2019 Actuarial Hackathon

Scoping Document

# Hackathon Committee Team Leader Info

Primary contact within the volunteer team.

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# The Challenge

## 3.1 What are we trying to achieve? (E.g. We would like to …… so we can ……)

*The vast majority of income for Compassion comes from recurring donations by the Australian public. Our primary product is child sponsorship, for which each sponsor commits to paying $48/month.*

*We would like to compare our acquisition and cancellation rates to external socio-economic data so that we can more deeply understand long-term patterns and prepare for future variations.*

## 3.2 What does success look like?

*We would have clear statistics and easily interpreted graphs that show how our historical rates of sponsorship acquisition and cancellation correlate to a variety of external socio-economic trends.*

## 3.3 Are there specific questions you would like answered, ideas explored or hypotheses tested?

*Do Compassion’s rates of sponsorship acquisition or cancellation correlate to any of the following:*

* *National or State employment/unemployment/underemployment rates*
* *CPI*
* *Mortgage rates*
* *Measures of Consumer Sentiment or Consumer Anxiety*
* *Disposable income*
* *Housing prices*
* *Any other Australian economic indicators you may know of?*

*What is the typical lag between variations in those external measures and our internal measures?*

# The Data

## 4.1 What data can you provide? (Please provide existing dashboards, reports, any related analysis, etc.)

*We can provide a complete set of acquisition and cancellation data since Nov 2015. We can probably provide the same data back to 1980.*

*If it is useful, we could also provide some demographic details of the donors, e.g. postcode, and whether they are an individual, family or business.*

## 4.2 When can the data be made available?

*End of March.*

## 4.3 In what format will the data be provided, e.g. Excel, CSV or other (please specify)?

*CSV*

## 4.4 How was the data prepared? (e.g. system extract, manually entered by multiple parties)

*System extract.*

## 4.5 Has the data been modified in any way, e.g. has it been summarised, does it contain calculated fields?

*No, this is fairly straight forward data.*

## 4.6 Are you aware of any limitations with the data, e.g. are there known data quality issues?

*The sponsorship acquisition data is very accurate, the cancellation data a little bit less accurate..*

## 4.7 Is the data appropriately de-identified for Privacy purposes?

*Yes.*

## 4.8 Are you aware of any external and publicly available data that would be useful?

*We are hoping you will be able to source the relevant external data.*

# Other Relevant Info

## 5.1 How does this assignment fit within your organisation e.g. how does it relate to your strategy or business plan? Does it impact on other initiatives in your organisation? *(Please provide additional materials as necessary.)*

*This project touches the core of our business model, since 90% of our income comes from these recurring payments for child sponsorship. Understanding patterns in how those recurring payment streams are acquired and lost is an important aspect of core mission improvements.*

## 5.2 Have you tried to solve this problem before? What was the outcome and are there any learnings for us?

*We did some correlation analysis 8 years ago in-house.*

## 5.3 Do you foresee any sensitivity around the results of this analysis?

*No.*

## 5.4 How will the results be used?

*Senior management will be made aware of the analysis, and will use the correlations to both interpret recent history and plan for future movements.*

## 5.5 Do you intend to publish, share or use any findings outside of your organisation?

*No*

## Is there anything else we need to be aware of?

*The data we provide is commercially sensitive and we would require each person with access to the data to sign an NDA.*