

Marketing Analytics Module Information

Dr Ashutosh Singh

WELCOME



About the Teaching Team



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Your Learning Experience

- Interactive lectures: **1 hour / week** 
- Online learning environment
 - Zoom
 - Minerva discussion board
 - MS Teams
- Learn by doing (Workshops): **2 hours/ week** 
 - R using datasets 

- Self-learning



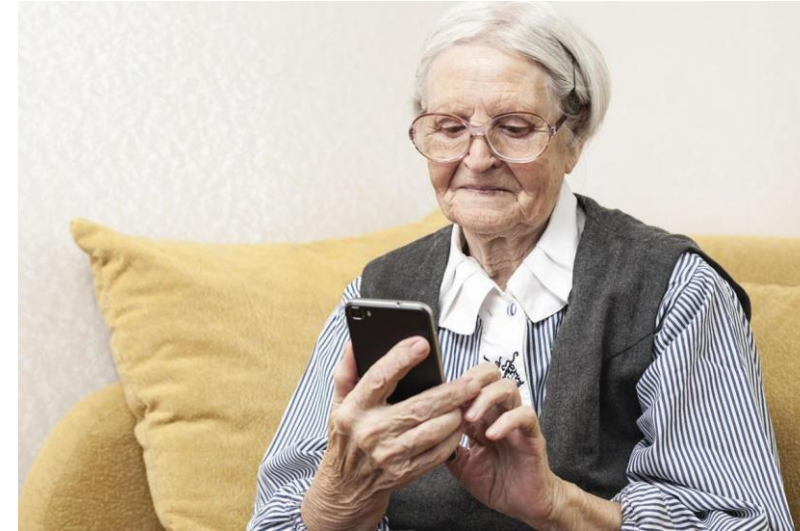
You will walk away with ...



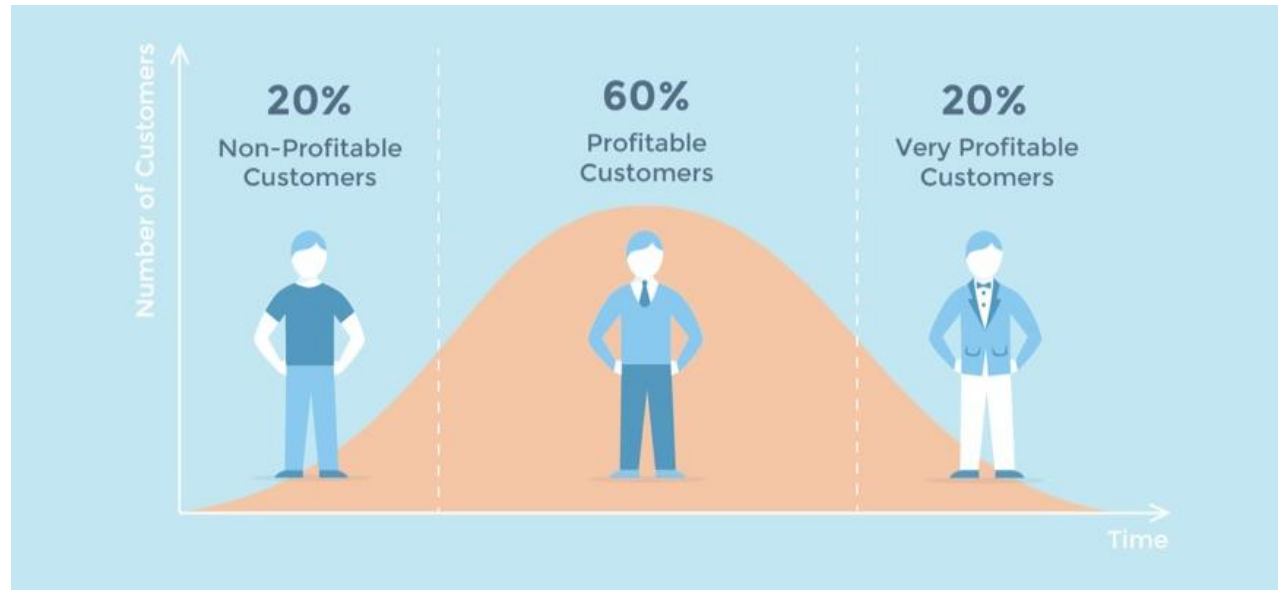
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- An in-depth **understanding of various analytics tools**, including segmentation, regression, among others.
- The ability to **implement these tools**, by applying **R code** to datasets
- Understand how to **interpret the results**

- How to classify consumers into different segments?
- How to understand consumers' perception?



- How to predict if customers will choose the product or not?
- How to quantify customer's life time value?



Session 6 & 7

- How to make decisions on developing new products?
- How to better understand customer's basket?



Shopping basket



Shopping basket recommended

Session 8 & 9

- How to quantify the impact of marketing spending on sales? How to measure return on marketing investment?
- How to decide which design is better?




- How to understand what consumers are saying about brands on social media?

@Ryanair I have to say, I've just landed into Lisbon on flight FR1884, the whole experience was seamless from beginning to end! Everyone was extremely helpful but in particular your cabin crew who were friendly and professional! Very impressed!!!



Don't fly with @British_Airways.
They can't keep track of your luggage.

 Promoted by
9/2/13, 8:32 PM

9 RETWEETS 7 FAVORITES





Module Structure

Session 1	Session 2	Session 3	Session 4	Session 5
Introduction	Managing customer heterogeneity		Managing customer dynamics	
<ul style="list-style-type: none"> • Introduction to R • Descriptive analysis 	<ul style="list-style-type: none"> • Cluster analysis • Classification 	<ul style="list-style-type: none"> • Factor analysis 	<ul style="list-style-type: none"> • Choice model 	<ul style="list-style-type: none"> • Calculating CLV • RFM analysis

Session 6	Session 7	Session 8	Session 9	Session 10
Managing sustainable competitive advantage		Managing resource trade-offs		Text Analysis in Business
<ul style="list-style-type: none"> • Conjoint analysis 	<ul style="list-style-type: none"> • Market basket analysis 	<ul style="list-style-type: none"> • Experiment • A/B testing 	<ul style="list-style-type: none"> • Marketing mix models 	<ul style="list-style-type: none"> • Sentiment and text analysis

- 100% Individual Report – Datasets will be given.
- You will be working on the datasets individually by using appropriate analytic tools to solve marketing problems.
- Deadline:
 - **TBD..**
- Details may change upon approval.

Task:

You are asked to conduct marketing analytics by applying appropriate analysis tools (using R) to the provided datasets and to develop a marketing consultancy report based on your analysis results. You can use part or all of those data files. In addition to analysing the provided datasets, you are required to provide suggestions on future marketing analysis plan.

Guidance for your task:

Your report should cover the following contents:

Introduction (5%):

Briefly introduce the report, including the business context and background.

Main body (75%):

This is based on data analysis and should address the THREE out of the following four main marketing themes (equally weighted):

- Managing customer heterogeneity,
- Managing customer dynamics,
- Managing sustainable competitive advantage, and
- Managing resource trade-offs.

For each theme, you can follow the following structure:

- Problem definition and model specification: identify the useful analysis tools and the datasets; and describe your model specification.
- Results: present the results using appropriate tables and figures; and interpret the results.
- Discussion: summarize key findings and implications; reflect critically on the validity of your proposed model.

Future works (20%):

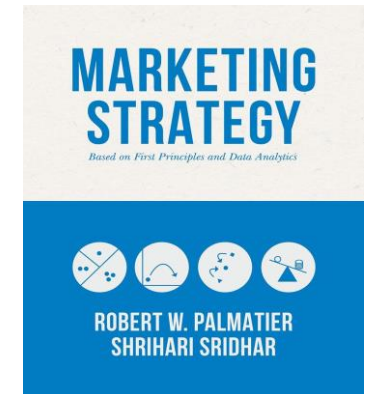
This is the part you make suggestions on future marketing analysis plan. Suggestions should include what other data could be collected and how, what models could be used to analyse the data, and what insights could be obtained.

Optional Readings



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- Chapman, C., & Feit, E. M. (2015). *R for marketing research and analytics*. New York, NY: Springer.
- Palmatier, R. W., & Sridhar, S. (2017). *Marketing strategy: Based on first principles and data analytics*. Macmillan International Higher Education.
- http://lib5.leeds.ac.uk/rlists/broker/?bbModuleId=202122_37062_LUBS5403M&bbListId=9334713_1&s=m
- <https://r-marketing.r-forge.r-project.org/Instructor/slides-index.html>



ANY
QUESTIONS
?

Marketing Analytics: Session 1

Introduction to Marketing Analytics



Learning outcomes

- **Introduction to Marketing Analytics**
 - Why marketing analytics?
 - Data sources for marketing analytics
 - Marketing principles and marketing analytics
- **Workshop**
 - Introduction to R
 - Descriptive analysis



Do you know any examples of organisations with a data-driven culture?



Why Learn About Marketing Analytics



“Managers had signs outside their offices that said, 'In God we trust. The rest, bring me data’”

“It was common to have heated debates around data. It was like, 'I don't trust your subjective opinion. Bring me data-driven opinion.’”

“Amazon is driven by data...It will only change if the data says it must”

Source: Business Insider, 2015

Why Learn About Marketing Analytics



McD's Arch Burger, 1996

- Tasty burger, upscale, targeted for adults, but.....

The Burger with the Grown-Up Taste





Why Learn About Marketing Analytics

5%

Of managers in retail use analytics to make pricing decisions.

\$1 trillion

“Marketers are always asking for more money, but can rarely explain how much incremental business this money will generate”



Accountability drives the marketing department's influence within the firm

Marketing Analytics (Grigsby 2018)

The dawn of marketing's next golden age: \$200 billion and counting (McKinsey & Company); Verhoef, P. C., & Leeflang, P. S. (2009). Understanding the marketing department's influence within the firm, *Journal of Marketing*, 73(2), 14-37



The
Guardian

How stats and data are changing the marketing career path

When recruiting for marketing roles, companies are increasingly looking for graduates who can combine analytical rigor with the ability to apply this knowledge creatively

Harvard Business Review

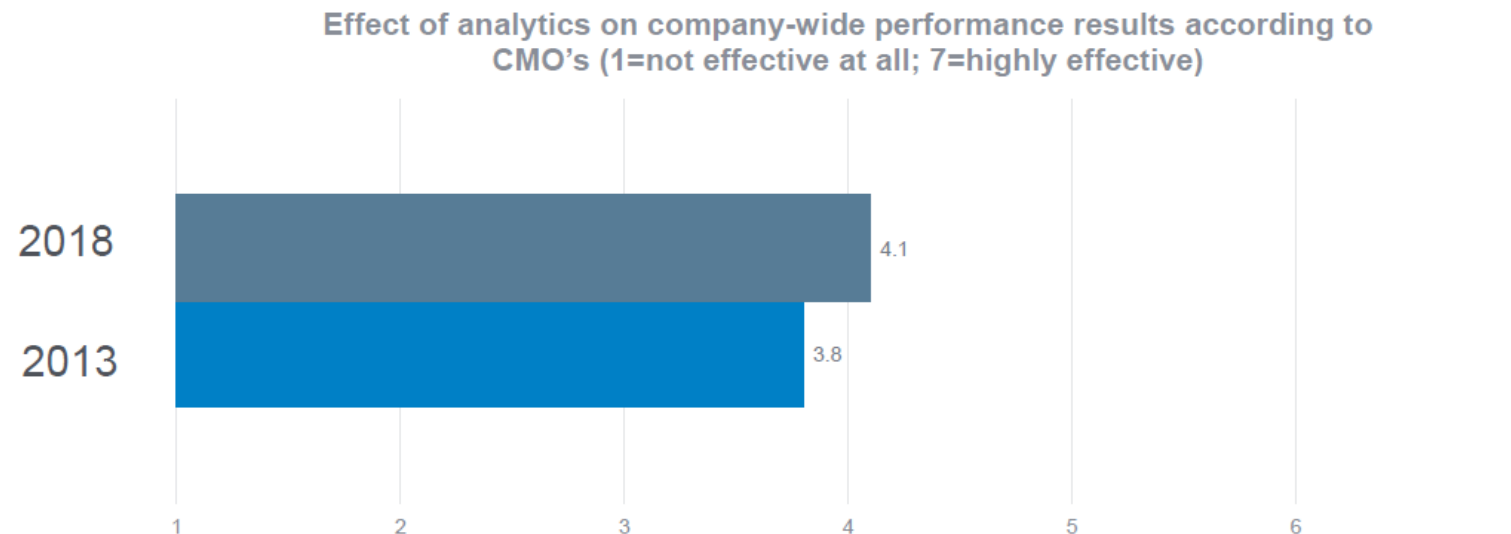
“The Analytics Translator”

You Don't Have to Be a Data Scientist to Fill This Must-Have Analytics Role



Impact of Marketing Analytics

The % of marketing budgets allocated to analytics has increased substantially in recent years, but the perceived beneficial results remain modest:



Source: Why Marketing Analytics Hasn't Lived Up to Its Promise (Mela & Moorman, 2018)

Why is there a gap between the promise and reality of marketing analytics?



Impact of Marketing Analytics

- **Two key challenges:**

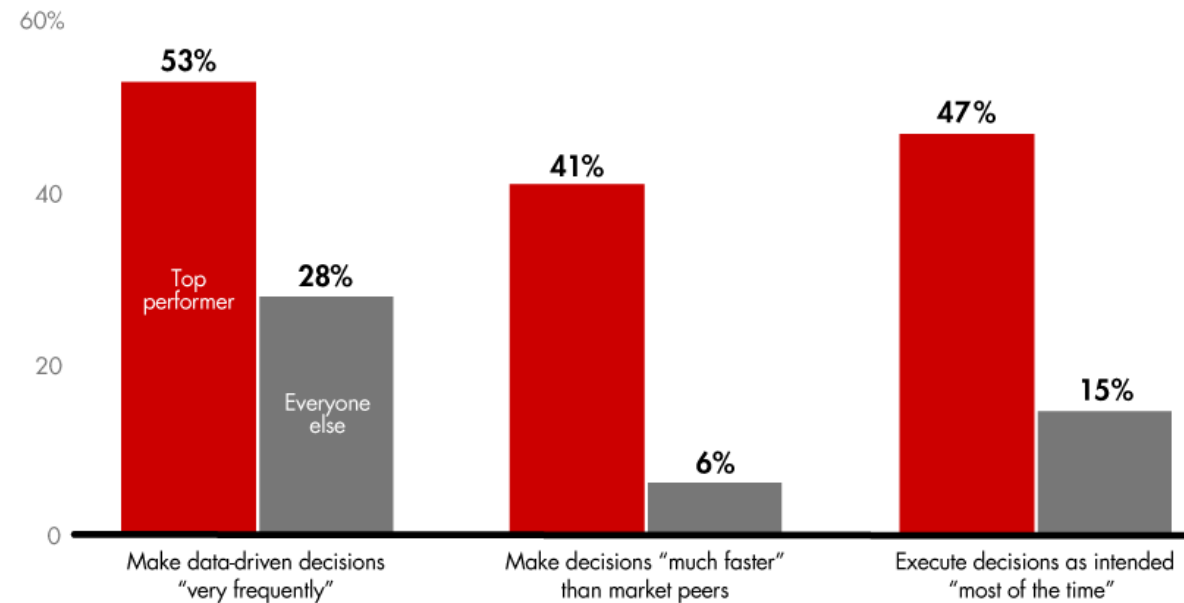
- Data challenge
- Data analyst challenge

– “If I were given one hour to save the planet, I would spend 59 minutes defining the problem and one minute resolving it” Albert Einstein

Source: Why Marketing Analytics Hasn't Lived Up to Its Promise (Mela & Moorman, 2018)

Advanced analytics supports better decision making

Percentage of respondents by data capabilities



Source: Bain research, n~409

Impact of Marketing Analytics

Policy issues



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Bonfrer, A., Chintagunta, P. K., Roberts, J. H., & Corkindale, D. (2020)..Marketing Science,39(1), 234-252. Assessing the sales impact of plain packaging regulation for cigarettes: Evidence from Australia

Duffy, M. (1991). Advertising and the consumption of tobacco and alcoholic drink: a system-wide analysis. Scottish Journal of Political Economy, 38(4), 369-385.

Impact of Marketing Analytics

Consumer behaviour



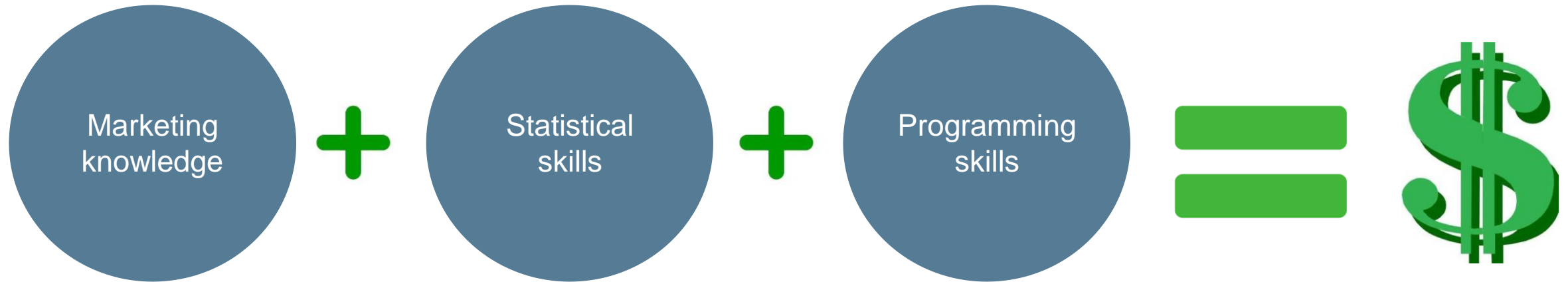
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Cleeren, K., Geyskens, K., Verhoef, P. C., & Pennings, J. M. (2016). Regular or low-fat? An investigation of the long-run impact of the first low-fat purchase on subsequent purchase volumes and calories. *International Journal of Research in Marketing*, 33(4), 896-906.

Nikolova, H. D., & Inman, J. J. (2015). Healthy choice: the effect of simplified point-of-sale nutritional information on consumer food choice behavior. *Journal of Marketing Research*, 52(6), 817-835.

Impact of Marketing Analytics



- Marketing analytics gives input/information to the organization for decision making
- Does not replace managerial judgement, but can offer guidance
- Decrease the chance of marketers making the wrong decision

Data Sources for Marketing Analytics

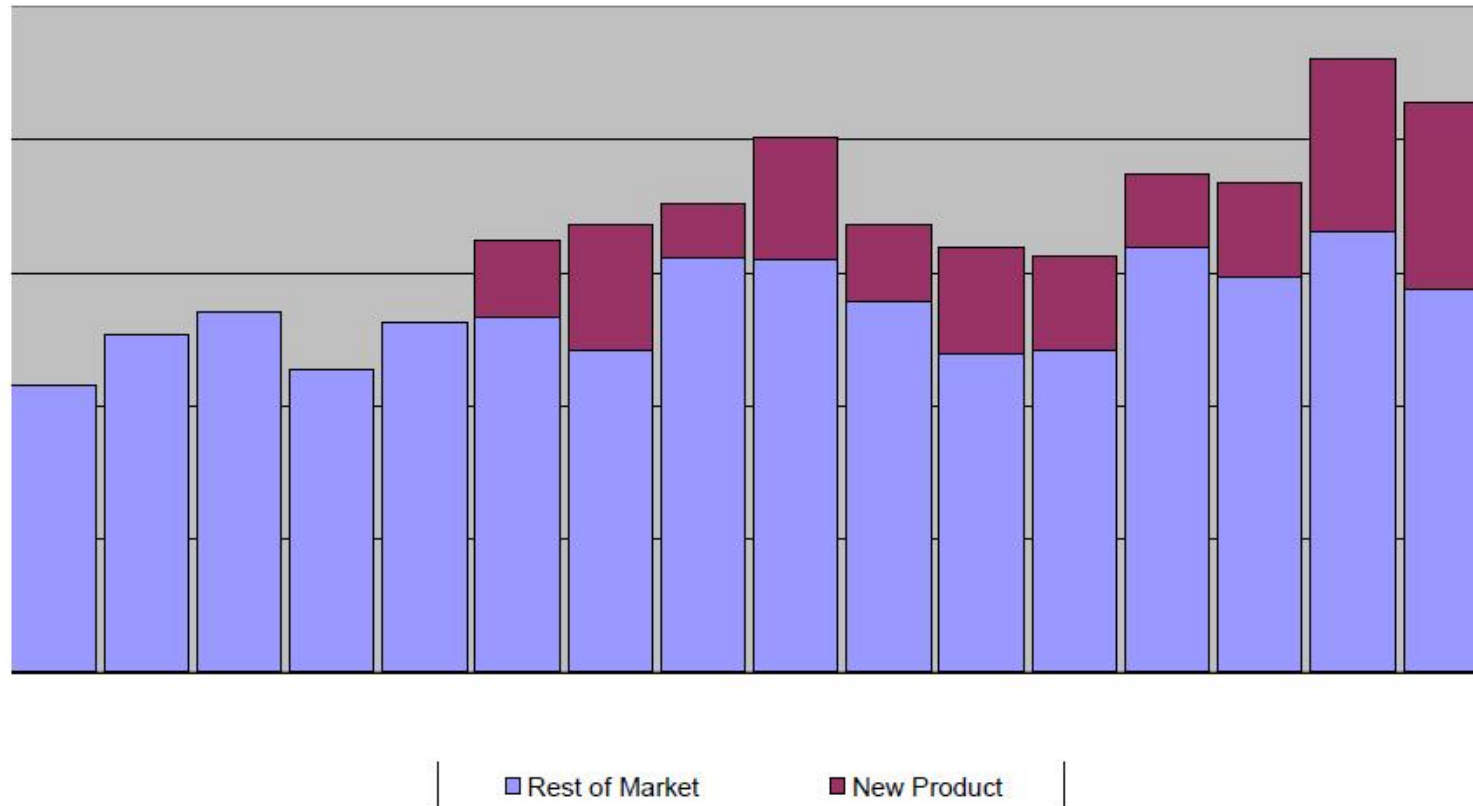


- You got hired as a strategic marketer for the Unilever's brand Magnum.
- Your boss informs you that Magnum's market share is decreasing.
- You are asked to identify the underlying reasons for this decrease. What data would you ideally use?
- What do you think the underlying reasons are?

Data Sources for Marketing Analytics



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Data Sources for Marketing Analytics

- **Primary data sources**

- First hand data gathered by researcher, specific to researcher's need
- Survey, observation, experiments

- **Secondary data sources**

- Second hand data gathered by others, not necessarily specific to researcher's need
- Business press, academic press, yearly reports, government reports, clickstream data, social media data





Data Sources for Marketing Analytics

Validity matters

Over the past quarter, we've registered one accident or crash-like event for every **3.34 million miles** driven in which drivers had **Autopilot** engaged. For those driving **without Autopilot**, we registered one accident or crash-like event for every **1.92 million miles** driven. By comparison, the National Highway Traffic Safety Administration's (NHTSA) most recent data shows that in the United States, there is an automobile crash every **0.49 million miles**"

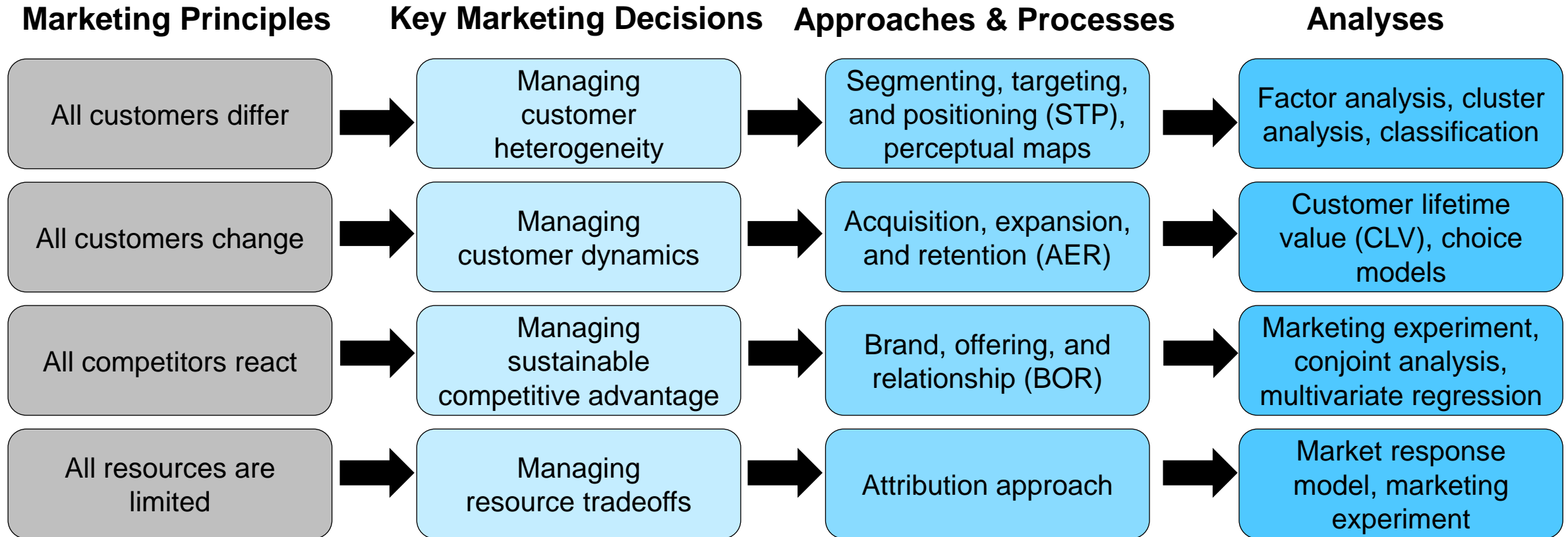


Do you find the conclusion to be valid? Why (not)?

Source: Tesla Safety Reports (<https://www.tesla.com/blog/q3-2018-vehicle-safety-report>)



Marketing Strategy: Marketing Principles Approach



You should be able to...



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-
- **Explain how marketing analytics can contribute to firm value**
 - **Explain which data sources can be leveraged to solve strategic marketing questions**
 - **Explain how marketing principle approach could help for strategic marketing decision making**

ANY
QUESTIONS
?

- **Introduction to R**
- **Descriptive analysis**



Introduction to R

- **What is R?**
- **What is RStudio?**
- **Why do I have to learn R?**
- **What if I do not have any background in statistics or programming?**
- **What can I expect to learn?**