

Learning Module

Preliminary



INTRODUCTION TO DATA SCIENCE

Presented by Randi Eka Sanjaya,
Dentsu - Merkle Indonesia

10 March 2025

INTRODUCTION



Hi, I'm Randi

Senior Data Scientist, Dentsu - Merkle Indonesia

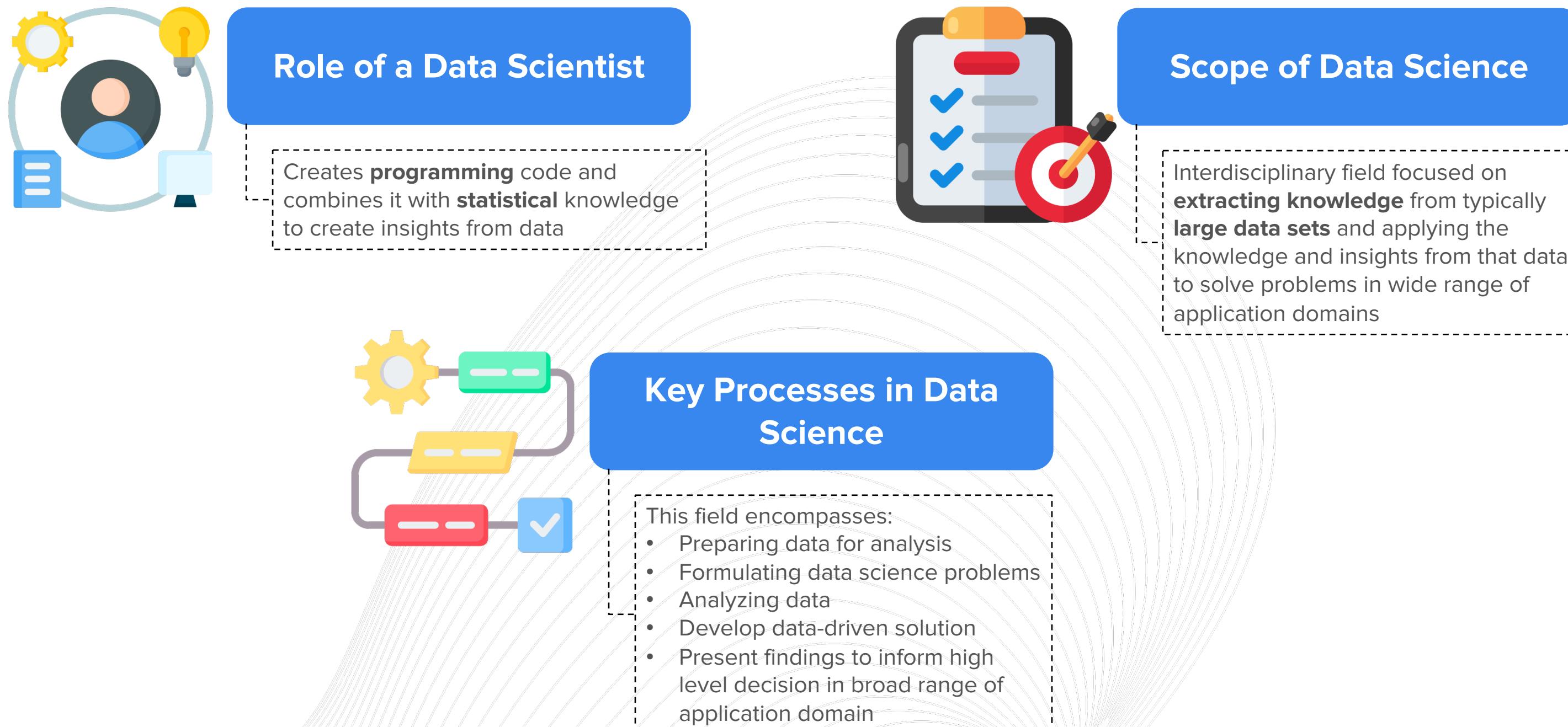
I have 4 years of experience in IT Consultant industry, especially in **Big Data Analytics** and **Agency**, with master degree in **Industrial Engineering – Business Analytics**.



Let's Start!

Harness the Power of Data Science to Transform Industries

Organizations today are inundated with **massive data**, which hold **untapped potential**. Without awareness of this potential, extracting actionable insights from this data becomes nearly impossible.



Why We Need Data Scientist now?



According to a report by IBM, **59%** of organizations believe that adopting **big data and analytics** is a key factor in gaining a competitive advantage.



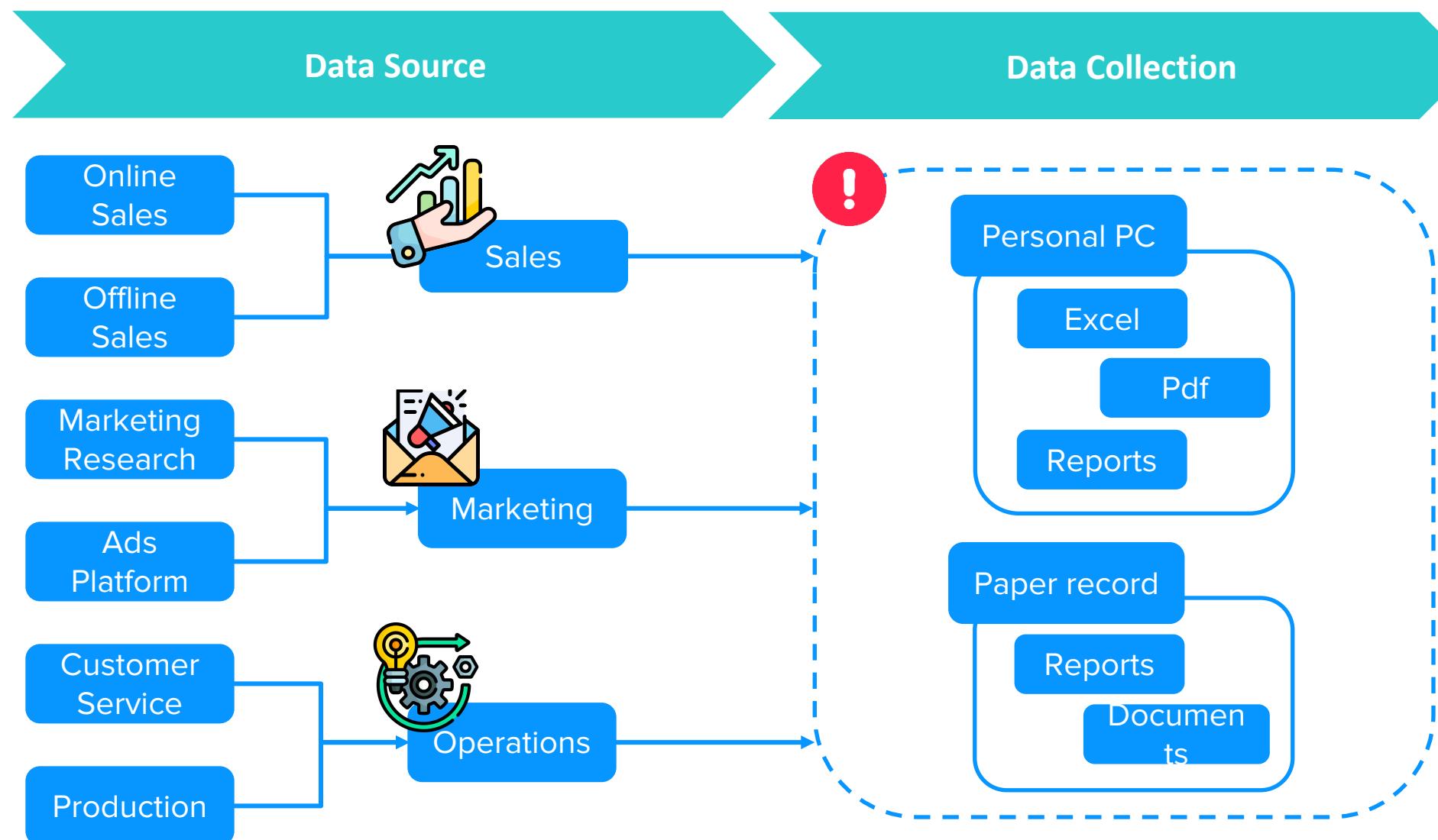
Deloitte Leonardo Innovation Space Launching Ceremony
According to a survey by Deloitte, 88% of financial institutions believe that artificial intelligence (AI) will revolutionize the way they gather information and interact with customers.



A study by PwC estimates that artificial intelligence (**AI**) and machine learning (**ML**) could contribute up to **\$15.7 trillion** to the global economy by **2030**.

Eliminate the Chaos of Data Overload to Make Smart Decisions

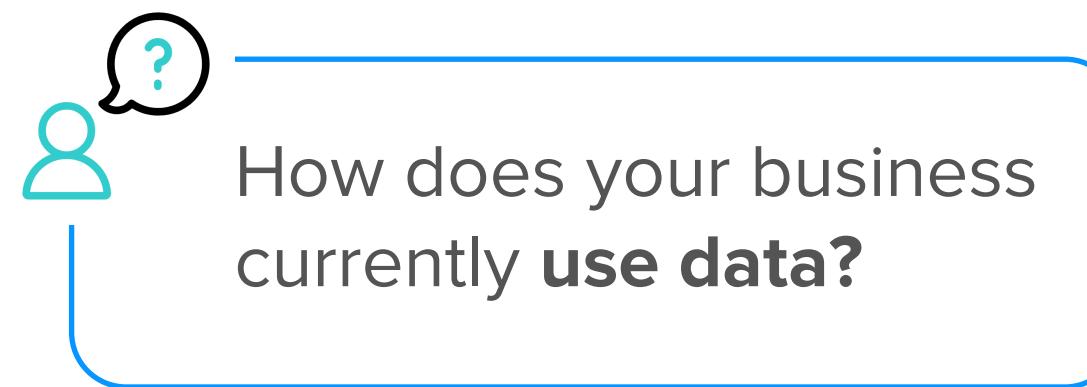
Businesses today collect data from multiple sources—customer transactions, social media, website interactions, and more. However, without proper organization and analysis, this massive data turns into chaos instead of insights.



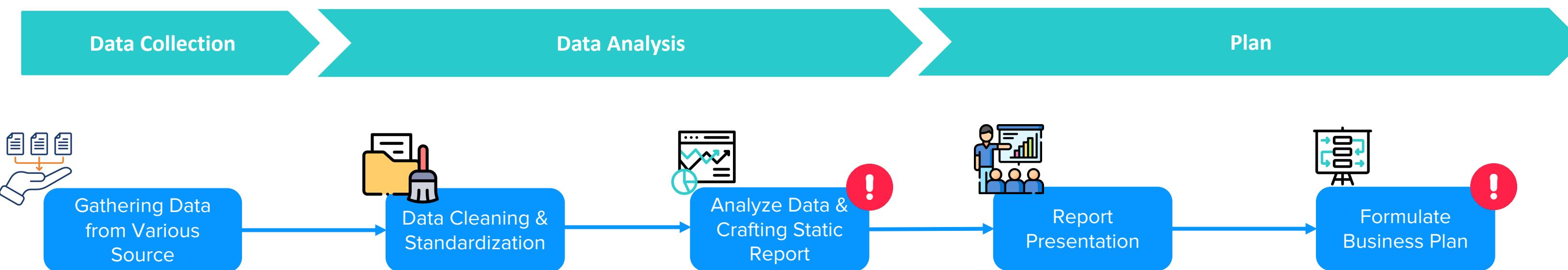
-
- What challenges do you face in making sense of it?
- Different teams use different formats, making data hard to compare or integrate
 - Information stored in different locations leading to duplication and inconsistencies
 - Teams spend more time searching for data than making decisions
 - Different departments report conflicting numbers, this leads to trust issues in data accuracy

Tackle Real-World Problems That Traditional Methods Can't Solve

In today's fast-changing world, businesses face complex challenges that traditional methods struggle to address. Manual analysis and rule-based decision-making rely on human intuition and historical trends, which often fail to capture hidden patterns or adapt to rapid changes.

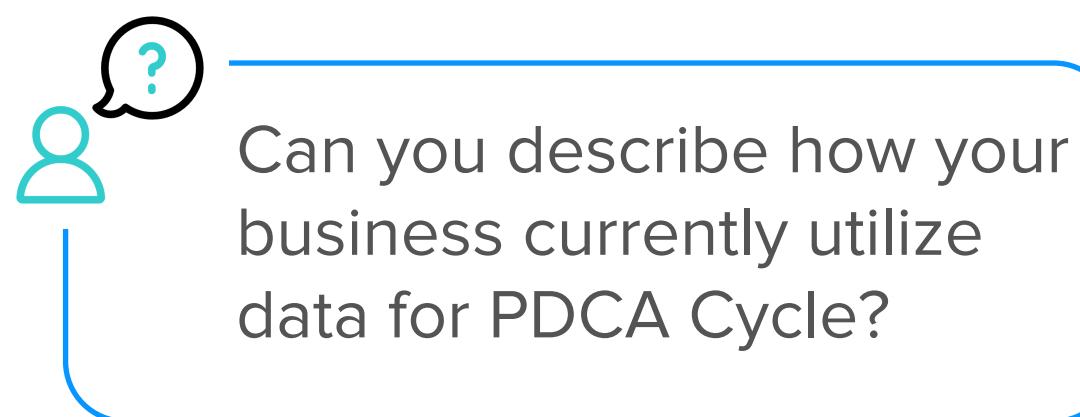


- ! What challenges do you face in making sense of it?
- Manually analysing large amounts of data takes too long, leading to delayed or outdated decisions.
 - Insights are historical (looking backward) rather than predictive
 - Traditional systems may overlook complex relationships in data that AI can identify.

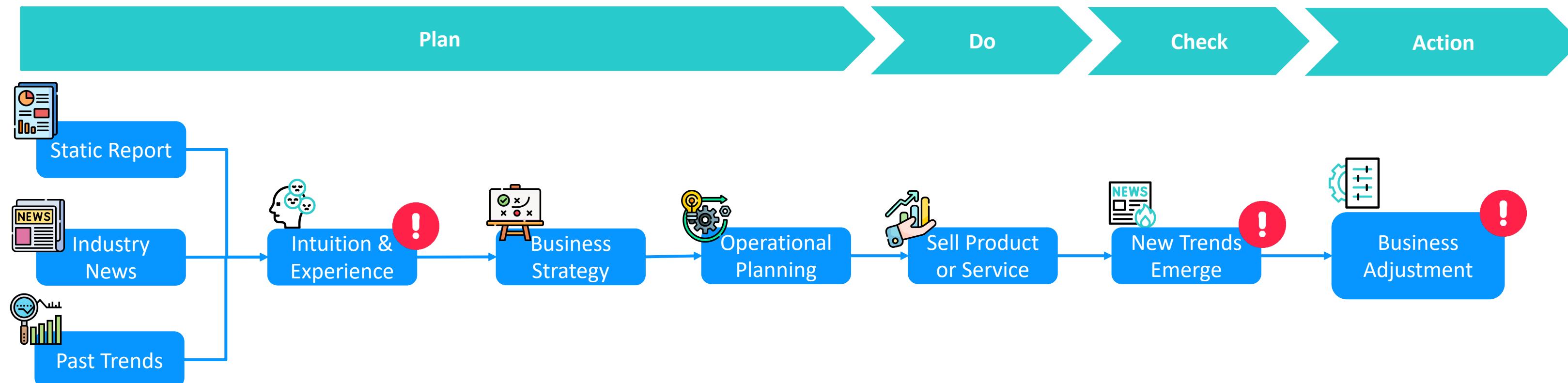


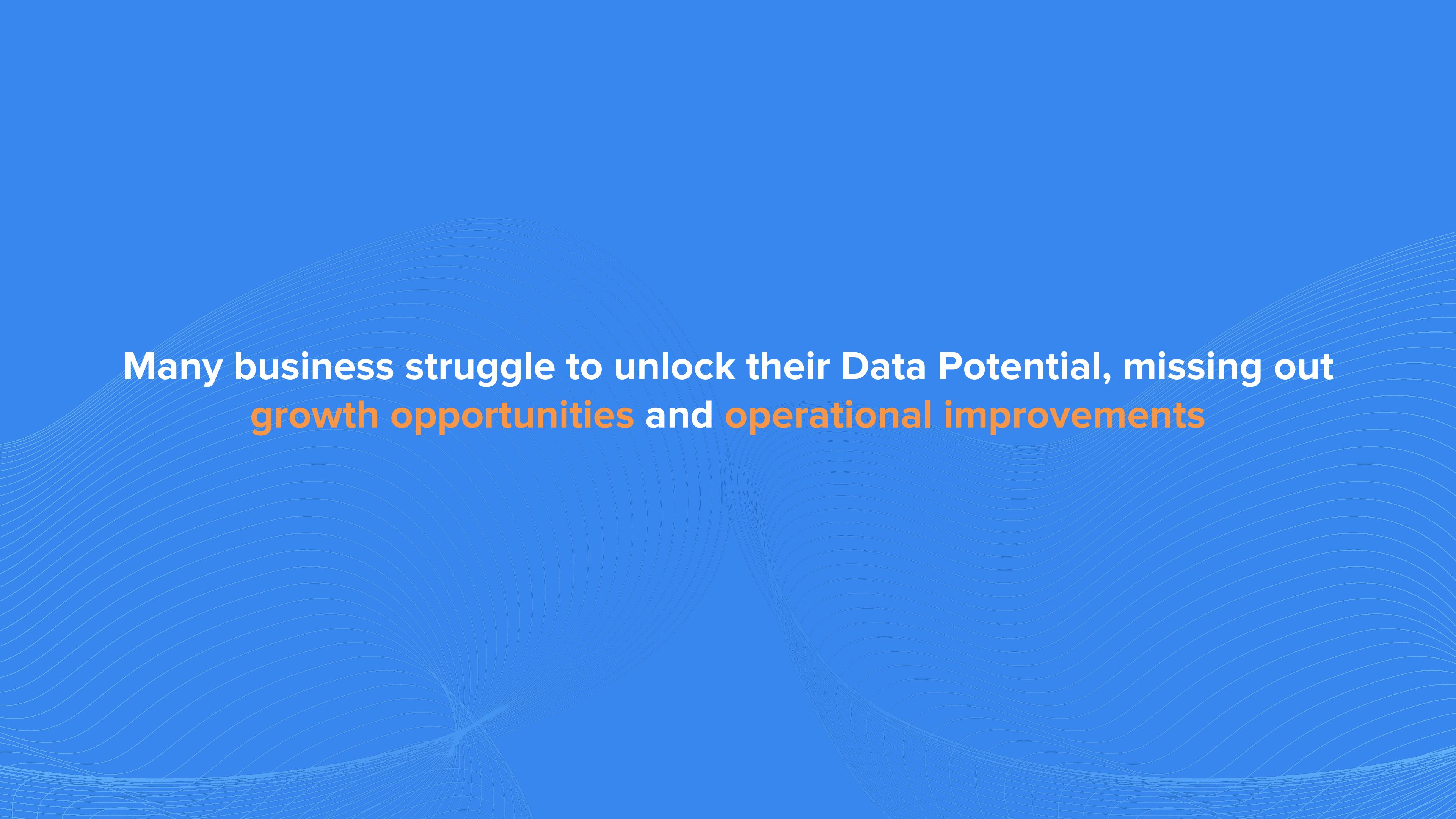
Outsmart Competitors by Embracing Data-Driven Strategies

Competitors leverage data to innovate faster and make smarter decisions. Statistics: McKinsey reports that data-driven organizations are 19 times more likely to be profitable.



- ! What challenges do you face in making sense of it?
- Unoptimized resource allocation due to lack demand forecasting as Decision Support System
 - Business react to customer behaviour instead of anticipating the needs
 - Competitor movements are analysed too late, leading to slow reaction
 - Struggle to align business with new trends





**Many business struggle to unlock their Data Potential, missing out
growth opportunities and operational improvements**

Data Scientist as Agent of Changes-Unlocking Business Potential!🚀



Turn scattered, messy data into a **structured, valuable asset** for business growth.



Leverage advanced analytics to **reveal hidden opportunities** beyond conventional approaches.



Gain a sustainable competitive advantage by adopting data-driven insights. Allow you to **anticipate market trends** and **respond faster** than your rivals.

Prospect of an Data Scientist!



According to LinkedIn, data science-related job postings have **grown by 256% since 2013.**



The US Bureau of Labor Statistics predicts that data science jobs will experience **36 percent growth between 2023 and 2033**



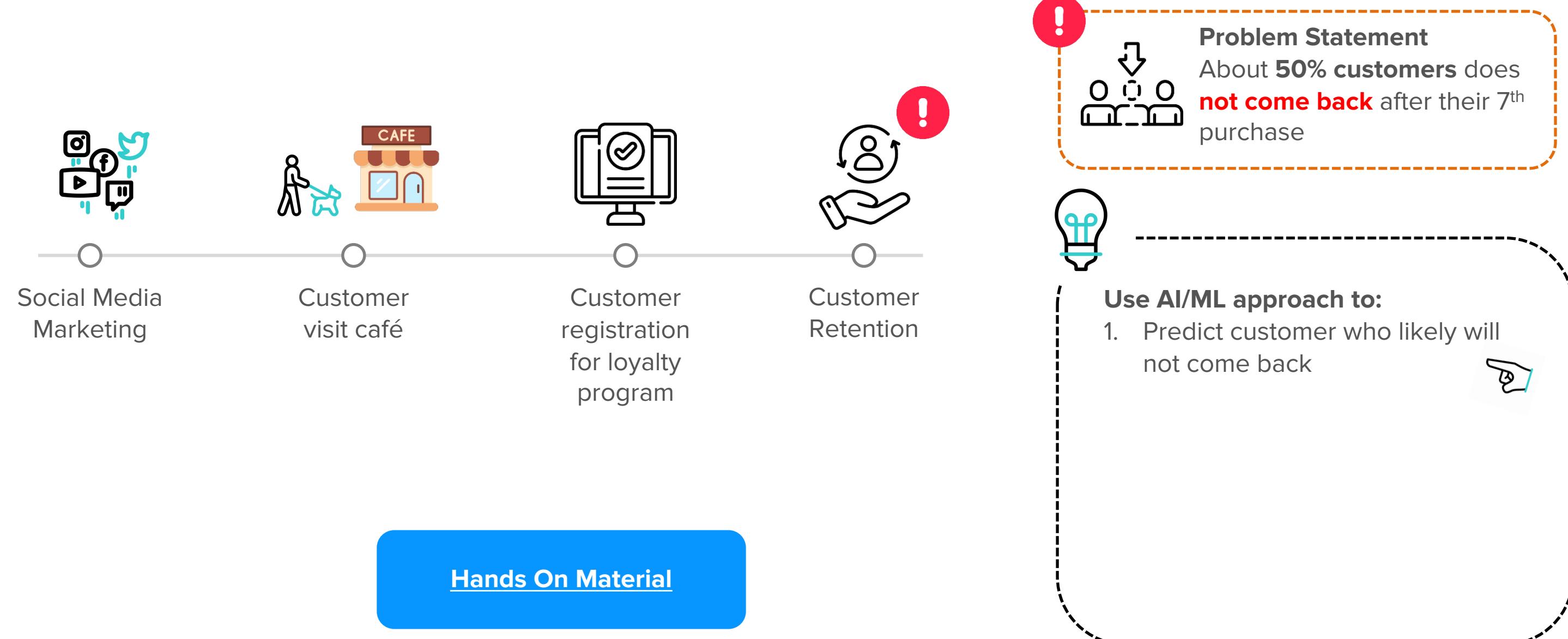
McKinsey Global Institute predicts that by 2026, demand for data scientists in the United States will **exceed supply by over 50%.**



How Data Scientist Unlock Business Potential?
Let's do Hands On!

Reduce Customer Churn and Increase Retention Rates

Imagine you have a cozy cafe in Jakarta which facing stiff competition. Some regular **customers are drifting away** to other cafés, and the owner wants to keep them coming back. On the other hand, you hold your customer data from using web application





THANKYOU FOR YOUR TIME

Any Question, Just Ask don't be shy