THE TOLLING BACKOFFICE

A-to-Be MoveBeyor

HI II

Advanced Mobility Platform for Road Operators

All information included in this document is subject to change as the product evolves



Mobility Beyond





Our Backoffice (BO) has two layers to provide rich functionality: Operational and Commercial. The operational side ensures information consistency, as it serves as a two-way communicational link with the roadside toll collection system, supplying it with timely transponder status and toll schedule updates and, in turn, receives transaction data and license plate images. The commercial layer analyses, processes and dispatches all transaction information, thus enabling authorized users to perform billing operations, document management and various CRM activities such as account management and customer notification.

Both layers of **A-to-Be MoveBeyond**[™] are accessible through an integrated web interface and run on common storage and data processing structures.

Backoffice Functions

SECURITY

Protection from unauthorized access is ensured by a specially-designed module - Security Manager, using Single Sign On (SSO).

CONFIGURABILITY

All system parameters (such as toll rates, LPR confidence level, customer account expiration date, minimum replenishment amount, account balance threshold) can be easily configured.

INTEROPERABILITY

The modular architecture allows for the a harmonious and straightforward integration of various requirements toll operators face with interoperability.

Operational Backoffice Features

MEDIATION AND DATA VALIDATION

It performs the role of mediator by receiving transactions from the roadside systems and validating them for format, consistency, and completeness, hence guaranteeing that only compliant and certified data is allowed inside the system. If an interruption of data flow occurs, the BO resumes it when normality is restored with no data loss.

DYNAMIC PRICING

It can set toll fares when a toll schedule change is required, considering specific roadway geometries, traffic patterns, and operational business rules. It can also operate automatically (online mode) – using lane sensors' data. Adjusting itself according to traffic flow conditions and informing the roadside of the need to update traveler's information, such as with any existent Variable Message Signs (VMS).

TRIP BUILDING

New transactions are monitored, applying specifically-defined transaction consolidation, using a travel rules engine that identifies candidate unitary transactions for consolidation.





PROVISIONING AND TAG STATUS MANAGEMENT

Transponder status interfaces supply the roadside with updated information on the account holder balance, enabling to determine the behavior of the toll plaza peripherals (e.g. lane barriers and signals) as determined by configurable and specific business rules.

IMAGE PROCESSING AND REVIEW

It manages and archives images captured by the roadside video enforcement system, allowing manual review of license plate images, designed for high performance (up to 8,000 photos per day per operator). This module interfaces with customer accounts for correct associations to valid license plate reads.

Commercial Backoffice Features

BILLING PROCESS MANAGEMENT

To guarantee consistent application and matching of the correct toll fares to the effective customer accounts, the billing system is composed of four modules:

RATING

The Rating module determines the toll rate to be applied to each individual transaction and validates against the rate defined by the tolling system. It also applies discounts and makes sure that transactiona are always guided to their proper account.

BILLING

The Billing module associates all transactions occurred during the billing period to a single customer invoice/monthly statement document, regardless of the number of toll facilities involved. This module also manages cancellations, modifications and/or refunds.

COLLECTIONS

In case any toll payment violations occur, a specially-designed Collections module, following configurable workflows, gathers information and evidence of non-payments, opens penalty processes, and handles applicable fees and surcharges for administrative and legal costs.

PAYMENT GATEWAY

Whether the customer decides to top up his account on the selfcare portal online or to pay an invoice, secure processing of payments is guaranteed by our Payment Gateway module that integrates closely with our merchant partner, who provides us with a web service payment processing platform where all communication takes place over secured protocol.

ACCOUNT MANAGEMENT

A browser based interface allows to perform all necessary account management operations. The operators' users can create accounts of both pre-paid and post-paid billing types, close or suspend inactive accounts, associate credit cards for automatic replenishment as well as accept any other means of payment defined by existing business rules.





PREVENTION OF REVENUE LOSS

The BO anticipates potential revenue losses by issuing automatic account holder notices for certain events such as low/negative balance and declined/expired credit card. Notification channels are flexible and can be customized to the preferences of an account holder, supporting multiple channels, mobile and online.

DOCUMENT MANAGEMENT

The BO accommodates document scanning (letters, faxes, etc.) and allows for both manual and automatic metadata classification which enables assisted redirection of documents based on certain identified elements (such as account number or transaction date), as well as account association.

TRANSPONDER INVENTORY

Authorized users can access transponder information via the BO web interface. By merging transponder data this module enables tracking of transponder transaction history including (but not limited to) account holder number and date/time of transaction, as well as association of valid/invalid/in lane failure flags to a transponder and of procurement/testing states to a transponder.

EXTERNAL ENTITIES INTERFACE

Our BO gains versatility and independence when establishing communication channels with external entities such as In state and out of state DMVs, banks and financial institutions, clearing houses, printing facilities, tax authorities, collection agencies, 3rd party ERPs.

CUSTOMER WEB PORTAL

A-to-Be MoveBeyond[™] system architecture integrates a user-friendly customer web portal for toll operator customers. This self-care portal comprises all major account management options for registered users such as name, address, vehicle, credit card information or preferred means of notification – all without needing to visit the toll operator's administrative office. Users can access their statements, replenish account balance or, in the case of post-paid accounts, pay their outstanding invoices.