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Shared bicycles that also share energy

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Revision: 03

Date: November 07, 2022

Model Introduction

Model Specification>Documentation

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Created:4/17/17 4:29 PM.
Title: Shared bicycle also share energy

This model shows a new bicycle and its energy sharing service.
The most core idea of this service is to solve the issues of existing bicycle sharing services by sharing not only bicycles but also energy.
In the future, the service could be expanded to a small energy sharing service that distributes small amounts of energy, like a small mobility service for the elderly.

All Project Diagrams

1. Bicycle-energy-sharing Concept

Diagram Specification>Documentation
In: Concept Model.Bicycle-energy-sharing Concept.Bicycle-energy-sharing Concept

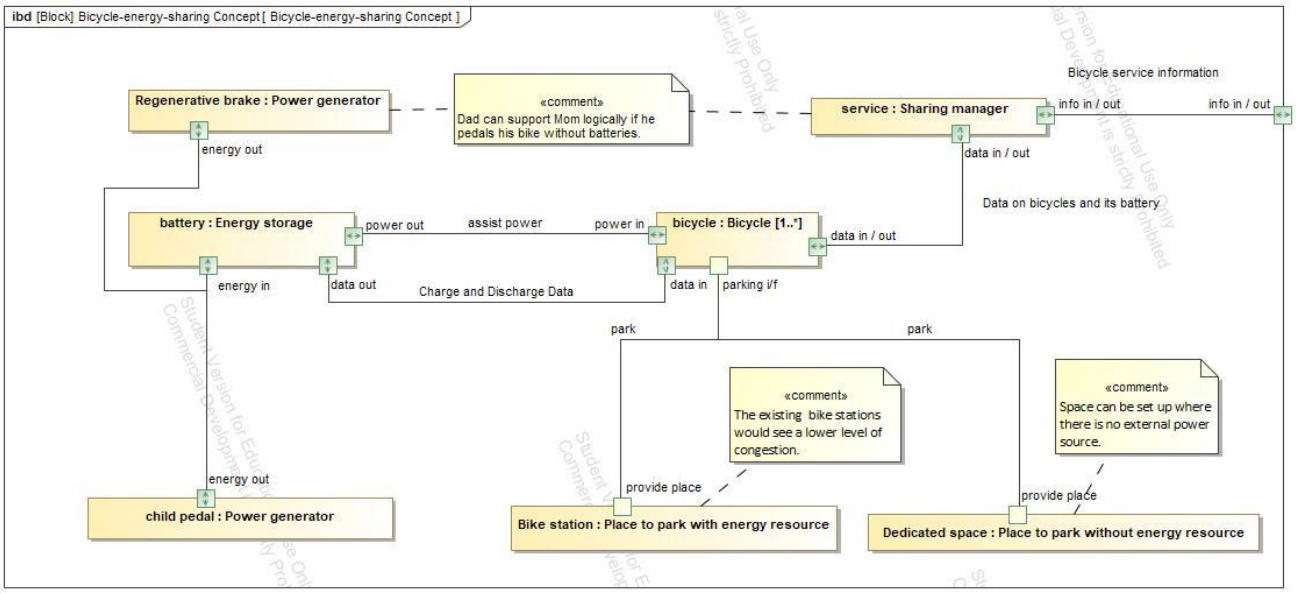


Figure 1 Diagram Bicycle-energy-sharing Concept

2. Product Use Case Diagram

Diagram Specification>Documentation
In: Concept Model.Product Use Case Diagram

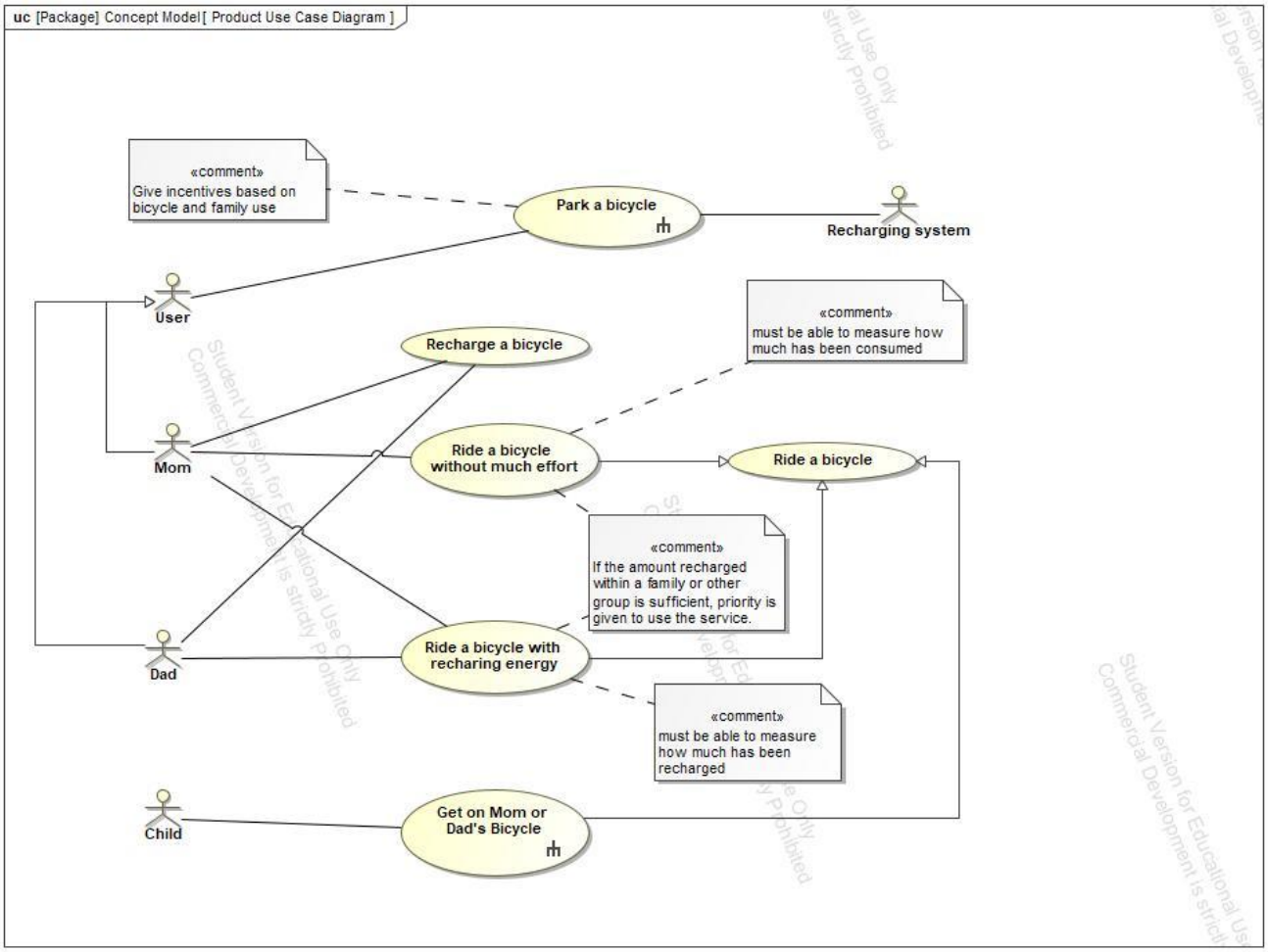


Figure 2 Diagram Product Use Case Diagram

3. Mapping Concept to PoC

Diagram Specification>Documentation
In: Proof of Concepts.Procurement PoC1.Mapping Concept to PoC

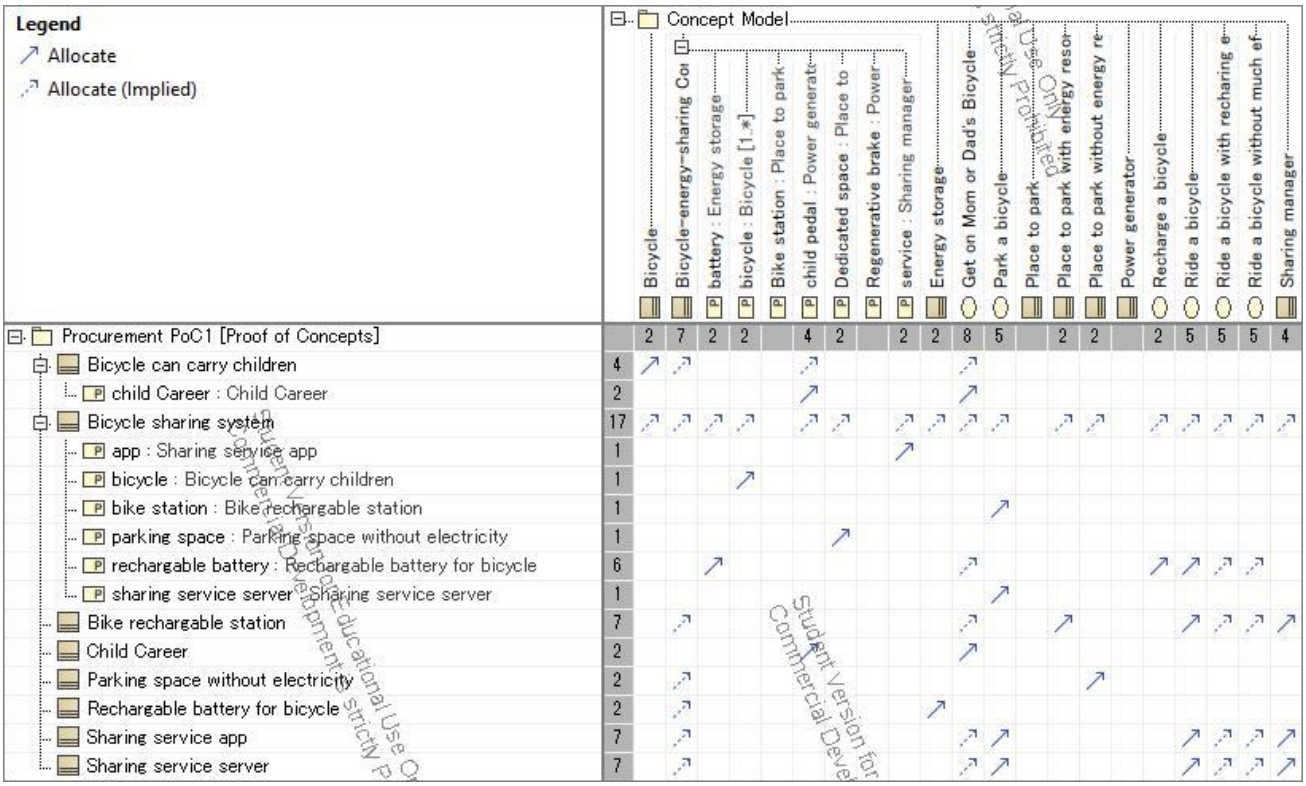


Figure 3 Diagram Mapping Concept to PoC

4. Ideas and Assumption Diagram

Diagram Specification>Documentation
In: Concept Model.Data.Ideas and Assumption Diagram

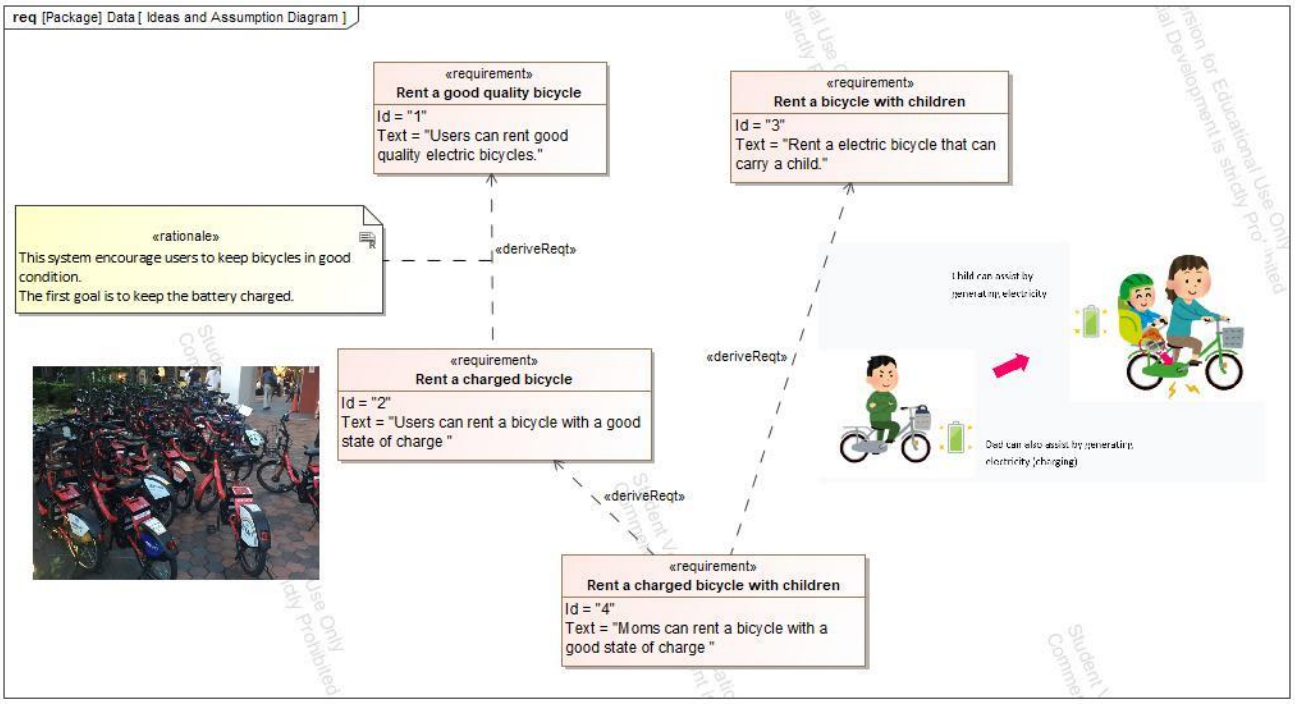


Figure 4 Diagram Ideas and Assumption Diagram

5. PoC Blocks

Diagram Specification>Documentation
In: Proof of Concepts.Procurement PoC1.PoC Blocks

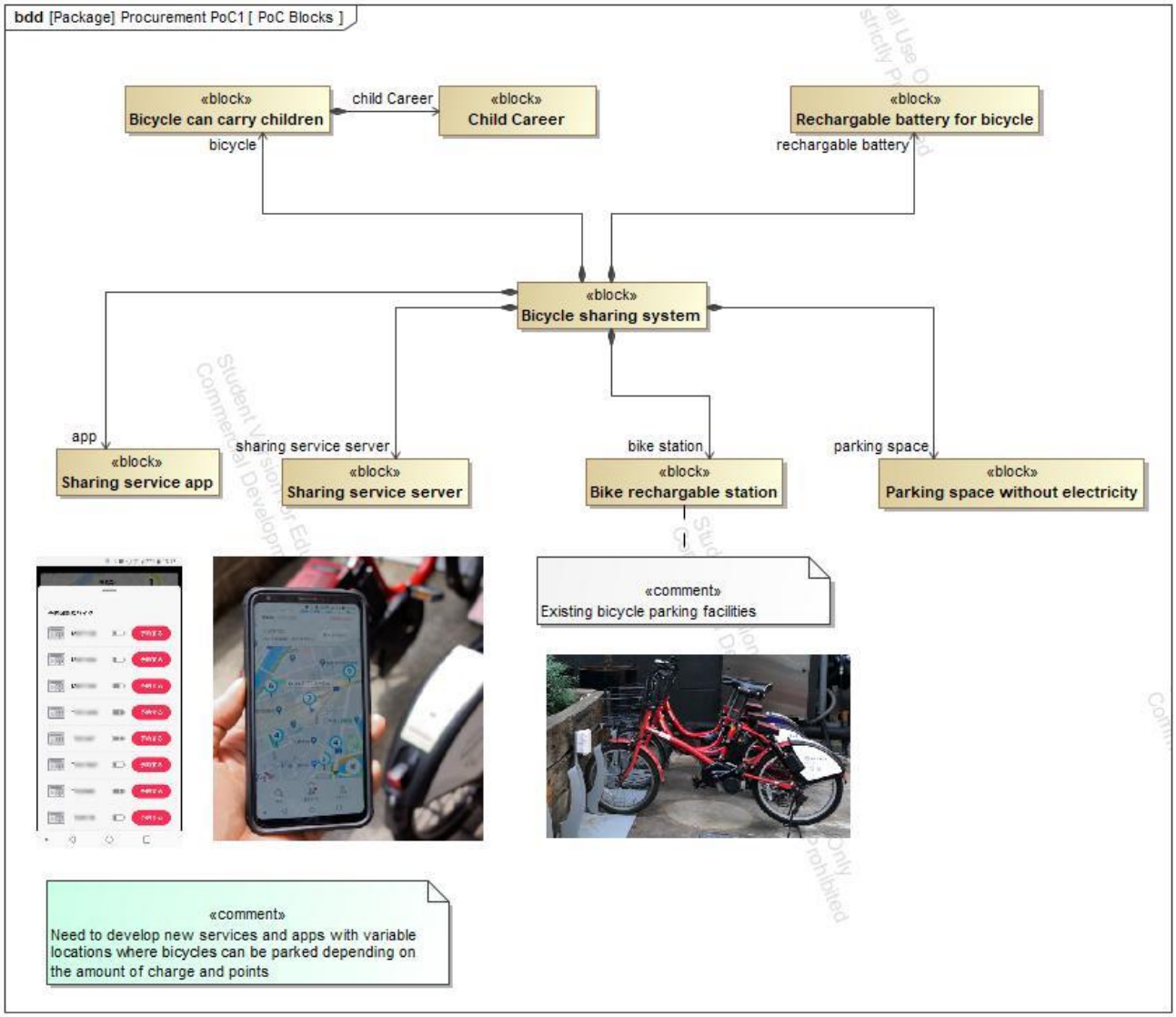


Figure 5 Diagram PoC Blocks

6. Get on Mom or Dad's Bicycle

Diagram Specification>Documentation

In: Concept Model.Get on Mom or Dad's Bicycle.Get on Mom or Dad's Bicycle.Get on Mom or Dad's Bicycle

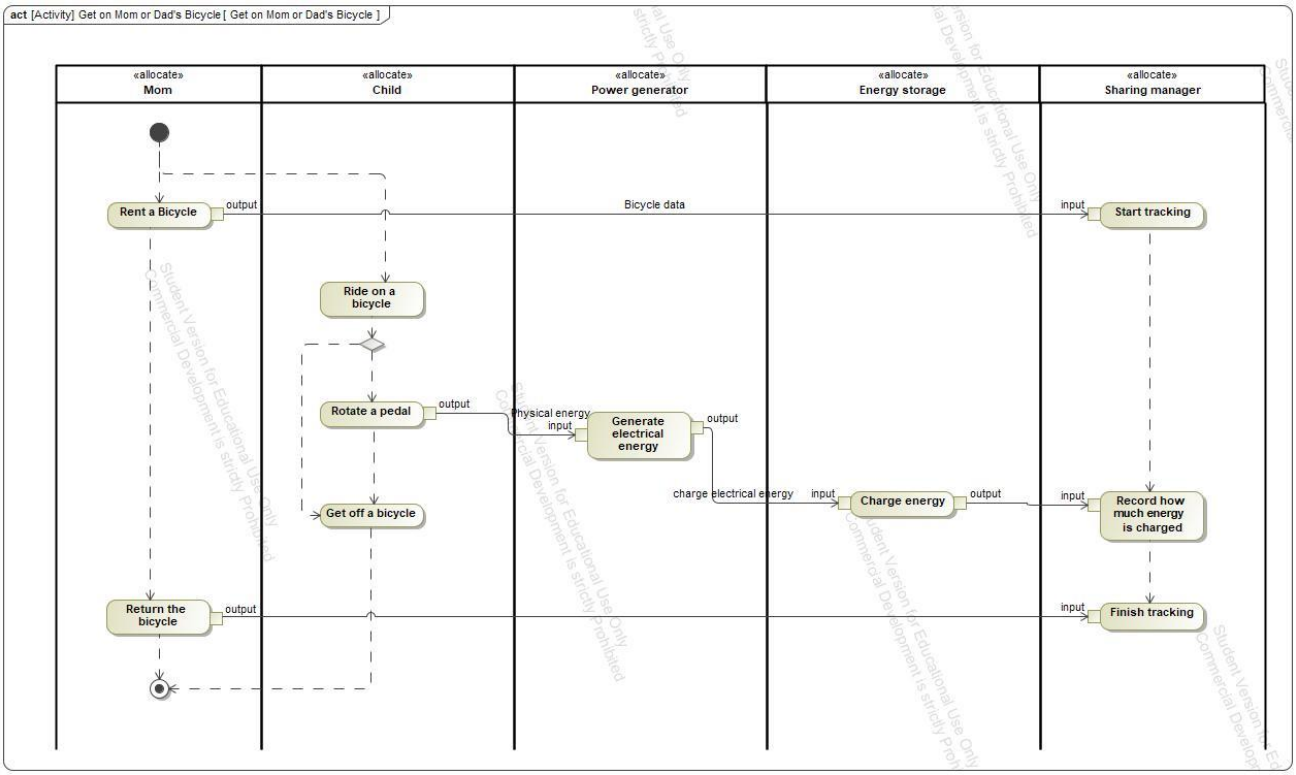


Figure 6 Diagram Get on Mom or Dad's Bicycle

7. Concept Model

Diagram Specification>Documentation
In: Concept Model.Concept Model

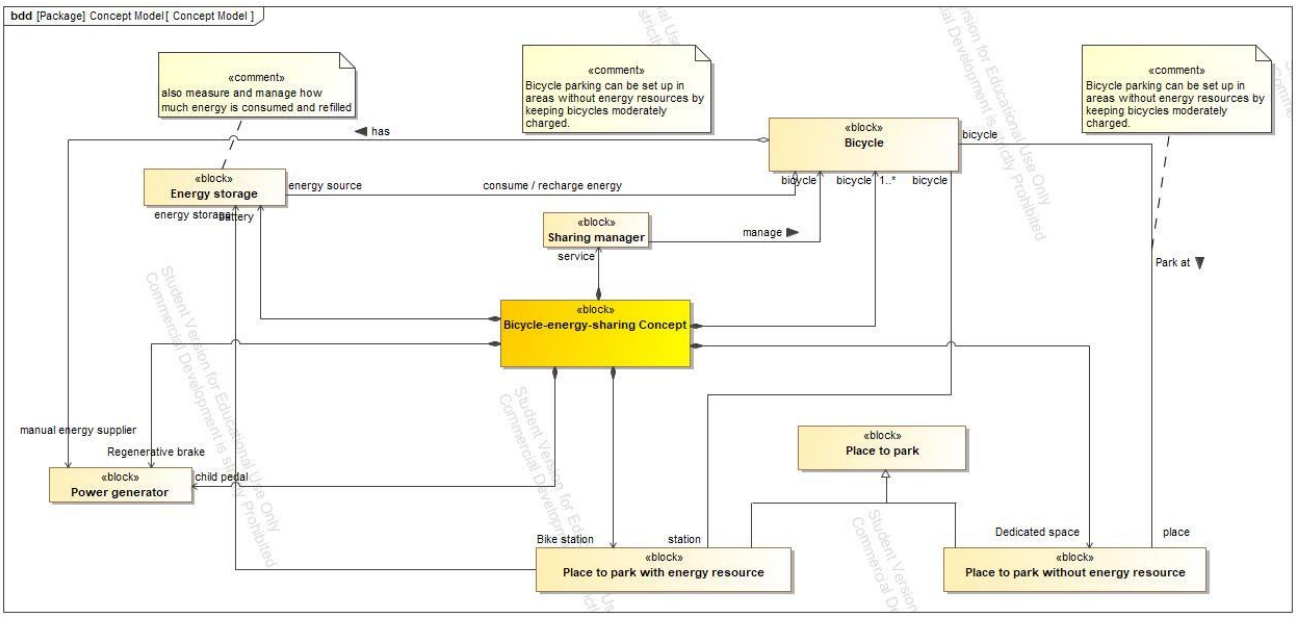


Figure 7 Diagram Concept Model

8. Bicycle sharing system

Diagram Specification>Documentation
In: Proof of Concepts.Procurement PoC1.Bicycle sharing system.Bicycle sharing system

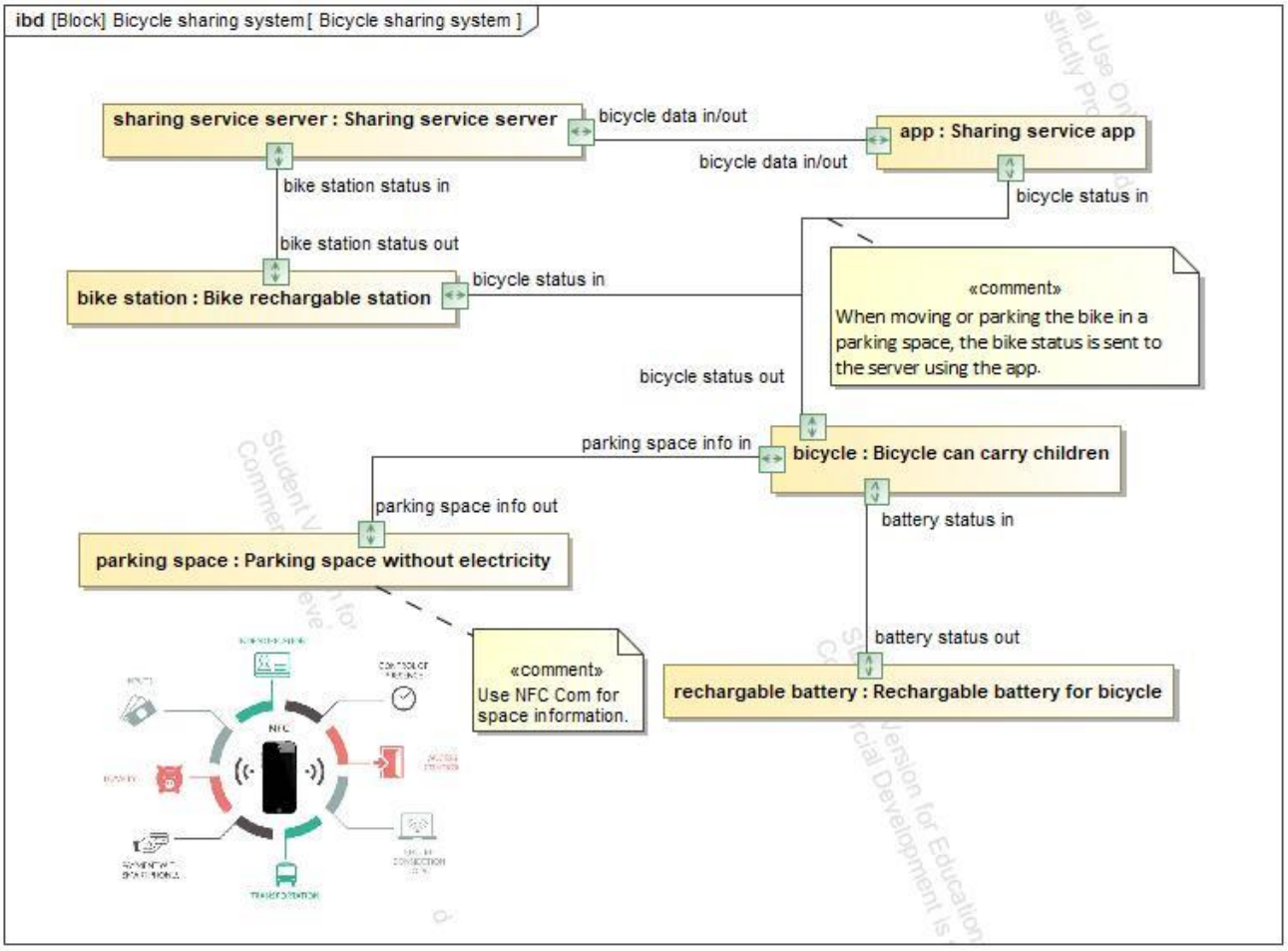


Figure 8 Diagram Bicycle sharing system

9. Park a bicycle

Diagram Specification>Documentation
In: Concept Model.Park a bicycle.Park a bicycle.Park a bicycle

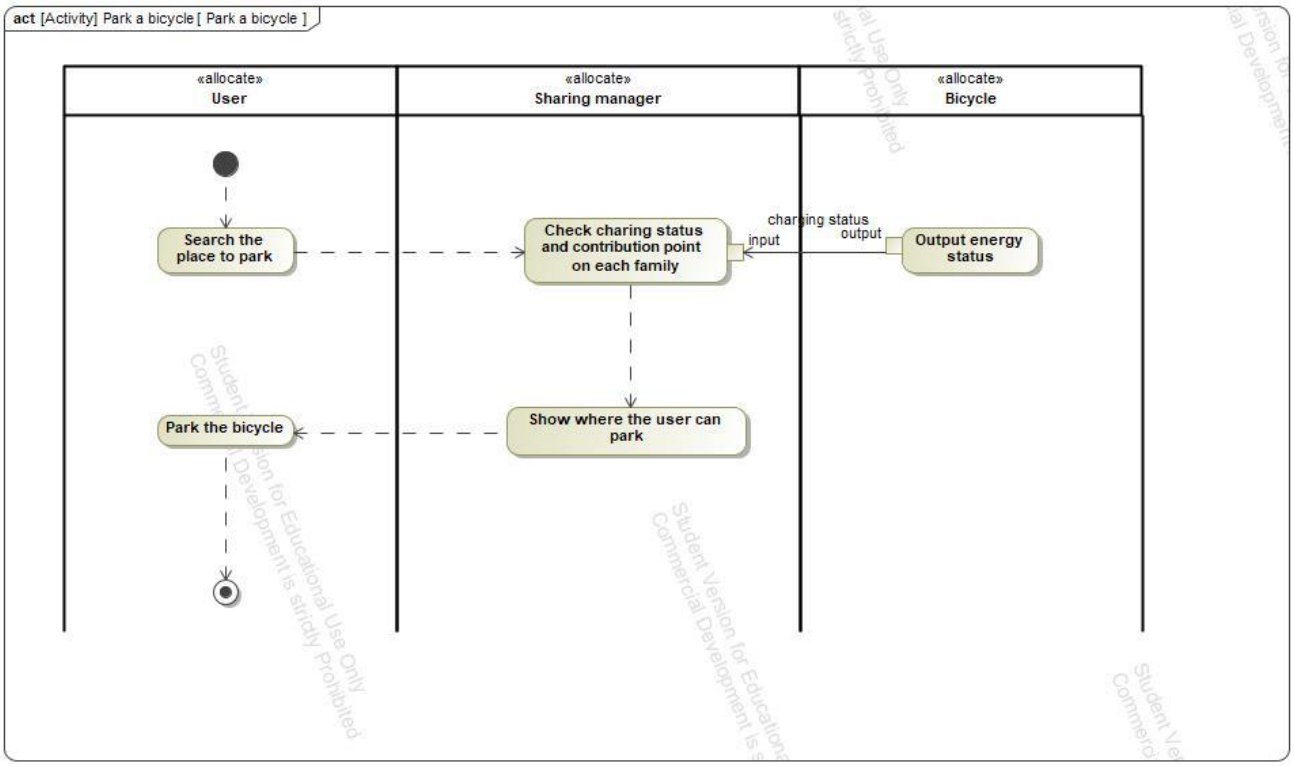


Figure 9 Diagram Park a bicycle

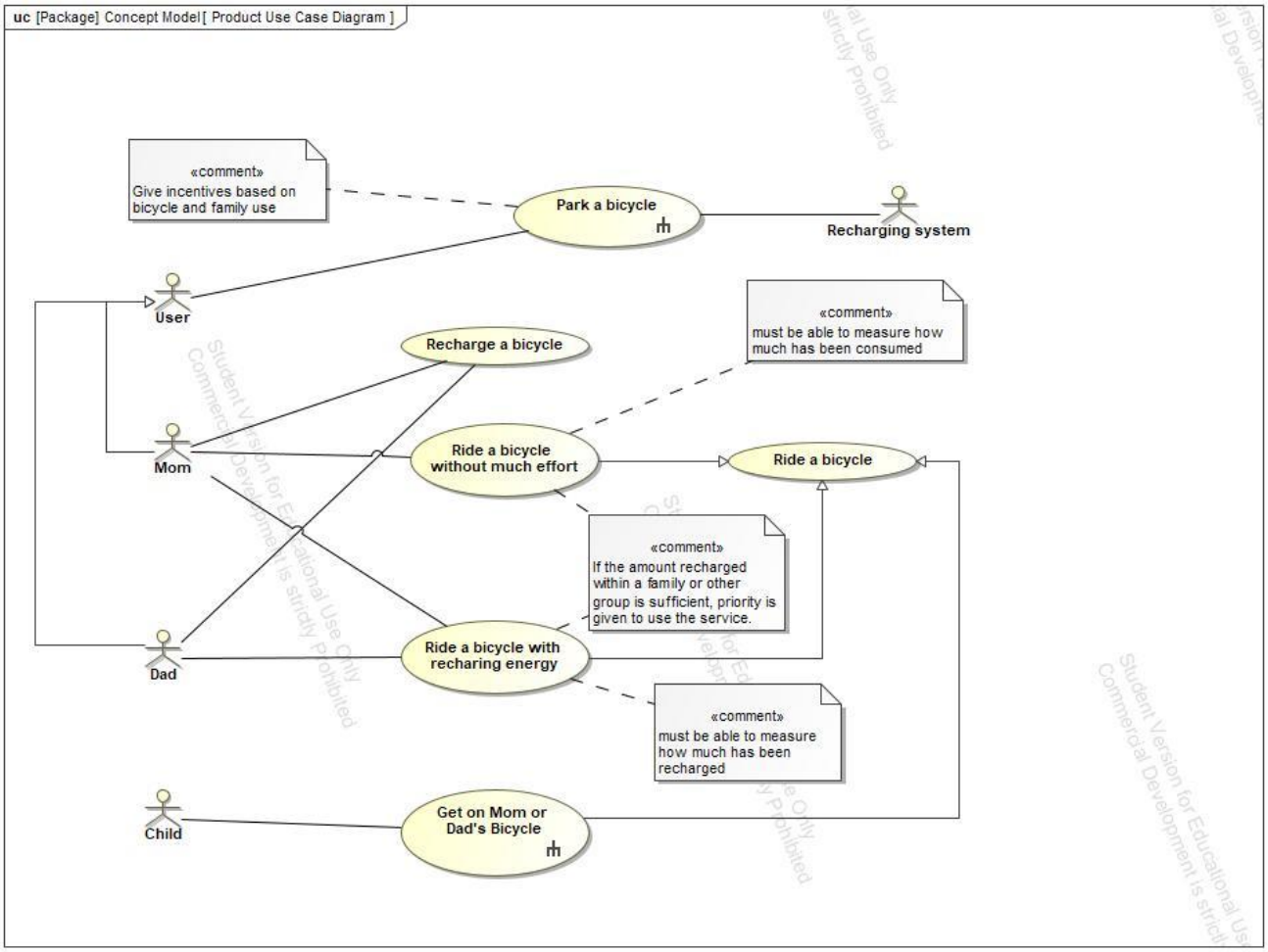
Concept Use-Cases

UseCase
Get on Mom or Dad's Bicycle
Park a bicycle
Recharge a bicycle
Ride a bicycle
Ride a bicycle with recharing energy
Ride a bicycle without much effort

Actor Summary

Primary Actor	Use Cases
Child	• Get on Mom or Dad's Bicycle
Dad	• Recharge a bicycle • Ride a bicycle with recharing energy
Mom	• Recharge a bicycle • Ride a bicycle with recharing energy • Ride a bicycle without much effort
Recharging system	• Park a bicycle
User	• Park a bicycle

Use Case: Product Use Case Diagram Diagram



Get on Mom or Dad's Bicycle Use Case

Use Case Name	Get on Mom or Dad's Bicycle	**ID**	
Complexity	Average Complexity		
Description	The child can supply energy by pedaling at the same time as riding the parent's bicycle.		
Actors	• Child		
Goal			
Assumption	No assumption for this use case.		
Non Functional Requirements	No non-functional requirement for this use case.		

Relations	
Association	• Child Actor
Generalization	• Ride a bicycle UseCase

Park a bicycle Use Case

Use Case Name	Park a bicycle	**ID**	
Complexity	Average Complexity		
Description	The user can park bicycles where there are no facilities to supply energy.		
Actors	• Recharging system • User		
Goal			
Assumption	No assumption for this use case.		
Non Functional Requirements	No non-functional requirement for this use case.		

Relations	
Association	• Recharging system Actor • User Actor
Generalization	

Recharge a bicycle Use Case

Use Case Name	Recharge a bicycle	**ID**	
Complexity	Average Complexity		
Description	The user charges energy without moving the bicycle.		
Actors	• Dad • Mom		
Goal			
Assumption	No assumption for this use case.		
Non Functional Requirements	No non-functional requirement for this use case.		

Relations	
Association	• Dad Actor • Mom Actor
Generalization	

Ride a bicycle Use Case

Use Case Name	Ride a bicycle	**ID**	
Complexity	Average Complexity		
Description			
Actors	See parent class for actor associations		

Goal	
Assumption	No assumption for this use case.
Non Functional Requirements	No non-functional requirement for this use case.

Relations	
Association	No direct association to this use case. Check the parent use case (see Generalization below.)
Generalization	

Ride a bicycle with recharing energy Use Case

Use Case Name	Ride a bicycle with recharing energy	**ID**	
Complexity	Average Complexity		
Description	The user can ride a bike with charging energy, can also ride without charging.		
Actors	• Dad • Mom		
Goal			
Assumption	No assumption for this use case.		
Non Functional Requirements	No non-functional requirement for this use case.		

Relations	
Association	• Dad Actor • Mom Actor
Generalization	• Ride a bicycle UseCase

Ride a bicycle without much effort Use Case

Use Case Name	Ride a bicycle without much effort	**ID**	
Complexity	Average Complexity		
Description	Ride a bicycle without much effort using the charged energy.		
Actors	• Mom		
Goal			
Assumption	No assumption for this use case.		
Non Functional Requirements	No non-functional requirement for this use case.		

Relations	
Association	• Mom Actor
Generalization	• Ride a bicycle UseCase