**Easy Park**

A parking automation system suitable for AAP, Inc’s business model.

How does current system work?

* Customer checks his car out in the main gate.
* Damage control unit checks the car’s body damages.
* Spotted damages and also customer specifications are recorded in the ticket and a copy of ticket are provided to customer.
* Parking manager checks out the car key and remaining of the ticket to the driver.
* Driver transfers the car to VMware parking garage and checks it out to the Parkman.
* Parkman parks the car in a suitable parking slot.
* Driver gets on van and returns to the main gate.
* Customer refers to main gate to get his car.
* Driver gets on van and returns to VMware parking garage.
* Parkman removes the car from parking garage.
* Driver transfers the car to the main gate.
* Car is being checked out to the customer.

Difficulties of current system:

* Damage control process and also filling out the relevant forms are time consuming tasks.
* Customers have to be in waiting queue for a long time in order to check out their cars and/or declare their specifications.
* Drivers’ current statuses are not clear. Thus, parking manager has to manage drivers manually.
* Drivers don’t know about their assigned tasks as long as they haven’t interacted with parking manager.
* Vans’ current positions and statuses are not clear.
* There is no acceptable notification mechanism for customers to inform staff previously that they are going to need their cars. Thus they have to wait for a long time in the main gate for their cars to be returned.

How is the new system going to work?

* Customer checks his car out in the main gate.
* Parking manager issues a car scan command to system.
* System scans car’s license plate and also takes photos from four sides of the car.
* System fills out the digital ticket’s form according to license plate, which include customer specifications and preferred departure time.
* Parking manager assigns a suitable driver to transfer the car to the parking (Considering drivers statuses system reports).
* Driver swipes his ID card in order to inform the system that he has checked in the car to transfer.
* Driver transfers the car to the parking.
* Driver swipes his ID card again to inform the system that he has checked in the car to the Parkman.
* System suggests car’s best parking position (slot) for the Parkman.
* Parkman parks the car in a suitable parking slot, considering system suggestion and digital ticket’s specifications.
* Customer notifies the system that he is going to need his car in a certain amount of time.
* Parking manager being informed about costumer’s notification, issues a car removal command from the parking.
* Parkman being informed about manager’s command, removes the car from parking and assigns a suitable driver (considering drivers statuses system provides) to transfer the car to the main gate.
* Driver swipes his ID card to inform the system that he has checked out the car from the Parkman.
* Driver transfers the car to the main gate.
* Driver swipes his ID card again to inform the system that he has checked in the car in the main gate.
* Parking manager registers in the system that he has checked in the car to the customer.

Unique features of automated system:

* Tracking vans’ positions and statuses in real-time.
* Reporting Drivers’ current statuses and their last assigned task. (Considering drivers have to swipe their cars when they are getting into van and also when they are getting out of it.)
* The ability to assign multiple tasks to drivers as queues, so that drivers always know about their assigned tasks, current tasks and also tasks they have finished at the moment.
* Customers can schedule their preferred departure time in various days of the week.
* Intelligent determination of best position to park a car.

Difficulties that automated system resolves:

* Damage control process and filling out relative forms are being done in fraction of a second.
* Customers don’t have to be in waiting while checking out their cars or to declare their specifications. This is because system extracts customer specifications from his car’s license plate and also takes photos of car’s body.
* Drivers’ current statues and positions are clear. Thus parking manager doesn’t need to manage them manually.
* Drivers always know about their task statuses while swiping their ID cars and as a result don’t need to interact with manager regarding this matter.
* Vans’ positions and statuses are always clear.
* Customers have a proper notification mechanism to send their requests. Therefore they are not going to wait to check in their cars. Because the car is previously removed from the parking and is already in the gate.