

Mid-point check-in

Vodafone and JCU Master of Data Science Project
Team

Agenda



THE PROBLEM
STATEMENT



KEY BUSINESS
QUESTIONS



PROPOSED
DELIVERABLES AND
OPTIONS



SUGGESTED
TIMELINES

Problem Statement

Free-text survey responses contain a wealth of business insights on what drives promoters and detractors.

...However, the volume and variability of the data make manual analysis unfeasible, so the full value of this data is not being realised.

An automated solution to extract actionable insights is desirable to target initiatives and improve customer satisfaction.

Key Business Questions



WHAT DRIVES CUSTOMERS TO
BECOME PROMOTERS OR
DETRACTORS?



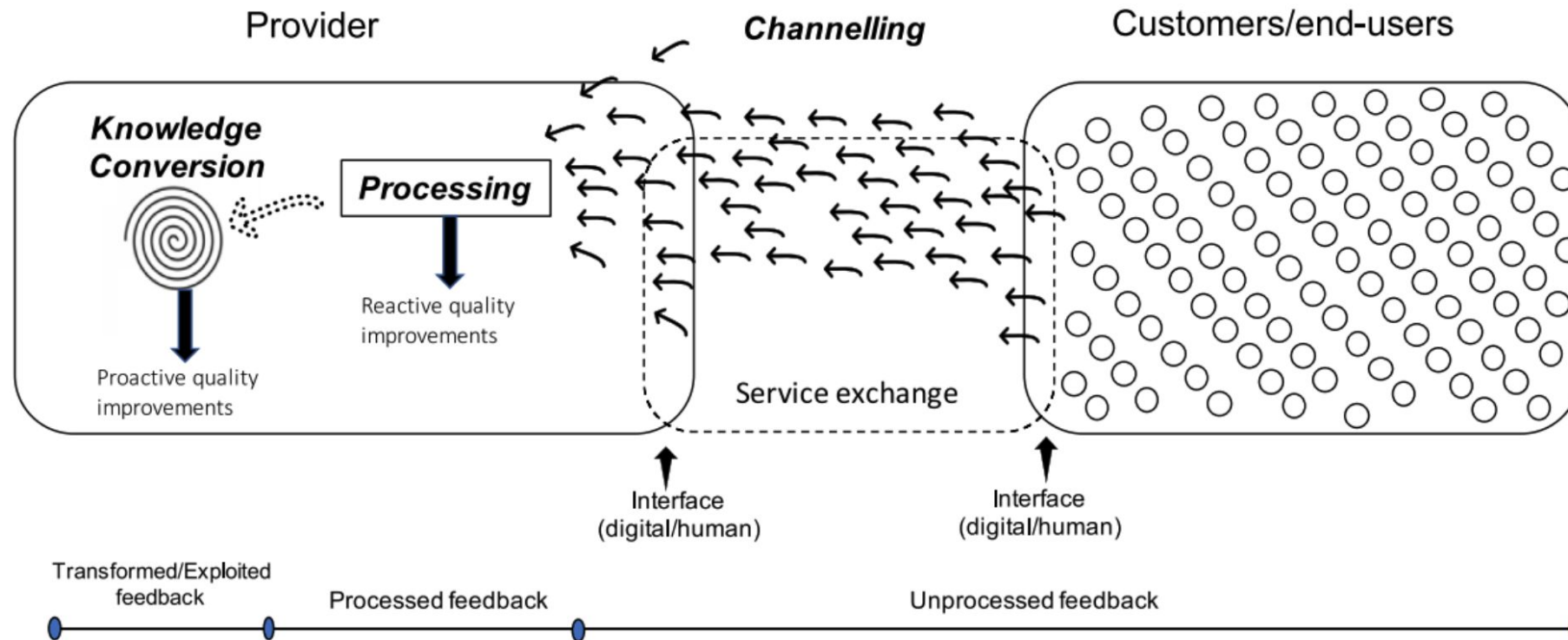
WHAT INFLUENCES A CUSTOMER
TO GIVE A NEUTRAL RESPONSE?



WHICH ISSUES HAVE THE
BIGGEST IMPACT IF NOT
RESOLVED ON THE FIRST CALL?

Desired Outcomes

An automated reusable tool to extract actionable insights related to the business questions, including an automated visualised report.

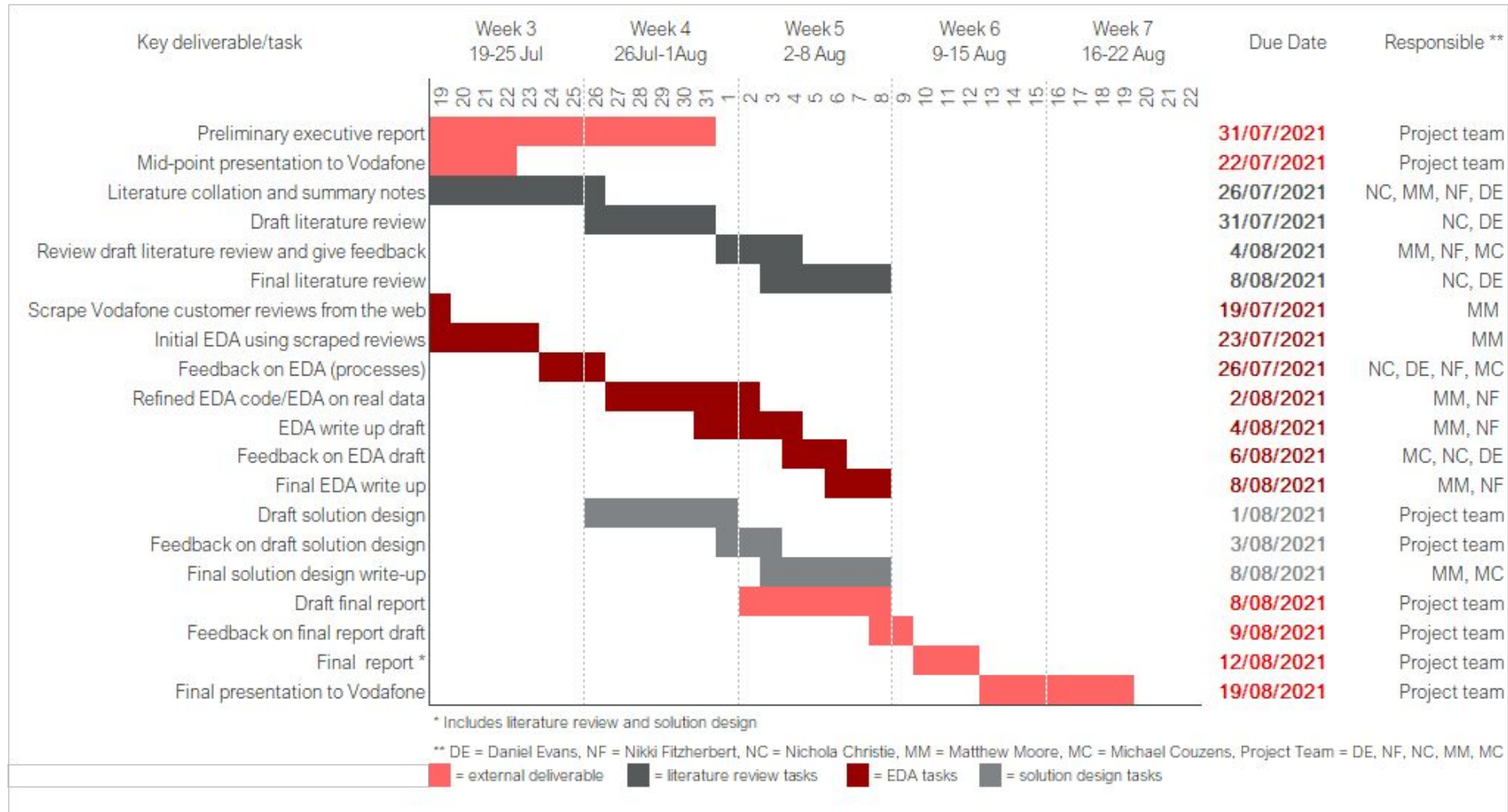


Birch-Jensen, A., Gremyr, I., & Halldórsson, Á. (2020). Digitally connected services: Improvements through customer-initiated feedback. *European Management Journal*, 38(5), 814–825.

Proposed process and deliverables

- Literature review
- Exploratory data analysis
- Natural language processing solution design

Timeline



High-level solution design

Literature review

- Drivers of customer satisfaction/loyalty
- NPS in the context of telecommunications, sentiment and natural language processing
- Relevant NLP techniques (e.g. topic modelling)

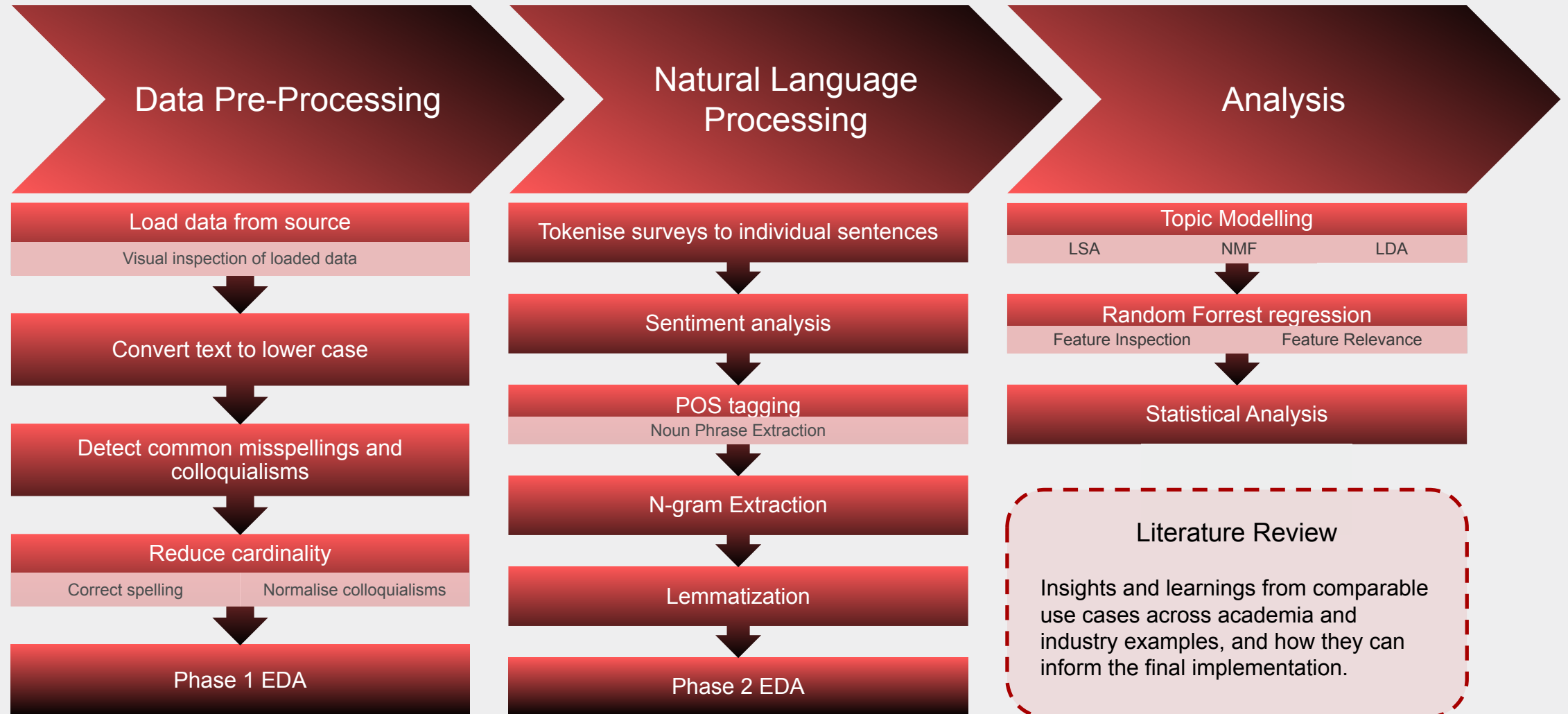
Exploratory data analysis

- Word and n-gram frequencies
- Common misspellings, colloquialisms, and synonyms
- Sentiment spread for pertinent n-grams/words

Natural language processing design

- Methodologies to be employed (e.g. Latent Dirichlet Allocation, tree-based supervised learning methods)
- A flow diagram visualising the NLP pipeline

Natural Language Processing Solution Design





Q&A



Thank You