



Australian Government

Austrade



TOURISM  
RESEARCH  
AUSTRALIA

# COMPLEMENTARY DATA AND TOURISM

In 2017, Tourism Research Australia (TRA) undertook a review of the data landscape, including the utility of new and emerging data sources for tourism use, in line with the continuous improvement program. Data61 (the commercial arm of the CSIRO) assisted with the review, bringing their expertise with administrative and big data sources.

While 'big data' is not a new concept – TRA has been using this type of information since the 80s – today's offering includes a range of new commercial and government data sources that were previously unavailable.

## CURRENT DATA GAPS

Industry consultation, along with analysis by Data61 and TRA identified the following data gaps:

- visitor pathways
- visitor sentiment and actual experience
- non-travellers (and possible motivators)
- granular level data

Another important consideration is the latency of current data – there is an identified need for more frequent reporting.

## KEY FINDINGS

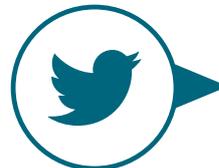
### DATA61 – THE POTENTIAL FOR ALTERNATIVE DATA SOURCES TO MEET TOURISM DATA NEEDS

- There's value in and requirement for surveys as a whole, but there's also an opportunity to improve the data offering by using complementary data.
- Commercial and government administrative data has the potential to fill current data gaps and provide new insights.
- Data users want trusted agencies like TRA and the Australian Bureau of Statistics (ABS) to be involved to ensure quality & provide advice/guidance on how to use commercial data or new data sources.
- Complementary data are more likely to be useful in the domestic space, due to more information being available on domestic travellers, along with the fact that international data is more complex.
- Data will need to be compared with mainstream data sources over a five year period, so there will be additional cost implications.
- Commercial data are constrained by increased privacy and access issues, as it includes the use of personal information. Data is only useful if it can be shared and analysed.
- There are licensing issues around sharing and publishing of commercial data.
- For best results, tourism products need involvement from tourism experts, researchers and data scientists.

Data61 identified these four data groups to investigate further:



TRANSACTIONS,  
INCLUDING FINANCIAL



SOCIAL MEDIA



BOOKINGS AND  
TICKETING



TELECOMMUNICATIONS

## DATA QUALITY FRAMEWORK

These four data groups were assessed across the ABS' [Data Quality Framework](#), which addresses the institutional environment, accessibility, interpretability, coherence, accuracy, timeliness and relevance, with the addition of single source.

TRA and state tourism organisations undertook over 20 proof of concepts to analyse the usability of these data groups for tourism purposes. Following is a summary of the findings, also identifying key uses.



## MORE INFORMATION

In April 2019, TRA held a webinar, *Update on the tourism data landscape* about the potential benefits of complementary data sources and the challenges for the tourism industry in using them. A recording of the [webinar](#) and the [presentation](#) are now available at [tra.gov.au](http://tra.gov.au)



# TOP FOUR COMPLEMENTARY DATA SOURCES FOR TOURISM

## OPPORTUNITIES

- Provides data at more granular geographic scales
- In some cases data can be near real time (after setup)
- Provides new data items and insights not previously available
- Can work with traditional research to improve official statistics

## CHALLENGES

- Cannot clearly define tourism and wasn't designed for statistical purposes
- Lacks coverage of items and the population (data often skewed or partial)
- Can be messy as it comes from disparate sources and systems
- Privacy issues and commercial licensing provides limited access



### TRANSACTIONS

- Provides insights on spending pattern behaviours
- Granular
- Available soon after reference period
- Better for domestic than international
- Provides insights on events

- Tourism not clearly defined
- Non representative sample
- Privacy/licensing = limited access
- Partial coverage of items
- Relies on card use
- Items such as purpose of visit, travel party etc. limited



ACCOMMODATION



SPEND



GRANULARITY



PURPOSE



MOVEMENT



SATISFACTION



### SOCIAL MEDIA

- Near real time insights
- Good source of sentiment and satisfaction information
- Early warning and crisis management
- Easy to monitor and find emerging trends
- Good for a range of topics accommodation/ attractions/ food and dining/ events

- Qualitative not quantitative
- Non representative sample
- Application Programming Interfaces (API) are constantly changing
- BOTS and self interest groups can impact accuracy
- Unstructured volumes of text, images, video and sound
- Works best when customised for each customer



ACCOMMODATION



SPEND



GRANULARITY



PURPOSE



MOVEMENT



SATISFACTION



### BOOKING/ DISTRIBUTION/ TICKETING

- Near real time reporting
- Bookings can be forward looking
- Reports at granular levels of geography incl. locations/ events
- High level of automation possible
- Time series available

- Tourism not clearly defined
- Limited reporting items
- Can be expensive and access is limited
- Only partially covers key variables
- Messy, as it comes from disparate sources



ACCOMMODATION



SPEND



GRANULARITY



PURPOSE



MOVEMENT



SATISFACTION



### TELECOMMUNICATIONS

- Best for tracking movement
- Very granular and real time reporting
- Good for event measurement
- Can work with surveys to improve official statistics
- Tourism definitions mostly covered
- Travel paths can be clearly highlighted

- Non representative sample
- Narrow topic range
- Better for domestic than international
- Can be expensive to purchase
- Limited access and licensing



ACCOMMODATION



SPEND



GRANULARITY



PURPOSE



MOVEMENT



SATISFACTION