

Process description

Context and Task: As the liberalization of telecommunication markets progresses, companies are required to react rapidly, i.e. near real-time, to customer demands in order to retain their client base. The case examined here is when the conditions of a provided service (this could be e.g. a DSL subscription service, a mobile phone service, etc.) exceed – or fall below, respectively – the parameters specified in the Service Level Agreement (SLA) (i.e. the contractual agreement between customer and telco company is violated). The customer detects this SLA violation and reports it to the telco company. The reported problem may be corrected by the company, but it will lead to a billing rebate given to the customer.

You are asked to model this process “Execution of SLA violation” in BPMN (the model will be used as the main specification in subsequent implementation activities). You are provided with a reference business process model as an assistant artifact that you should reuse and adapt as needed. Your process model should encompass the stakeholders “Customer”, the “Customer Service” of the telco company as well as the company’s “Service Management” and “Resource Provisioning” departments.

Process goal: The process is seen from the perspective of the telco company’s (TELECO) departments that interact with a customer. A customer will detect deviances from the agreed service quality parameters and report this to TELECO. The goal of the process is then to record, analyze and fix the problem, inform the customer about it and let the billing department know about a given rebate.

Process: At the beginning the customer perceives that her subscribed service has degraded. A list with all the problem parameters is then sent to the Customer Service department of TELECO. At the customer service an employee enters – based on the received data – a problem report into system *T*. Then the problem report is compared to the customer SLA to identify what the extent and the details of the service degradation are. Based on this, the necessary counter measures are determined including their respective priorities. An electronic service then determines the significance of the customer based on information that has been collected during the history of the contractual relationship. In case the customer is premium, the process will link to an extra problem fix process (this process will not be detailed here). In case the customer is of certain significance which would affect the counter measures previously decided upon, the process goes back to re-prioritize these measures – otherwise the process continues. Taking together the information (i.e. contract commitment data + prioritized actions) a detailed problem report is created. The detailed problem report is then sent to Service Management. Service Management deals on a first level with violations of quality in services that are provided to customers.

After receiving the detailed problem report, Service management investigates whether the problem is analyzable at the level of their department or whether the problem may be located at Resource Provisioning. In case Service Management assesses the problem to be not analyzable by themselves, the detailed problem report is sent out to Resource Provisioning. If Service Management is sure they can analyze it, they perform the analysis and based on the outcome they create a trouble report that indicates the type of problem.

After Resource Provisioning receives the detailed problem report, it is checked whether there are any possible problems. If no problems are detected a notification about the normal service execution is created. If a problem is detected this will be analyzed by Resource Provisioning and a trouble report is created. Either trouble report or the 'normal execution' notification will be included in a status report and sent back to Service Management.

Service Management then prepares the final status report based on the received information. Subsequently it has to be determined what counter measures should be taken depending on the information in the final status report. Three alternative process paths may be taken: i) for the case that no problem was detected at all; ii) for the case that minor corrective actions are required; and iii) for the case that automatic resource restoration from Resource Provisioning is required. In i) the actual service performance is sent back to the Customer Service. In ii) Service Management will undertake corrective actions by themselves. Subsequently the problem resolution report is created and then sent out to Customer Service. After sending, this process path of Service Management ends. If iii) is the case, Service Management must create a request for automatic resource restoration. This message is then sent to Resource Provisioning. Resource Provisioning has been on-hold and waiting for a restoration request – but this must happen within 2 days after the status report was sent out, otherwise Resource Provisioning terminates the process. After the restoration request is received, all possible errors are tracked. Based on the tracked errors, all necessary corrective actions are undertaken by Resource Provisioning. Then a trouble-shooting report is created. This report is sent out to Service Management; then the process ends.

The trouble-shooting report is received by Service Management and this information goes then into the creation of the problem resolution report just as described for ii). Customer Service either receives the actual service performance (if there was no problem) or the problem resolution report. Then, two concurrent activities are triggered, i.e. i) a report is created for the customer which details the current service performance and the resolution of the problem, and ii) an SLA violation rebate is reported to Billing & Collections who will adjust the billing. The report for the customer is sent out to her. After all three activities are completed the process ends within Customer Service. After the customer then receives the report about service performance and problem resolution from Customer Service, the process flow at the customer also ends.

Requested changes for the to-be-process: The process to be modeled should be extended in an early phase of the process by a plausibility check of the entered problem report: the entered report is therefore checked for completeness and validity. In case of any errors the problem report must be entered again. Otherwise the process continues as-is.

A second requirement concerns the determination of customer significance which currently happens *after* Customer Service determines and prioritizes the first counter measures. The to-be process model should be altered in the way that customer significance is determined *before* customer SLA and problem report are compared. "Premium" customers are then branched out to a different process for special handling; the others stay in the path of the as-is process.