Use Case:

We propose to develop a website which new or existing businesses can use in order to determine whether their products will be viable as an e-commerce offering in Brazil.  The website would use existing data on Brazilian e-commerce in order to generate information which would help inform the user’s decision.

                The user will be able to generate a table of best-selling product categories in a particular state (based on total quantity); average price by product category in that state and % of all orders shipped inside seller’s state vs outside the seller’s state. The website would also provide the user with the average number of months it takes a business in that state to reach its maximum number of orders, as well as population growth information by state, so that a user can judge whether or not the region they’re thinking of selling to is growing rapidly and therefore can offer a growing market or if it is stagnant or shrinking.

Flow:

**Actors**: User, Website

**Use Case Relationships**: The user selects a state from a drop down menu, defined by the existing states in the database; the website then uses that selection to filter tables and queries and returns data to the user.

The user can also choose a product category from a dropdown menu consisting of all distinct product categories in the database; this selection would generate results for whichever state the selected product sells in the most.

**Pre-conditions**: The user should have a home state or product category in mind when exploring the possibility of expanding into e-commerce in Brazil. This home state must exist in the seller\_state field of the database. The user’s business product should also fit into the existing product categories, contained in the product\_category\_name\_english field in the database. The product category must have sold more than one unit in a particular state if the user is to select a state based on a product category.

**Basic Flow**:

1. Use case begins when user selects a product category or state from a drop down menu.
2. Selected state becomes filter in SQL queries
   1. Business rule: state must exist in database
   2. Business rule: state must have orders associated with it
3. Selected product becomes the parameter for the GET\_STATES function, which generates the state where that product sells the most.
   1. Business rule: product category must have more than 1 order in a given state.
4. Website generates two tables and three KPIs, corresponding to the following:
   1. Top 10 product categories as defined by number of products sold
      1. This gets generated by the query “Top 10 product categories in a state”
   2. Average product price by product category
      1. This gets generated by querying the avg\_product\_price view using a select all query.
   3. KPI: % of customer orders shipped to seller’s state
      1. This KPI gets generated by querying the out\_of\_state\_orders view with a select all query and using a seller\_state where statement according to the user’s selection.

(SELECT \* from out\_of\_state\_orders WHERE seller\_state=get\_states('USER\_SELECTION') or seller\_state='USER\_SELECTION'; )

* 1. KPI: average number of months for a business to reach max orders
     1. This KPI gets generated by querying the avg\_months\_to\_max\_order table with a select all query filtered for seller\_state according to user selection
  2. KPI: population growth percentage
     1. This KPI gets generated by calling the pop\_growth stored procedure.