Data mining solutions for customer relationship management (CRM)
Conception phase: Challenge of CRM

TelcoX Mobile Business Overview

TelcoX Mobile is a leading cell phone carrier, offering various voice and data plans to thousands of subscribers. Customers in the telecom sector can actively move between different operators and select from a variety of service providers. With an increasing number of competitors in the market offering similar or even better packages, customer churn has become a concerning issue to TelcoX Mobile.

Business process

The core business process of TelcoX Mobile includes customer acquisition, service delivery, customer retention, and churn management. The process begins with marketing efforts to attract new customers and extends through the lifecycle of a customer's interaction with the company, focusing on maintaining high levels of satisfaction and loyalty to reduce churn rates.

Potential Optimization 1: Customer Churn Prediction and Prevention

Research question: What are the key drivers of customer churn? How can predictive models be utilized to analyze historical data and forecast customers at risk of churn, enabling proactive intervention with personalized retention strategies?

Location: "Evaluate feedback for critical issues" and "Service improvement plan" steps.

Explanation: Predictive models can be developed to analyse historical data and to proactively forecast customers who are the risk of churn, allowing businesses to intervene with personalized retention strategies before a customer decides to leave. Automate feedback evaluation to promptly address common issues leading to churn.

Potential Optimization 2: Customer Segmentation

Research question: What targeted marketing strategies can be developed for each customer segment to improve contract renewal rates?

Location: "Collect feedback" and "Renew contract" steps.

Explanation: Use clustering algorithms to segment customers based service usage data. Develop targeted marketing strategies for each segment to improve contract renewal rates. This segmentation should be applied to the feedback and renewal stages to tailor responses and offers to different customer groups.

Potential Optimization 3: Upsell and Cross-Sell

Research question: Can commonly purchased service bundles be identified and personalized offers and cross-sell campaigns be created to encourage customers to upgrade or add additional services?

Location: "Implement personalized offer/service upgrade campaigns" step.

Explanation: Utilize association rule learning to identify commonly purchased service bundles. Leverage this data to create personalized offers and cross-sell campaigns, encouraging customers to upgrade or add additional services. Implement these offers during the personalized offer/service upgrade campaign stage.
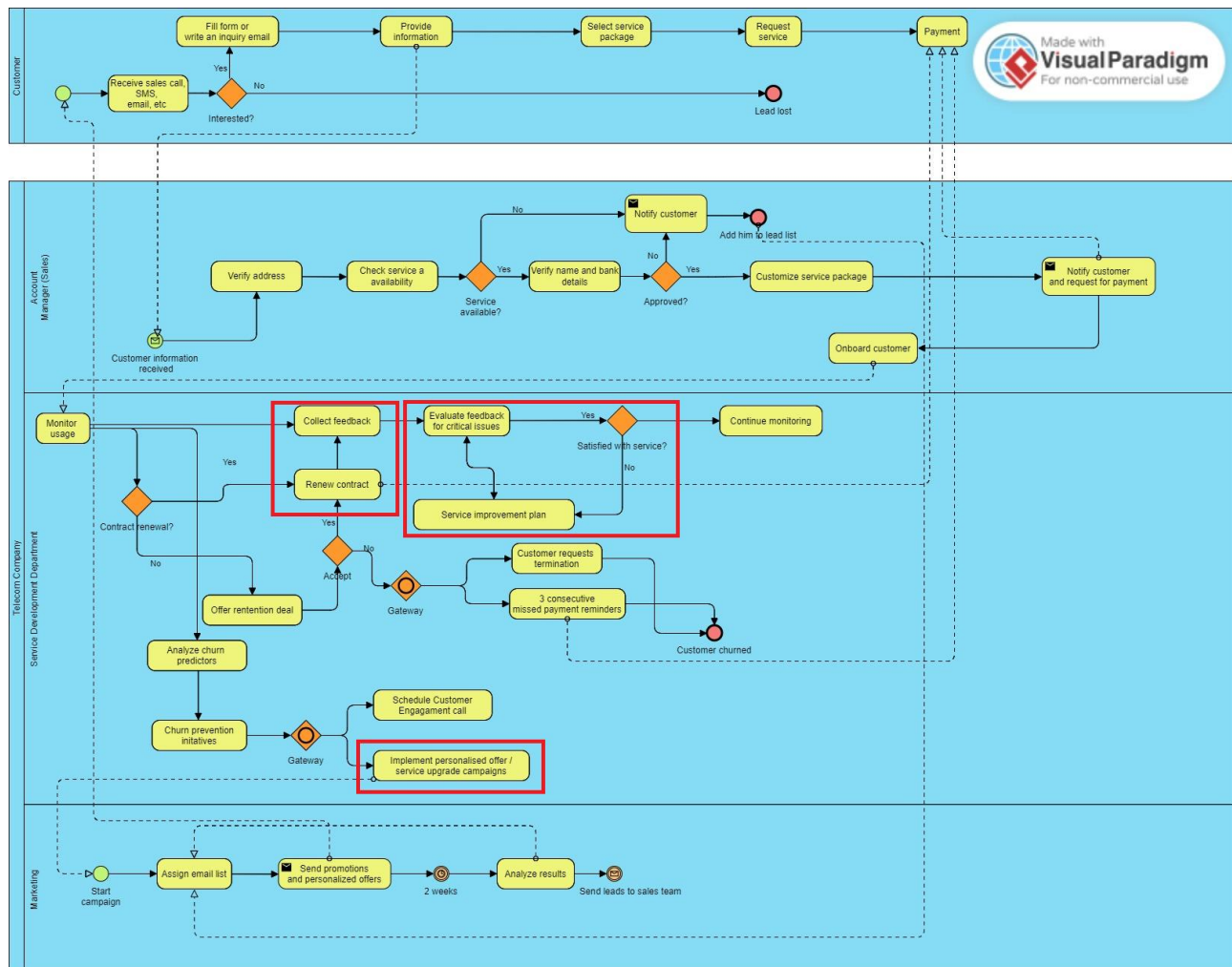

Figure 1: TelcoX Mobile Business Process Model