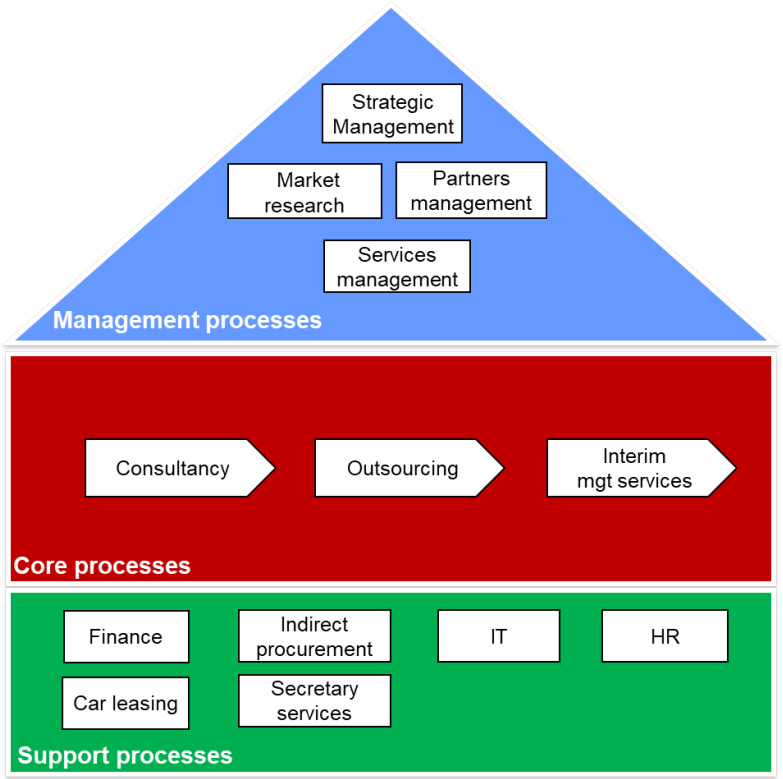
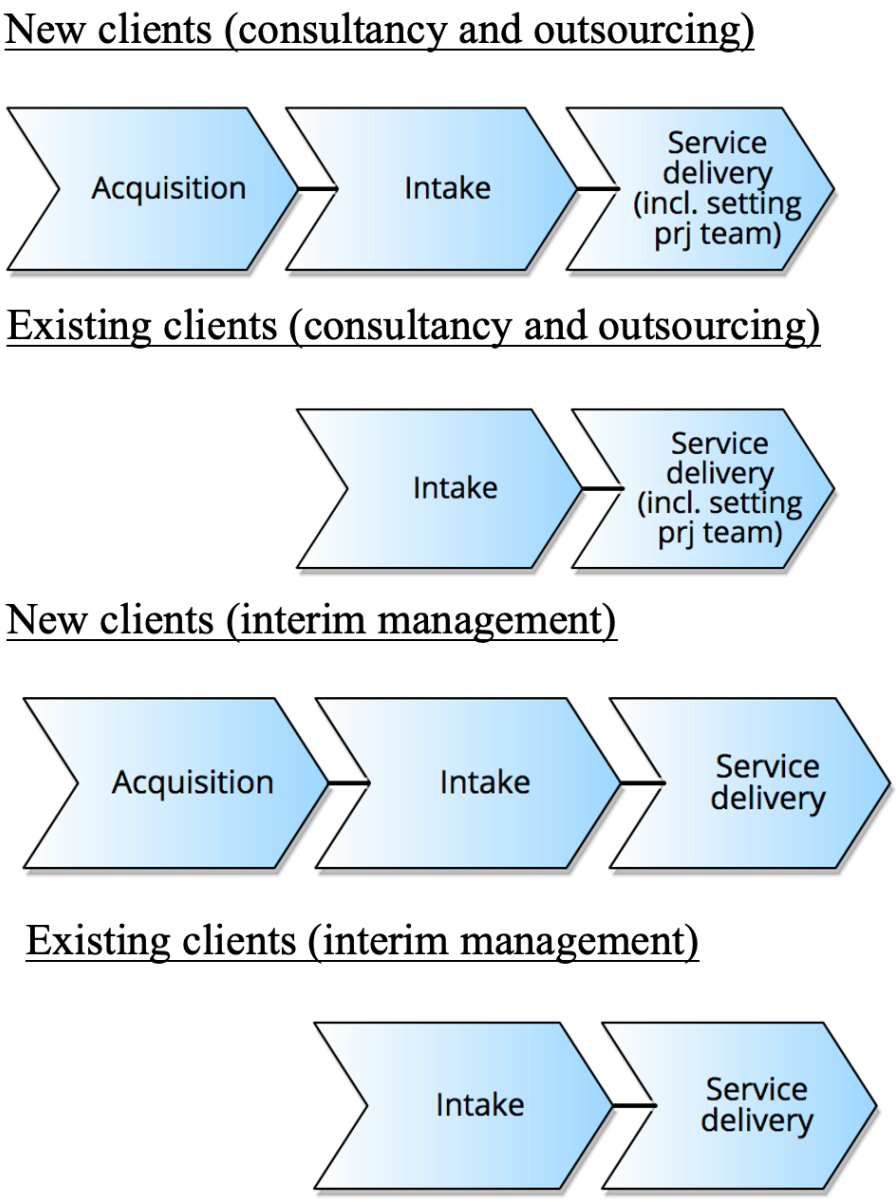
Assignment 1 Solutions

1.

- Core processes [groups]
  - Consultancy (acquisition, intake, delivery)
  - Outsourcing (acquisition, intake, provision)
  - Interim management (acquisition, intake, delivery)
- Support processes [groups]
  - Indirect procurement (operational resources replenishment…)
  - HR (policies update, recruitment, induction, probation…)
  - IT
  - Finance
  - Car leasing
  - Secretary services
- Management processes [groups]
  - Strategic management
  - Market research
  - Partners management
  - Services management



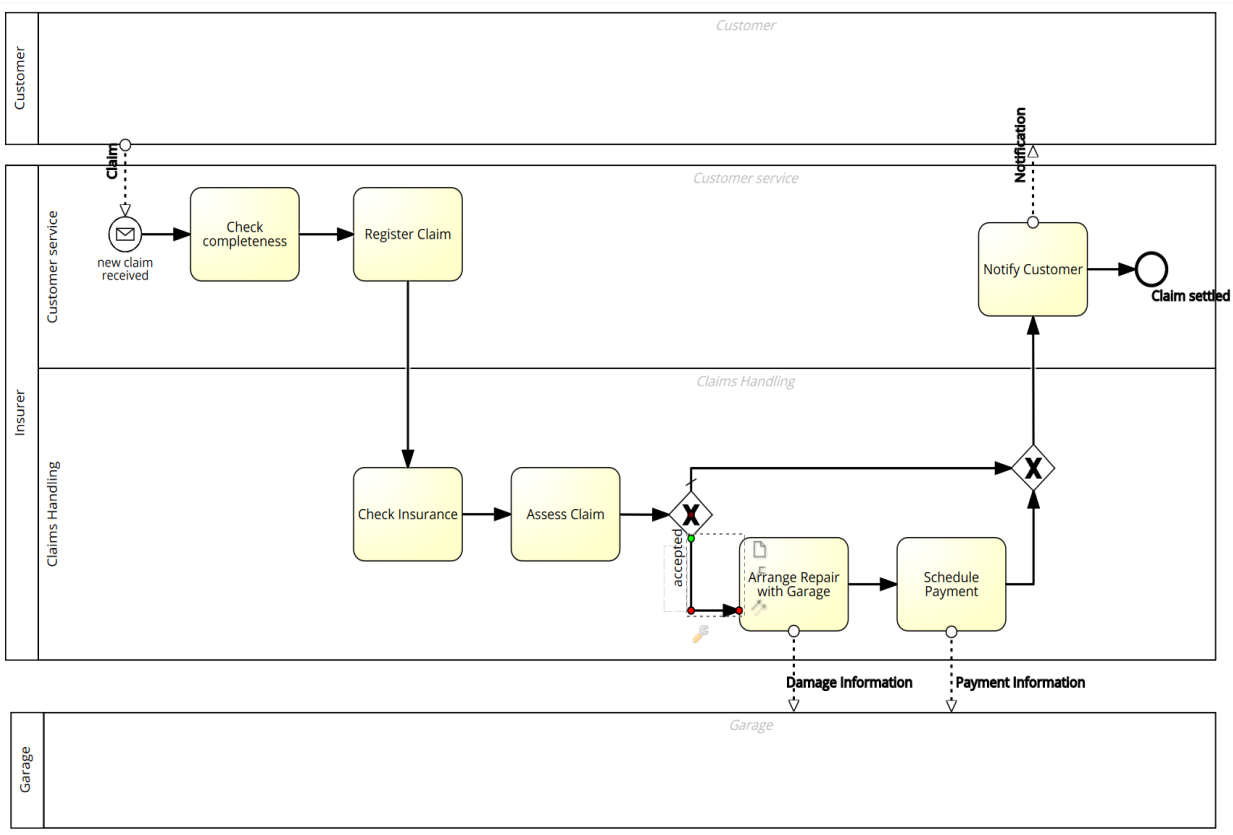
2.



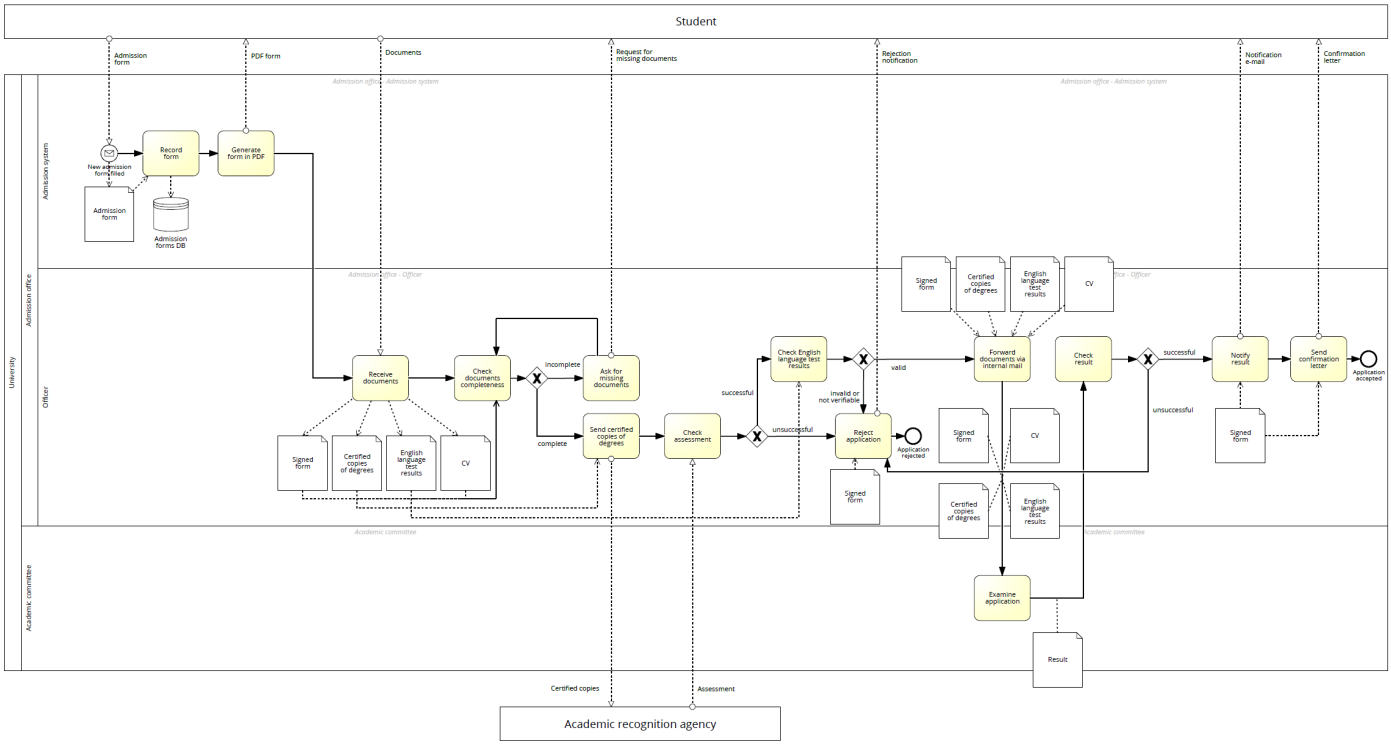
Note: a single value chain with Acquisition, Intake and Service delivery is also correct, since processes within a value chain can be skipped.

Assignment 2 Solutions

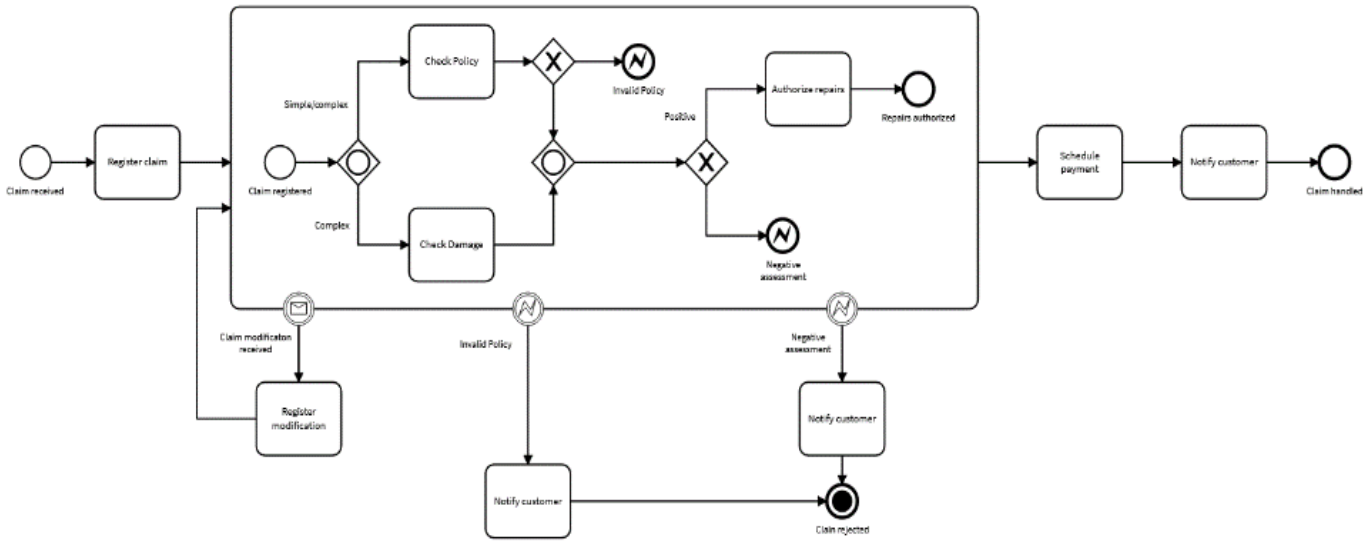
1.



2.


Student
Admission form
PDF form
Documents
Request for missing documents
Rejection notification
Notification e-mail
Confirmation letter
University
Admission office
Admission system
Officer
Academic committee
New admission form filled
Record form
Generate form in PDF
Admission form
Admission forms DB
Receive documents
Check documents completeness
incomplete
complete
Ask for missing documents
Send certified copies of degrees
Check assessment
successful
unsuccessful
Check English language test results
invalid or not verifiable
valid
Reject application
Application rejected
Forward documents via internal mail
Check result
successful
unsuccessful
Notify result
Send confirmation letter
Application accepted
Signed form
Certified copies of degrees
English language test results
CV
Examine application
Result
Certified copies
Assessment
Academic recognition agency

3.


Claim received
Register claim
Claim registered
Simple/complex
Complex
Check Policy
Invalid Policy
Check Damage
Positive
Authorize repairs
Repairs authorized
Negative assessment
Schedule payment
Notify customer
Claim handled
Claim modification received
Register modification
Invalid Policy
Notify customer
Negative assessment
Notify customer
Claim rejected

Assignment 3 Solutions

1.

Assumptions: *the travel agency receives around 100 itinerary requests per day and that the agency makes 50 bookings per day. Each booking brings a gross profit of 100 to the agency. On average, every two complaints lead to a customer churning (to "churn" means to switch to another service provider in future dealings).*

A.

Issue 1: Errors during the booking	
Priority	1
Description	Errors are made in the booking process based on tickets with false dates and not well conducted changes of ongoing bookings.
Data and Assumptions	On average, 2% of customers have errors in their booking process. Based on 50 daily bookings, one includes false information.
Quantitative Impact	2%*50*100 = 100 (missing / returning gross profit daily) 2%*50/2 = 0.5 (customer churn daily – every two days one customer switches the provider)
Qualitative Impact	Unsatisfied customers result in bad publicity and missing future customers. Also, the company needs to be aware of legal processes based on compensation of damages
Issue 2: Long response times	
Priority	2
Description	The response times highly differ based on the complicity of the request.
Data and Assumptions	On 10% of the requests it takes up to 2 days for the agents to answer the request. Those long waiting times are handled as complaints by customers which means that half of those complaints result in customer churn.
Quantitative Impact	10%*100 = 10 (daily 10 new cases that take up to two days to response to) 10/2 = 5 (customers who switch the service based on long waiting times)
Qualitative Impact	Unsatisfied customers result in bad publicity and missing future customers.
Issue 3: Missing service quality	
Priority	1
Description	The service quality is in some cases not high enough which results in booked flight connection that does not represent the best possibilities for each individual customer.
Data and Assumptions	For 5% of the customers the booked flight does not represent the best flight connection or price based on their wishes.
Quantitative Impact	5%*50 = 2,5 (customers per day with not the best flight connection 2,5/2 = 1,25 (customer churn per day based on complaints)
Qualitative Impact	Unsatisfied customers result in bad publicity and missing future customers. And the risk of cash back requests because of bad customer service.

B.

The following why-why diagrams are structured as nested bullet-point list (each level of indentation represents a “deeper why”)

- Errors during the booking
  - Change Process results in errors
    - Unclear process for the travel agent
      - Missing initial employee training
      - Missing process documentation
    - Missing controlling instance
      - Missing knowledge of controlling
      - Employees are too busy and they multi-task
  - Travel agents are making mistakes
    - Missing controlling instance
      - Missing knowledge of controlling
      - Employees are too busy and they multi-task
    - Missing process automation to support employees
      - Missing knowledge about process automation
        - Employees are too busy and they multi-task
- Long response times
  - Complicated itinerary requests
    - Missing necessary information
      - Customers can enter whatever they want in forms
        - Missing IT knowledge
          - Missing trainings
          - Employees are too busy and they multi-task
      - Customers can request flights via mail
        - Old service based on missing IT infrastructure at customer places
    - Strict information about flight routes
      - Customers can request whatever they want
        - Provide better customer service
        - Customers can send request via mail
          - Old service based on missing IT infrastructure at customer places
- Missing service quality
  - Human mistakes
    - Missing controlling instance
      - Missing knowledge of controlling
      - Employees are too busy and they multi-task
    - Missing process automation
      - Missing knowledge about process automation
        - Employees are too busy and they multi-task
    - Manual search by employees

        - Missing IT software
    - Changing flight information
        - Flight provider change their data based on demand
            - Higher percentage of full planes

2.

Theoretical Cycle Time (TCT) = 2 + 0.9*(3 + max(2, 2) + 1) = 7.4 hours

Cycle time efficiency: TCT / CT = 7.4/16 = 46.25%

3.

Activity	**Time**
Receive documents by post	**Waiting time**: 2 weeks = 80 hours (8 hours per day, 5 days a week) **Processing time**: 0 (instant event)
Check documents for completeness	**Waiting time**: (no information) **Processing time**: 10 minutes = 1/6 hours (20% of applications are incomplete)
Validate documents with agency	**Waiting time**: 2 weeks = 80 hours **Processing time**: 10 minutes = 1/6 hours (10% of applications are rejected)
Check English test results	**Waiting time**: 1 day – 10 minutes = 7 5/6 hours **Processing time**: 10 minutes = 1/6 hours (10 % are rejected)
Assess application by academic committee	**Waiting time**: 2 weeks = 80 hours **Processing time**: 1hour= 60 minutes
Record decision	**Waiting time**: (no information) **Processing time**: 2 minutes = 2/60 hours

Theoretical cycle time (only consider processing time). Let's work with minutes, since hour computations will be more difficult.

The event "documents received by post" and the activity "Check documents for completeness" execute at least once. It is a rework block, so the average theoretical cycle time for this block of activities is:

$$TCT_1 = \frac{T}{1-r} = \frac{0+10}{1-0.20} = 12.5\ minutes$$

If the documents are complete, they need to be checked by the academic recognition agency. The cycle time increases:

$$TCT_2 = TCT_1 + 10 = 22.5\ minutes$$

There is 10% chance that degree will not be verified, so there is only 90% possibility that all next activities after verification by academic recognition agency will be executed. The same statements are true also for the test of English. So the TCT could be calculated as follows:

$$TCT = TCT_2 + 0.9\big(10 + 0.9(60 + 2)\big) = 81.72\ minutes$$