

AY 2018 – 19 TERM 1 Sample Exam Paper - IS210 Business Process Analysis and Solutioning

1. Multiple Choice Questions MCQ

Read all Multiple Choice questions below and choose **One or Multiple answers** for each of the questions. **Fill your answers in this table.** Markings on options in the questions will **not** be graded.

Question	Answer
1	
2	

1. Within the BPE team, the Business Analyst is expected to:
 - A. Understand both the business and IT
 - B. Understand the business process being studied
 - C. Design and implement the IT Solution
 - D. Have deep technical knowledge of a specific technology
 - E. Translate business requirements into IT solution requirements

2. Which of the following activities is/are of the type **Interactive**?
 - A. Jane enters the delivery details into the Shipping system
 - B. The SAP (Finance module) system sends an IDOC document containing account details to the Accounting system
 - C. Marche stacks the items on the warehouse shelves
 - D. Judith approves the purchase through the Purchase Portal
 - E. Albert Ching approves the purchase by signing the paper request forms

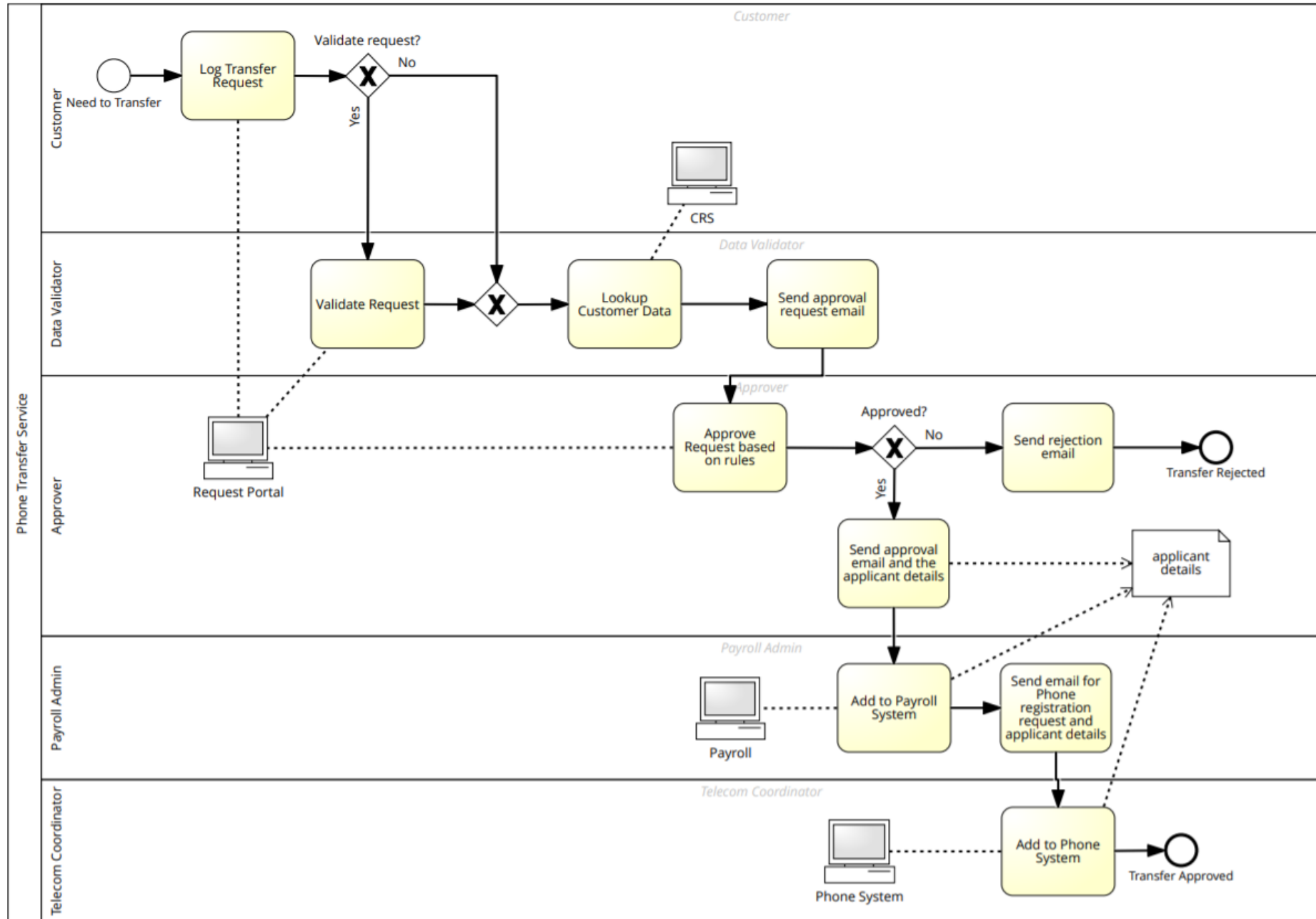
Question 2 – Business Process Analysis

The leading telecom firm MobileHub has the following “Phone Transfer Service” process. This process enables the customers of the firm to request for the transfer of the phone services to a new address and the process is triggered when the customer submits the transfer request form. The customer will be informed on the outcome at the end of the process. If successful, the process will trigger the “Transfer Installation Process” which is not shown in the workflow diagram next page.

The customer submits a transfer request via the Request Portal. The Request Portal determines if the transfer request needs validation. For a transfer request that needs validation, the Data Validator applies some straightforward rules (IF. ..X THEN...Y) to validate the transfer request. Data validator then logs into the Customer Relationship System (CRS), searches for the Customer record and retrieves the record. The CRS system is very slow and hard to use, taking up lots of time just to perform the search. After the lookup, the Data validator will email the Approver the customer request. On receiving the approval request email, the Approver will login to the request portal and check the transfer request against the rules to approve or disapprove the transfer request. If rejected, the Approver will send a rejection email to the customer and the process ends. If approved, the Approver will send an approval email and applicant details to the Payroll admin. The Approver has to manually type the applicant details in the email. As Payroll admin is usually quite busy, he sometimes misses the email from the Approver and takes a few hours before taking action on the email. Upon receiving the email from the Approver, the customer details is updated in the Payroll System by the Payroll admin. The Payroll admin will next send an email of the exact same phone registration request and the same applicant details to the Telecom coordinator. Finally the Telecom coordinator will add the customer information to the phone system and the transfer approve process is complete. Similar to the Payroll admin, the Telecom coordinator also takes hours to respond to the email task as he does not check his email frequently. Do note that task by the Telecom coordinator has no dependency with the task by the Payroll Admin of adding the customer details to the Payroll System.

Assumptions (Only if needed):

Workflow Model (Process Diagram)



Report 1 – Process Path Report (Assume data correctness)

Process Cases Summary Report							
Case Name	Average Cost	Average Resource Cost	Average Elapsed Duration	Average Resource Duration	Average Delay Duration	Distribution	No of Instances
Approve Without Validation	USD26.58	USD26.58	17 hrs 6 min	1 hrs 15 min	2 hrs 55 min	18.00%	9
Approve With Validation	USD29.92	USD29.92	30 hrs 9 min	1 hrs 25 min	1 hrs 39 min	32.00%	16
Reject with Validation	USD13.43	USD13.43	26 hrs 55 min	42 min	1 hrs 8 min	28.00%	14
Reject without validation	USD10.10	USD10.10	16 hrs 29 min	32 min	1 hrs 27 min	22.00%	11
All Cases	USD20.34	USD20.34	23 hrs 53 min	59 min	1 hrs 41 min	100.00%	50

- A. Report 1 shows the results of a dynamic simulation run and the statistical measurements for the various cases of the process. With reference to Report 1, identify the case with the highest wastage. Using the statistical measurements, briefly justify your selection of the case. Suggest **one** solution to minimize this wastage.

i.Name of case:	ii.Justification of selection :	iii.Suggested Solution (elaborate):

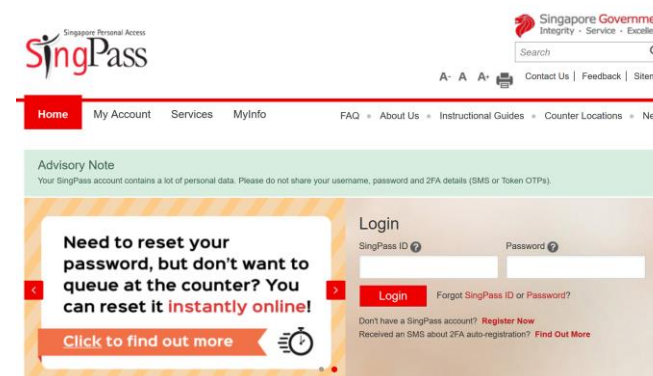
B. Analyse the possible issues (3 issues) in the given workflow and fill up the below table (This is a new template requested by the vendor). Fill in the table provided below. **(1.5 marks)**

<u>Issues No</u>	<u>Issue</u>	<u>Cause</u>	<u>Root Cause</u>	<u>Recommendation</u>

Question 3 - Business Process Modeling

The Housing and Development Board (HDB) is launching a new resale portal in January 2018. HDB aims to shorten the resale transaction process by half from 16 to 8 weeks. Currently, the process requires two appointments with HDB and multiple manual checks. The new resale portal cuts the process to only one appointment and will automate most of the eligibility checks. After two months of studying of the current process and several rounds of consultations with the stakeholders, Business Process Experts team (BPE) proposed a TO-BE workflow model as described below.

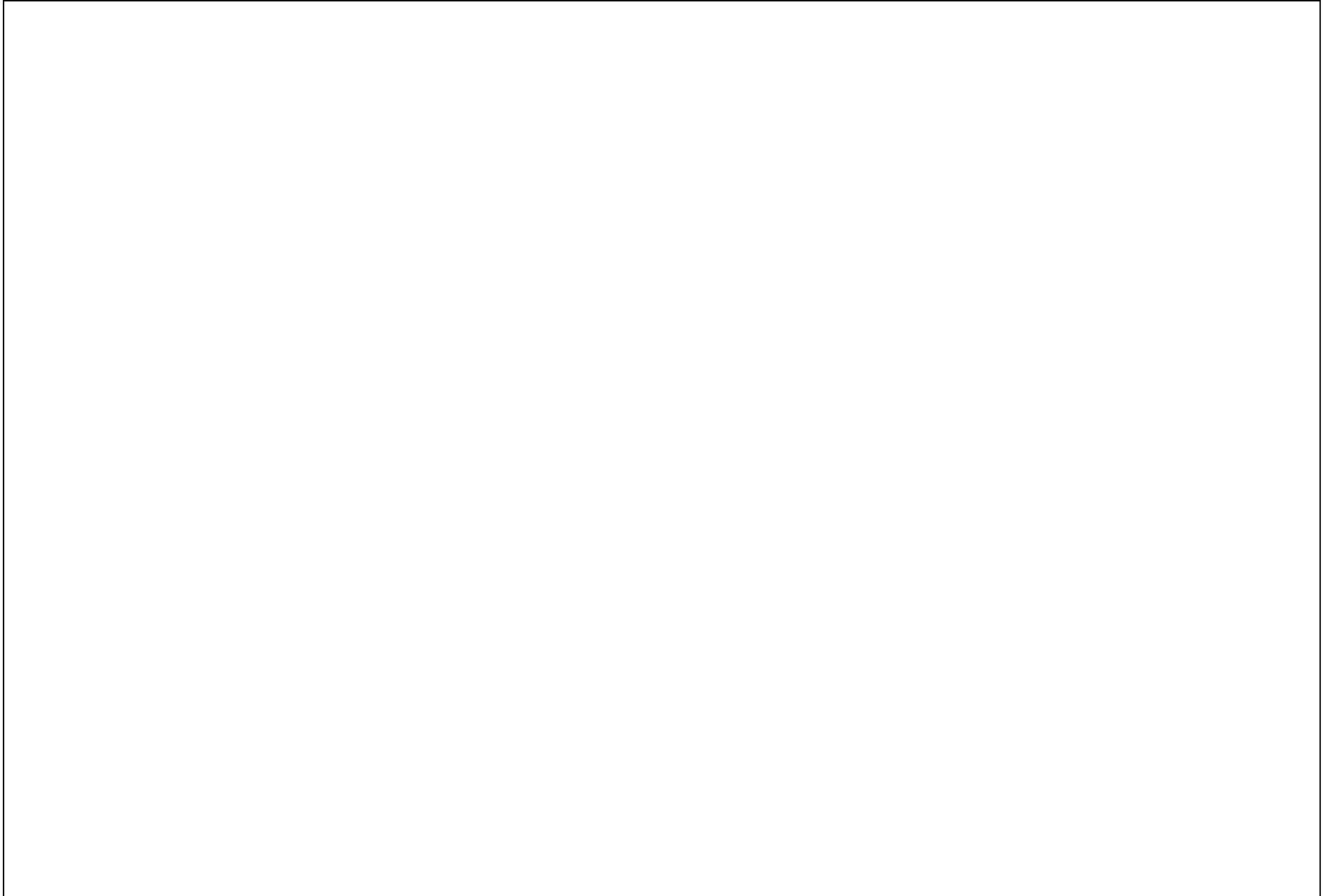
1. Using the new HDB Resale Portal System **HDB-RP**, the buyer applicant shall submit registration details along with their Singapore Personal Access - **SingPass**.
2. After receiving the registration request, **HDB-RP** will retrieve personal data from **SingPass Service System** by providing buyer's SingPass.
3. **HDB-RP** will also check the **STS** (Singapore Tax System) web service to retrieve the buyer's income information.
4. With all this information, the **HDB-RP** system will automatically validate the buyer's eligibility and will notify the applicant of eligibility either success or failure. If not eligible the process ends.
5. If eligible, HDB-RP will generate application form with automatically filled data (income, personal info etc.,) and flats list. HDB-RP will send the application form, the flats list to select to the buyer.
6. Upon receiving the application form and resale flats list, the eligible buyer will proceed to review and update the application form and select a flat from the resale pool with the proposed price, and submit using the **HDB-RP** system.
7. HDB-RP will notify the seller on the buyer proposal.
8. The seller will then review the proposed price and choose to accept or reject the offer using the **HDB-RP** system.
9. If the offer is rejected the **HDB-RP** system will notify the Buyer. The buyer will proceed to select another flat and the loop repeats.
10. If the offer is accepted both the buyer and the seller will be notified by HDB-RP and will be given an appointment with the HDB officer.
11. Both buyer & seller will meet the HDB officer with his given appointment. This is the only required manual appointment, which triggers the subsequent process, "Transaction Management".



Note: SingPass has existing web services that provides authentication & personal data retrieval for government applications to call. STS has an existing web service that allows government applications to call for retrieval of personal income information.

As a member of the BPE team, you are required to develop the Workflow Model,

Assumptions (Only if needed):



Question 4 - Business Process Solutioning

Identify Use Cases from the To-Be workflow model in **question 3**. Draw the Use Case Model.



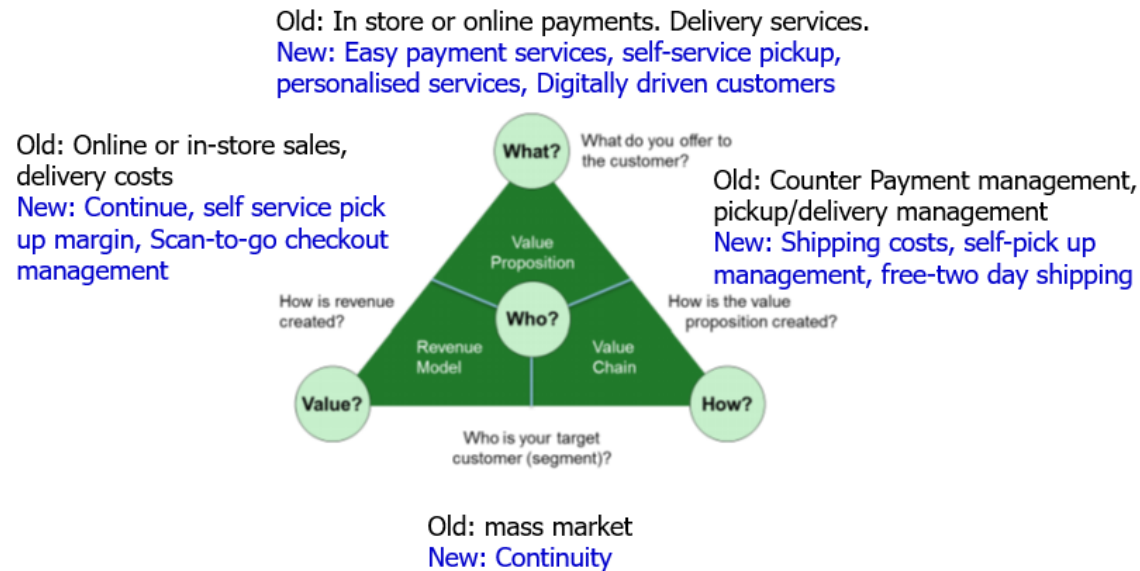
Question 5 – Process Innovation

Background:

Walmart has focused on the development of progressive and innovative technologies to gain relevancy in today's retail environment and bring novelty to customer experience. New innovations and ideas have ranged from internal technologies to making the shopping experience more convenient and simple. Walmart is testing new approaches at its supercenters to keep up with customers' digitally driven lifestyles.

Scan-and-go technology allows customers to skip checkout lines and pay for purchases using smartphones. When the customers are in store, they can simply scan the goods that they like to purchase using an app as they move in the aisles with smart shelves. Finally, they can checkout the shopping cart and complete the payment. This prevents them to skip the queues and hassle of carrying the goods. They can do a pickup of their shopping at the pick up ATMs after 1 hour. Online to in-store, seamlessly is a concept features an automated pick-up tower, where customers can order something online, have it sent to the store and pick up their purchase seamlessly. The technology allows customers completing online grocery orders at the store to select self-service as a pick-up option. There is a \$30 spending threshold for orders, which must be placed during store hours. They also use the pick up ATMs. Other offerings include, all Walmart customers qualification for free two-day shipping. There is no fees or enrolment in membership programs required for this 2 day free-shipping. The concept offers better and more personalized shopping experience and recommendations going forward.

Business Model using Gassman Triangle:



(a) Given the background of the company, the BPM team created a business model using Gassman Triangle. Identify 3 components incorrectly mapped in the diagram and correct them. For example, “Self-service pickup” is a component which is correctly mapped.

Fill in the below box with the correct Answers:

Component	Correction Model (Revenue, Value chain, Value proposition, Customer model)	Justify

(b) Self-service pickup management process is like an “ATM for groceries” where the kiosks can provide customers with the option to pick up their groceries any time of the day or week. During the online purchase, the customer provides the day of self-pickup as an input and a self-pickup code is generated. On the pick up day, the customer keys in the pickup code information in kiosk at the store and waits for the groceries. What technology can be used to collect the correct package from the self-pick up storage room and be handed to the customer efficiently?

Technology –

How it works?

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