

## **Introduction to Business Process**

In this project we are working on the business process of the University of Connecticut that issues the UConn Pass, also known as CT Pass. University of Connecticut issues a travel pass to all its enrolled students that allows free commute to most of the public transport.

The pass can be used for the following transport lines:

- 1) Local & Express buses
- 2) CTfastrak
- 3) Shore Line East
- 4) Intrastate New Haven Line
- 5) CT Rail Hartford Line services.

Any other transport line (like Greyhound) does not allow the use of CT Pass.

### **Business Rules :**

The following business rules are applicable for the business process to issue the CT Pass:

- 1) CT Pass is valid for use by students enrolled at participating UConn campuses.
- 2) CT Pass is valid for unlimited rides within Connecticut.
- 3) This pass is not refundable or transferable.
- 4) A valid UConn student ID must be shown at time of pass use.
- 5) Students have to apply for a new CT Pass for each semester.

### **Problems that the company is facing**

- 1) To mail the CT Pass to the students, UConn has outsourced the mailing service and it costs a lot of money.
- 2) After issuance of the pass, it can take a lot of time for the student to receive the pass.
- 3) There is a risk of loss, theft, and damage to a physical card.
- 4) If reapplying, students have to wait again to receive a new CT Pass.
- 5) Can be misused and used by travelers who are not UConn students.

### **Solution**

The digital version of the CT Pass will include a unique QR code and Pass ID assigned to each pass. These codes and ID serve to confirm and authenticate the pass during travel. This means students can use their smartphones or other digital device wallets to display the pass for bus/train rides, eliminating the need for a physical card.

## **Benefits and motivation**

- 1) Avoids mailing and issuing a physical card.
- 2) Reduces the student wait time
- 3) Saves a lot of money for UConn in mailing services.
- 4) No risk of loss or theft of the card.
- 5) Avoids unauthorized use of the card to a large extent.

## **Business Process**

The business process is handled between four swimlanes in the AS-IS model. The business process in detail is described below.

- 1) All the currently enrolled students in the University of Connecticut can apply for a bus pass on the Parking Services website. After applying for the CT Pass, the website prompts for a Status Confirmation.
- 2) After the confirmation is done by the student, the request is sent to the Parking Services to issue a CT Pass for the student.
- 3) Parking services then checks with the college student database whether the mailing address of the student exists or not. If the address is missing, then the college sends an email to the student to update the mailing address.
- 4) Once the parking services has the mailing/updated address of the student, it prints a physical pass and sends it to the student mailing address via postal services

The bus pass has to be carried by the student to avail free bus transportation.

The business process is handled between four swimlanes in the To-Be model. The business process in detail is described below.

- 1) All the currently enrolled students in the University of Connecticut can apply for a bus pass on the Parking Services website. After applying for the CT Pass, the website prompts for a Status Confirmation.
- 2) After the confirmation is done by the student, the request is sent to the Parking Services to issue a CT Pass for the student.
- 3) Parking services then checks with the college student database for an email id and address, then generates a digital pass with a unique qr code and pass id and sends it to the student via email id.

- 4) The CT pass can be scanned in the bus/train through the digital wallet till the pass is expired/outdated.

### **Business Rules, cardinalities in relationships for ERD and User Requirements**

- 1) Uconn enrolled student entity **has a one to many relationship** with Student CT pass registration entity:  
The Uconn enrolled student can register for a student CT pass for the entire duration of his/her study.
- 2) Uconn enrolled student entity has a **many to one relationship** with enrolled student mailing address:  
Practically speaking, there can be more than one student living at the same mailing address.
- 3) Uconn enrolled student entity has a **one to one relationship** with CT digital card entity:  
Each student has a unique CT digital card which is identified by a unique QR code and a Pass ID.
- 4) CT digital card entity has a **one to many relationship** with CT bus entity:  
Each unique CT digital card can be used in all the applicable buses in the Connecticut state.
- 5) CT digital card entity has a **one to many relationship** with CT train entity:  
Each unique CT digital card can be used in all the applicable trains in the Connecticut state.
- 6) CT digital card entity has a one to one relationship with digital wallet entity:  
Each unique CT digital card can be imported to one digital wallet which has a unique wallet id.