

Use Case: Rent a Bike

Scope: BIXI Montréal System

Level: User Goal

Intention in Context: The intention of the User is to rent a bike for a short period.

Multiplicity: Many Users can rent bikes simultaneously.

Primary Actor: User

Secondary Actors: Pay Station, Bike Dock

Main Success Scenario:

User approaches the Pay Station.

User selects the rental option (1-day, 3-day, or one-way trip).

User reads and accepts the user contract.

User pays using a credit card.

System places a \$100 deposit on the User's credit card.

System provides an unlocking code valid for 5 minutes.

User enters the unlocking code on the Bike Dock.

System unlocks the bike.

User takes the bike.

Extensions:

4a. User's credit card is declined.

4a.1. System informs User of the declined transaction. Use case ends in failure.

6a. Unlocking code expires.

6a.1. User requests a new unlocking code. Use case continues at step 6.

Use Case: Return a Bike

Scope: BIXI Montréal System

Level: User Goal

Intention in Context: The intention of the User is to return a rented bike.

Multiplicity: Many Users can return bikes simultaneously.

Primary Actor: User

Secondary Actors: Bike Dock

Main Success Scenario:

User approaches an empty Bike Dock.

User pushes the front wheel of the bike into the Bike Dock.

System locks the bike.

System confirms the return by showing a green light.

Extensions:

1a. No empty Bike Dock available.

1a.1. User requests an additional 15 minutes free of charge to find another Bike Dock. Use case continues at step 1.

Use Case: Notify Bike for Servicing

Scope: BIXI Montréal System

Level: User Goal

Intention in Context: The intention of the User is to notify BIXI mechanics of a bike requiring servicing.

Multiplicity: Many Users can notify bikes for servicing simultaneously.

Primary Actor: User

Secondary Actors: Bike Dock

Main Success Scenario:

User presses the service button on the Bike Dock.

System logs the service request.

System notifies BIXI mechanics of the bike requiring servicing.

Use Case: Purchase Subscription

Scope: BIXI Montréal System

Level: User Goal

Intention in Context: The intention of the User is to purchase a subscription for bike rentals.

Multiplicity: Many Users can purchase subscriptions simultaneously.

Primary Actor: User

Secondary Actors: Online System

Main Success Scenario:

User accesses the BIXI Montréal website.

User selects the subscription type (30 days or annual).

User provides personal and payment information.

System validates the payment information.

System confirms the subscription purchase.

System sends a BIXI key to the User.

Extensions:

4a. Payment information is invalid.

4a.1. System informs User of the invalid payment information. Use case ends in failure.

Use Case: Plan Trip Using Mobile App

Scope: BIXI Montréal System

Level: User Goal

Intention in Context: The intention of the User is to plan a bike trip using the BIXI mobile app.

Multiplicity: Many Users can plan trips simultaneously.

Primary Actor: User

Secondary Actors: Mobile App

Main Success Scenario:

User opens the BIXI mobile app.

User views the map of available stations.

User selects a destination station.

System displays available bikes and docking points at the selected station.

User plans the trip route.

Use Case: Unlock Bike with BIXI Key

Scope: BIXI Montréal System

Level: Subfunction

Intention in Context: The intention of the User is to unlock a bike using a BIXI key.

Multiplicity: Many Users can unlock bikes simultaneously.

Primary Actor: User

Secondary Actors: Bike Dock

Main Success Scenario:

User inserts the BIXI key into the Bike Dock.

System validates the BIXI key.

System unlocks the bike.

User takes the bike.

Use Case: Validate Payment Information

Scope: BIXI Montréal System

Level: Subfunction

Intention in Context: The intention of the System is to validate the User's payment information.

Multiplicity: The system can validate multiple payment information requests simultaneously.

Primary Actor: None

Secondary Actors: Payment Gateway

Main Success Scenario:

System sends payment information to the Payment Gateway.

Payment Gateway validates the payment information.

Payment Gateway informs System of the validation result.

Extensions:

2a. Payment Gateway is unavailable.

2a.1. System retries the request. Use case continues at step 2.