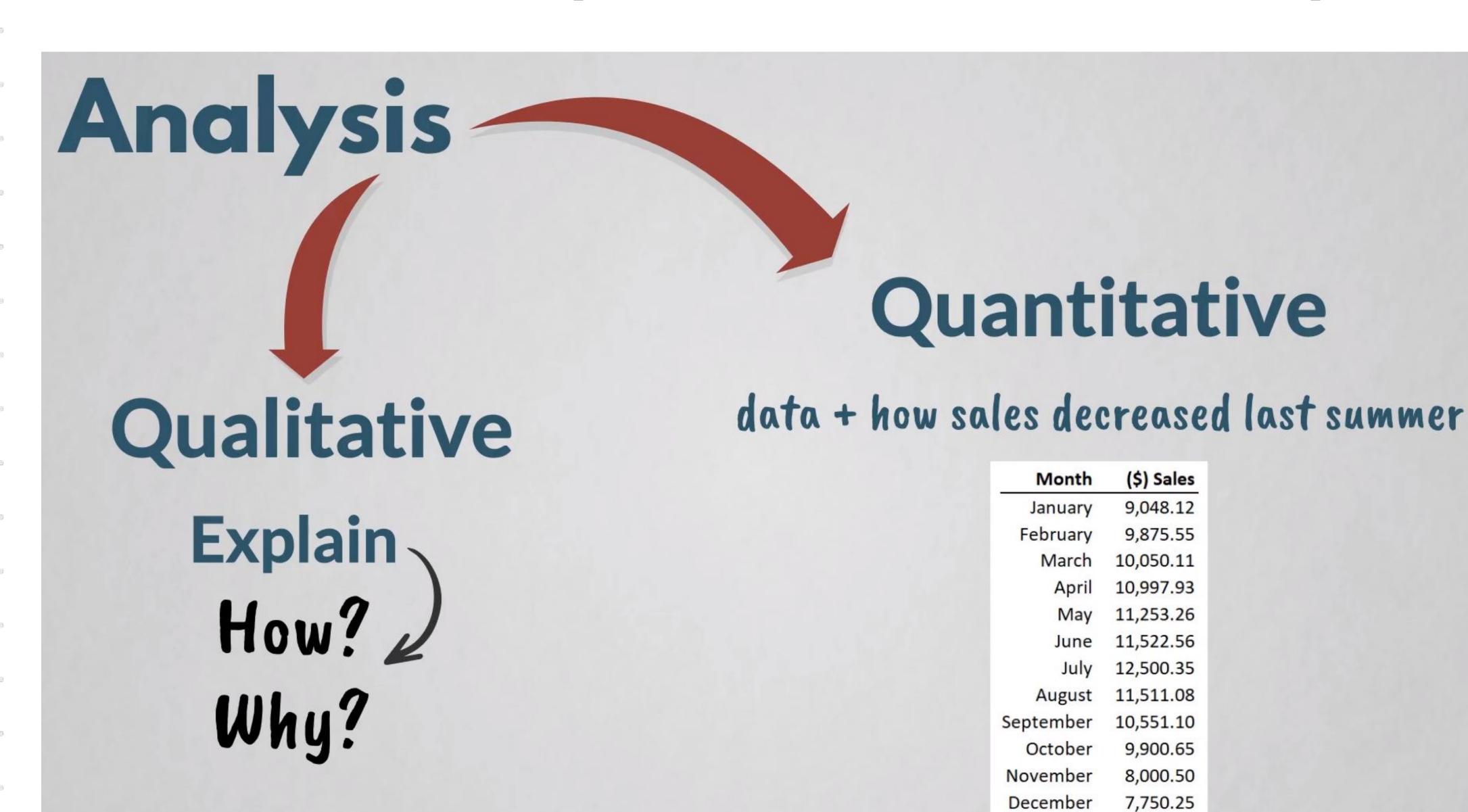


#### Qualitative Analytics Example

- An owner of an online clothing store
  - understands customers' needs and
  - perform a very detailed analysis of women's clothing articles
- Then
  - feels sure about which fashion trends to follow
  - uses intuition to decide on which styles of clothing to start selling



## Quantitative Analysis vs Qualitative Analysis



December

TOTAL 122,961.46

## **SWOT Analysis**

- Qualitative Analysis (such as SWOT) is not used for Quantitative Analysis
  - Hence, they are not part of BI
- Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis

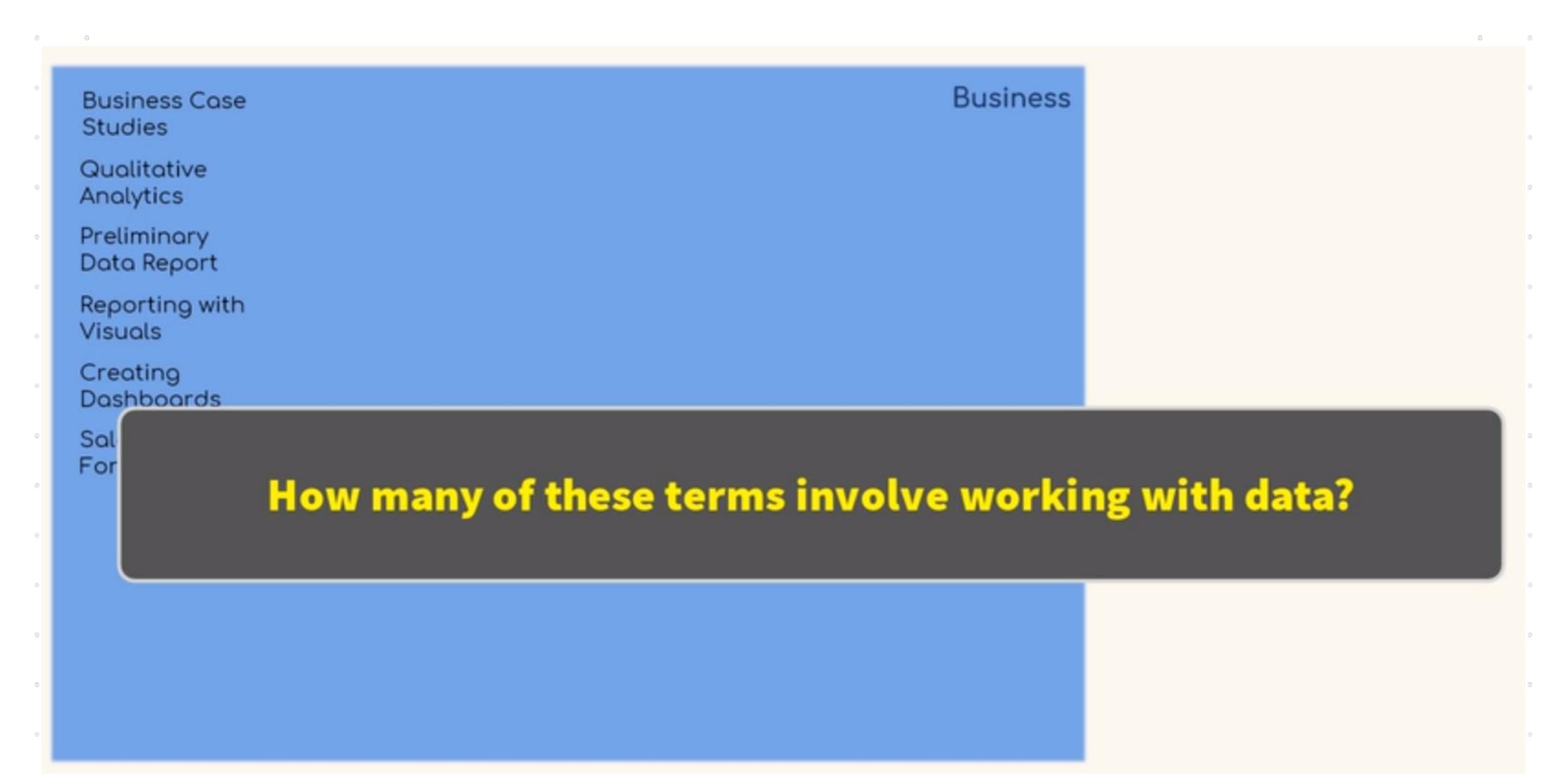
- a technique for assessing these four aspects of business
- a tool that can help to
  - analyze what your company does best now
  - devise a successful strategy for the future

# Business & Data & Data Science

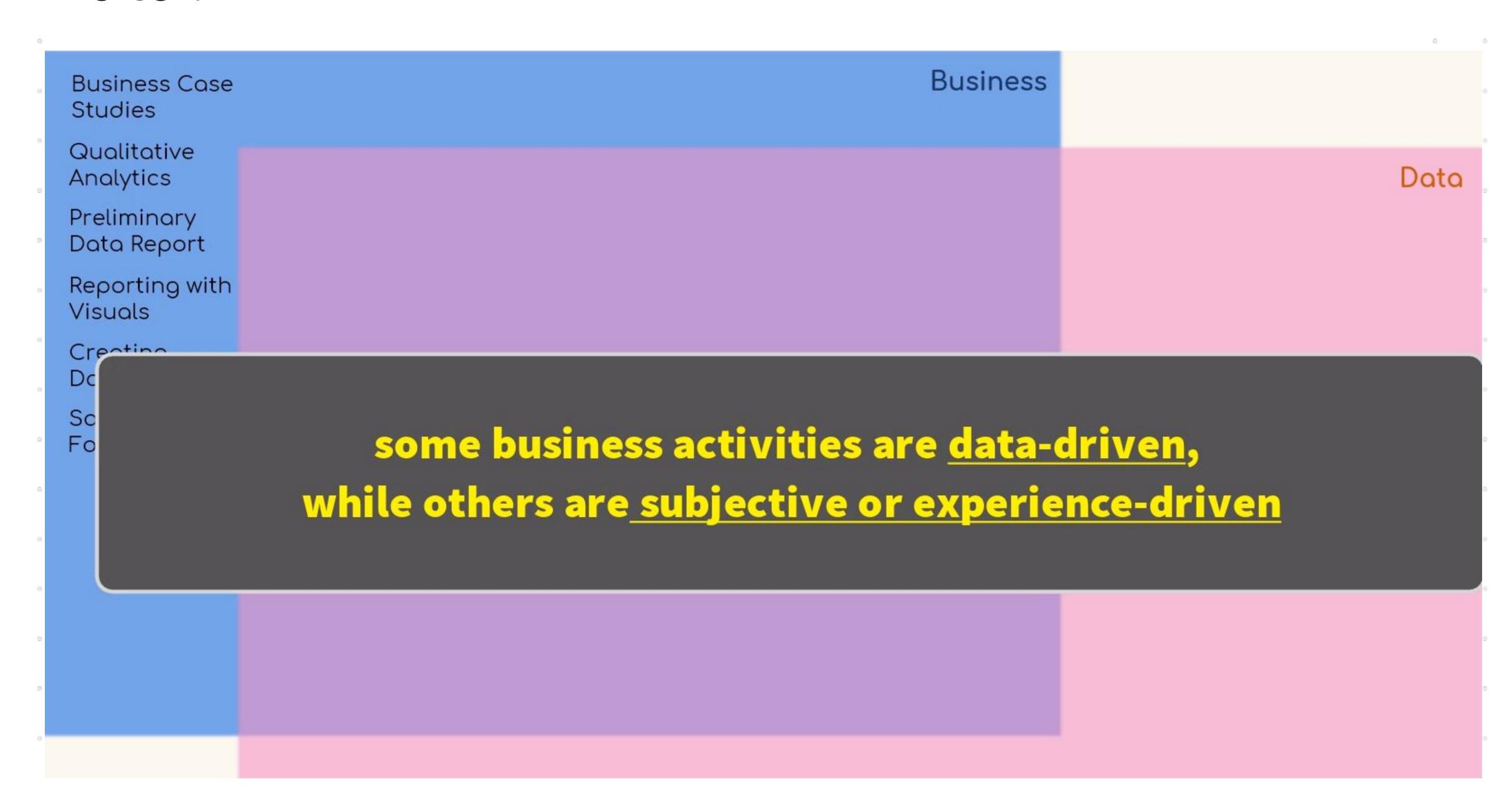
#### Business

**Business Case** Studies Qualitative Analytics Preliminary Business Data Report Reporting with Visuals Creating Dashboards Sales Forecasting

#### Data?



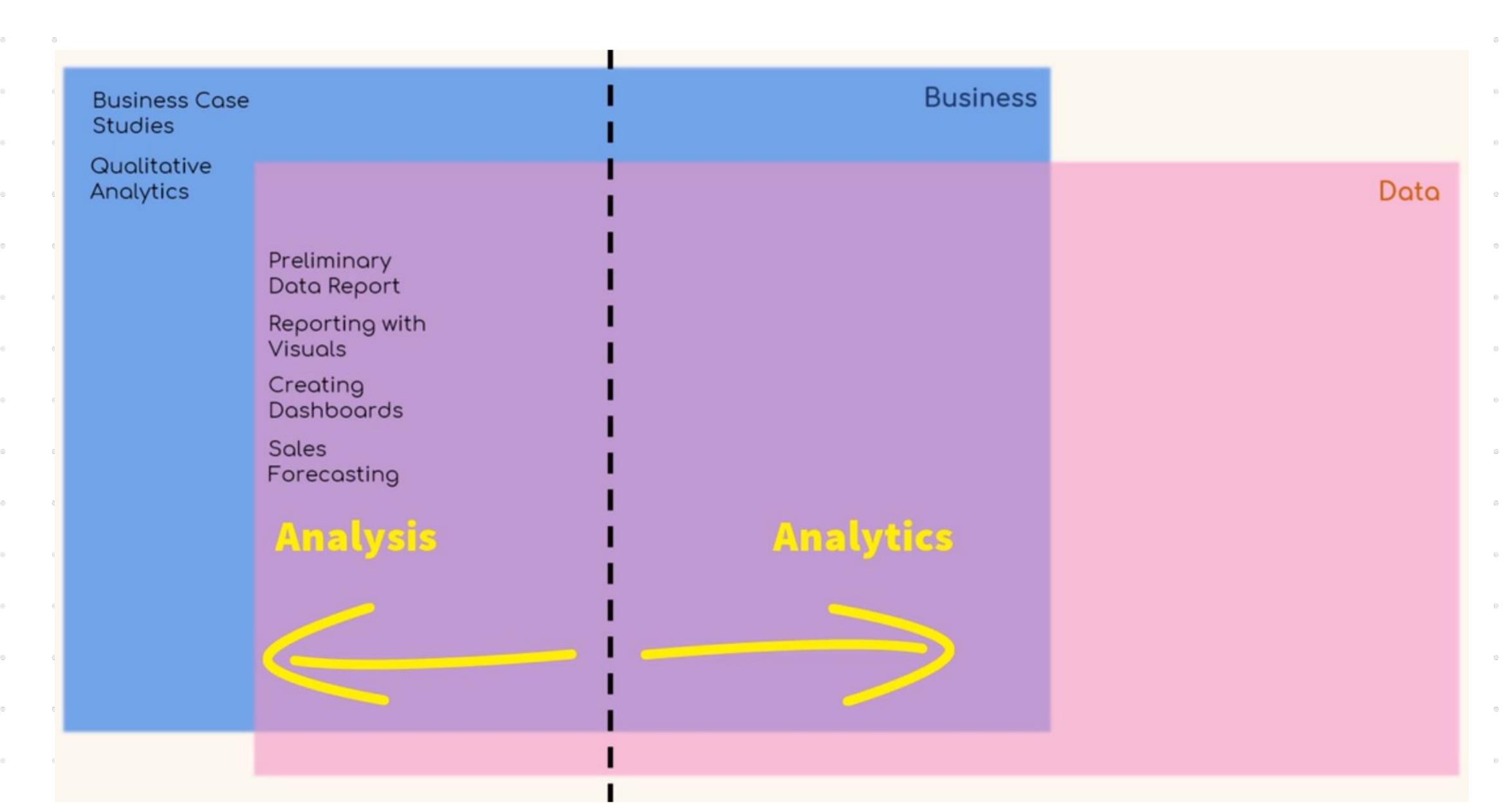
#### Data?



#### Data



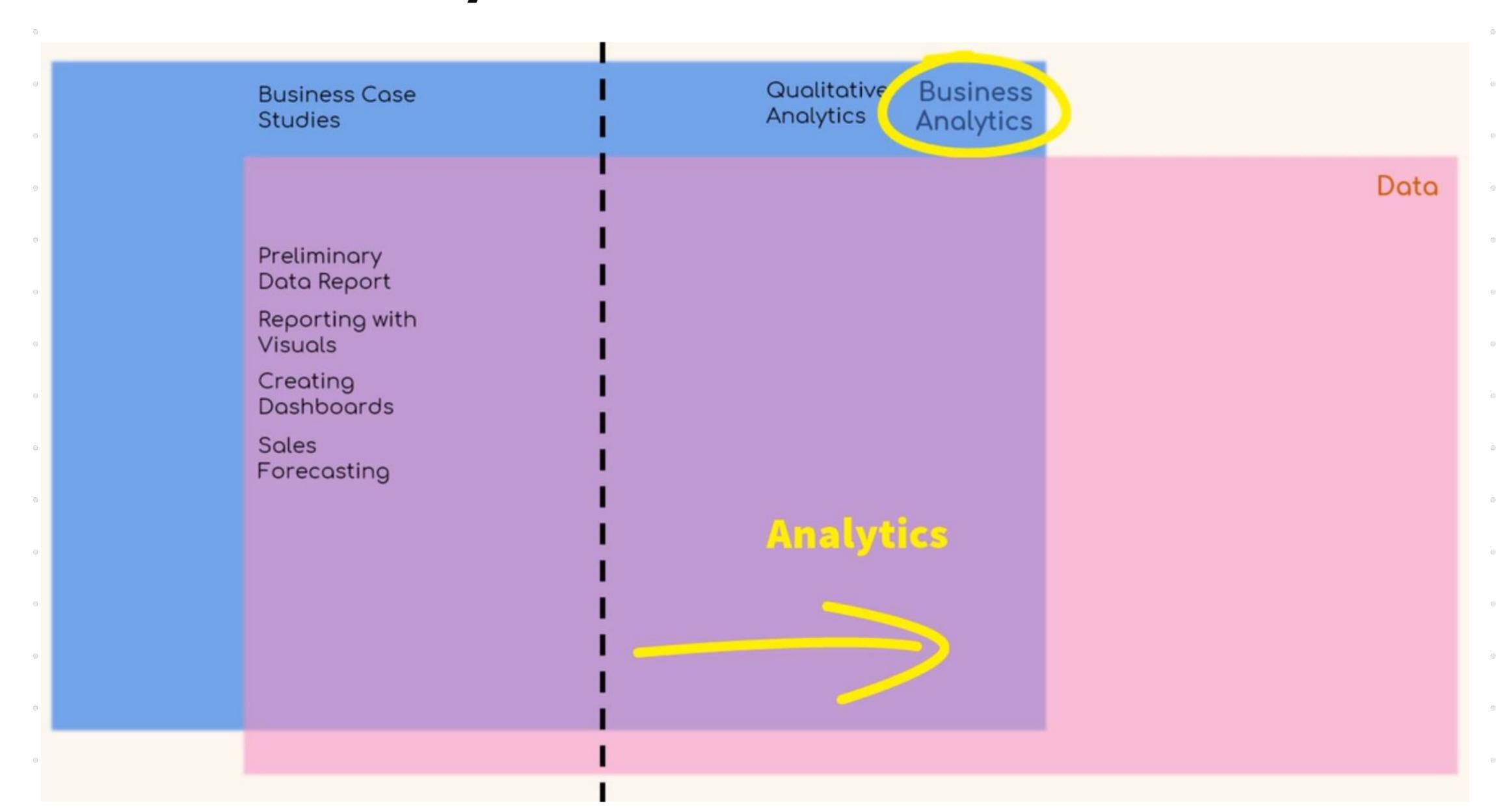
#### Past vs Future?



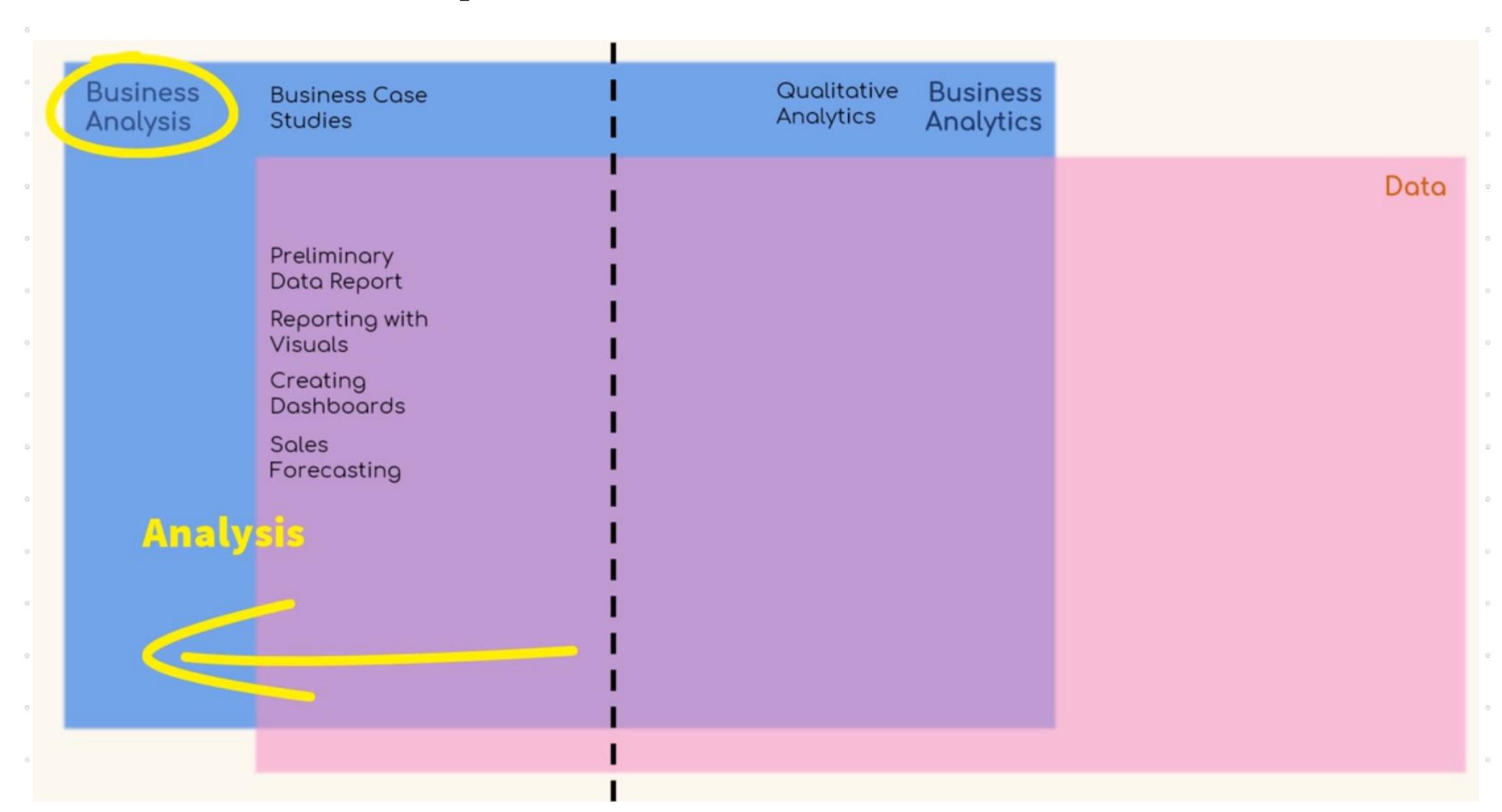
#### Past vs Future

Business Case Studies Qualitative Business Analytics	ata
	ata
Preliminary	
Data Report  Reporting with	
Visuals	
Creating Dashboards  Dashboards	
Sales Forecasting	

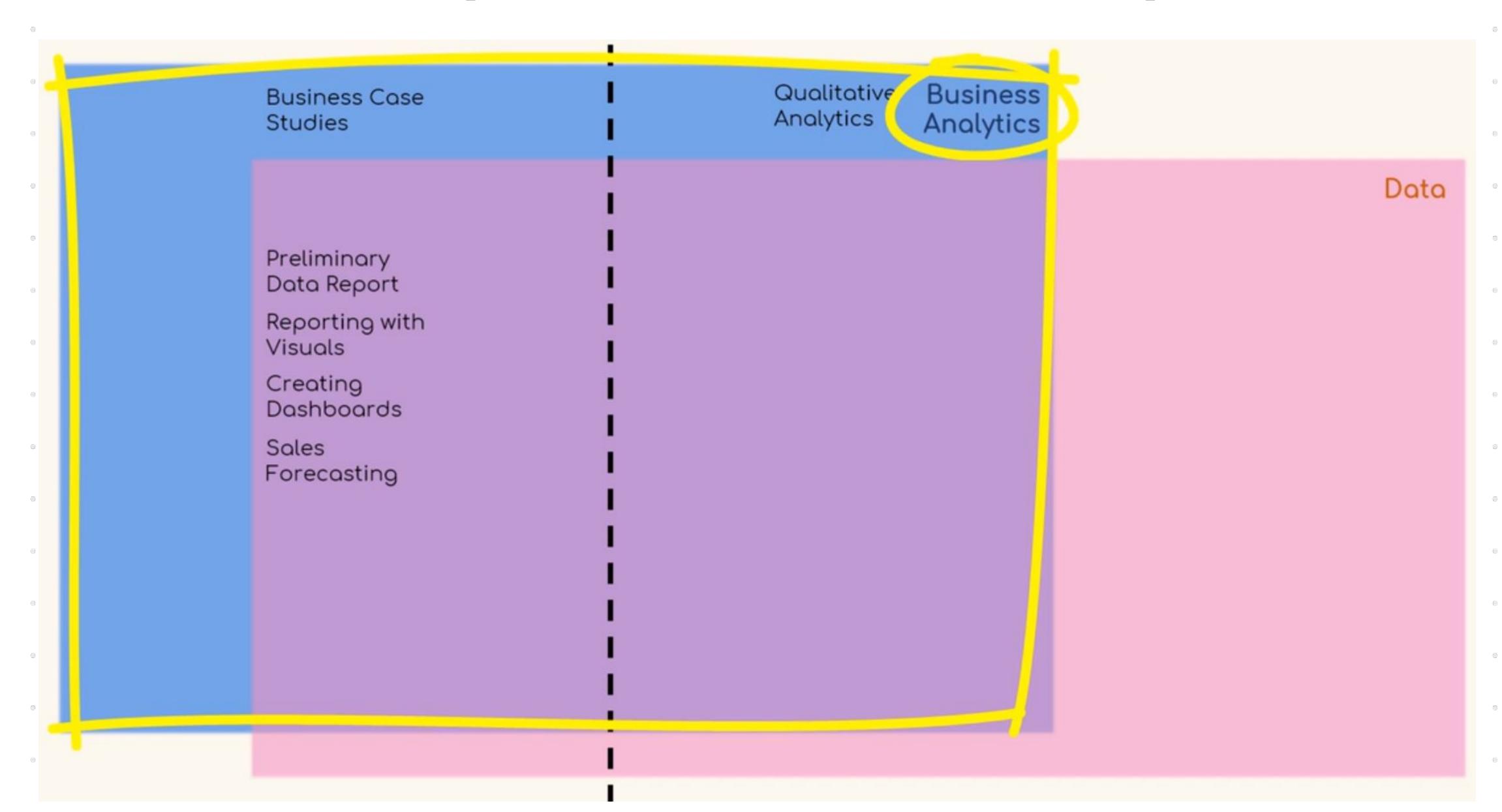
## **Business Analytics**



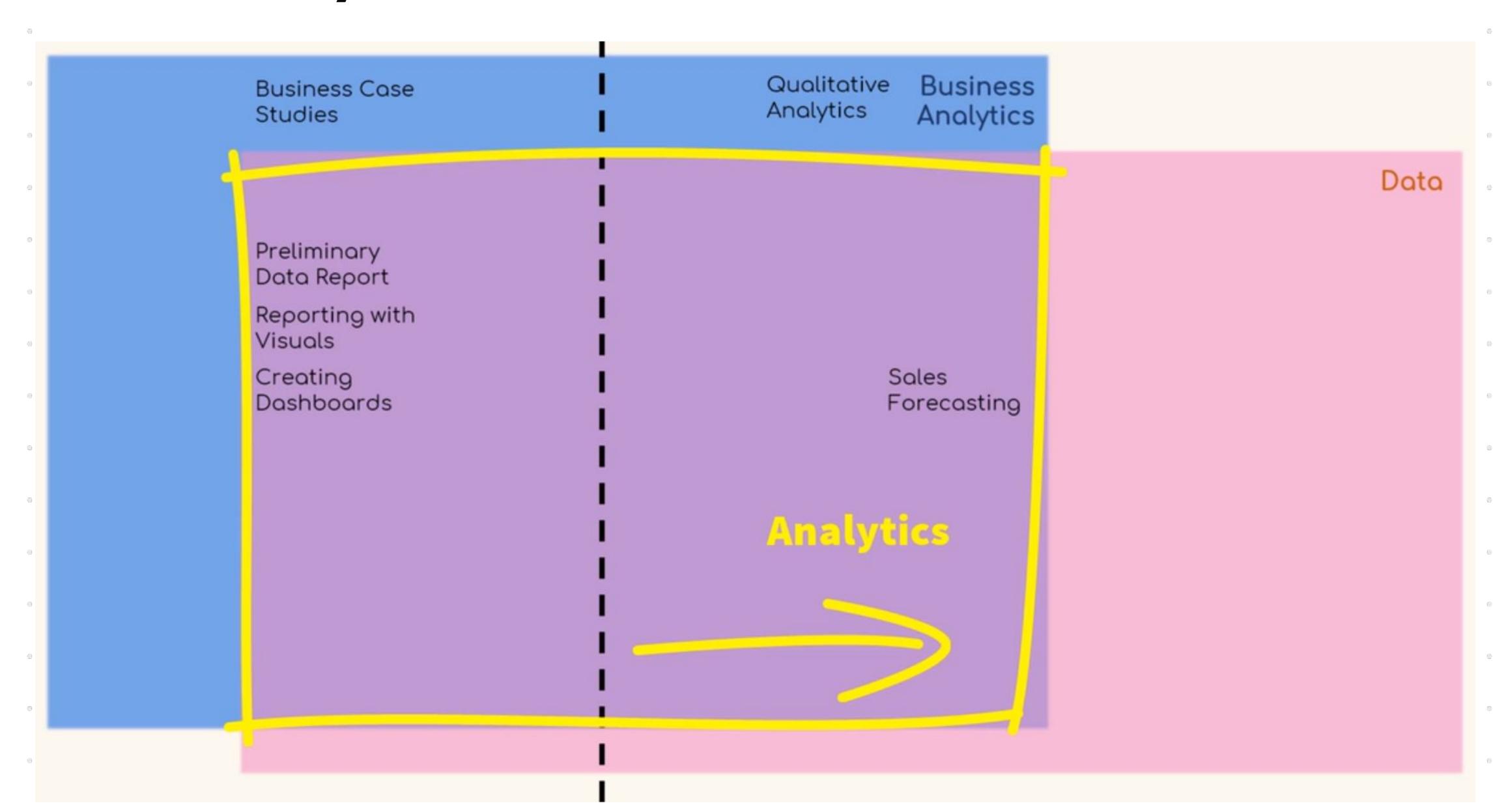
## Business Analysis



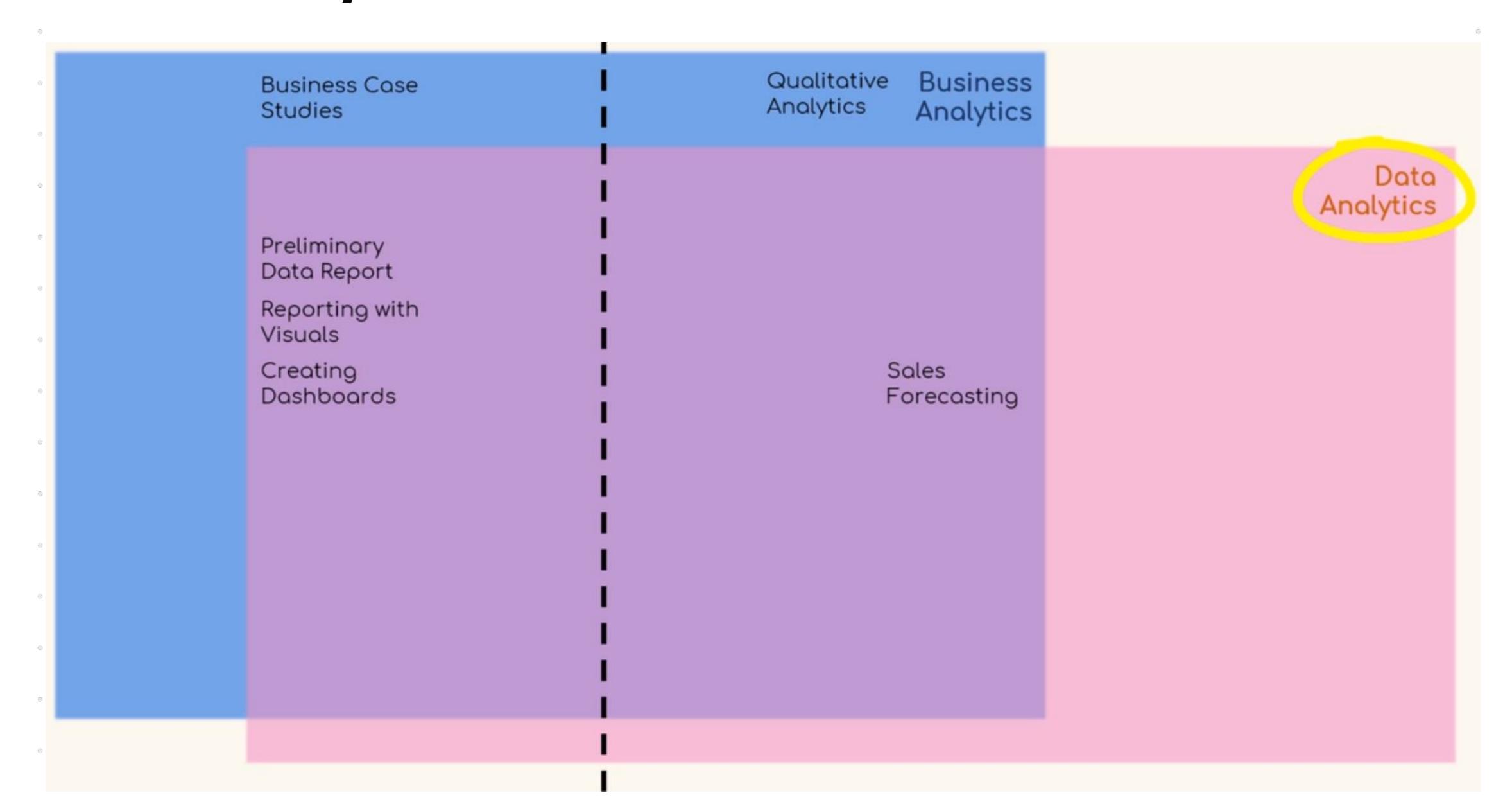
## Business Analytics += Business Analysis



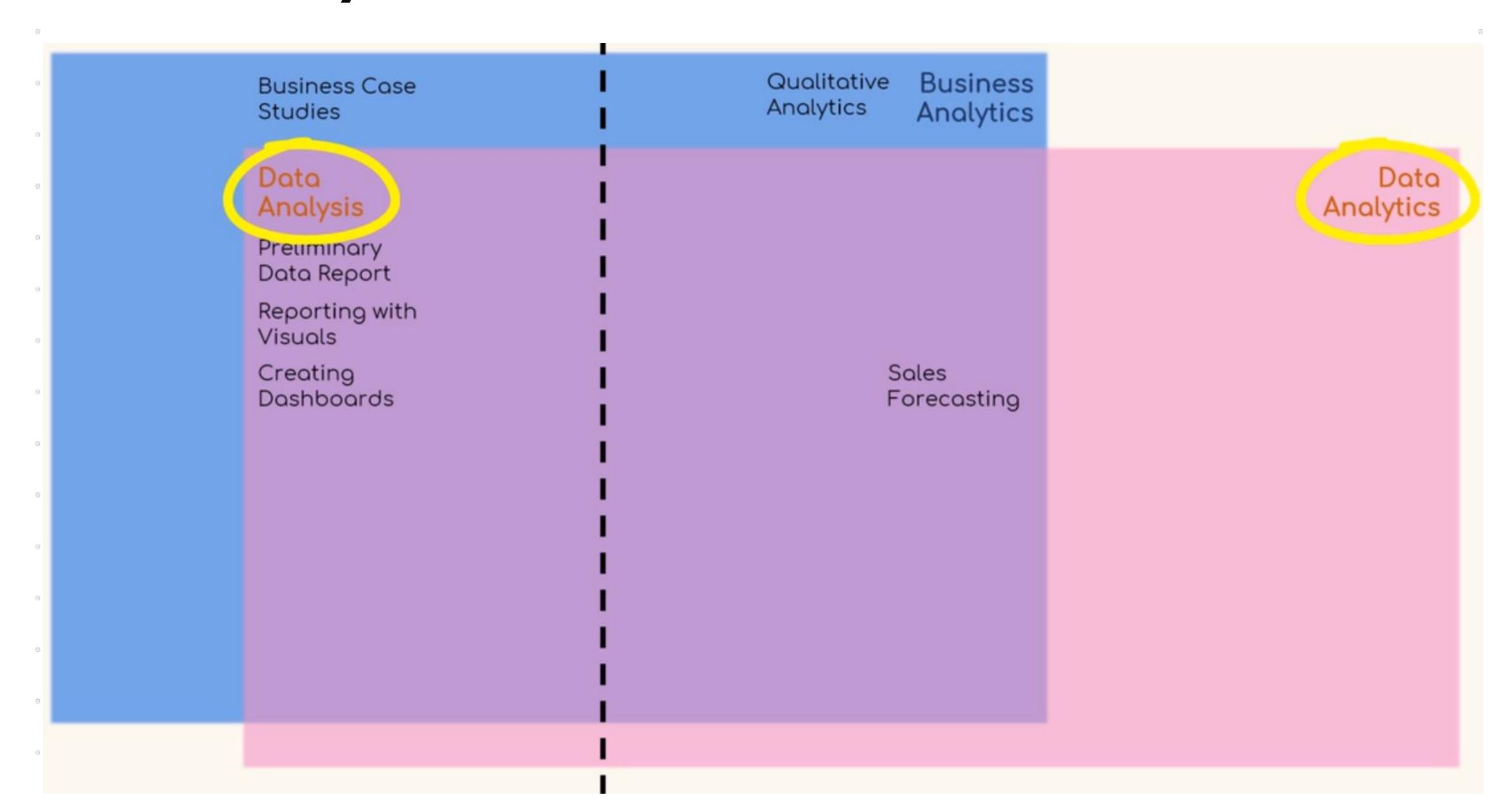
## Data Analytics?



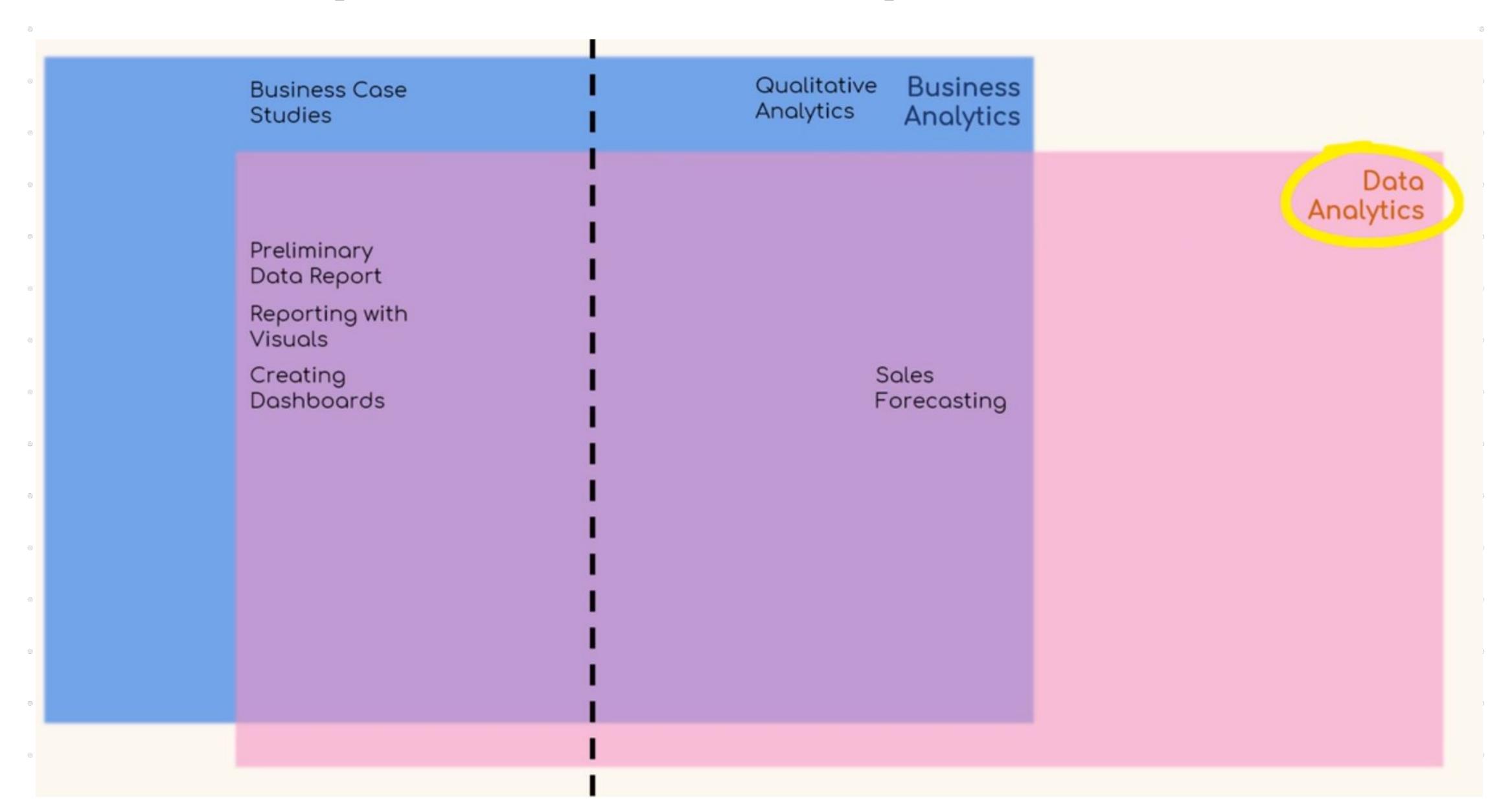
# Data Analytics



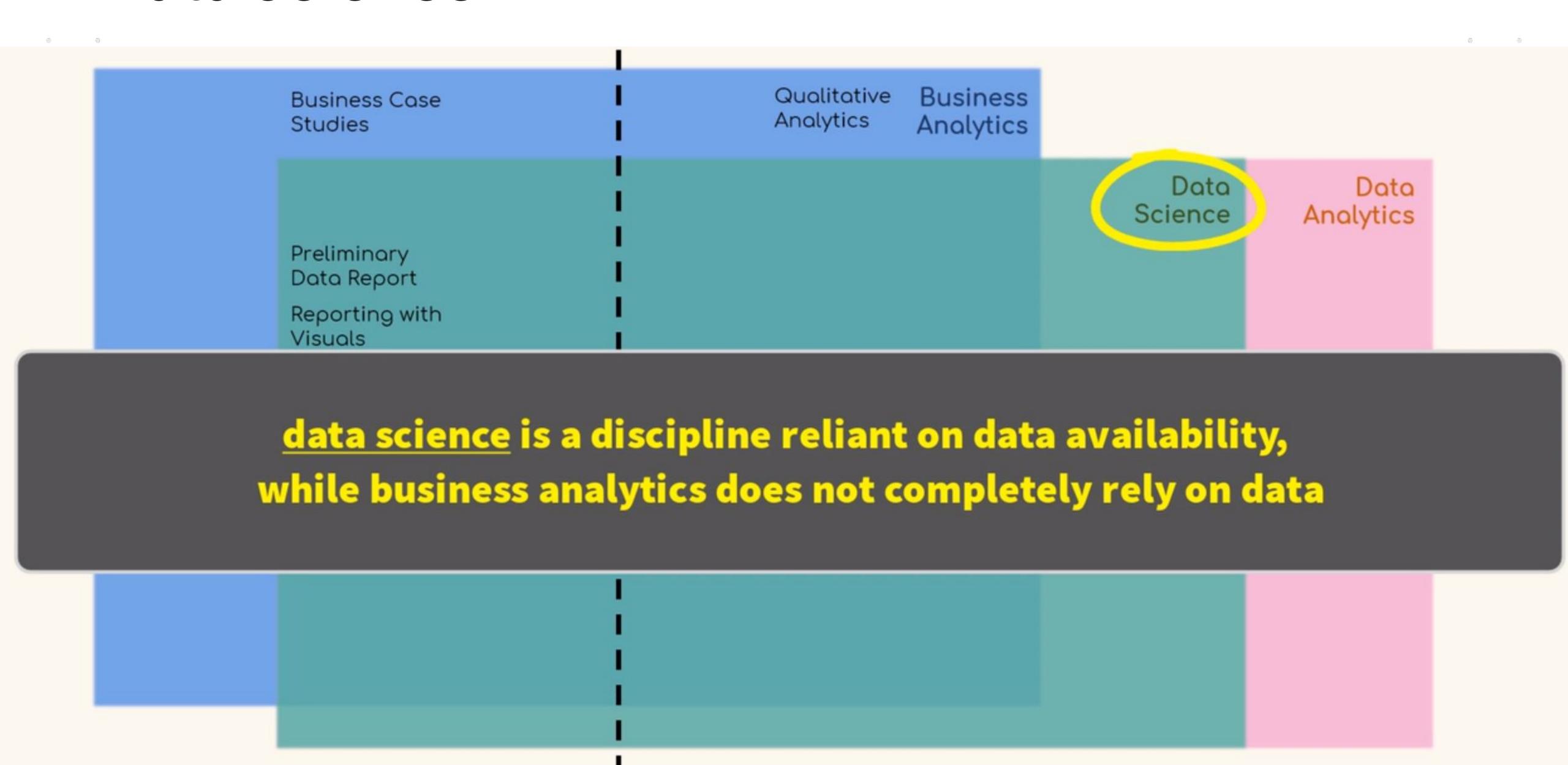
## Data Analysis



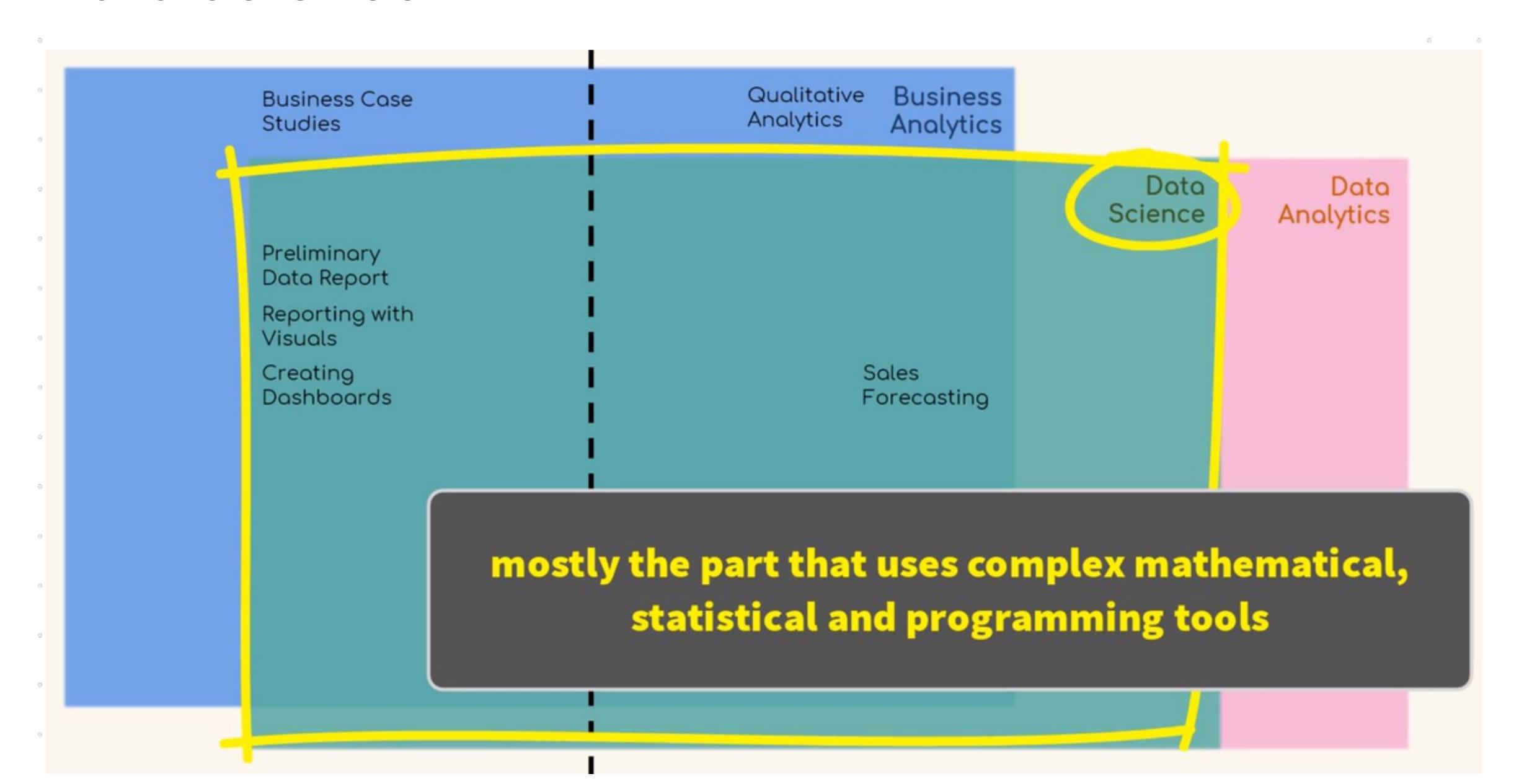
## Data Analytics += Data Analysis



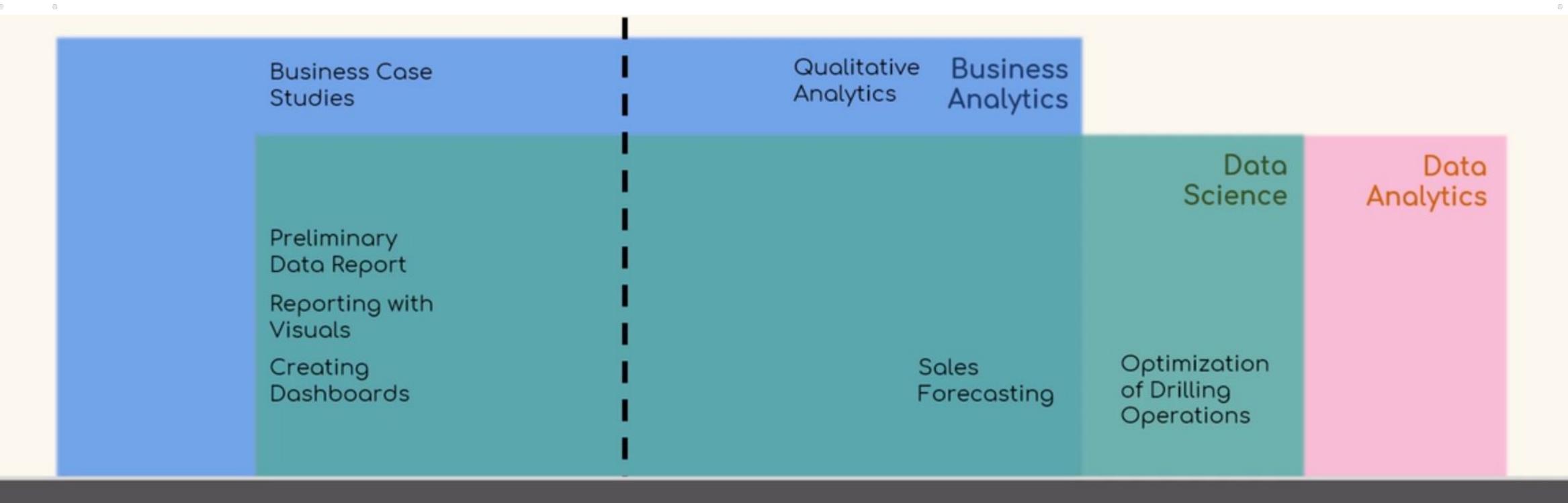
#### Data Science - 1



#### Data Science - 2



#### Drilling Operations Optimization



data science can be used to improve the accuracy of predictions based on data extracted from various activities typical for drilling efficiency

# Drilling Optimization - Course

- 1 day
- Intro Level
- Up to \$900

#### Data Analytics for Drilling Optimisation [Cairo]

#### 15th October 2018 – Cairo, Egypt

Held in conjunction with the SPE Workshop: Drilling and Optimisation, 14-17 October 2018.

#### Description

In today's world, traditional methods of drilling oil wells don't work as much anymore. Yesterday's practices are being superseded by a universal trend towards the extensive use of historical and real-time data to understand, learn and predict all well intervention operations. This course explores the impact of data analytics on well operations. Drawn from the presenter's extensive experience in data analysis, it examines, in easily understandable terms, today's data management processes targeting process improvement. The course introduces issues related to:

- · Basic concepts of data management with emphasis in drilling operations
- · Methods of using data as a basis for improving and optimizing process control
- Achieving a common understanding of the issues involved among information technology personnel and field engineers
- A roadmap for the implementation of a drilling process improvement system
- Business Intelligence as the ultimate goal of data management processes
- Discussions about data acquisition, quality control, storage, retrieval and analyses
- Understanding concepts for operational time and trouble analyses, learning curve, technical limit and benchmarking
- Real business cases to illustrate the concepts explored in the course.

#### **Pricing & Registration**

SPE Members: USD 375 (Local), USD 750 (International) SPE Non-members: USD 450 (Local), USD 900 (International)

#### **REGISTER FOR THIS COURSE**

#### Learning Level

Introductory

#### Course Length

1 Day (Daily Activities Agenda)

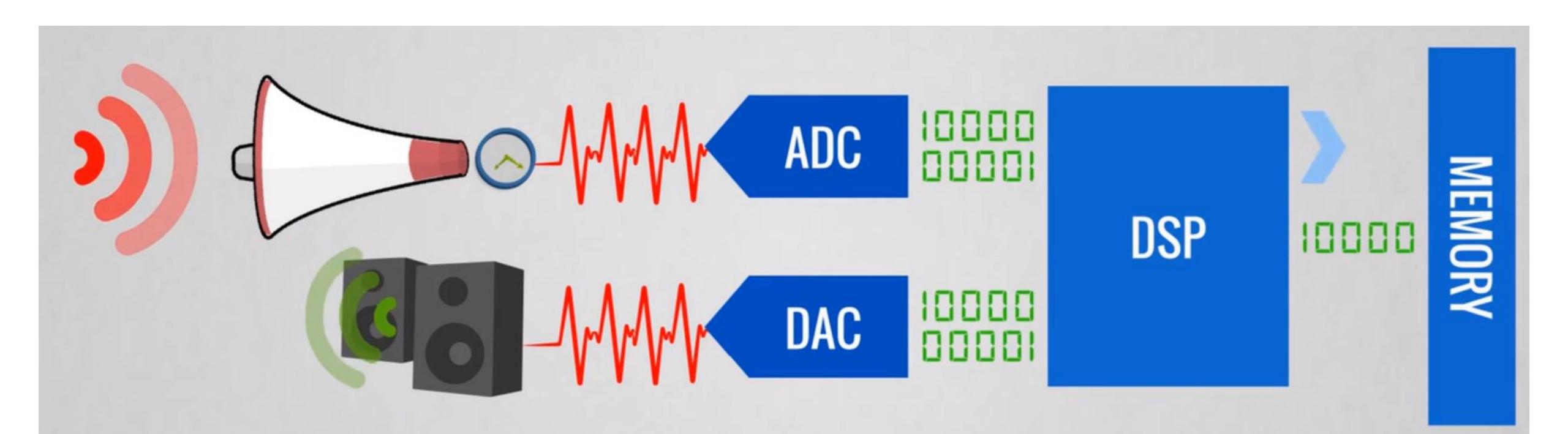
https://www.genesispetroleum.com.au/data-analytics-for-drilling-optimisation-cairo/

# Digital Signal Processing (DSP) - 1

©				*
	Business Case Studies	Qualitative Business Analytics Analytics		
9	Preliminary Date Present		Data Science	Data Analytics
	Data Report  Reporting with  Visuals			
	Creating Dashboards	Sales Forecasting	Optimization of Drilling Operations	Digital Signal Processing
<b>(3)</b>				
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### Digital Signal Processing (DSP) - 2

- Apply Data Analytics to Digital Signal to produce a higher quality signal
  - Analog-to-Digital Conversion (ADC)
  - Digital-to-Analog Conversion (DAC)



# Questions

Links

https://qithub.com/FCAI-B/da