

Development of Bookings Dashboards

Tropical Bloom Resort



Prepared by

Mirna Arivalagan - 220142881

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1. Introduction

Tropical Bloom Resort is a luxury eco resort based on the remote Tiwi Islands in the Northern Territory. It has a variety of accommodation types to choose from and fun activities that can be included in the stay which caters to all guest from all backgrounds. Tropical Bloom Resort was established in 2012 with a block accommodating 120 hotel rooms and not long after, it has established its brand as a luxury eco-tourism option for guests wanting to explore the remote Tiwi Islands.

8 years since establishment, the resort has grown with added on accommodation types such as apartments catering to families and large groups, camping and glamping options for adventure seekers and a small mix of cottages, beach bungalows and holiday villas catering to guests who are wanting a little extra space and touch of luxury.

Tropical Bloom's management has undergone significant changes in 2019, and extra investment has been made into staffing to cover each accommodation divisions, providing car parks for guests and an assortment of activities that guests can choose from. Tropical Bloom has also started using a couple of booking sites to increase their bookings and is now collecting more data than ever.

Tropical Bloom has contracted consulting services to develop 3 dashboards that will provide the Operations and Front of House team, Product Development team and the Sales and Marketing team a tool that can be utilised to understand trends in incoming reservations and past reservations. This report aims to cover the benefits of these dashboards and insights gained from them.

1.1 Objectives for dashboard design

1.11 Operations and Front of House Team

The first dashboard has been designed for the Operations and Front of House team. The Operations and FOH Management team has raised that they are now collecting more data than ever from a few sources, but do not have a tool that will provide them with a single view of all incoming bookings.

The dashboard that has been developed provides a single view of all incoming bookings, where the time frame is configurable, so essentially this dashboard can be used by multiple stake holders within the department as it will provide a view of all incoming bookings in the next year, quarter, month or day.

The dashboard will provide a summary of all bookings, organised by accommodation type, all activities booked and all catering requirements that needs to be catered for incoming guests. The dashboard will help identify any spikes in bookings which can be used to staff the operations team accordingly to support busy periods.

Finally, the dashboard will provide a summary on the booking types, it will give an indication on if a large group or corporate group is about to check in, this will enable staff to prepare the check in process in a timely manner.

1.12 Product Development Team

The Product Development team has requested for a dashboard to be develop that will support their decision making process with creating new holiday package options. The goal is to come up with two package options, one for couples and the other for families. The business questions that the dashboard will help solve are:

- Are there certain types of accommodations that are prone to higher cancellations?
- What are the most popular activities, and are most bookings booked with activities, is this important to guests?
- What is the optimal price to price the packages?
- What is the optimum length of stay to package?
- What are the contribution margins for each accommodation type?

1.13 Sales and Marketing Team

The Sales and Marketing team required a dashboard to be developed utilising the data that is available from the bookings database to provide an overview of all bookings and income from bookings in the last 12 months. The business questions that the dashboard will help solve are:

- What is driving the high cancellations rate that they are seeing in the last 12 months
- Are there any seasonality trends that can be identified with the bookings?
- What is the ratio of income received by accommodation type and staffing costs?
- Cancelled and Successful booking comparison
- Income from the various activities that have been introduced in 2019
- Income from each catering option, and is there any option that should be revamped?

1.2 Benefits of the dashboard design

All three dashboards have been designed utilising data from the resorts bookings database and also the third party sites that Tropical Bloom resort are affiliated with. Using the same source of data for all dashboard will ensure consistency of reporting across the board and will reduce the likelihood of reporting conflicting figures. Main benefits of the dashboards are:

- Provides the Operations and Front of House team a view of all incoming bookings to gain business insights that will ensure a smooth check in process for guests and ensuring that all front of house areas is adequately staffed during busy periods.
- Provides an overview of the different attributes that the product development team need to consider when developing the two new holiday packages.
- Provides the Sales and Marketing team with a wide lensed view of all reservations in the last 12 months. This will help the marketing team identify any seasonality trends and marketing opportunities

1.3 Assumptions

Table of Assumptions	
1	Staffing costs covers all operational human resources costs required to manage each accommodation type.
2	Running costs per unit covers all utilities and maintenance that is required to run each accommodation unit.
3	Costs of running each activity have been factored in separately and will not form part of the package holiday development analysis.
4	Kids are classified as anyone who is under 12 years of age and Adults are classified as anyone who is 12 and above in age.

1.4 Business Rules used in this report

Business Rules	
1.1	Total number of bookings is a count of total number of unique booking IDs.
1.2	Booking status can be either check-out for completed successful stays or Cancelled for bookings that are cancelled prior to arrival.
1.3	Loyalty Gift is assigned when the repeat booking status is set to 1 which indicates the customer has stayed with the resort in the past 12 months.
1.4	Booking types is assigned as follows: <ul style="list-style-type: none"> • 1-2 adults per booking is assigned as individuals • 3-10 adults per booking is assigned as groups. Maximum number of adults per booking is 10. • Corporate bookings are assigned when the booking is made for a group of 10 or more individuals from an organisation • Complementary bookings is assigned to 1 or 2 individuals on special cases.
1.5	Catering requirements is split into 3 categories:

	<ul style="list-style-type: none"> • Breakfast – Assigned when only breakfast is selected and pre-purchased (\$30) • Half Board – Assigned when breakfast and lunch is selected and pre-purchased (\$60) • Full Board – Assigned when breakfast, lunch and dinner is selected and pre-purchased. (\$120)
1.6	Average Stay Length is calculated by calculating the sum of the total number of nights in a defined period divided by the distinct count of successful bookings.
1.7	Short Term Stay is defined as bookings with 4 or less nights, and Long Term Stay is defined for bookings with 5 or more nights.
1.8	Number of nights is calculated as a variance between the check in date and the checkout date
1.9	Total Contribution Per Unit is calculated by calculating the variance of the nightly room rate minus the sum of the cleaning costs, inclusions costs and running costs for each unit.
1.10	Average spend per booking is calculated by summing up all total check out costs in a defined time period divided by the number of distinct booking IDs
1.11	Cleaning costs is calculated using the average number of hours taken to clean each unit in a 12 month period divide by the total pay paid to the cleaning staff for each division and then divide by the number of units.

2.1 Operations and Front of House Dashboard

This dashboard provides the Operations and Front of House team with an overview of all incoming bookings. This dashboard is filterable on date ranges, so can be used for long and short term planning, and is a useful tool to make sure the right amount of staff is staffed during busy periods. It will also support the team with information on the logistics required, such as the number of car park spaces required on a day, catering options required which will be used to inform the kitchen team, and also the activities that have been booked to ensure that enough spots are made available for each activity daily.

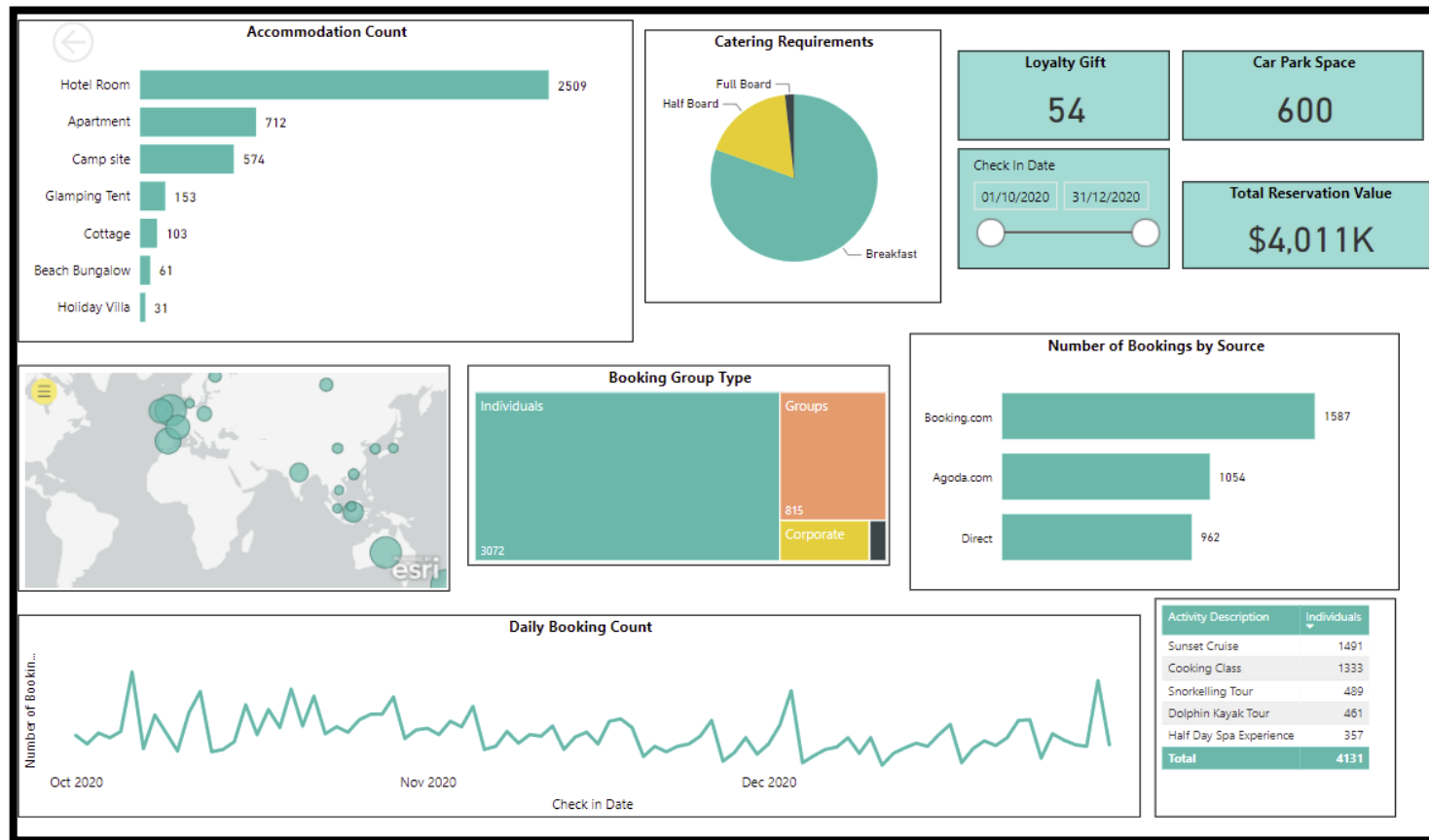
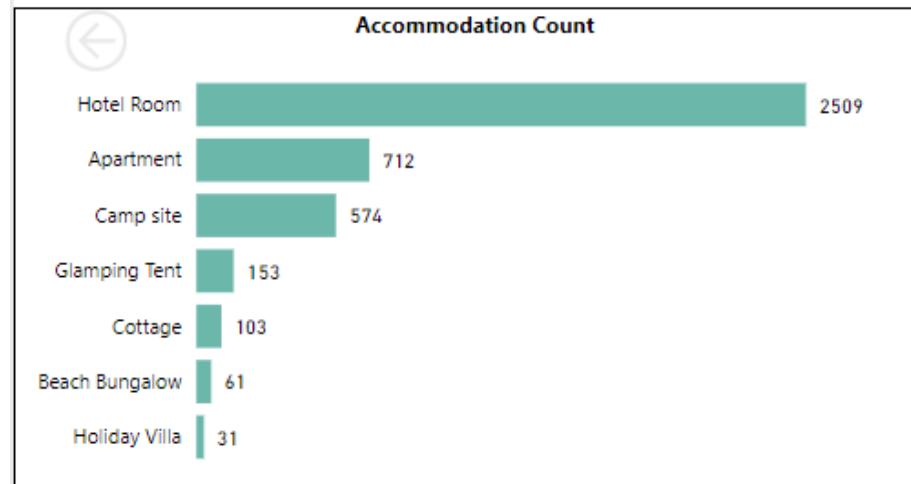


Chart 1:

This bar chart provides a summary of the number of booking by each accommodation type. This can be used to ensure no double bookings are made for bookings made offline on accommodation types that are already full. Between October and December, it appears that the hotel room division is the most popular option, so it is advisable to add extra staff to this division.

**Chart 2:**

This timeline chart provides an overview of the number of bookings for each day in a defined time period. It visually shows when the busy periods are and can also be used to view any long term trends around seasonality bookings as the date ranges for this dashboard is configurable. It is advisable to staff check in counters accordingly on the days where there are clear spikes.

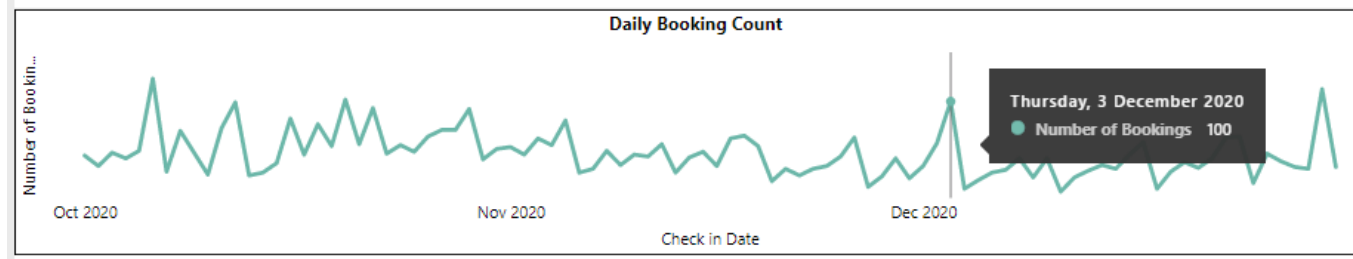
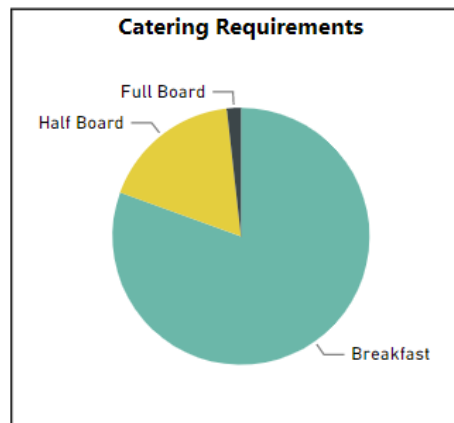


Chart 3:

This is a pie chart that visually shows the split between the three catering options that is available to be added on. The operations team can use this information to liaise with the kitchen to ensure the right amount of meals are prepared. From this, it's obvious that Full Board isn't a popular option and the kitchen needs to be prepared for a busy breakfast service.

**Chart 4:**

This is a tree map chart that outlines the number of bookings by group size. Majority of the incoming bookings are for individuals, however there is also quite a few number of group bookings that needs to be factored in, as usually the check in process for groups are a lengthy process. Based on this info, it's advisable to assign staff specifically for group bookings on days where there are a few groups checking in at the same time.

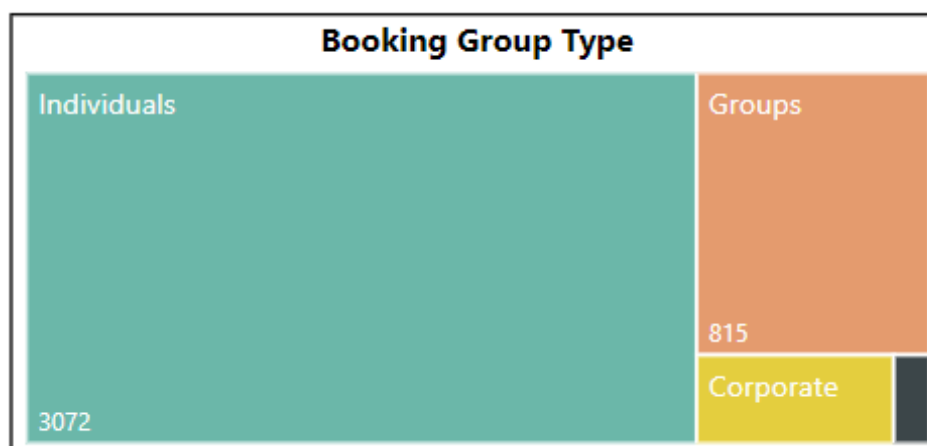
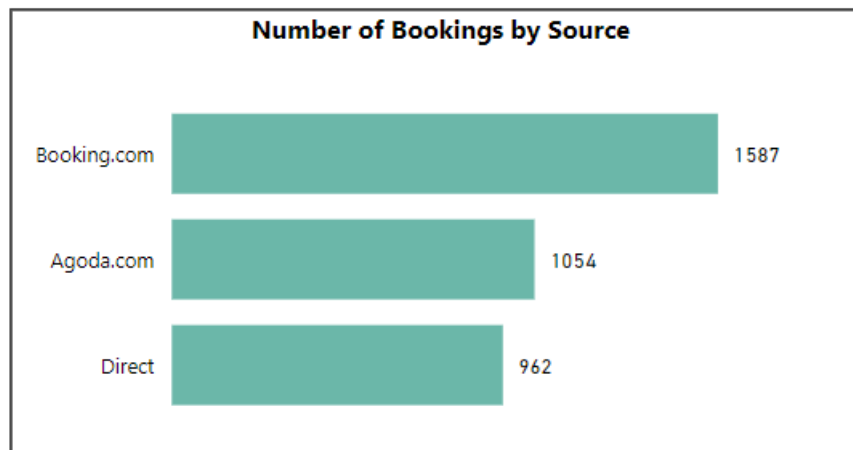


Chart 5:

This bar chart provides the operations team with a summary of the booking sources. Booking.com seems to be the most popular channel the customers are booking on with more than 1500 incoming reservations via this channel, and Direct which is the resorts' website is the smallest channel.

**Chart 6:**

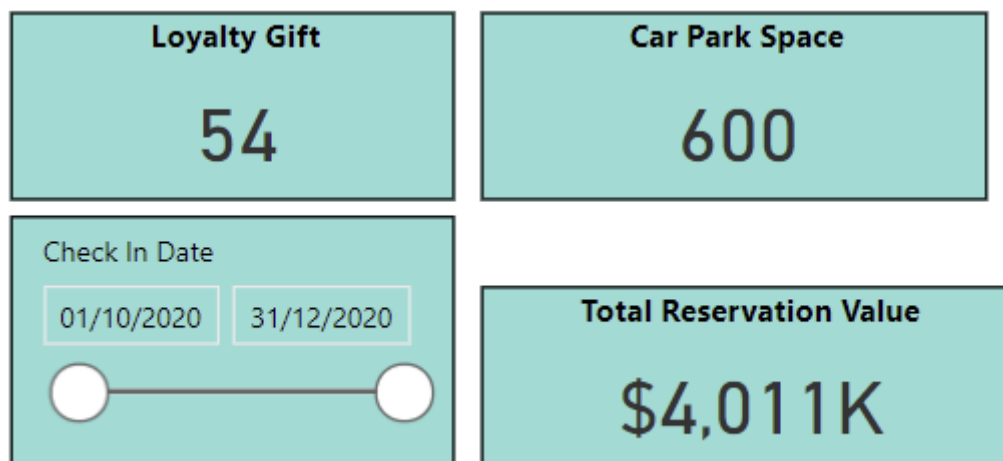
This map provides the operations team a visual overview of the split between domestic and international tourists arriving. The resorts biggest group of incoming tourists are domestic tourists followed by tourists from the European Region.



Chart 7:

This activities table provides the operations team with the number of individuals booked for each activity type. This can be used to liaise and book the activities with the respective operators. Sunset cruise seems to be the most popular option, and the Half Day Spa Experience is the least popular option. If there are last minute activities booked, the team can use this table to assess if the activity is full, and suggest a less popular option to last minute bookers. There are also 3 summary cards included, these are cards that will help the team plan the number of gifts to prepare, number of car parks that have been booked and a top level overview of the total reservation value for all reservations incoming reservations. The date filter can be used as a drill down tool.

Activity Description	Individuals
Sunset Cruise	1491
Cooking Class	1333
Snorkelling Tour	489
Dolphin Kayak Tour	461
Half Day Spa Experience	357
Total	4131



2.2 Product Development Dashboard

This dashboard provides an overview to the Product Development team on the information of the various attributes that needs to be factored in when developing the two new holiday packages. Attributes such as whether to package the holiday as a long term or short term stay needs to be considered, the team will also need to investigate what is the best activity option to include in the package, and most importantly, the contribution cost which is the profit after taking out the various costs associated with running each room type is taken off the room rate.

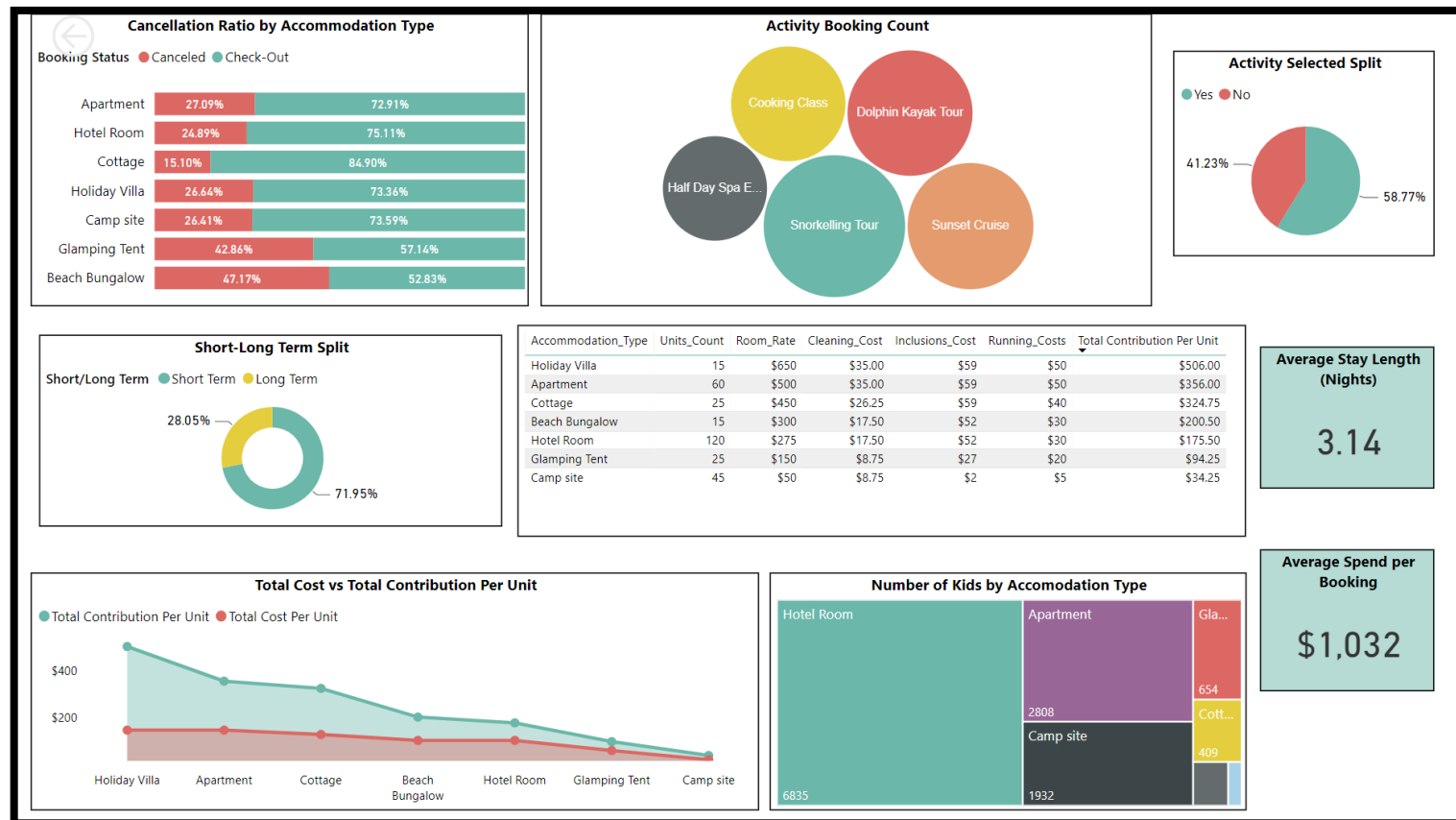
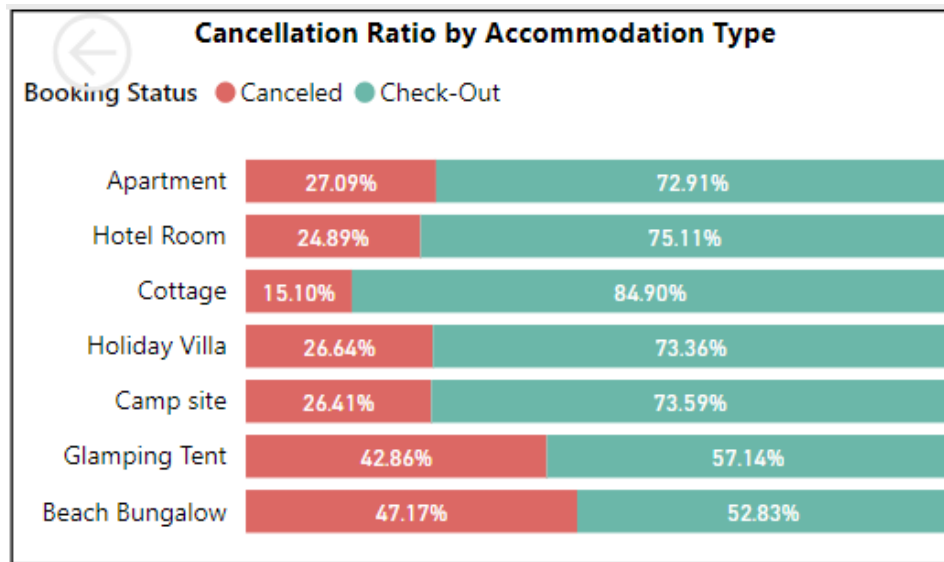


Chart 1:

This stacked percentage bar chart explores the relationship between the booking status and the accommodation type. Based on this, the product development team should consider including either the Beach Bungalow or Glamping Tent in the package for individuals, as both these options has a higher cancellation rate, which increases the likelihood of the accommodation being vacant, so this a strong option to include in the packages to avoid having the accommodation vacant.

**Chart 2:**

This bubble chart provides a visual summary of the most popular types of activities. The team can use this information when considering which activity to include in the package, as when tourists are booking package deals, they are often looking for activities that are excitable and fun to be included in the package. Based on the data of previous reservations, the snorkelling tour and sunset cruise could be strong options to consider to include in the package.

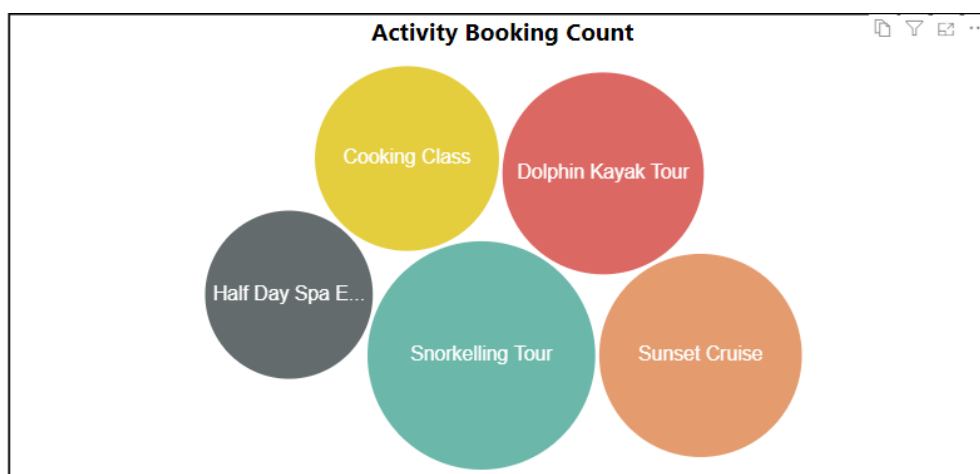
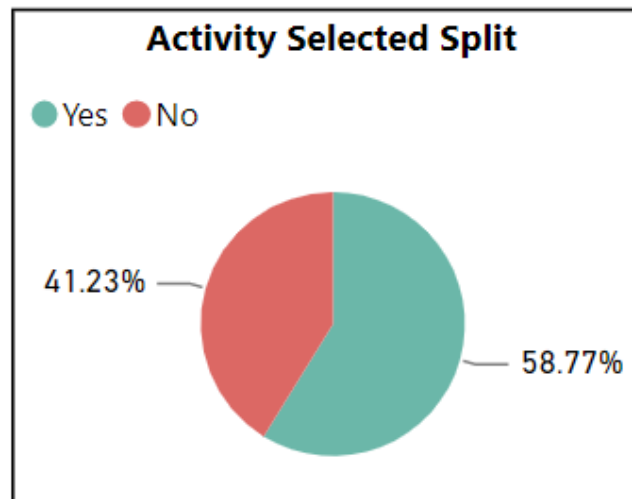


Chart 3:

This pie chart shows the split between guests that have opted to include activities with their bookings. It is quite evident, that having added on activities is a popular option, so this supports the decision to include an activity with the new holiday packages.

**Chart 4:**

This donut chart visually shows the splits between short and long term bookings. Short Term stays are for stays 4 days or less, and long term stays are for stays 5 nights or more. Short Term stays is the most popular option which makes sense as the Tiwi islands is quite a remote island, and there is not much activities available to fill up a stay of a week. The product development team should consider packaging the new packages between 3-4 nights

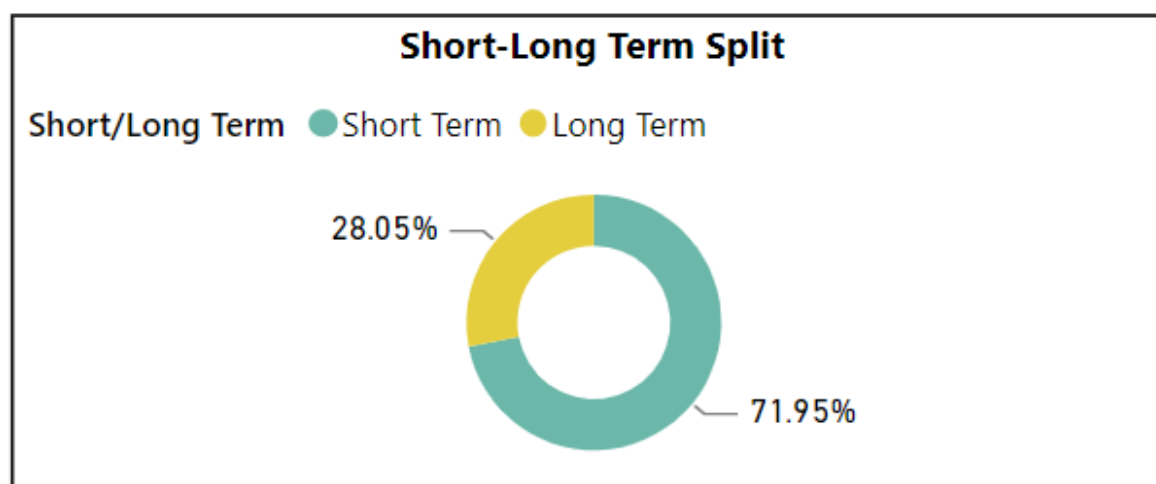


Chart 5:

This table can be a useful tool to use to include in the pricing analysis to find the optimal price for the new packages. The profit margins are larger for the Holiday Villa's and Apartments, so these could be good options for the family packages as given that the margins are quite large, there is room to bundle this in at a lower cost and still make a good profit. A good option for the couples' packages will be the Beach Bungalow as this has a comfortable margin of \$200.50.

Accommodation_Type	Units_Count	Room_Rate	Cleaning_Cost	Inclusions_Cost	Running_Costs	Total Contribution Per Unit
Holiday Villa	15	\$650	\$35.00	\$59	\$50	\$506.00
Apartment	60	\$500	\$35.00	\$59	\$50	\$356.00
Cottage	25	\$450	\$26.25	\$59	\$40	\$324.75
Beach Bungalow	15	\$300	\$17.50	\$52	\$30	\$200.50
Hotel Room	120	\$275	\$17.50	\$52	\$30	\$175.50
Glamping Tent	25	\$150	\$8.75	\$27	\$20	\$94.25
Camp site	45	\$50	\$8.75	\$2	\$5	\$34.25

Chart 6:

This area chart is a useful visual tool for the team to identify accommodations that are the most profitable. Based on this chart, Glamping Tents and Camp Sites has the lowest profit margin, hence it's not advisable to include these as an option in the packages.

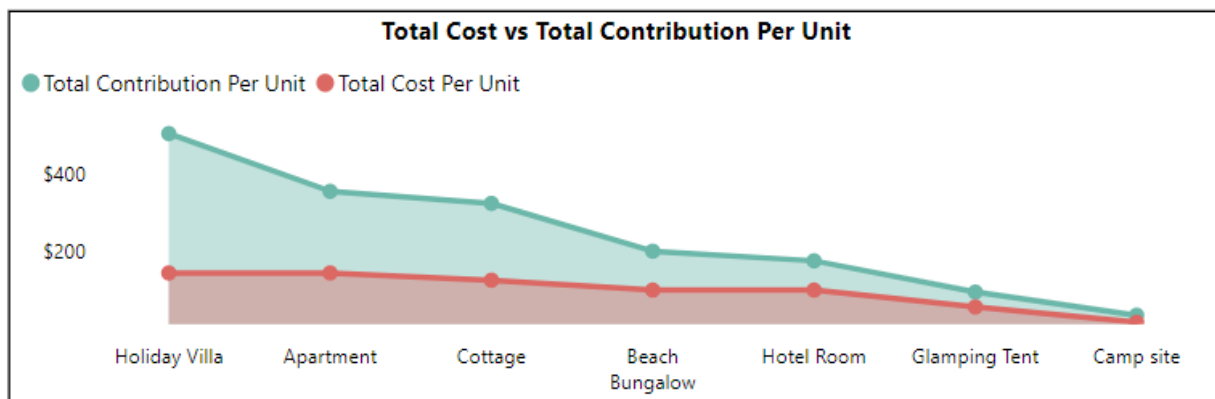
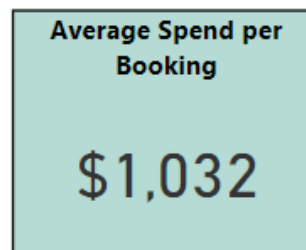
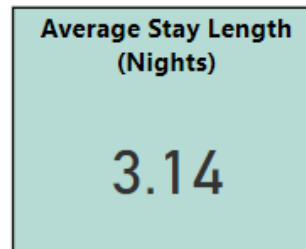
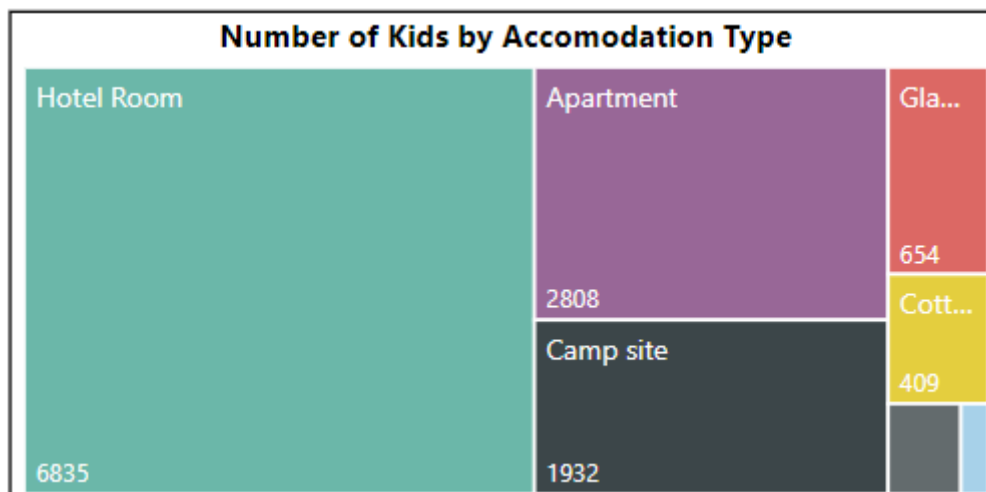


Chart 7:

These are summary cards that calculate the average stay length and the average spend per stay. The team can use this information to determine the length of stay in the packages and also use the spend to determine the right price to price the new packages.

**Chart 8:**

This tree map provides a summary of the number of kids that have been included in all bookings for each accommodation type. As the team is looking at creating a new package option for families, this is useful to identify the accommodation type that is popular with families. Hotel room seems to be the most popular option, but this is most likely driven by the fact that the cost per night for a room is much lower at \$275 compared to the more spacious option such as the apartment which is priced at \$500 a night. The apartment option is the 2nd most popular option, so this might be a strong contender to include as the accommodation type in the package for families, however consideration should be given around pricing this package appropriately.



2.3 Sales and Marketing Team

This dashboard will provide the Sales and Marketing team with an overview of all past reservations in the last 12 months. The dashboard has been designed to provide insights around cancellations, most profitable accommodation division & activities type, and can be used as a tool to compare the reservations that the resort has received via its three main booking channels (Booking.com, Agoda.com and the resort's website). The team is able to filter by the location of the incoming tourists to gain insights around the splits between domestic and international tourists and also use this information to conduct targeting activities for regions with fewer tourists.

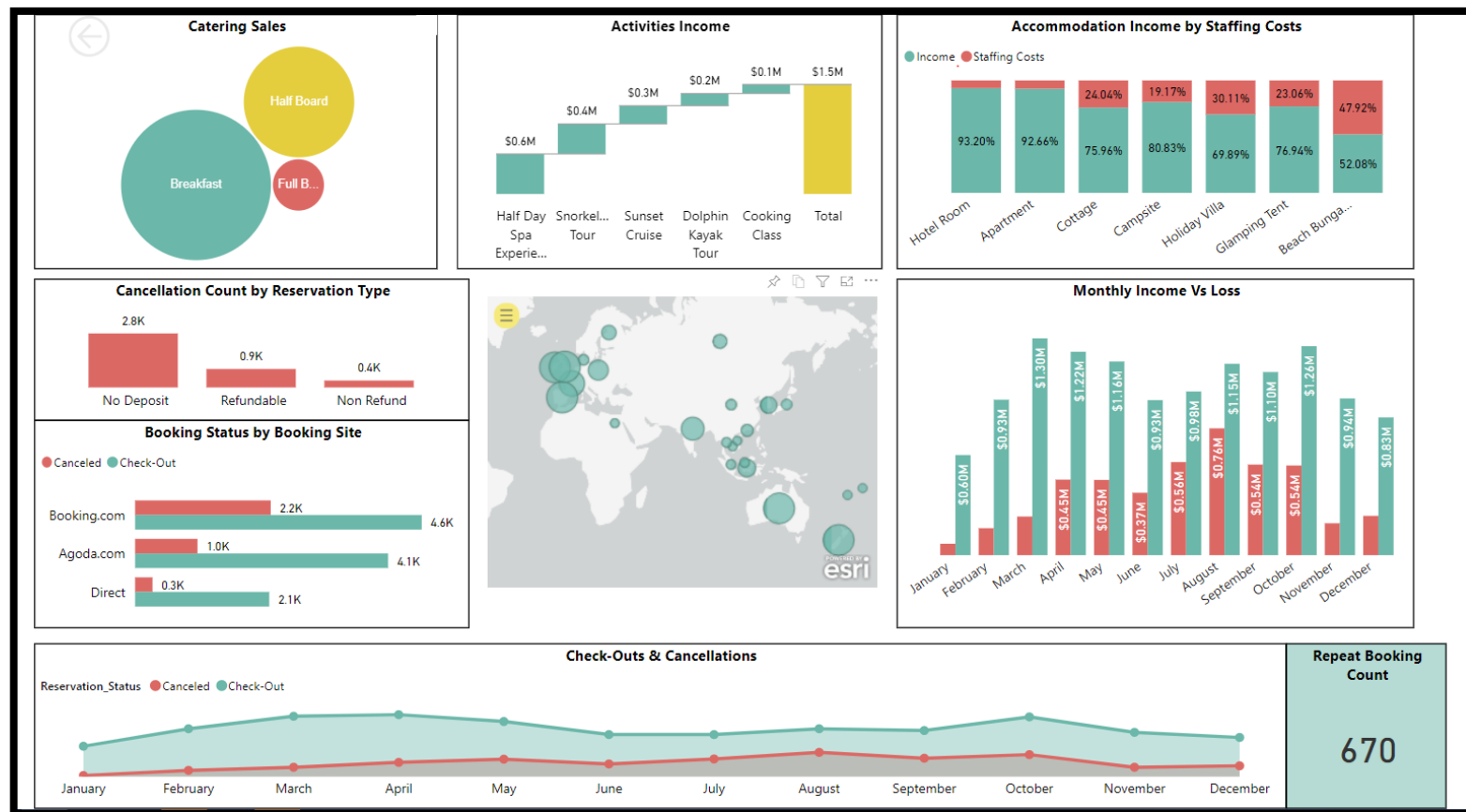
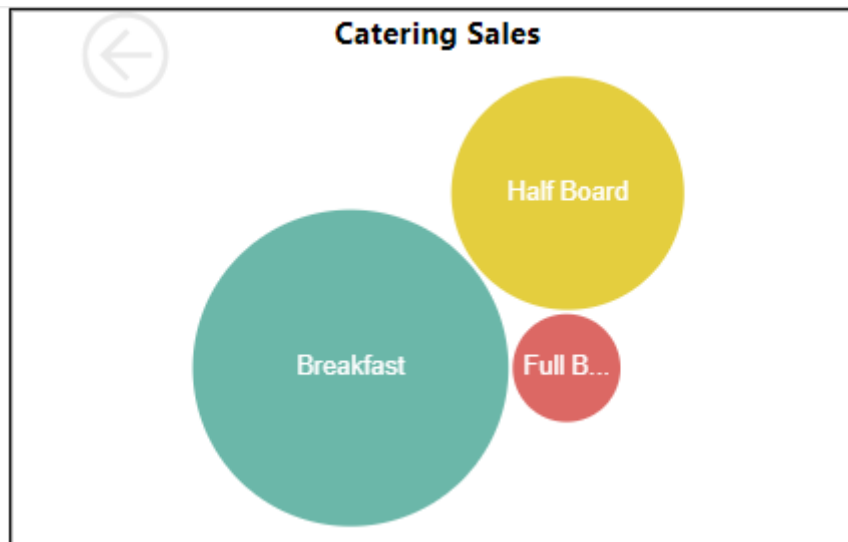


Chart 1:

This bubble chart provides a visual split between the catering options that have been added on with all incoming reservations. Breakfast is the most popular option and the least popular option is full board. This is interesting as the resort is on a remote location with not many choices around, it could be the pricing for the full board option that is causing a low amount of sales as it is double that of the half board option (\$120 compared to \$60).

**Chart 2:**

This is a waterfall chart that demonstrates the activity that generates the most income. The half day spa experience brought in the most income, followed by the snorkelling tour. This information is useful as even though based on the summary of the most popular activity booked, that was provided to the product development team, the day spa experience was the least popular, this could be attributed to perhaps the higher pricing of this activity compared to the most popular activity of the snorkelling tour.

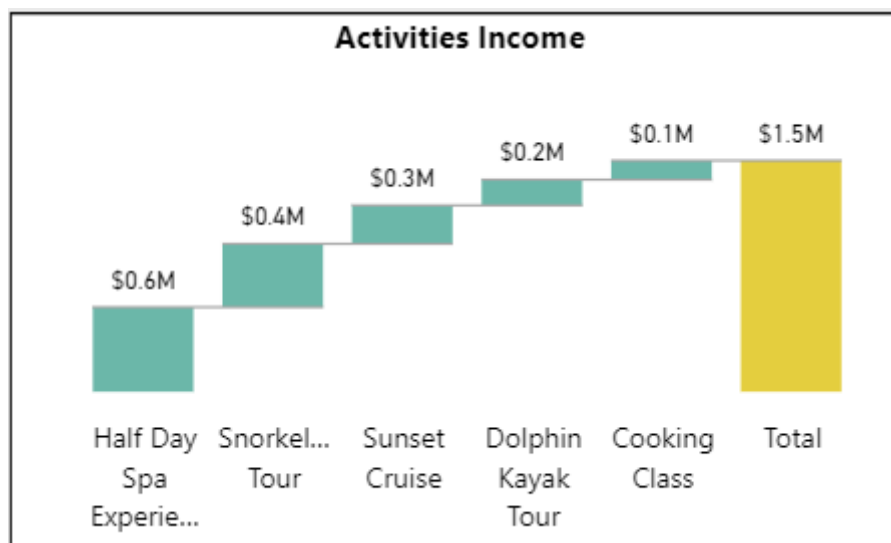
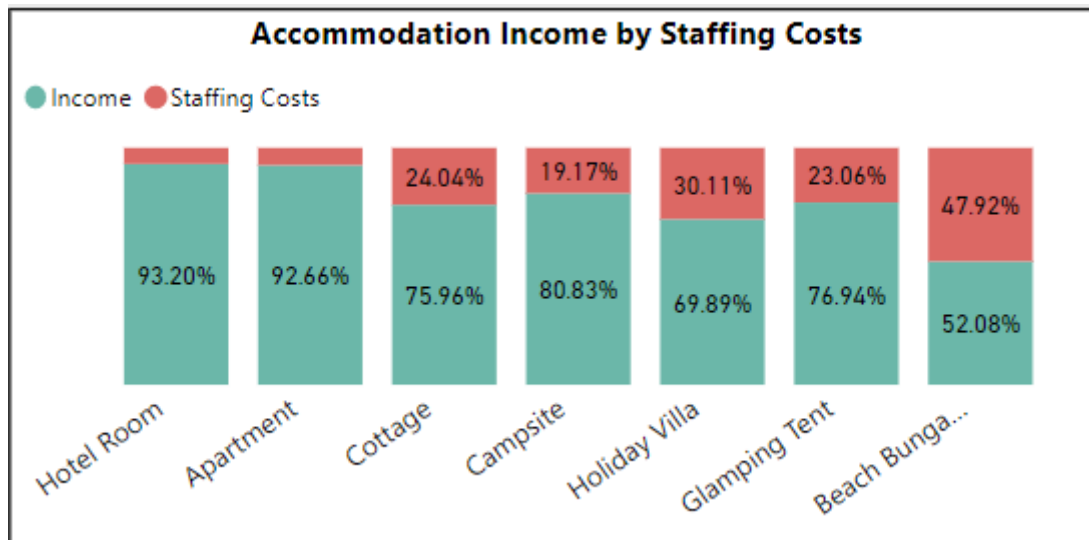


Chart 3:

This stacked bar chart provides the sales team with a summary of the income and staffing costs ratio for each accommodation type. Hotel rooms has the lowest ratio 93% to 7%, which would mean it would have the highest ROI. Looking at the costs and income over the last 12 months, it appears that the beach bungalows has probably the lowest ROI as there is nearly an equal split between the income received and the money spent to maintain it.

**Chart 4:**

Both these bar charts can be used by the sales team to understand what is driving the increased cancellation rates in the last 12 months. It is quite evident that the most cancellations are coming from Booking.com and this is also supported by the fact that the deposit type with the highest cancellation is the option that does not require a deposit which is only an option for bookings made via third party sites.

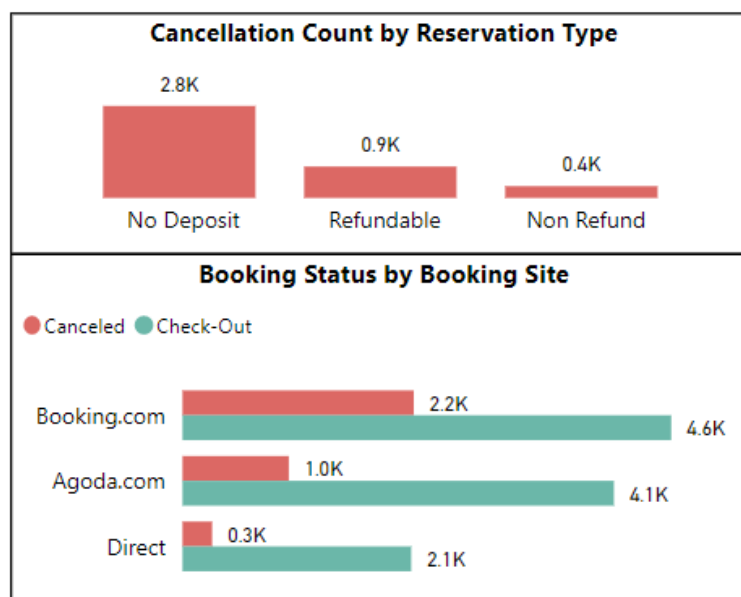


Chart 4:

This map shows the density of the regions with the most incoming bookings. Apart from domestic guests, and guests from New Zealand, Europe is also bringing in more guests compared to closer regions such as Asia. The resort should consider running some public relations and marketing activities in the Asian region to create more brand awareness.

**Chart 5:**

This clustered column chart compares the income received by all successful bookings to income lost by cancelled bookings. August is the month the resort lost the most income in cancellations, this could be attributed to the fact that in August 2019, the Northern Territory was hit by significant bushfires, causing guests to change their travel plans.

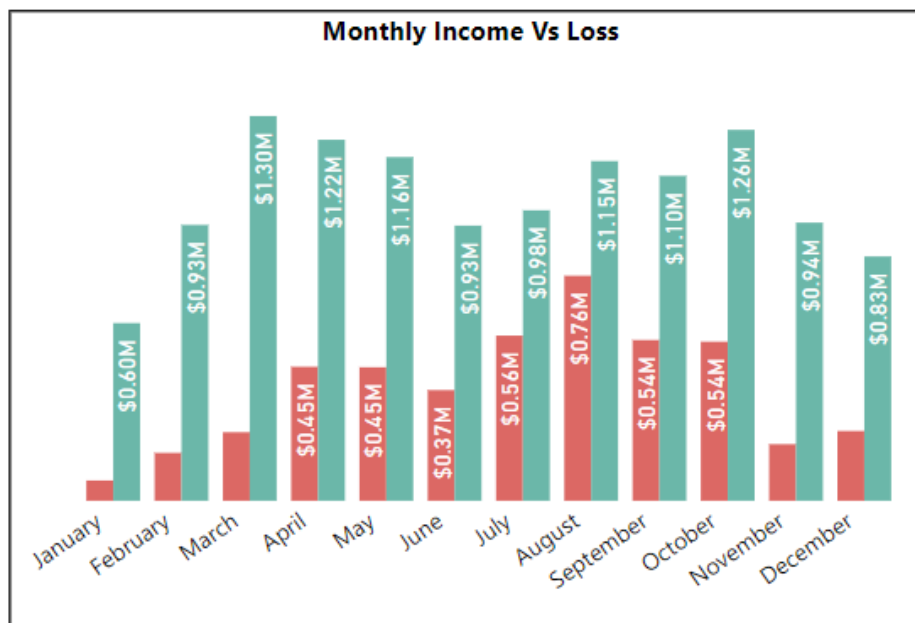
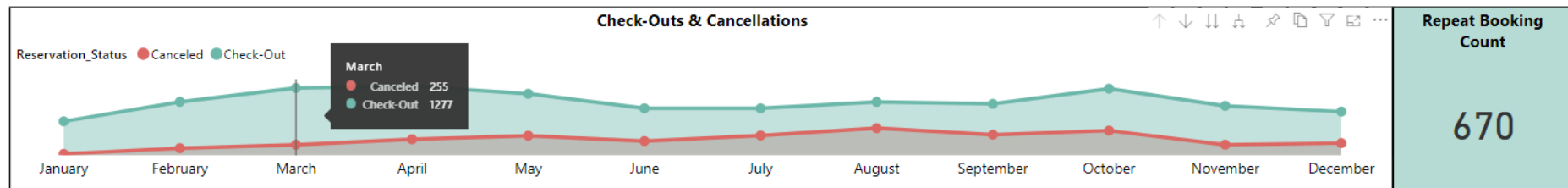


Chart 6:

This stacked area chart shows a visual comparison of the number of checked-out bookings and the number of cancelled bookings. Over all between the months of June – August there is a slight dip in the number of bookings. This could be attributed to the fact that a good portion of the resorts guests are from the European region which is going through the summer season during this period, hence preferring to travel within Europe rather than internationally. The Repeat Booking Count card is a calculated summary card that calculates the number of guests who have stayed at the resort more than once in a 12-month period.



3. Recommendations

Based on the analysis of the data of all incoming reservations, it is recommended that the resort considers the following:

- The couples package should be for 3 nights at the Beach Bungalows and includes the sunset cruise. It should be priced at between \$1000 to \$1200 including half board catering. This is because the Beach Bungalows has the lowest occupancy rate, a comfortable contribution of \$200.50 per unit, and the average spend by the hotel guests sits at \$1032 with a stay of 3 nights. Sunset cruise is the 2nd most popular activity and will be an activity that couples would appreciate.
- The family package should also be for 3 nights at an Apartment, includes the sunset cruise, priced at between \$1400 - \$1600 for 2 adults and 2 kids and includes the full board catering option. Given that the contribution per unit for the Apartment is a profitable \$356, even with a reduced packaged price, Tropical Bloom will still be making a profit. It is advisable to include the full board catering option, as it is the least popular option, but this is most likely due to the high costs of \$120 per person, double that of the half board option. So even with including the costs for 2 adults and providing free meals for 2 kids, the profit margin for this option will still be quite high, plus parents will appreciate the convenience as meal times with kids can be challenging.
- Tropical Bloom should also consider reducing the pricing of the full board option which is priced at a steep \$120 per night. As the resort is on a remote location, this should be a popular option as there is not many choices for meals around. By reducing the pricing of this to \$90, this should increase the sales of this option thus generating more revenue for the resort.
- There is a trend that the high cancellation rates Tropical Bloom has seen in the last 12 months is mainly driven by Booking.com & Agoda.com as these sites do not require a deposit upon booking. The resort should consider amending the terms of booking for these sites, and perhaps introduce a refundable option if the reservation is cancelled within a defined period.
- There is a clear dip in bookings between June – August as a large portion of the resorts guests coming from the European region where it is during their summer period, the marketing team should consider running digital campaigns to target guests from the Asian regions, as the resort does not see as many guests travelling from these regions. July is also school holiday period in Australia, so the best period to have special packages for families.