

# Travel Insurance

**Products streamline  
for our customers**

by Tracy Bay  
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Date Analytics  
Capstone Project



# Current Problem

Capstone Insurance

01

**We have 26 products just for travel insurance**

The resources to manage each product is high, and we aren't profiting enough from the lower end products.



**How can we streamline  
our travel insurance  
products to better  
provide for our  
customers needs?**

Capstone Insurance - Travel Insurance Product Team

# Data Source

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<https://www.kaggle.com/datasets/mhdzahier/travel-insurance>

## DATA COLUMNS ATTRIBUTES

- Claim Status (Claim.Status)
- Name of agency (Agency)
- Type of travel insurance agencies (Agency.Type)
- Distribution channel of travel insurance agencies (Distribution.Channel)
- Name of the travel insurance products (Product.Name)
- Duration of travel (Duration)
- Destination of travel (Destination)
- Amount of sales of travel insurance policies (Net.Sales)
- Commission received for travel insurance agency (Commission)
- Gender of insured (Gender)
- Age of insured (Age)

# Data Preparation

Out of the 11 columns, there were mismatch and missing data from Claim and Gender. However those were less important information required for our analysis.

Here are the shortlisted columns to find out which products are the most profitable ones:

- Product name > [renamed as Product](#)
- Agency
- Destination
- Net Sales
- Commision (in value) > [renamed as Commision](#)
- Age



## ✓ Claim

true  
0 0%

false  
0 0%

Valid	0	0%
Mismatched	63.3k	100%
Missing	0	0%
True	0	0%
False	0	0%

## ⚠ Gender

[null]

M

Other (8872)

71%

15%

14%

Valid	18.2k	29%
Mismatched	0	0%
Missing	45.1k	71%
Unique	2	
Most Common	M	15%

# Data Grouping

## Products:

There are 26 products, with similar series. Thus, I have grouped some of the products within the same series - Product (Group) to 22 products.

## Age Groups:

As the ages are wide range and not all of them have sales. Thus, I have also narrowed them to 5 groups to identify which age group contributes to the most sales.

### Groups:

- 1 way Comprehensive Plan
- 2 way Comprehensive Plan
- 24 Protect
- Annual Gold Plan
- Annual Silver Plan

#### ▶ Annual Protect Travel

- Basic Plan
- Bronze Plan
- Cancellation Plan
- Child Comprehensive Plan
- Comprehensive Plan
- Gold Plan
- Individual Comprehensive Plan
- Premier Plan
- Rental Vehicle Excess Insurance
- Silver Plan

#### ▶ Single Trip Travel

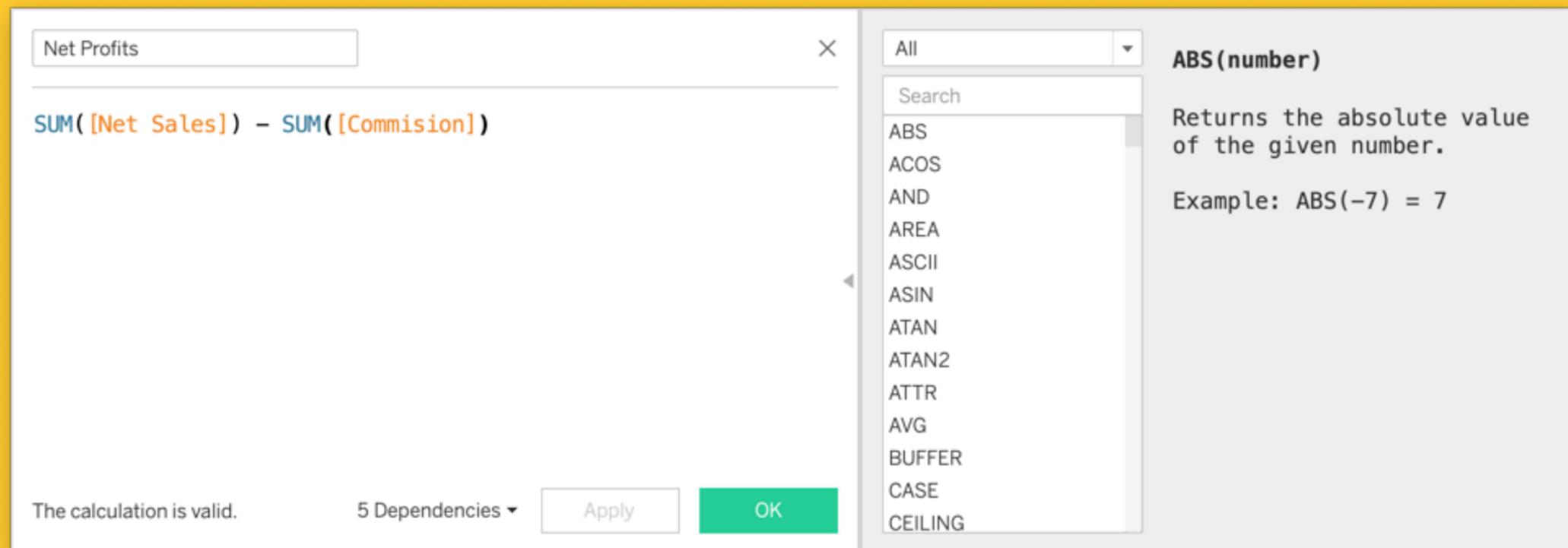
- Spouse or Parents Comprehensive Plan
- Ticket Protector
- Travel Cruise Protect
- Travel Cruise Protect Family

### Groups:

- ▶ < 20
- ▶ 21-40
- ▶ 41-60
- ▶ 61-80
- ▶ 81+

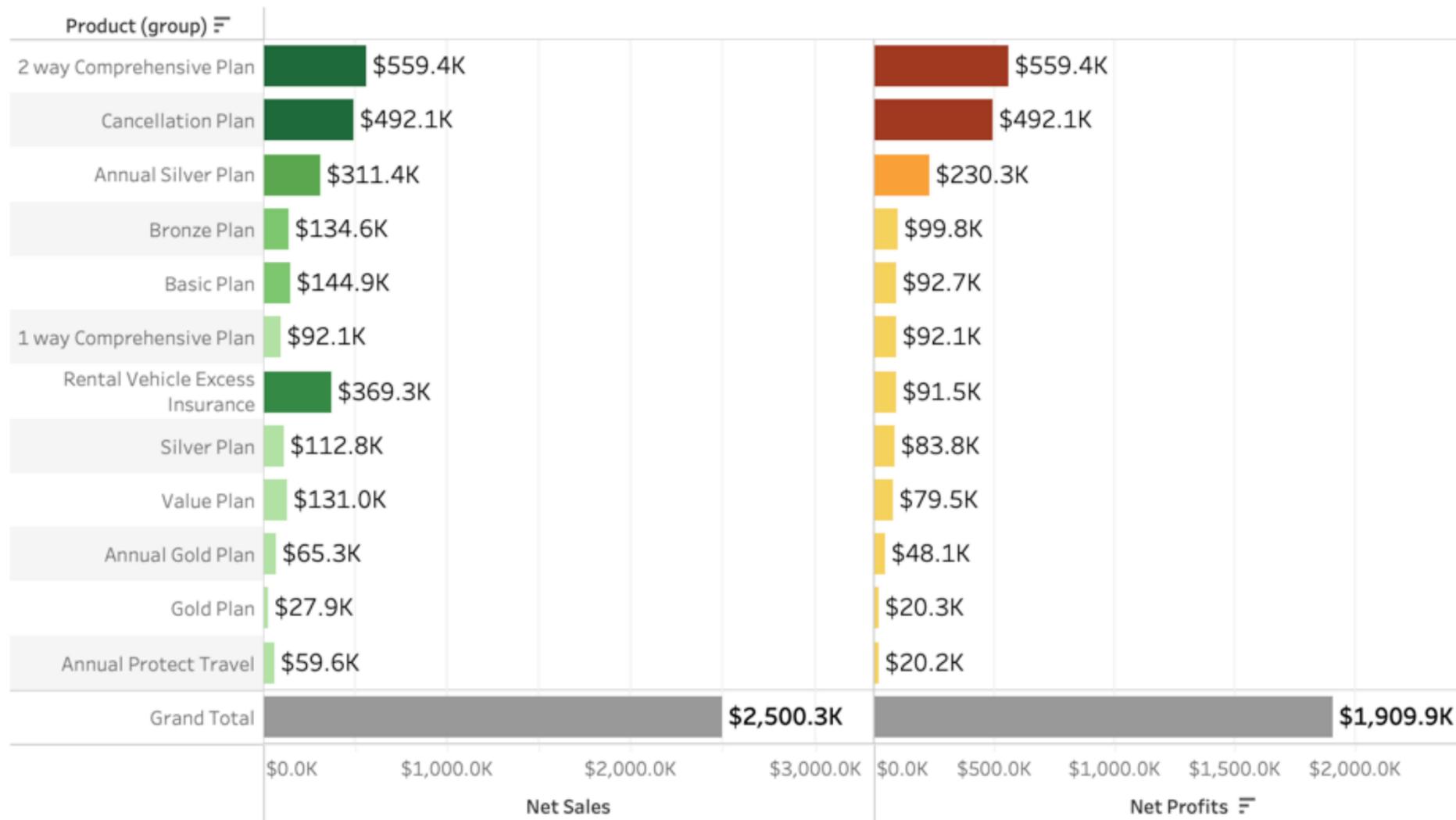
# Finding out Net Profit

With the **Net Sales** and **Commision Value** data, I created calculated field **Net Profits** from the difference of the two values.



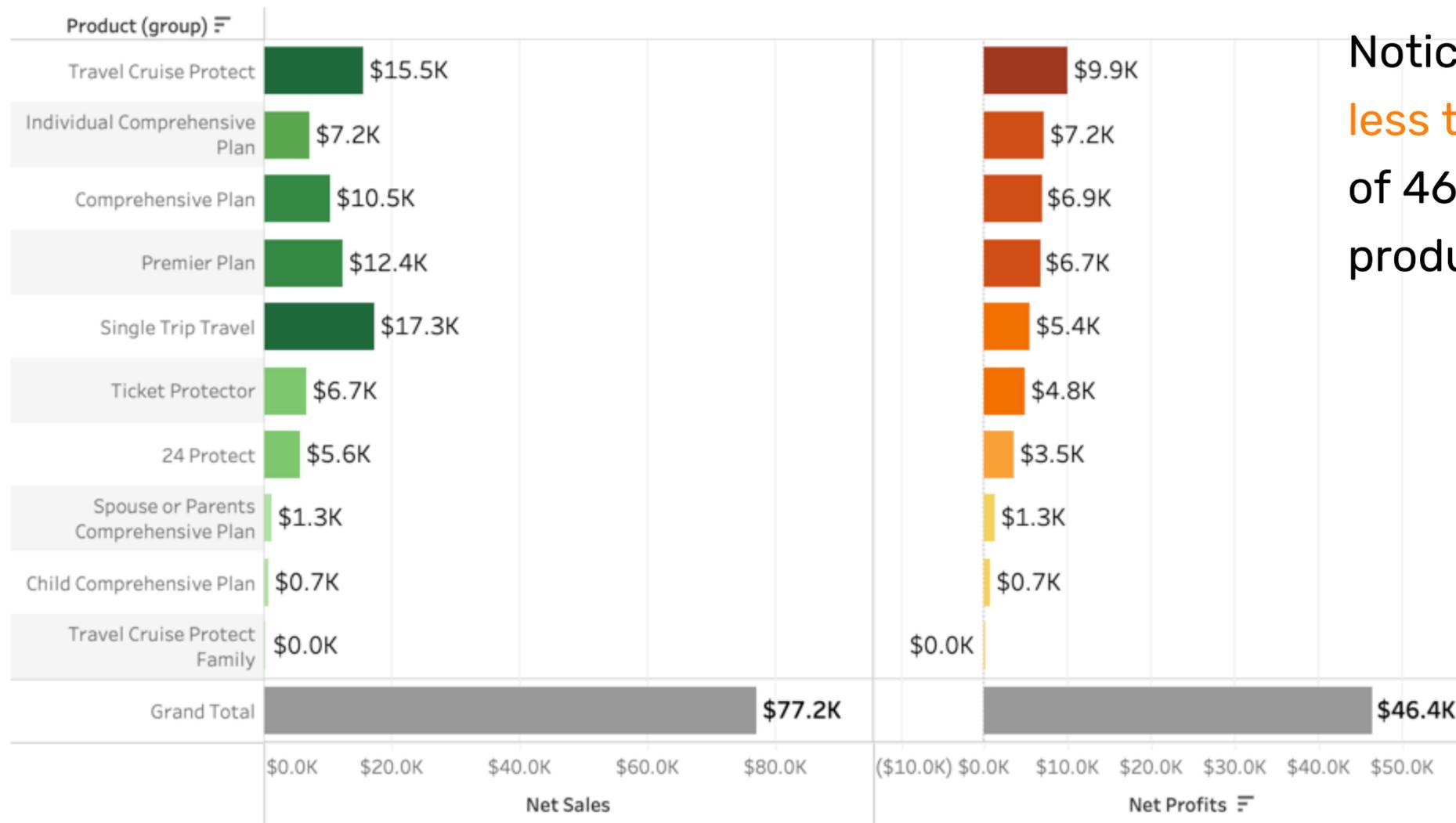
The screenshot shows a software interface for creating a calculated field. The main window is titled "Net Profits" and contains the formula `SUM([Net Sales]) - SUM([Commision])`. Below the formula, it states "The calculation is valid." and "5 Dependencies". There are "Apply" and "OK" buttons. On the right, a function list is open, showing a search bar and a list of functions including ABS, ACOS, AND, AREA, ASCII, ASIN, ATAN, ATAN2, ATTR, AVG, BUFFER, CASE, and CEILING. The "ABS(number)" function is highlighted, with a description: "Returns the absolute value of the given number." and an example: "Example: ABS(-7) = 7".

# Which are our Top Products?



Have shortlisted top products above \$20k net profit. From net profit, the "2-way Comprehensive Plan, Cancellation Plan and Annual Silver Plan" are our Top3 products weighs over 60% of our total profits. While "Rental Vehicle Excess" Insurance has also high sales but the commision is high, thus lower profits.

# Which are our Bottom Products?



Notice that there are 10 products of less than 20k profits yearly - a total of 46.4k profits yearly - these are the products we can try to optimise,



# Customer Age Group

21-40 years are the biggest contributor to most of top products. While "Value Plan" is well targeted at 41 and above travellers. However groups between 60-80 and below 20s have no products, but most likely they are covered under family plans.

Product	Age (g..)	Net Profits	Net Sales/Commision
2 way Comprehensive Plan	21-40	\$485K	\$485K
	41-60	\$61K	\$61K
Cancellation Plan	21-40	\$433K	\$433K
	41-60	\$48K	\$48K
Annual Silver Plan	21-40	\$135K	\$183K
	41-60	\$75K	\$101K
Bronze Plan	21-40	\$72K	\$98K
Basic Plan	41-60	\$43K	\$67K
	21-40	\$39K	\$61K
1 way Comprehensive Plan	21-40	\$81K	\$81K
Rental Vehicle Excess Insurance	21-40	\$46K	\$194K
	41-60	\$40K	\$157K
Silver Plan	21-40	\$56K	\$76K
Value Plan	41-60	\$29K	\$47K
	81+	\$26K	\$44K
Annual Gold Plan	21-40	\$23K	\$31K



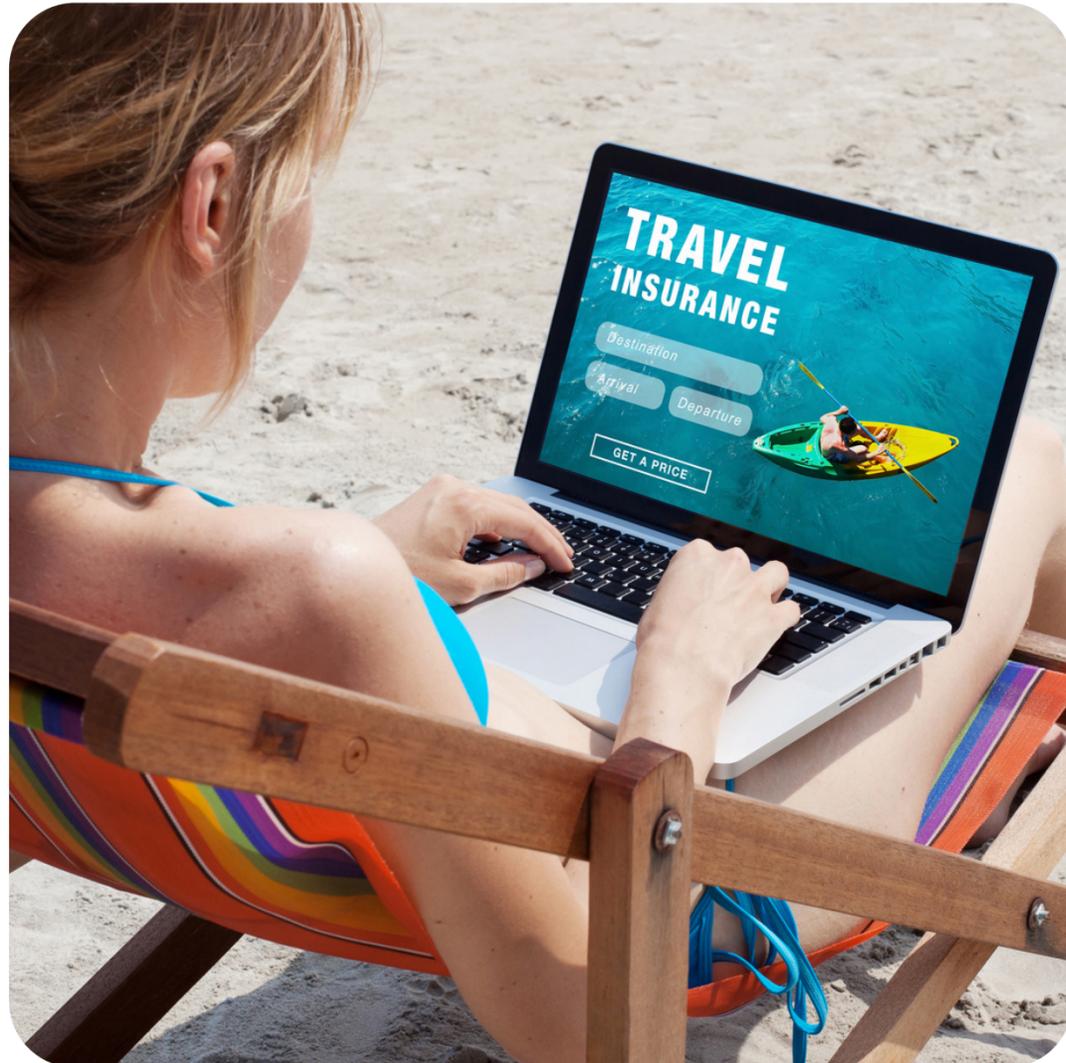
# Top destinations **out of SG**

Singapore is our key market, thus it is removed from the map to show the growth outside SG - which is surrounding Asia and the Top 2 products are most sold.





# Recommended products to delist or migrate



01

## Bottom 5 products to delist

Can consider to delist if there are no other qualifying reasons:

1. Spouse and Parents Comp Plan
2. Child Comp Plan
3. Travel Cruise Protect Family
4. Ticket Protector
5. 24 Protect

They are only take 10k of profits which can be easily covered by the top products when resources are release.

# Recommended products to delist or migrate



02

## Migration Plan for other bottom sales products

Analysis for the other bottom products:



1. Travel Cruise Protect - this should be retained to service the Cruise customers, and expand it outside Thailand and Malaysia
2. Individual Comprehensive Plan - This is only in Australia, it can be replaced with the 1-way Comp Plan.
3. Comprehensive Plan - Another product only in Thailand and Malaysia, which should be replaced with the Top 2 products.
4. Premier Plan - Negligible sales in a few countries, can also be replaced with Gold or Silver Plans.
5. Single Trip Travel - Although high in sales, but the commission is also high, propose to migrate to Value Plan or Bronze Plan which has similar travel durations.

# Thank you

## Email Address

tracybay@gmail.com

## Tableau Public Link to Analysis Data

[https://public.tableau.com/views/Tracy\\_CapstoneProject08Sep22/NetSalesvsProfitsBottom?:language=en-US&publish=yes&:display\\_count=n&:origin=viz\\_share\\_link](https://public.tableau.com/views/Tracy_CapstoneProject08Sep22/NetSalesvsProfitsBottom?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link)

