E-Commerce Technology (F20EC)

Coursework 1

Create your process model for Amazon.com
to support the Omni-channel Sales Model

Group 8

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1. Introduction

Amazon is one of the world's largest e-commerce companies, offering a vast selection of products to customers online. To ensure that its operations run smoothly and efficiently, we have developed a robust business process model that incorporates both in-store and online sales channels.

This model is built using Business Process Model and Notation (BPMN) 2.0, a standardized notation for visualizing and documenting business processes. The BPMN model for Amazon's in-store and online business includes a variety of processes, such as inventory management, order processing, payment processing, customer service and online marketing with loyalty points program.

By using a standardized notation like BPMN 2.0, we can clearly document and communicate Amazon's business processes to its employees, partners, and other stakeholders. This helps to ensure that everyone involved in the company's operations understands their role and responsibilities and can work together to achieve common goals.

Overall, Amazon's in-store and online business process model is an essential component of the company's success, enabling it to provide high-quality products and services to customers around the world in a seamless and efficient manner.

2. Assumptions

1. Customer purchases at least one item. (Does not leave without buying anything)
2. For online process, we assume the customer logs in to their account before browsing.
3. For online process, we assume the item is in-stock/ available online.
4. We assume that all customers are buying for themselves and not for the purpose of resale (delivering to warehouses etc.)
5. We assume the customer would like to receive points for their purchase.
6. We assume the customer signs up/ logs in to their Amazon account and scans their device in order to receive points for instore processes.
7. We assume Amazon does not do cash returns.
8. When the customer browses online and chooses to purchase the item in-store, we assume the customer receives a notification informing when the product is available in-store in the event of the item being out of stock or unavailable at the time.

3. Processes and Sub-Processes of the Model

3.1 Browsing and Trying Out Products Processes

Amazon's new business initiative to launch physical stores opens new opportunities to enhance customers' shopping experience. Customers can now shop completely online, completely in-store or combine several processes from both. Whether the customer wants to browse online and purchase products in-store or shop online and return in-store, Amazon's new initiative covers it all. The following points cover an in-depth look into how customers can choose to shop online or instore.

3.1.1 Browsing In-Store
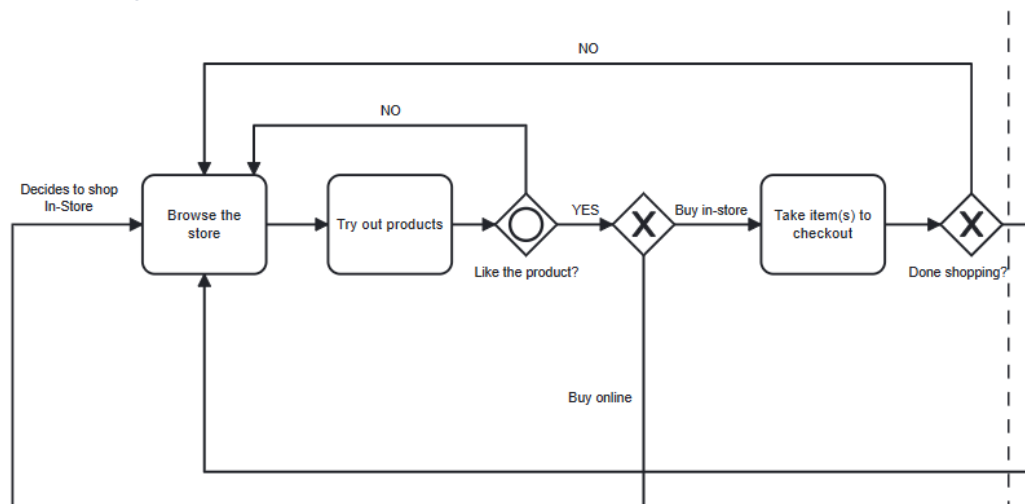
Figure 1 – Browsing in-store process

Browsing in-store gives the customers the opportunity to gain a proper touch-and-feel of the product they are planning to purchase. The in-store experience lets the customers try out the products giving them a proper idea as to what they will be purchasing. Here is a brief overview of the process:

1. The customer can browse through the different aisles of the store to locate the item they wish to purchase.
2. The customer can choose to try the product out to assist with the decision of purchasing the product.
3. If the customer is satisfied with the product, they can proceed to choose to purchase it either online or in-store.
4. If they choose to purchase the product online, see 3.1.2 step 1.
5. If they choose to continue to purchase in-store, the customer can proceed to check-out the product.
6. If the customer wants to continue shopping for more products, the process repeats from step 1.
7. If the customer is done shopping, the customer can proceed to the payment process (see 3.2).
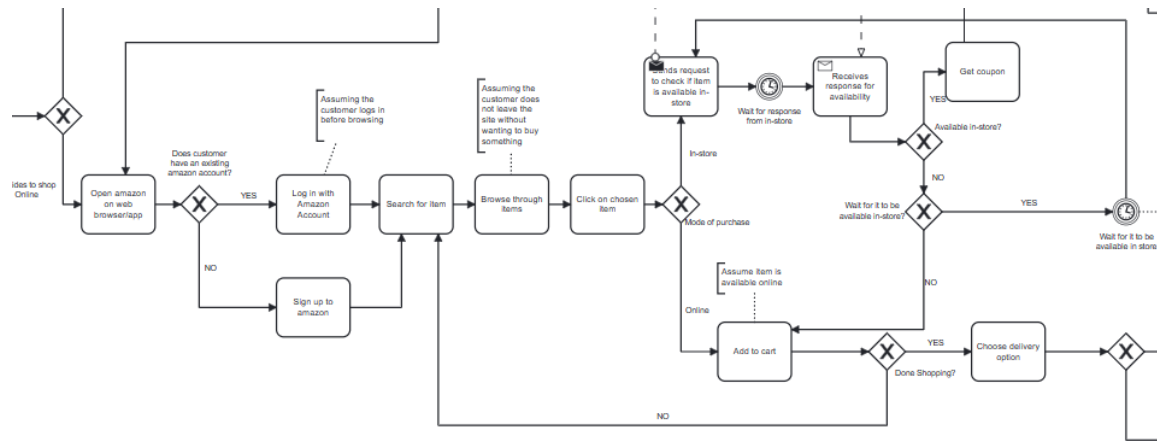
3.1.2 Browsing Online

Figure 2 – Browsing on the online store

Browsing online provides the customers with a lot of options for the product(s) they wish to purchase. Here is a brief overview of the process:

1. The customer opens the Amazon website on their preferred device.
2. The customer logs in to their account on the website. If the customer does not have an Amazon account, they can sign up and create a new account.
3. The customer can type in relevant keywords for the item they wish to purchase in the search bar.
4. The customer can browse through several options for the product on the search results pages.
5. Once the customer finds an item they are satisfied with, the customer can choose their mode of purchase.
6. If the customer decides to purchase the product instore, a request is sent to the Amazon store to check for the availability of the product to try out and purchase instore. The customer waits until they receive a response (Fig. 3).
   6.1 The availability of the product is checked in the inventory of the store and the response is sent to the customer.
   6.2 If the item is available instore, the customer is provided with a coupon that enables them to shop the product in-store.
   6.3 If the item is not available instore, the customer can choose to wait until the item is available or choose to continue to purchase the product online.
7. If the customer decides to continue to purchase the product online, the customer can add the item to the cart.
8. If the customer wants to continue shopping for other products, the process repeats from step 3.
9. If the customer is done shopping, they can proceed to choosing their preferred delivery method (see 3.3) and proceed to the payment (see 3.2).
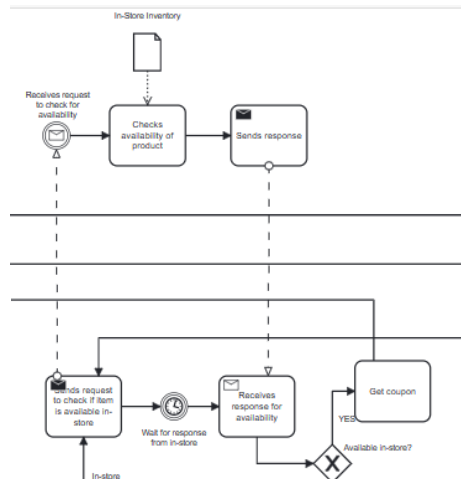
Figure 3 – The interaction between the online and instore process to check availability of products.

3.2 Payment Process

A Payment Process for the Amazon Business Model would include a set of steps and procedures to follow to accept and process payments from their customers. This is required because Amazon would need a reliable and secure way to accept payments from their customers.

By following a standardized payment process, businesses can ensure that they are collecting accurate payment information, processing transactions efficiently and securely, and maintaining detailed records of all transactions. This helps to minimize errors, reduce fraud, and ensure that the business is in compliance with applicable regulations and industry standards. A well-designed payment process can also help to improve customer satisfaction by providing a convenient and seamless payment experience.
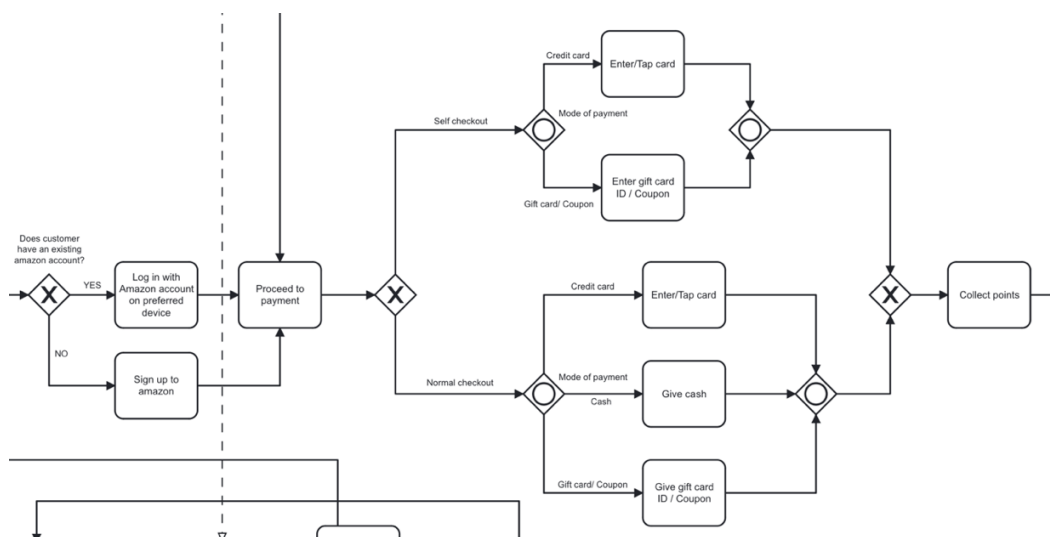
3.2.1 In-Store Payment

Figure 4 – The in-store payment process

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The Amazon in-store payment process allows customers to use their Amazon account to make purchases at physical retail locations. Here is a brief overview of the process:

1. Open the Amazon app on your preferred device and login/signup into your Amazon account and tap on the "In-Store" icon.
2. Then proceed to the payment counters (either Self-Checkout or Guided Checkout).
3. Start scanning the items in your cart one-by-one and make sure they are added to the screen.
4. Show the QR code that appears on your device to the cashier or to the QR scanner at self-checkouts in the store.
5. The cashier/scanner will scan your QR code and process your Amazon account information.
6. Customer can then select their preferred payment method i.e., Bank Card/Gift Card/Coupon/Cash for Guided Checkout and Bank Card/Gift Card/Coupon for Self-Checkout.
7. Once the payment is complete successfully, customers will then see loyalty points added directly to their account.
8. Customers will also start seeing similar results or frequency bought items along with their purchases on their suggestions tab after the payment.
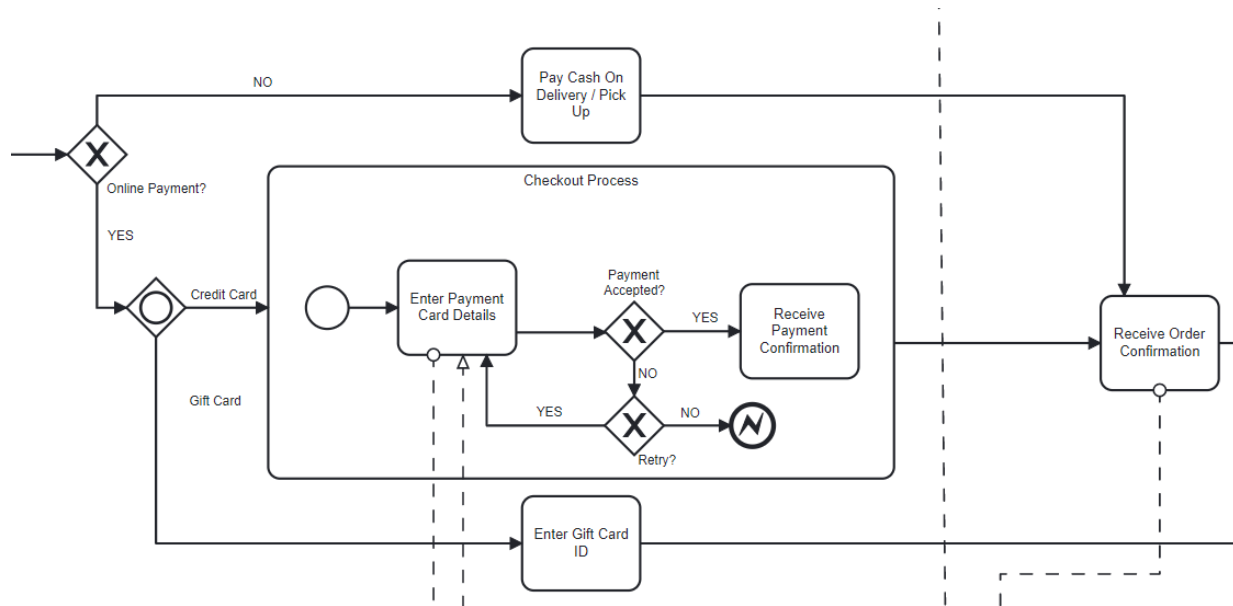
3.2.2 Online Payment

Figure 5 – The online payment process and the checkout subprocess

Amazon's online payment is designed to be a seamless experience for the customer. Once the customer is done shopping and move to the payment page, the customer can choose to either complete the payment online or choose to pay using cash when the product is delivered. If the customer chooses to pay online:

1. The customer can choose to pay using either their credit card, their gift card if they have one or choose to pay using both by redeeming their gift card balance and using their credit card for the remaining amount.
2. When they choose the credit card option, the customer is asked to enter their card details.

3. The customer's credit card company then receives a request to verify the transaction.
4. The bank then processes the transaction request. Once verified, the customer receives a payment confirmation, and their order is confirmed.
5. The customer then receives a receipt for their purchase.
6. When choosing to pay using a gift card, the customer is asked to enter their gift card ID to redeem their balance.
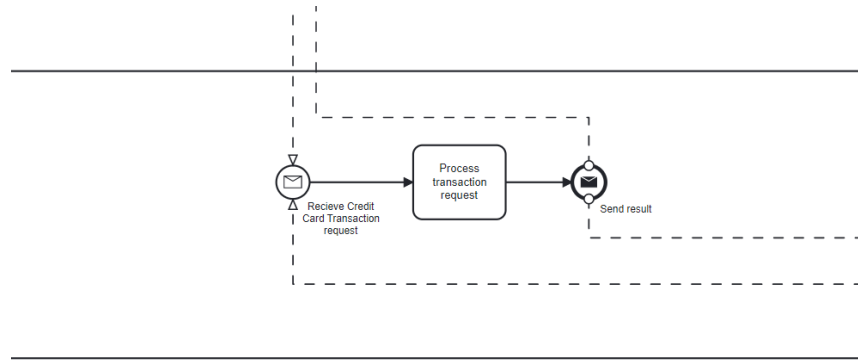

Figure 6 – The interaction between the credit card company and Amazon.

If the customer chooses to pay using cash on delivery, then they directly receive a receipt for their purchase and will have to pay for the product once its delivered to their home.

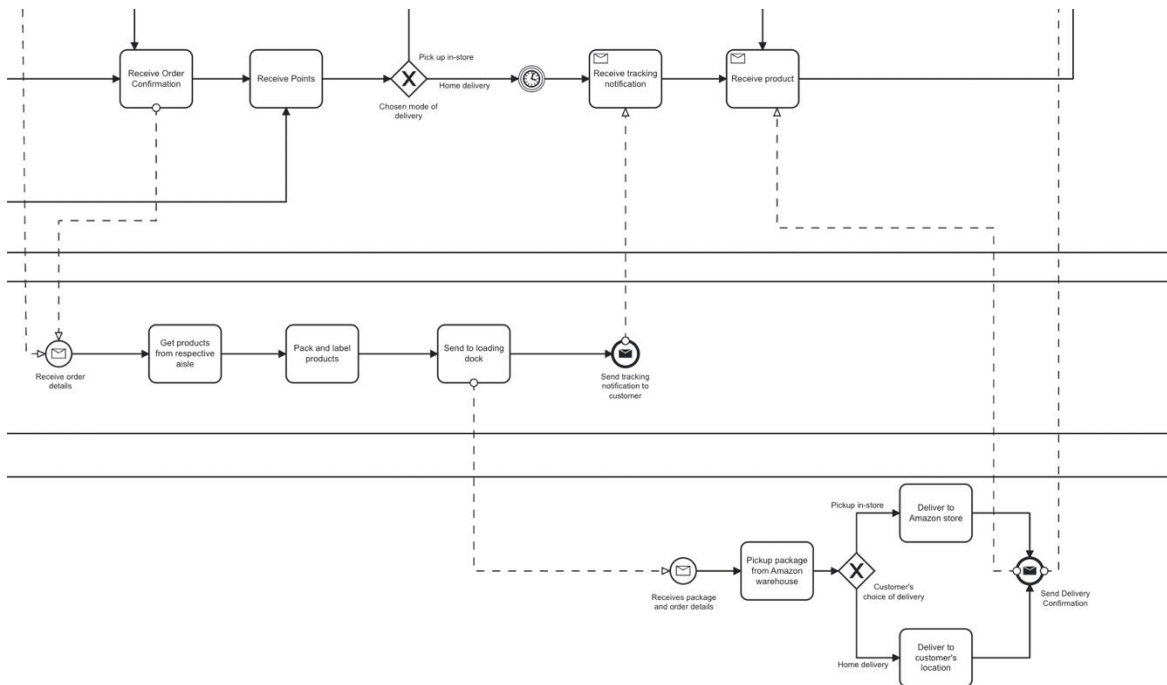## 3.3 Delivery and Pick-up process

3.3.1 Online Processes

Figure 7 – The process online to manage the delivery or the collection of the product.

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1. **Home Delivery** – After purchasing the product online, the customer will receive an order confirmation that contains the reference ID which can be used to track the order. The customer will have to wait while it undergoes a process in the warehouse where it receives order details, gets the products from the respective aisle, picks, and labels products, and after it sends them to loading docks. The courier service will pick up the order from the warehouse and delivers the product to the customer's location. The customer will then receive a delivery confirmation message.

2. **While picking up in-store** - After purchasing the product online, the customer will receive an order confirmation that contains the reference ID which can be used to verify the purchase. If the payment is done online, the customer will submit the receipt and can collect the product. If the payment is not done, the customer will proceed to the payment counter and after the payment is done, they can collect the product.

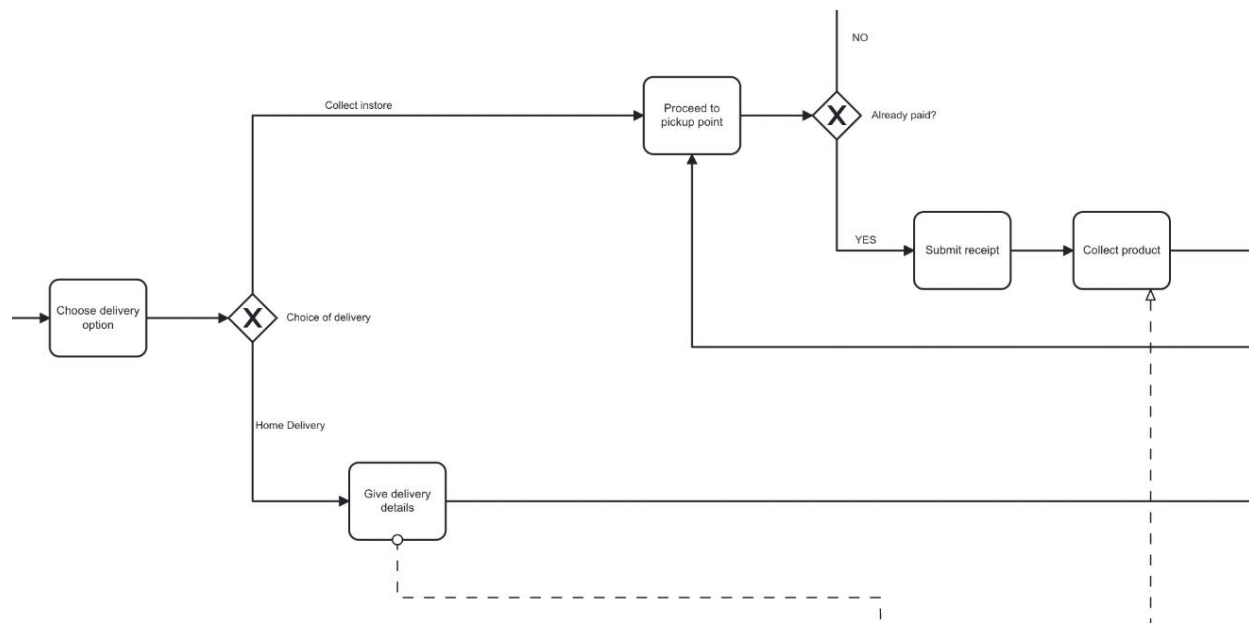## 3.3.2 In-Store Processes

Figure 8 – The process in-store to manage the delivery or the collection of the product.

1. **Home Delivery** – After purchasing the product in-store, the customer will receive a payment receipt and will have to provide the delivery details. The customer will have to wait while it undergoes a process in the warehouse where it receives order details, gets the products from the respective aisle, picks, and labels products, and after it sends them to loading docks. The courier service will pick up the order from the warehouse and delivers the product to the customer's location. The customer will then receive a delivery confirmation message.

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2. **<u>While picking up in-store</u>** - After purchasing the product in-store, the customer will receive a payment receipt and will proceed to the pickup point. The customer will submit the receipt and collect the product from the respective aisle.
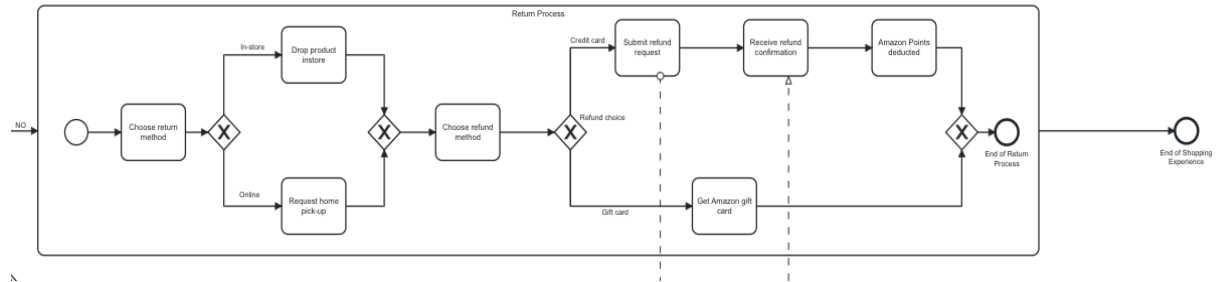
3.4 Return Process

Figure 9 – The return subprocess when the customer is unhappy with the product. This process can be done online or in-store.

Once the customer has bought the product, if they are happy with it, the shopping experience comes to an end. But if the customer is unhappy with the product, they go to the return process. The customer can choose to either drop the product in-store or request a home pickup online. An appropriate refund method must be chosen between credit card and gift card.

If the customer chooses a gift card refund, Amazon provides a gift card that can be used online or in-store, and the customer's return process comes to an end. On the other hand, if the customer opts for credit card refund, the refund request is first sent to Amazon, who in turn send the request to the credit card service *(Fig. 6)*. Once the request is processed, the refund confirmation is sent back to Amazon and the customer's Amazon points for the product are deducted and the customer's return process comes to an end.

The return process is made versatile so that the customer is able to buy in-store but return online, and vice-versa. Once the product has been successfully returned and an appropriate refund has been issued, the customer's shopping experience comes to an end.

4. Business Model
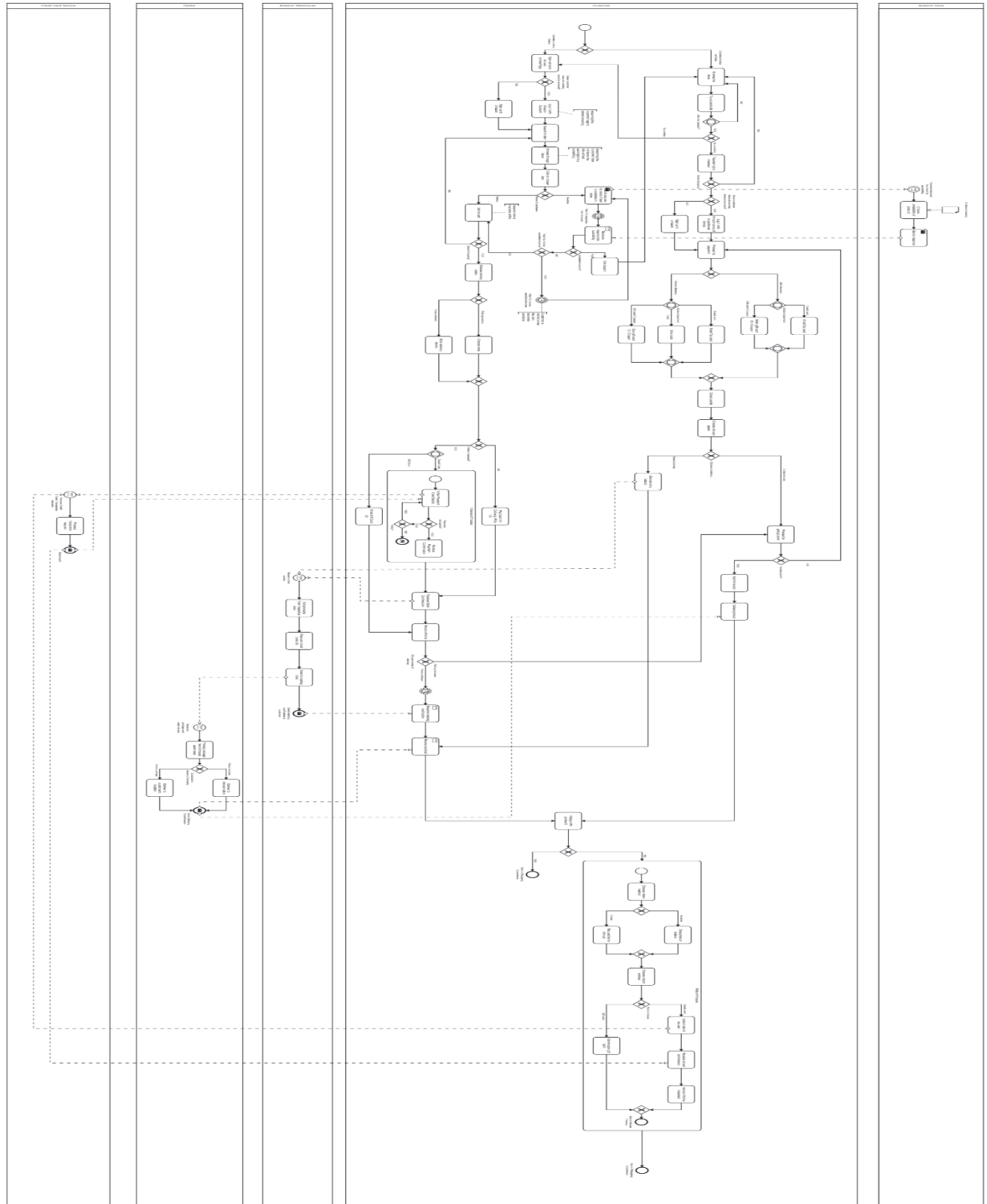
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