# User Guide on "A Fishy Business!" App

Our R Shiny app comprises three main sections to showcase the visualisation based on our analysis. Users can select the parameters to carry out data filtering and preferred configuration on the visualisation display. This document serves as user guide for users to navigate the app.
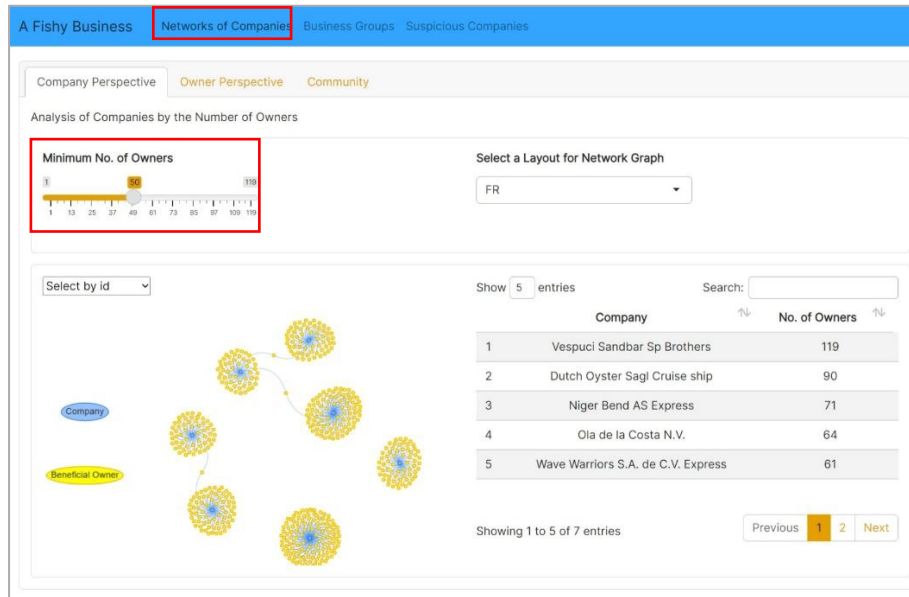
1.Networks of Companies

In this section, we can visualise the entire network from the perspective of individual business owners as well as individual companies. From the owner perspective, the visualisation comprises the network diagram showing the companies owned by individuals with relevant table on the names of these companies. From the company's perspective, the visualisation comprises a network diagram on the minimum no of owners the company has, with a table on the company names. In addition, a visualisation of the network community is also available for user selection.

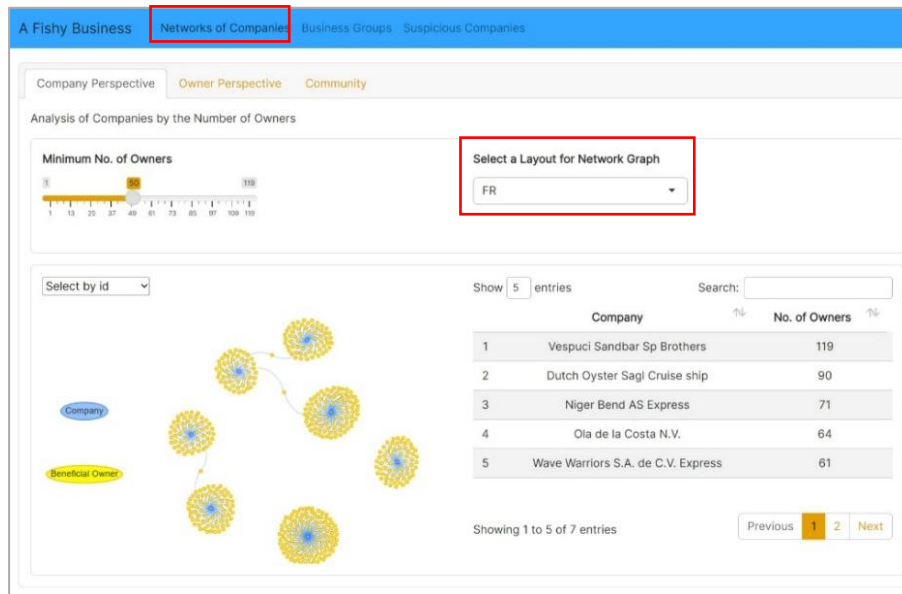**Steps to visualise the owners and contacts of the Companies**

1. Select "Company Perspective" tab
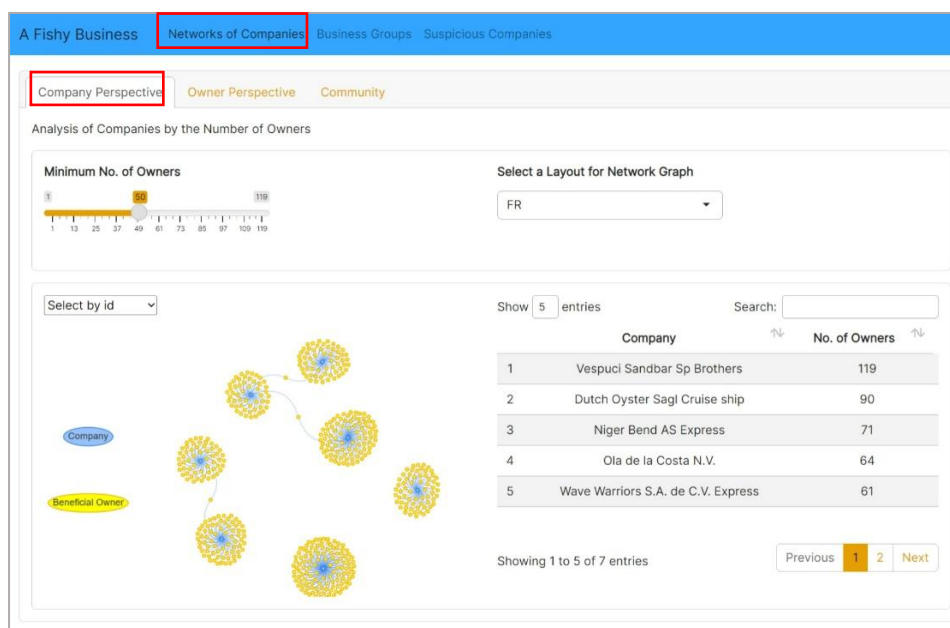
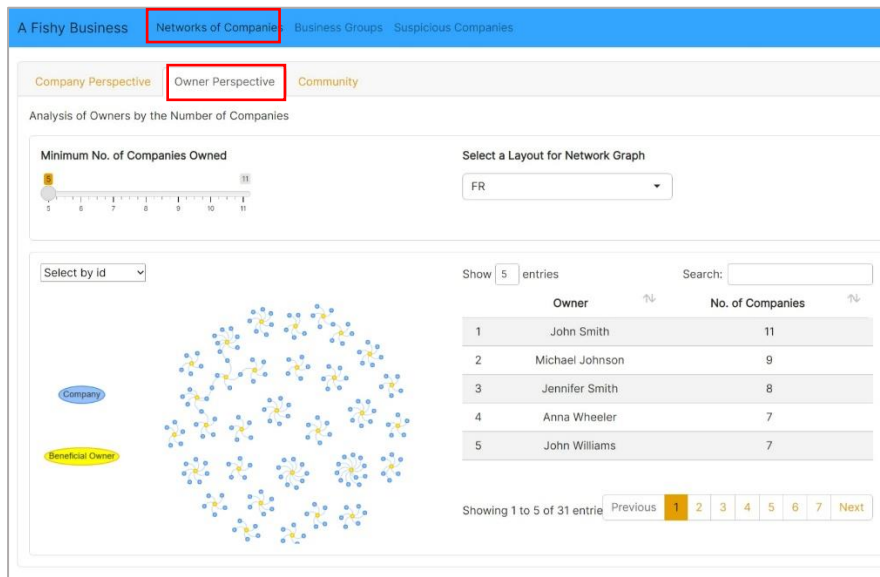2. Use the slider bar to filter the minimum no. of owners the company have.

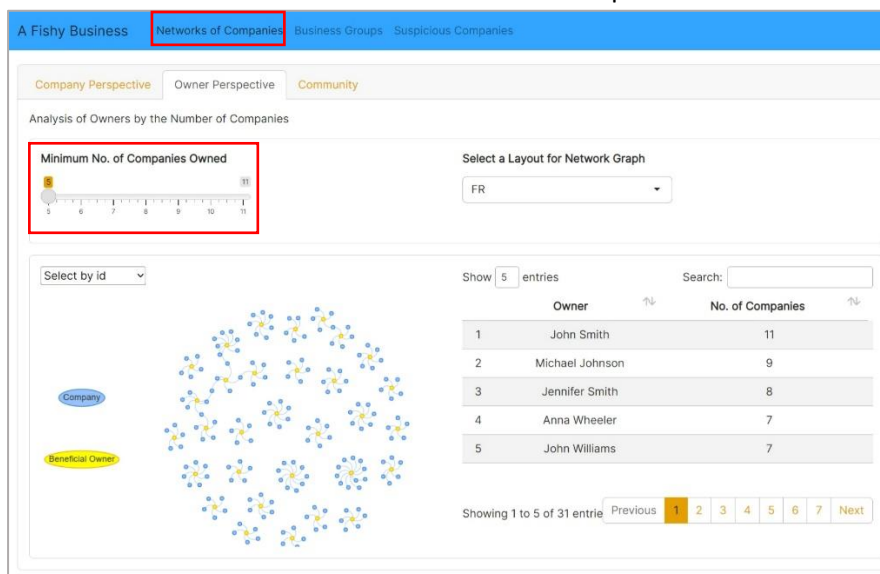3. Select "Graph Layout" for the preferred network graph display.

Steps to visualise the companies the owners have.

1. Select "Owner Perspective" tab

2. Use the slider bar to filter the minimum no. of companies owned.
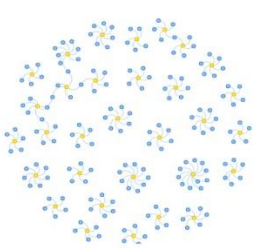
3. Select "Graph Layout" for the preferred network graph display.

Steps to visualise the Network Communities

1. Select "Community" tab.
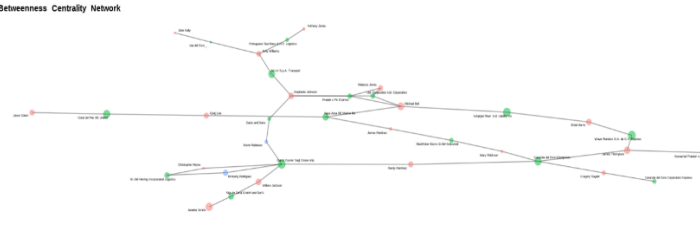
2. Use the slider bar to filter the minimum no. of communities desired.

3. Select "Graph Layout" for the preferred network graph display.
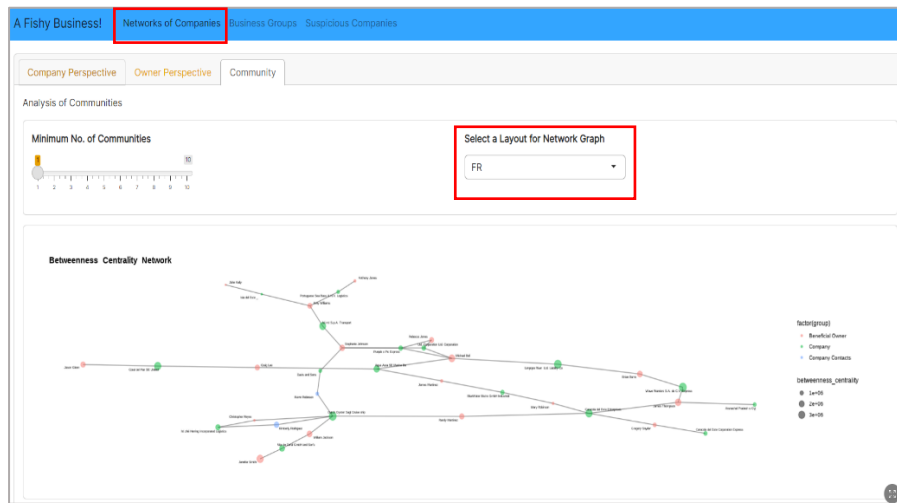
2.Business Groups

This section shows the visualisation on the categorisation of the various business groups within the entire network. Users will be able to select different visualisations to understand the characteristics of each business group such as the list of companies, countries registered and key products and services.

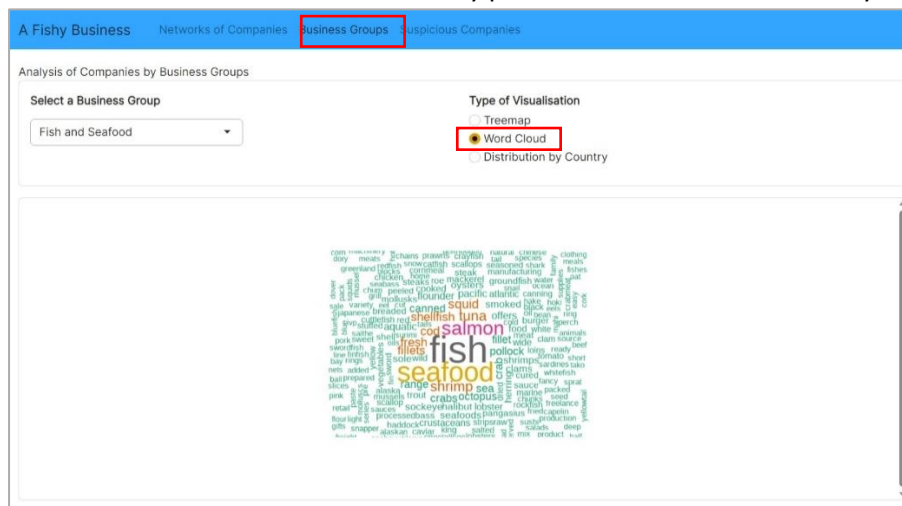**Steps to visualise the companies in each of the Business Group**

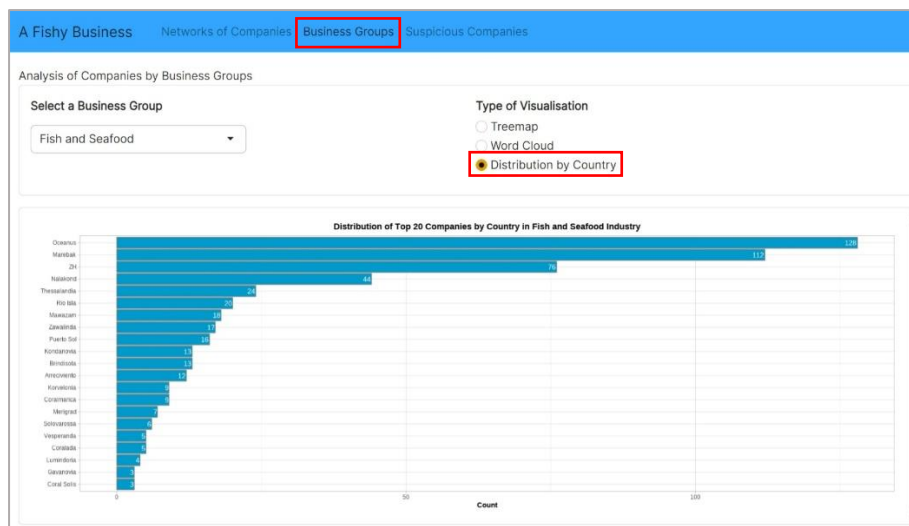1. Select the relevant names under "Business Group".
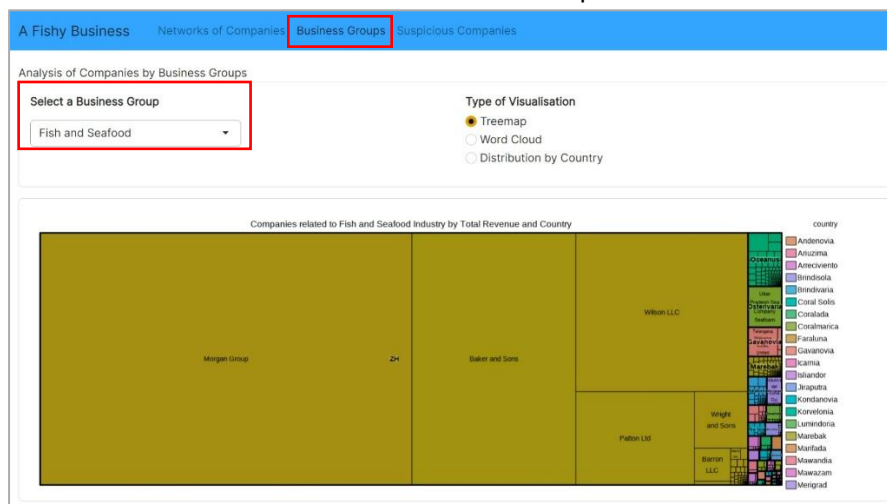
2. Select "Tree Map" to visualise the high revenue companies and which countries they are registered in, OR
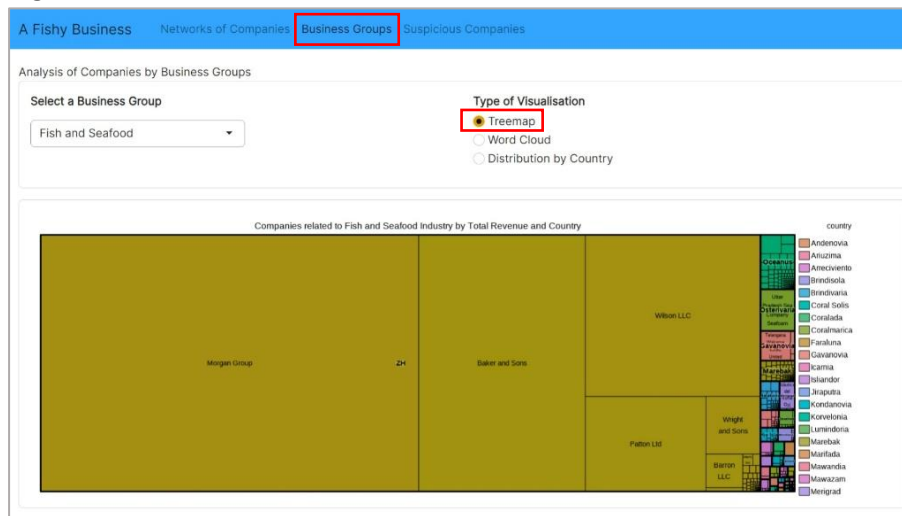
3. Select "Word Cloud" to visualise the key products and services offered by the companies; OR

4. Select "Distribution by Country" to visualise the number of companies in the Business Group

3.Suspicious Companies

This section looks at the network of the Business Group that is related to fishing trade to tease out potential companies which display patterns of anomalies and hence be identified for their possible involvement in illegal fishing activities. Users can select and view the network diagram to uncover more insights on these companies.

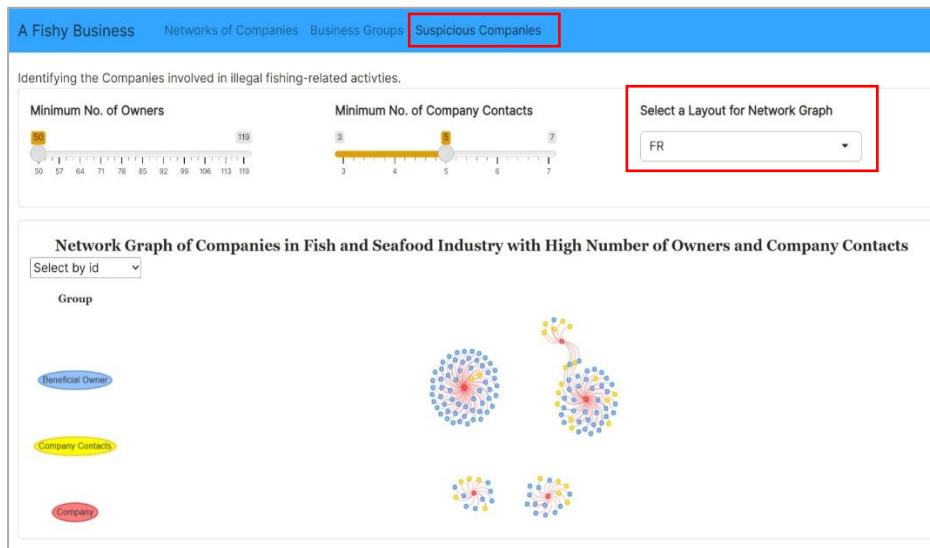**Steps to visualise potentially Suspicious Companies**

1. Use the slider bar to filter the minimum no. of owners the companies have.
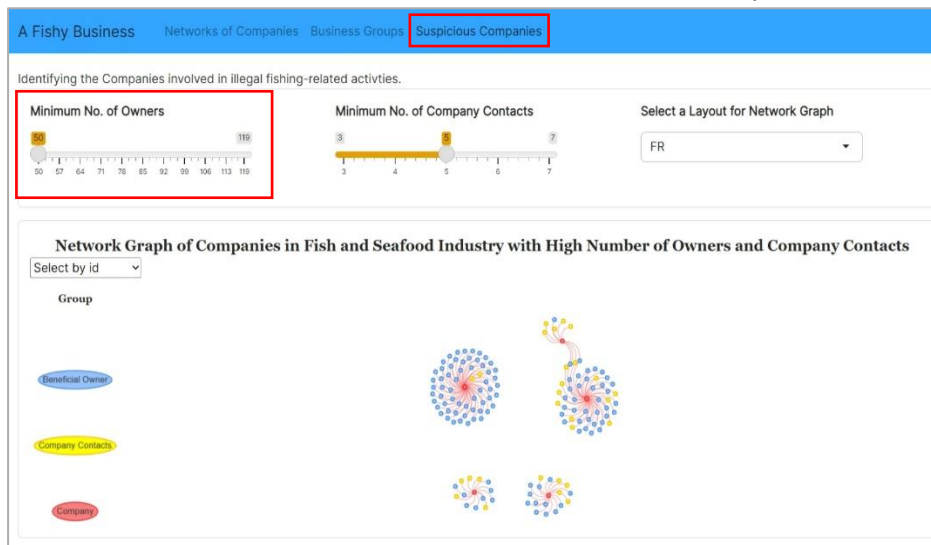
2. Use the slider bar to filter the minimum no. of contacts the companies have.
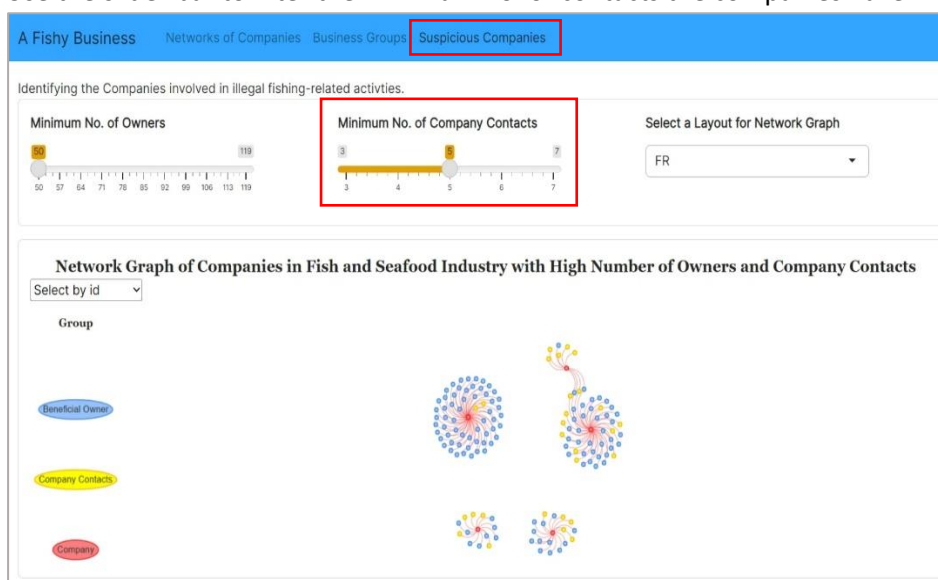
3. Select "Graph Layout" for the preferred network graph display.

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