

RDD Presentation

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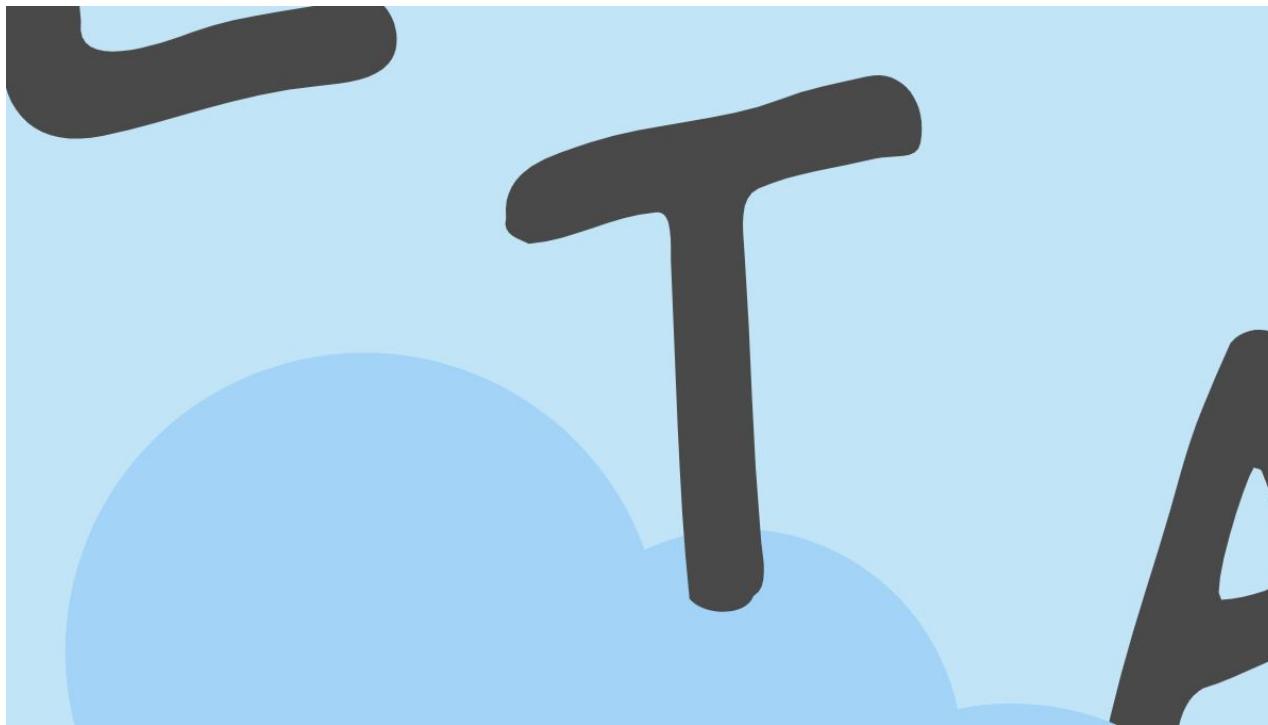
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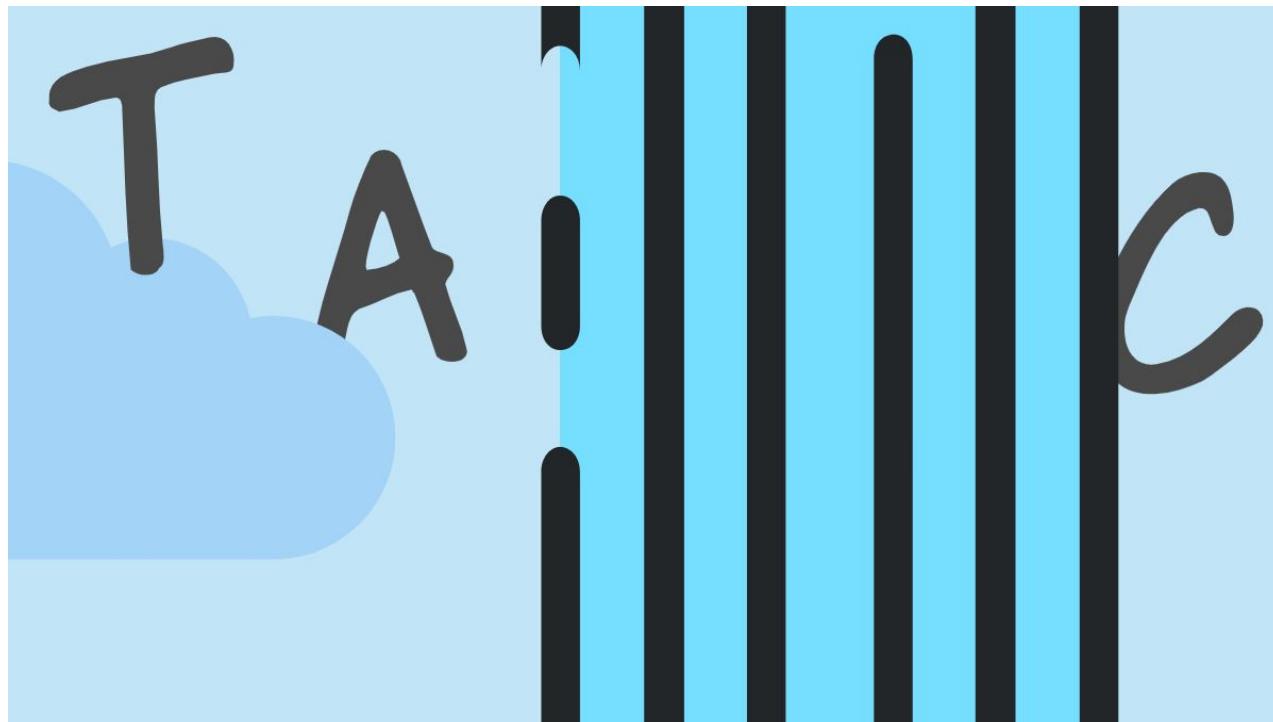
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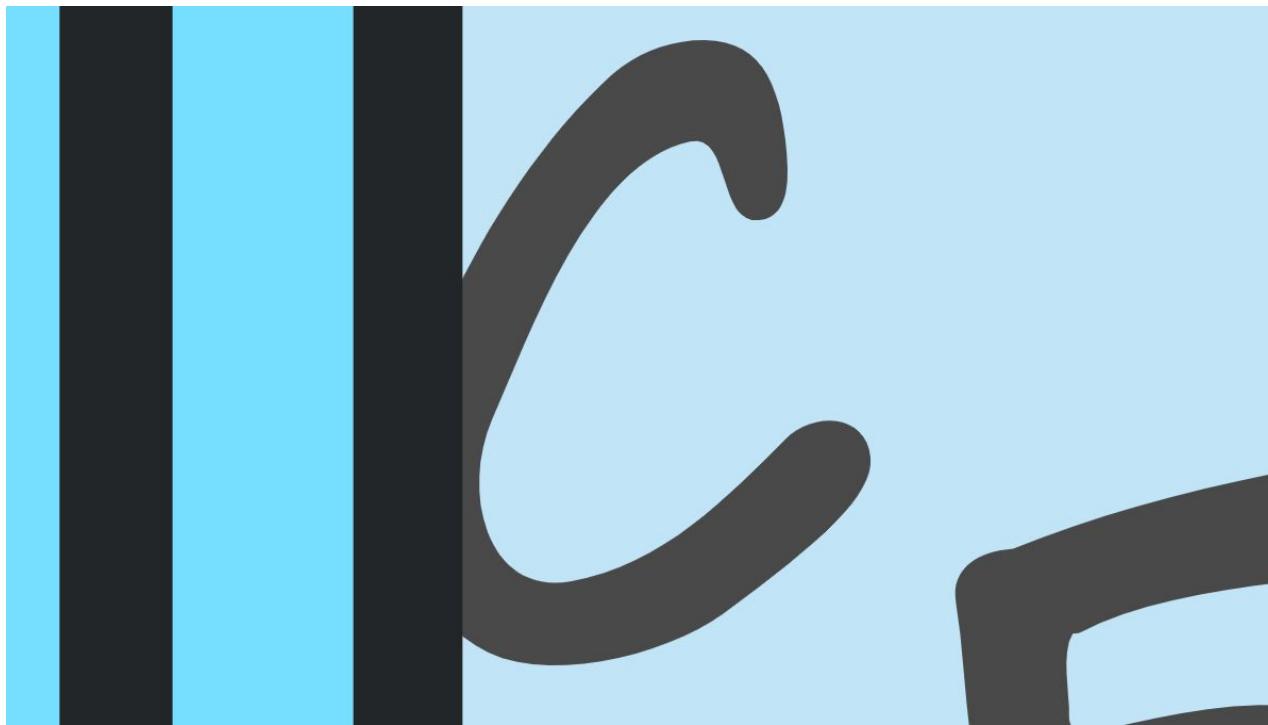
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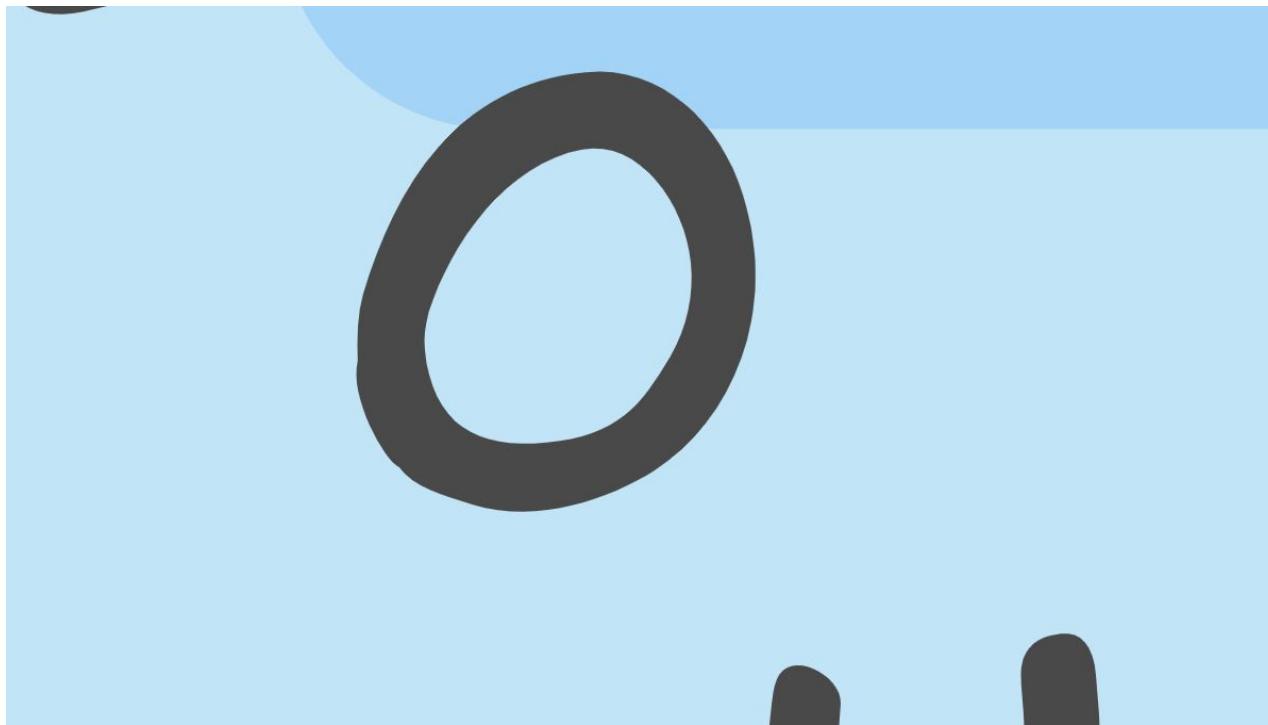
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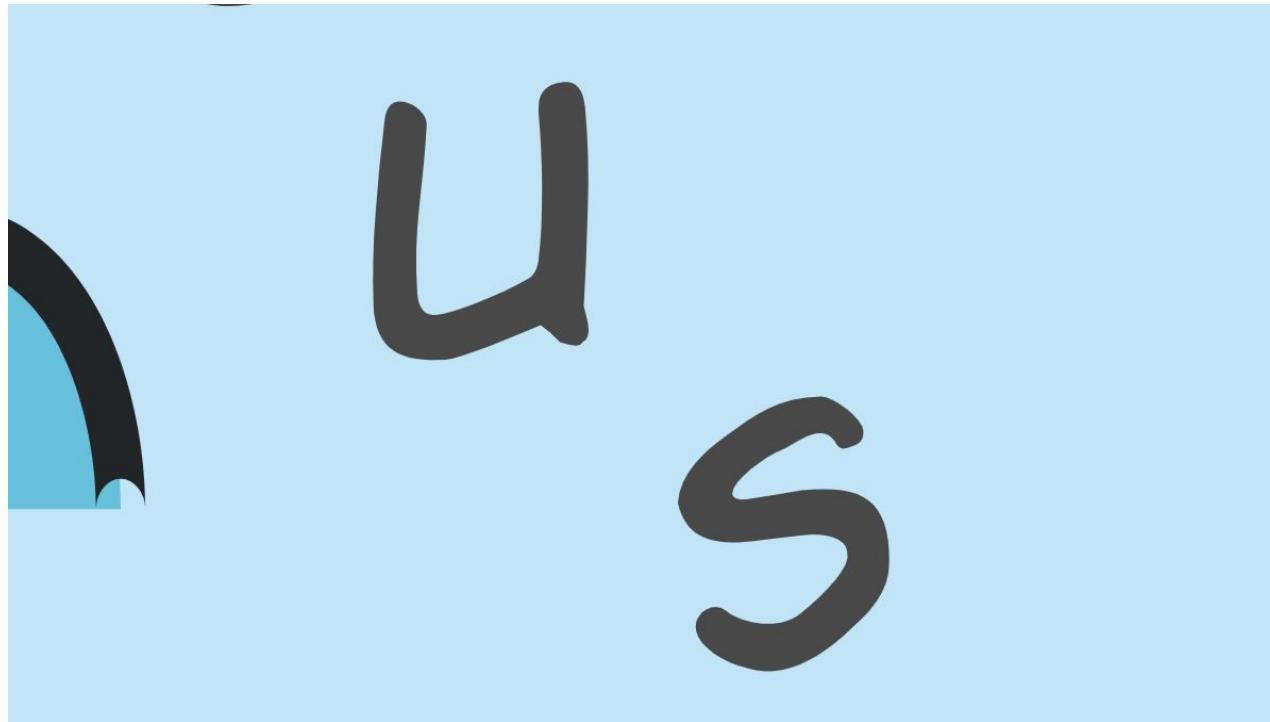
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Slide 29 Copy 11



Slide 29 Copy 12



Slide 29 Copy 13



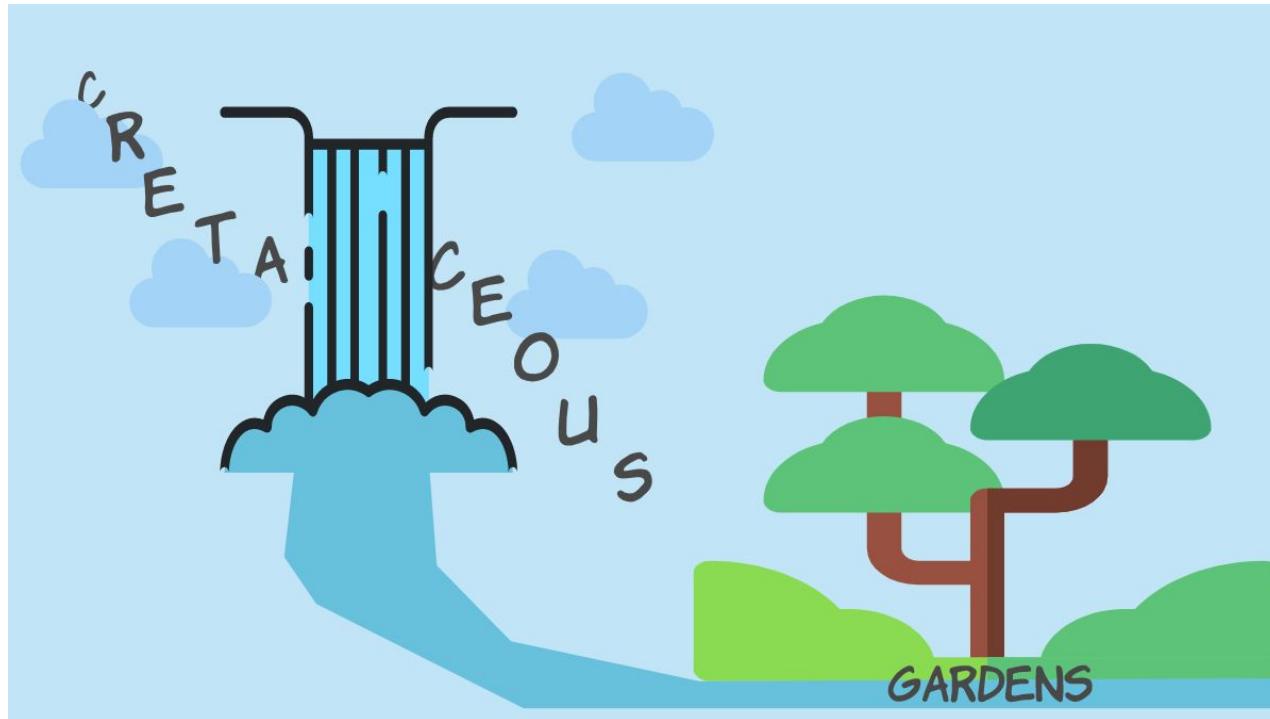
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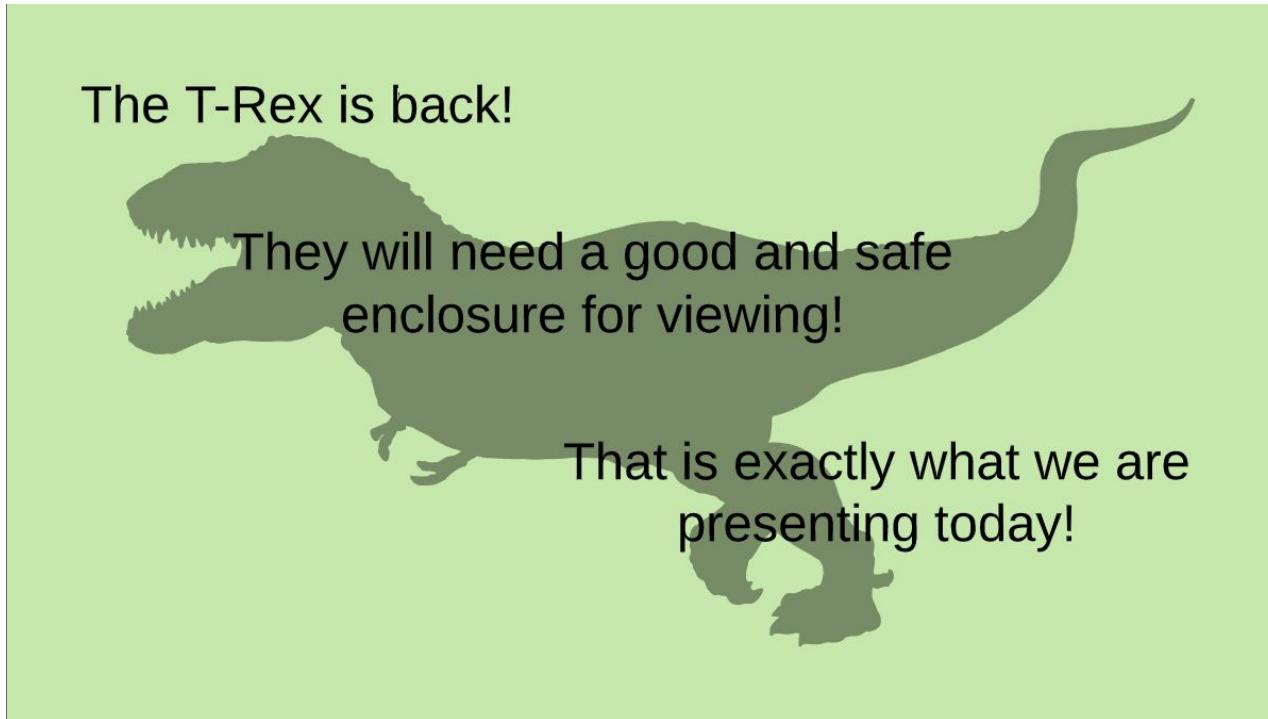
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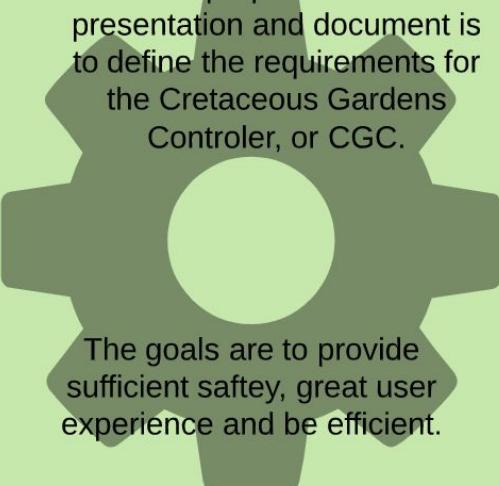


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Slide 29 Copy 22

Sadly, it is time to be a bit more boring and get into the details.



The purpose of this presentation and document is to define the requirements for the Cretaceous Gardens Controller, or CGC.

It will cover the components for the pay kiosks, cars, and the electric fence (escaped rex is bad).

The goals are to provide sufficient safety, great user experience and be efficient.

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Up coming in the slides:

- Outlining of the main objectives.
- Overall System organization at a high level.
- Outlining of the interfaces
- The design constraints



Objectives

Slide 29

Safety



Main Objectives include:

- Electric fence safety, the CGC must ensure that the T-Rex doesn't come out.



- Self-driving car safety, the doors must be locked when in motion.



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User Experience

A vertical stack of icons representing user interaction:

- Top row: magnifying glass, three dots, triangle.
- Middle row: person icon, square icon.
- Bottom row: a smartphone with a hand pointing at its screen.

The entire icon stack is grouped by a large curly brace on the right side of the slide.

- Self-driving cars available at both North and South end.
A small icon of a white self-driving car with a steering wheel and a small figure inside.
- The users be able to easily purchase the tokens from the kiosk.
An icon showing a blue kiosk machine next to a black ticket stub.
- Be able to seamlessly interact with the self-driving cars.

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Maintainability



- The CGC should be easily accessible and easy to understand.



- The system should also be maintainable in real-time.



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Efficiency

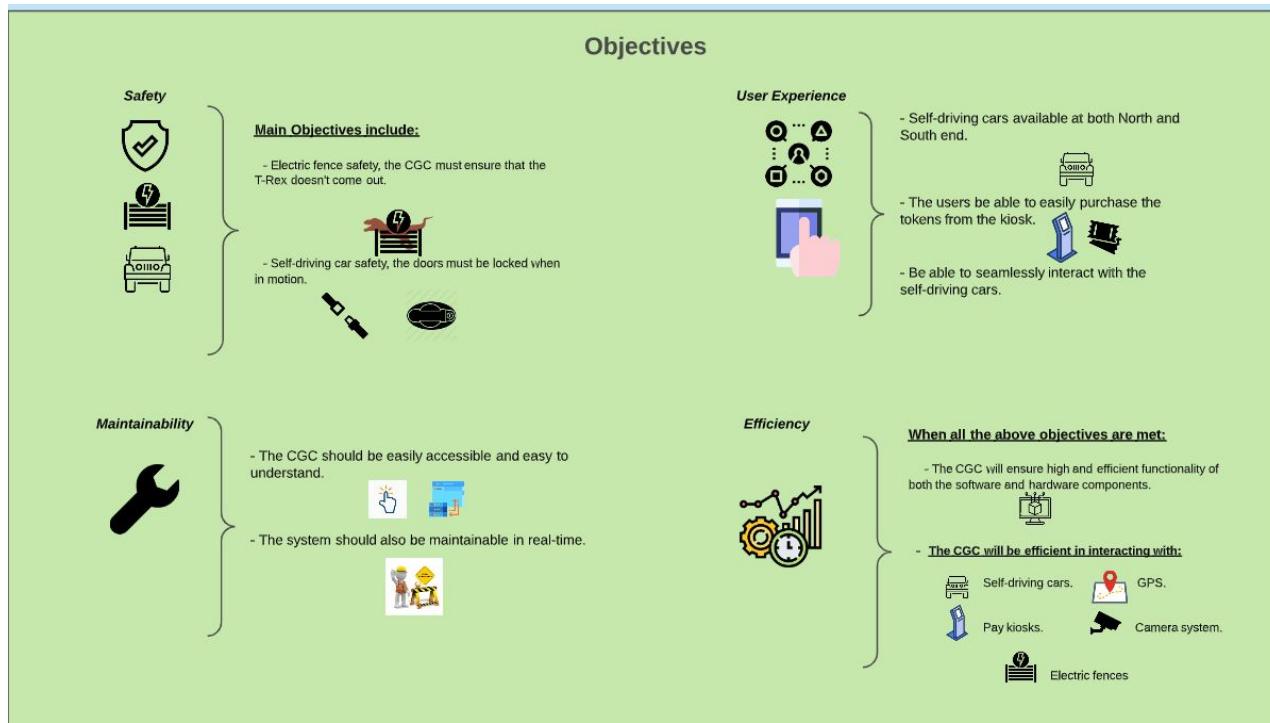


When all the above objectives are met:

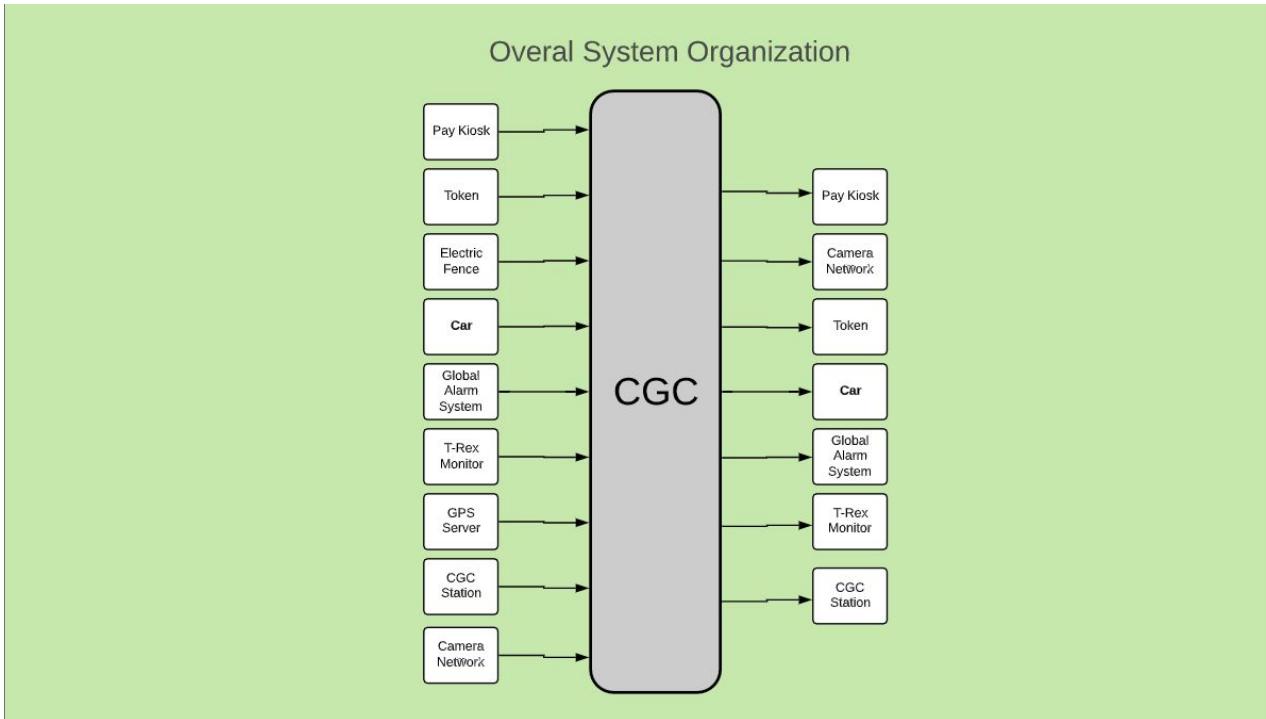
- The CGC will ensure high and efficient functionality of both the software and hardware components.
- **The CGC will be efficient in interacting with:**

	Self-driving cars.		GPS.
	Pay kiosks.		Camera system.
	Electric fences		

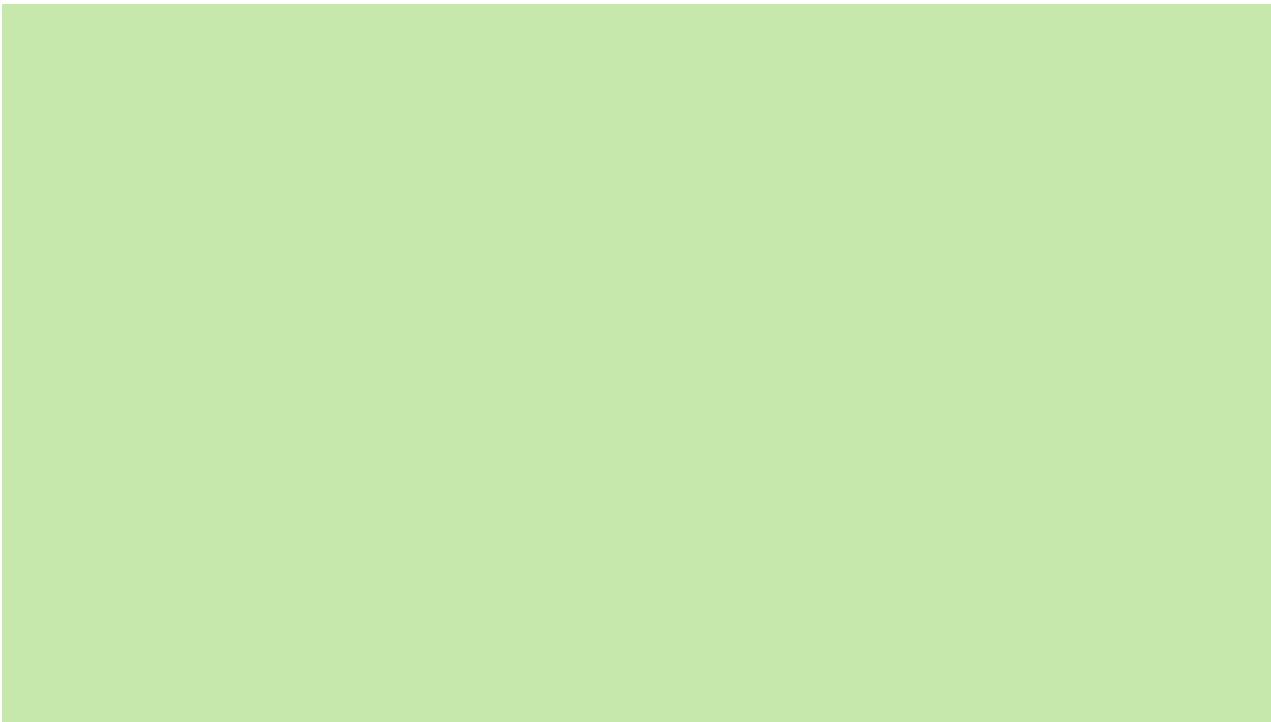
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Slide 2 Copy 1



Slide 2



T-Rex
Monitor

Slide 2



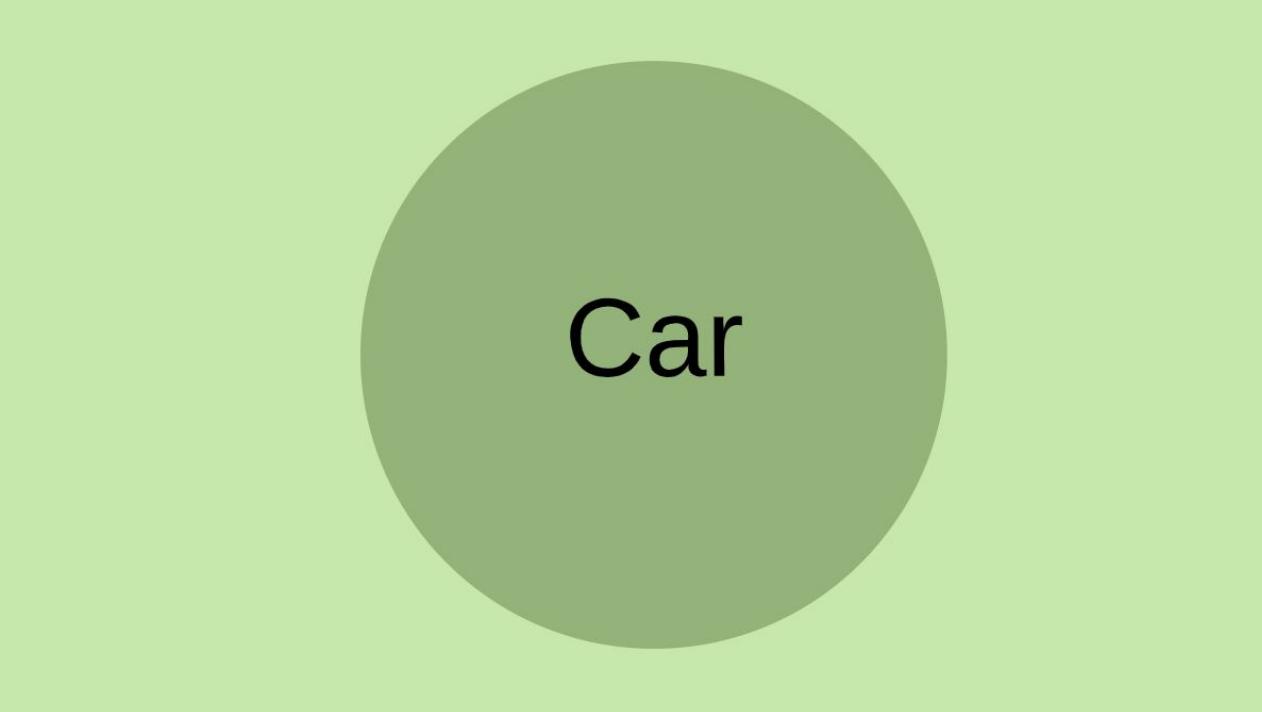
Pay Kiosk

Slide 2



Global Alarm
System

Slide 2



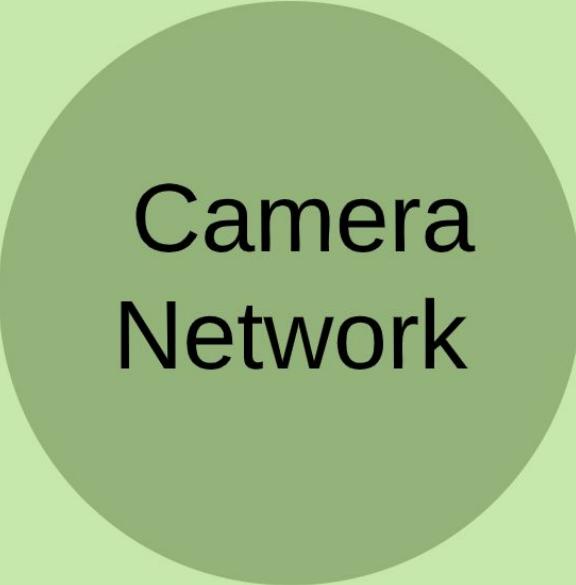
Car

Slide 2



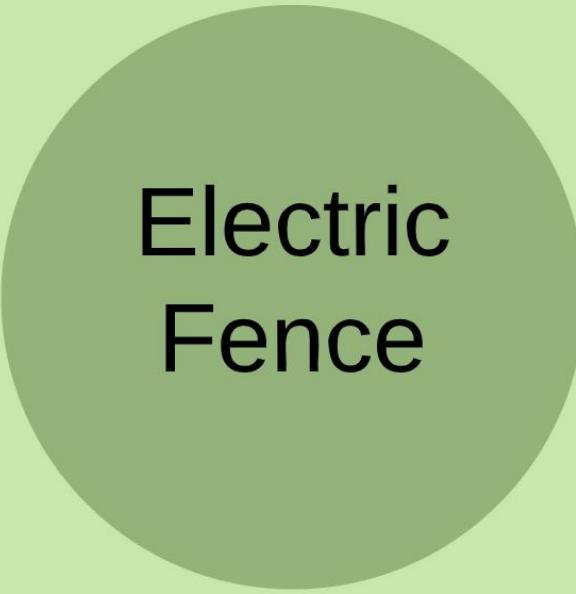
GPS Server

Slide 2



Camera
Network

Slide 2



Electric
Fence

Slide 2



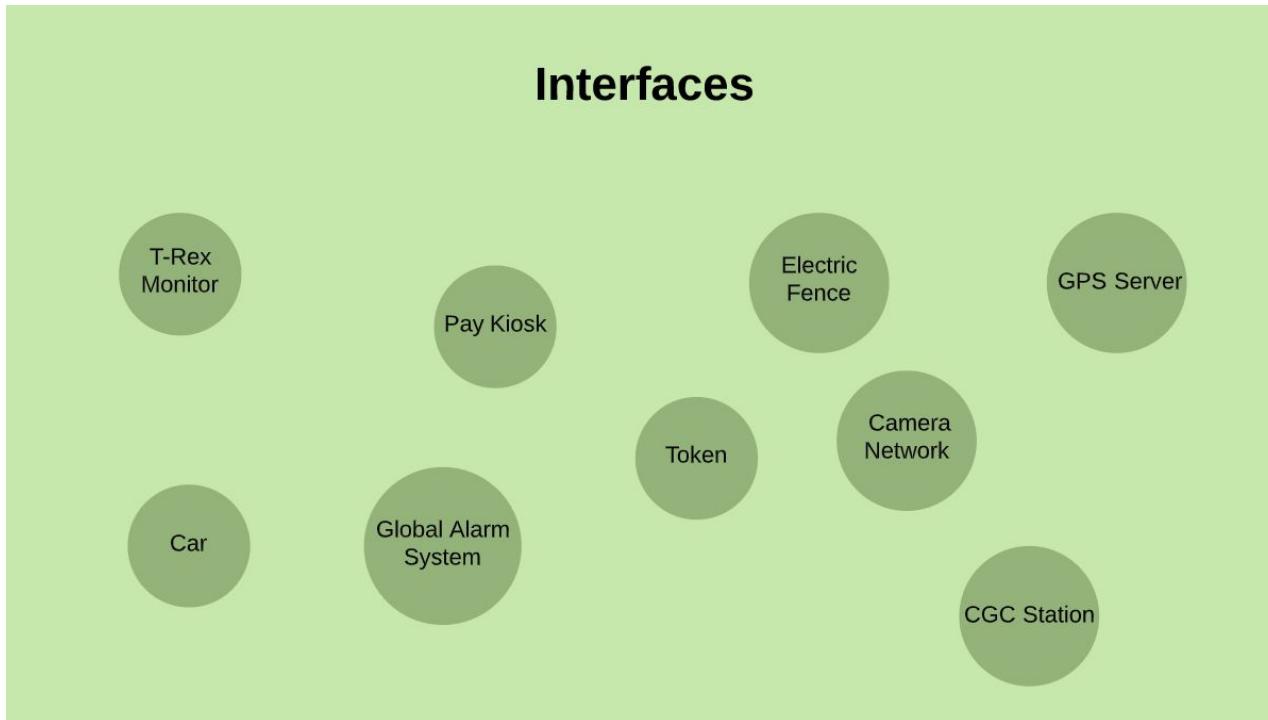
CGC Station

Slide 2



Token

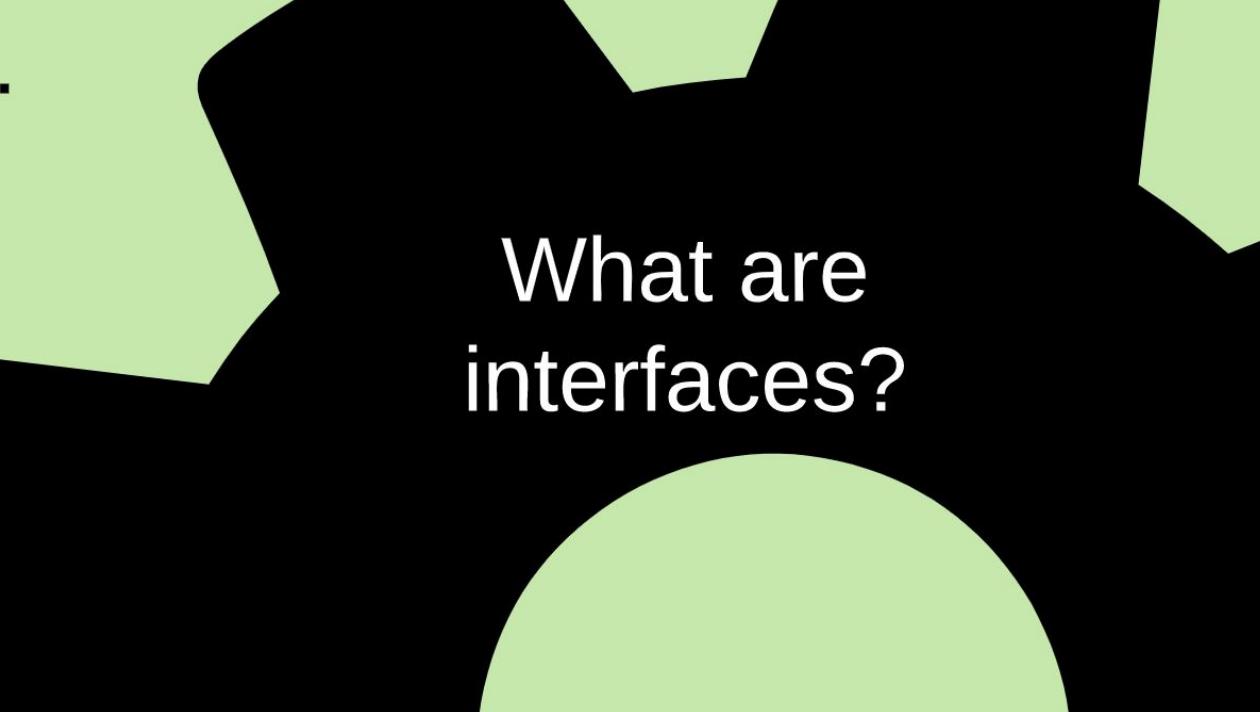
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Slide 12

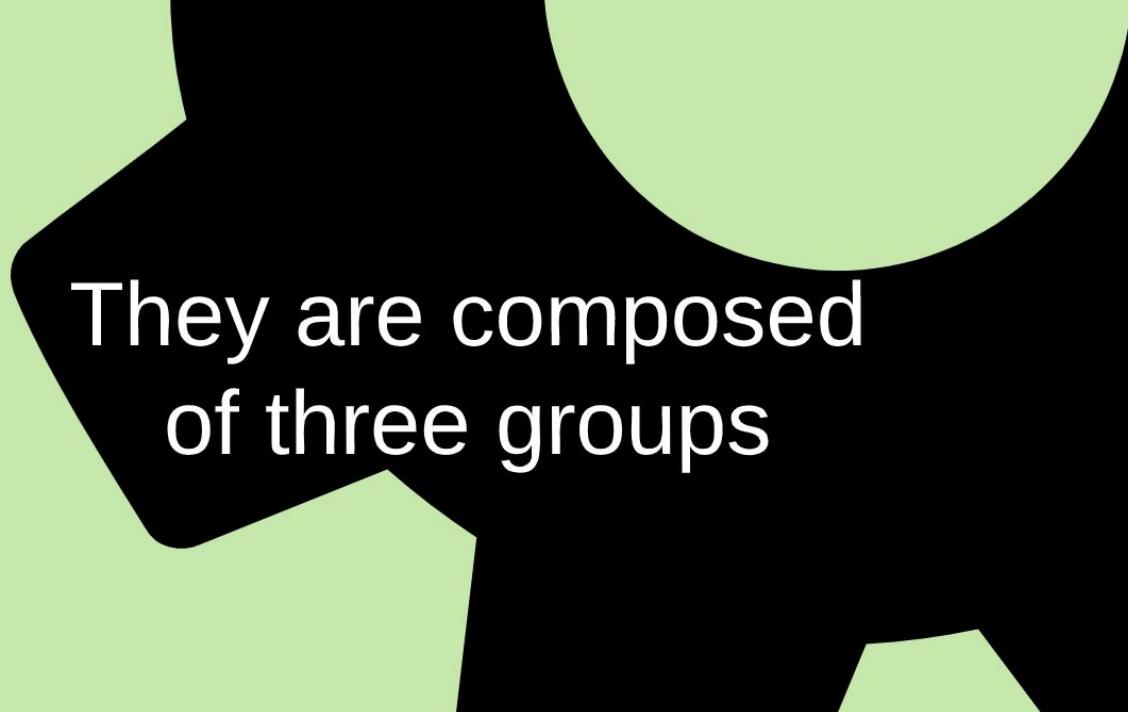
But...

Slide 12 Copy 1



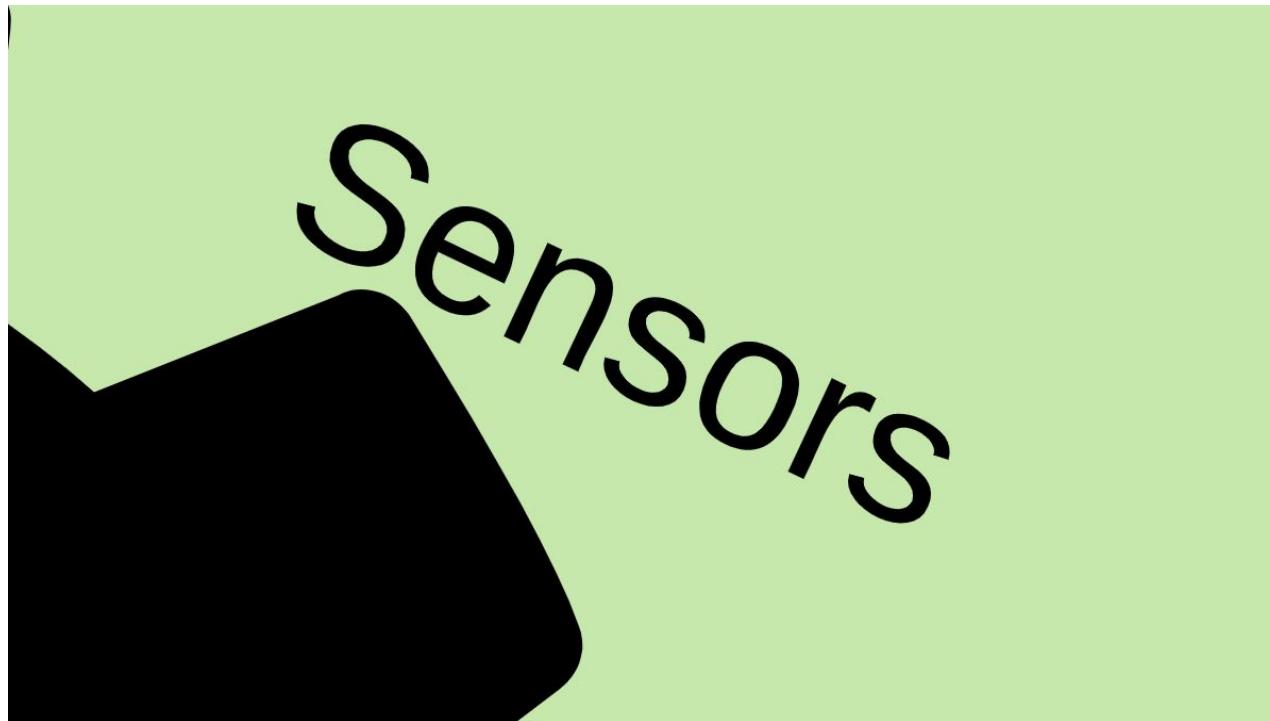
What are
interfaces?

Slide 14



They are composed
of three groups

Slide 15





Slide 15

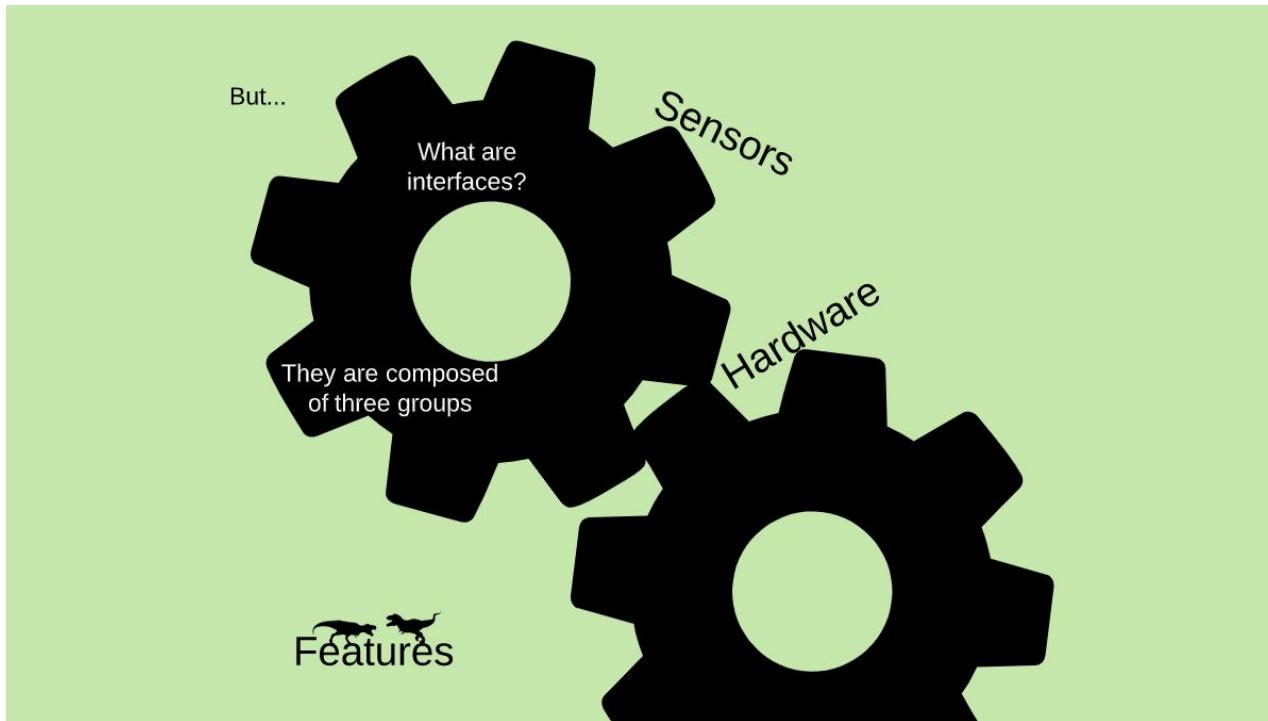


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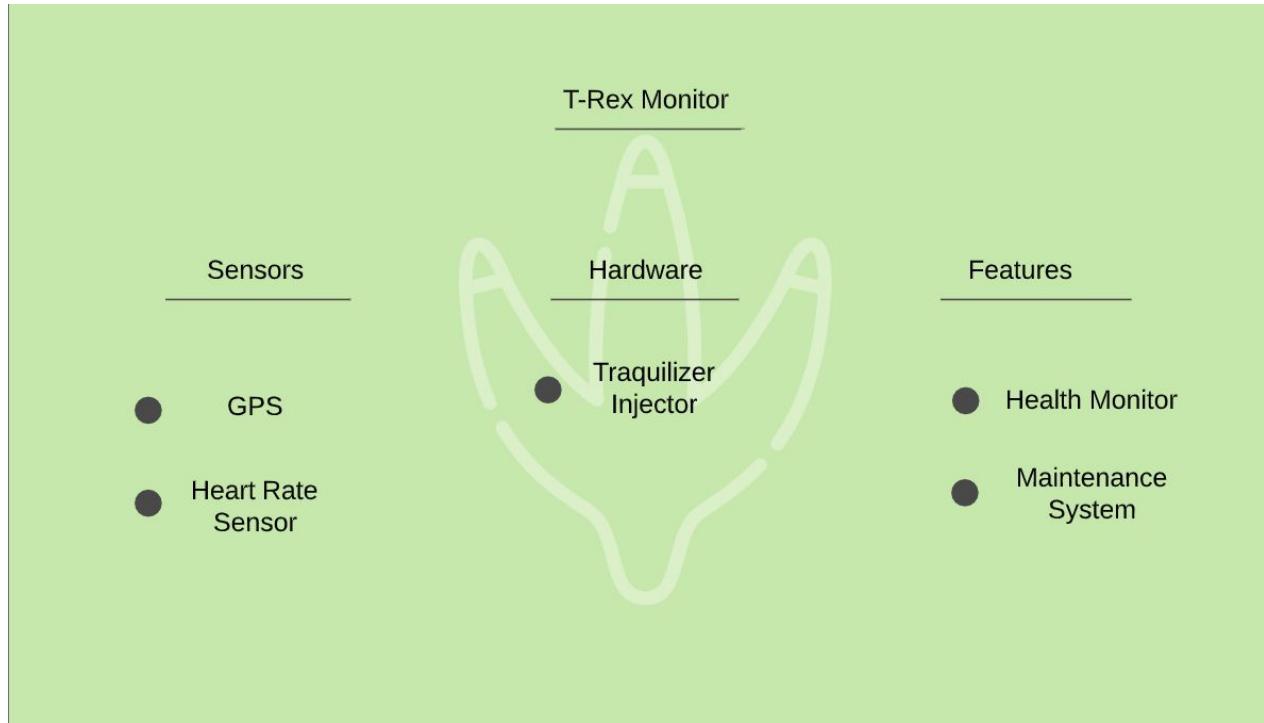
Features



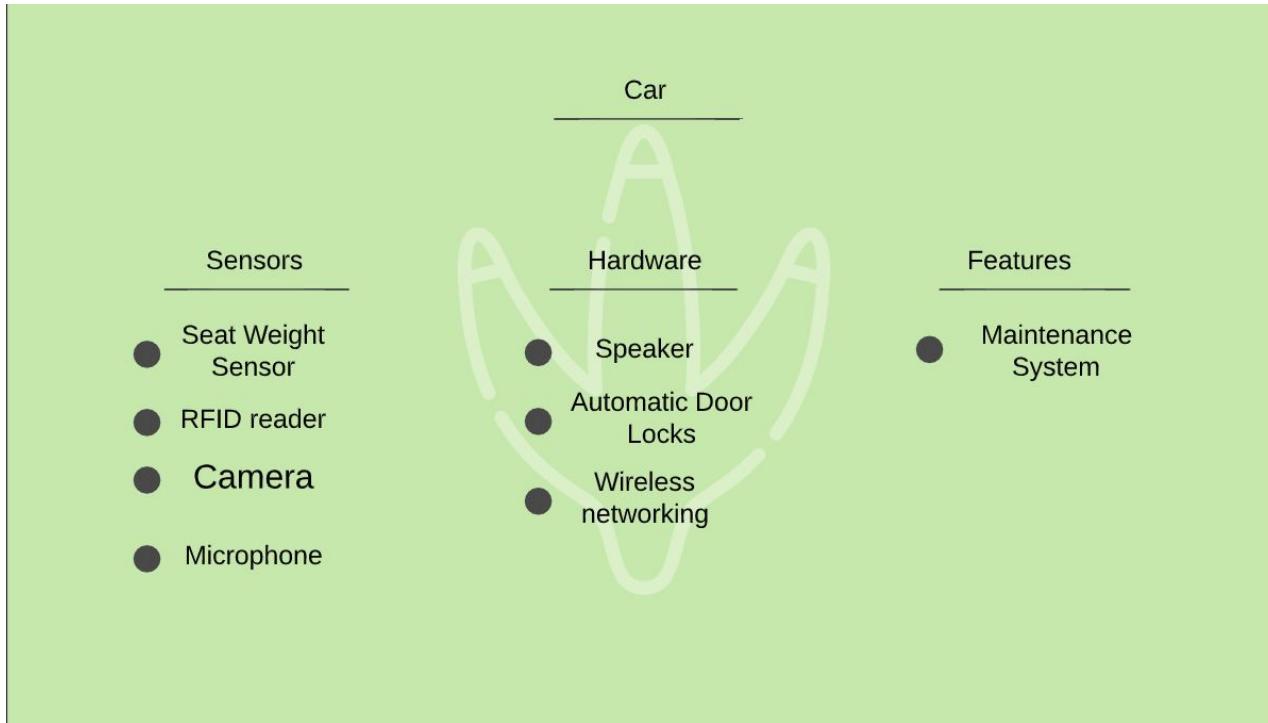
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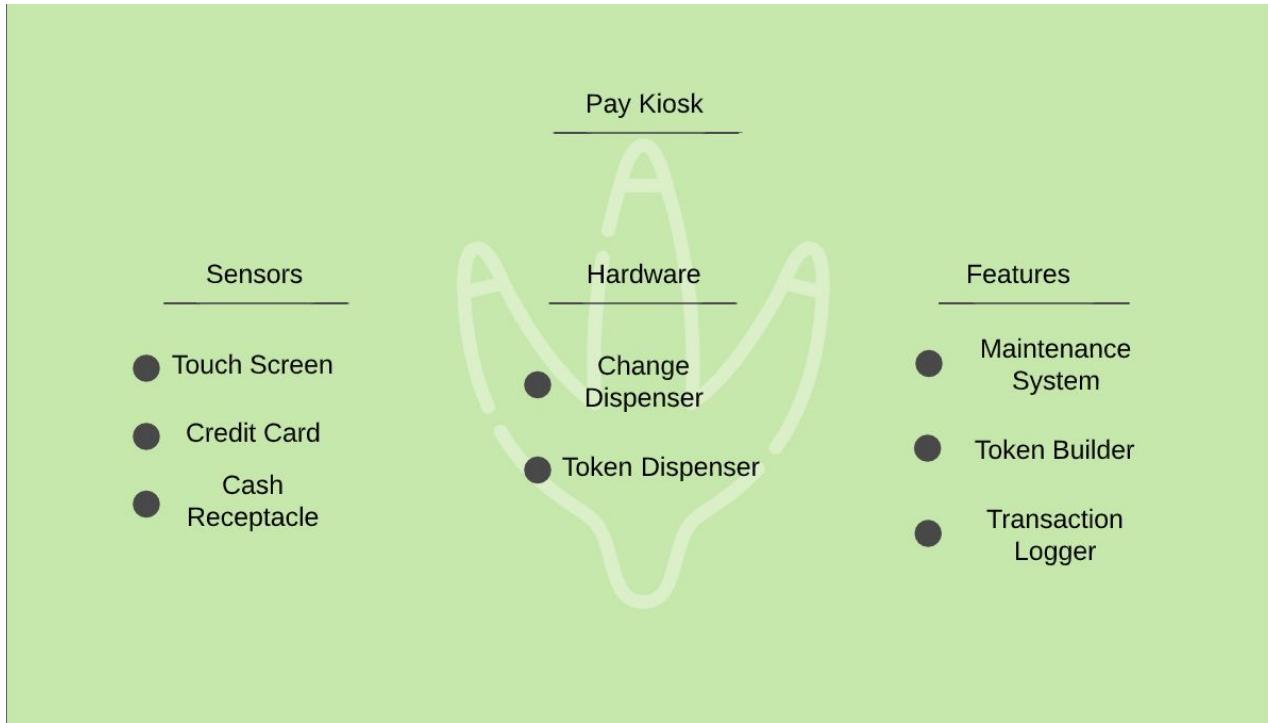
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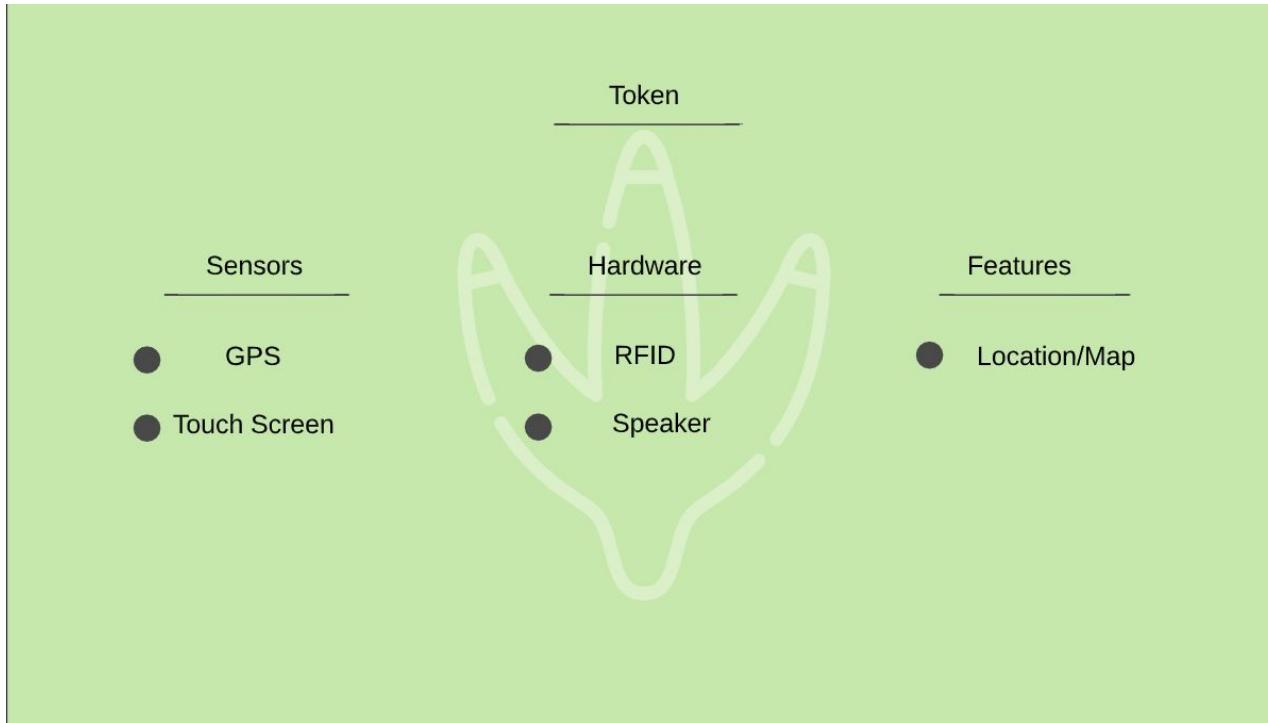
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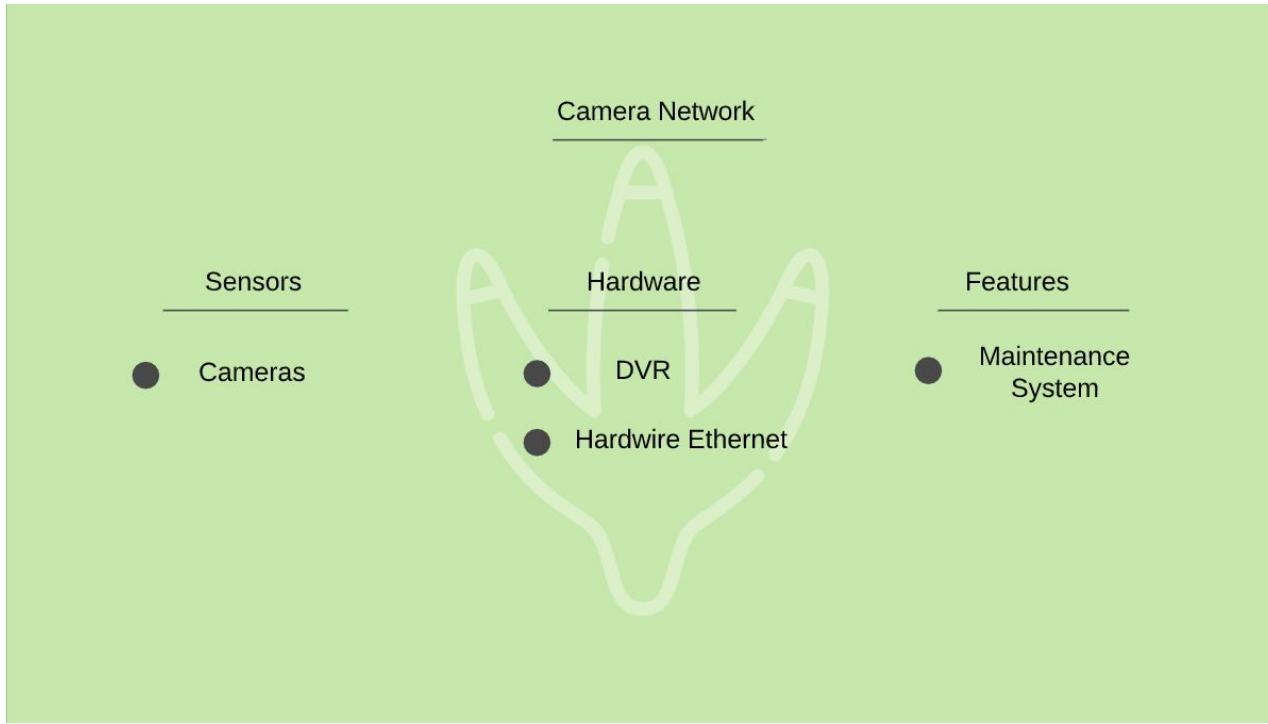
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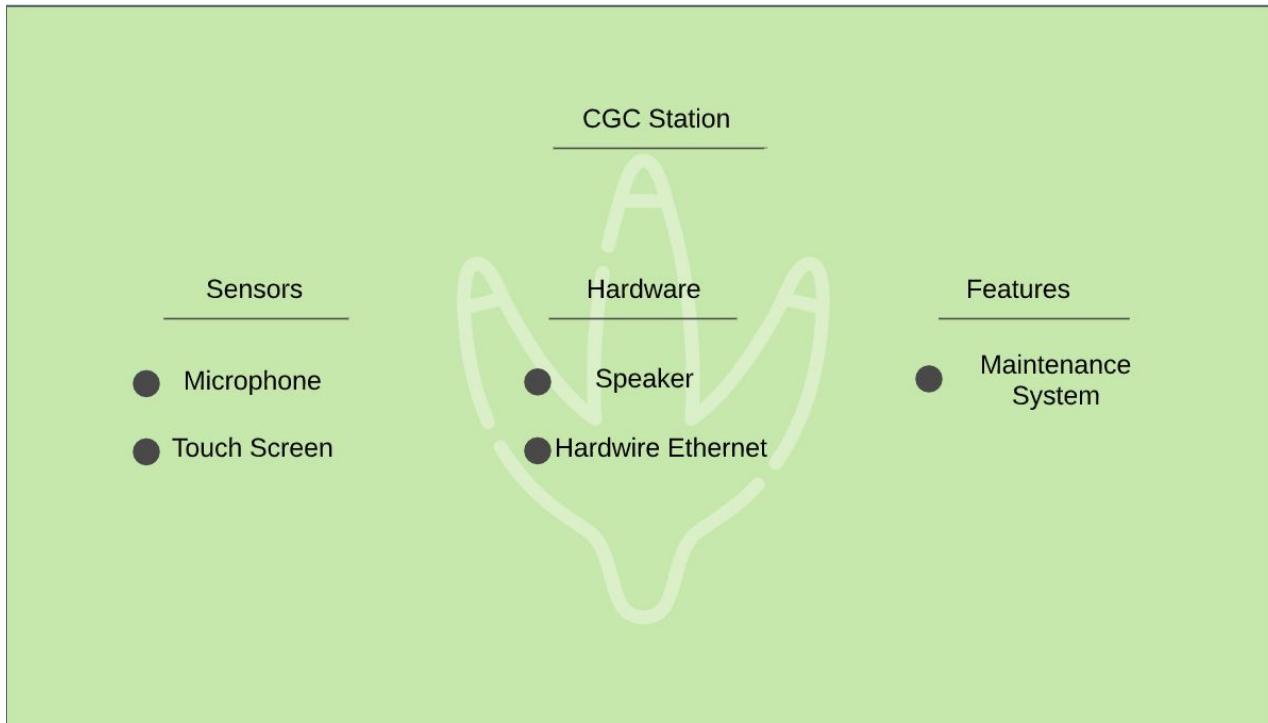
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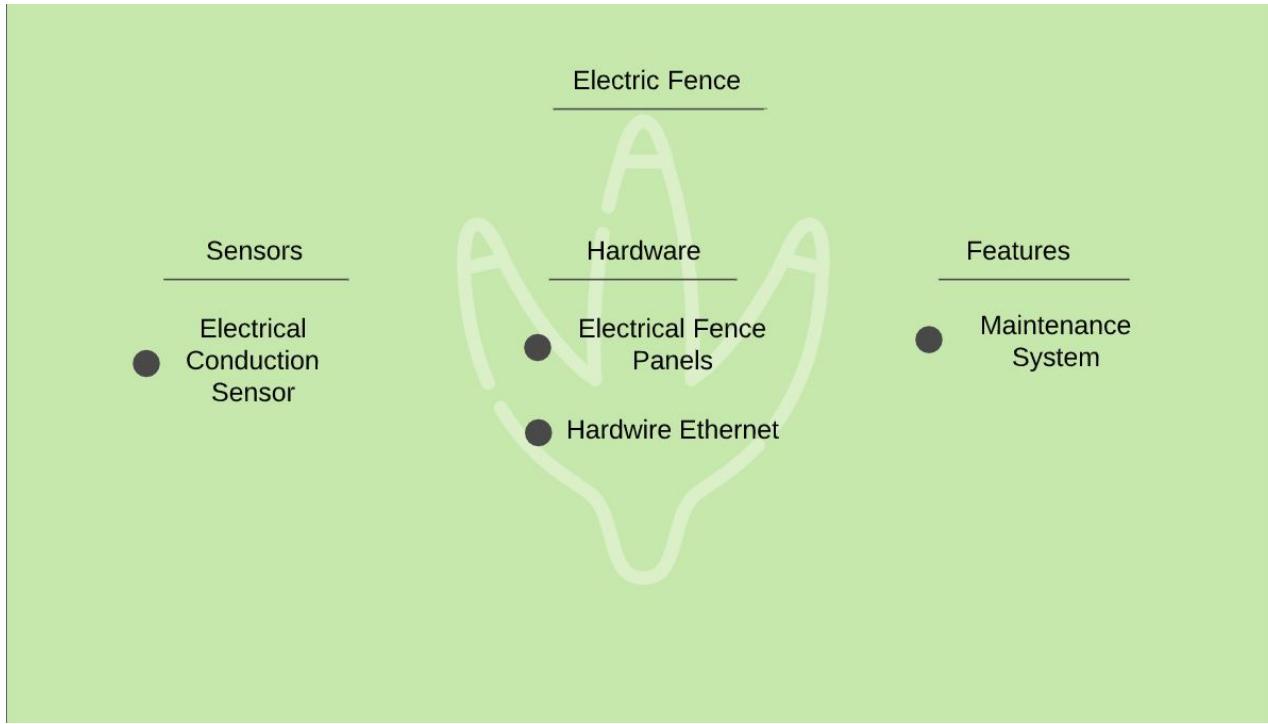
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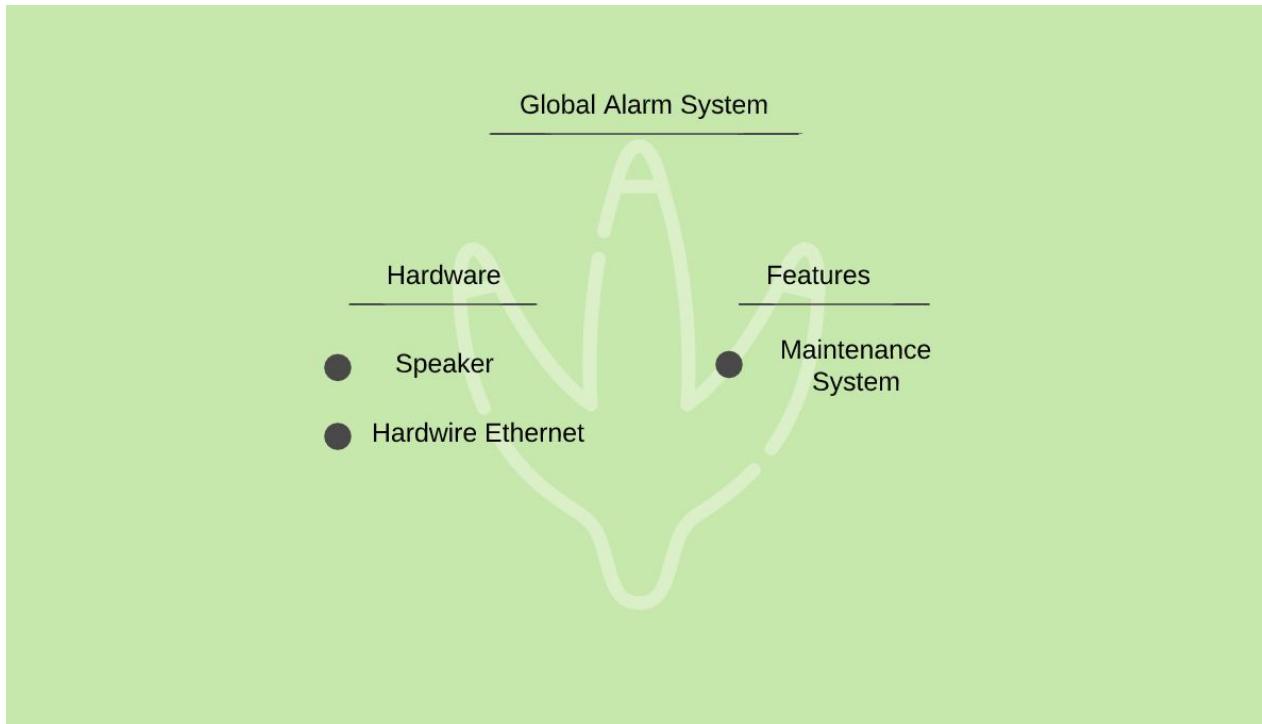
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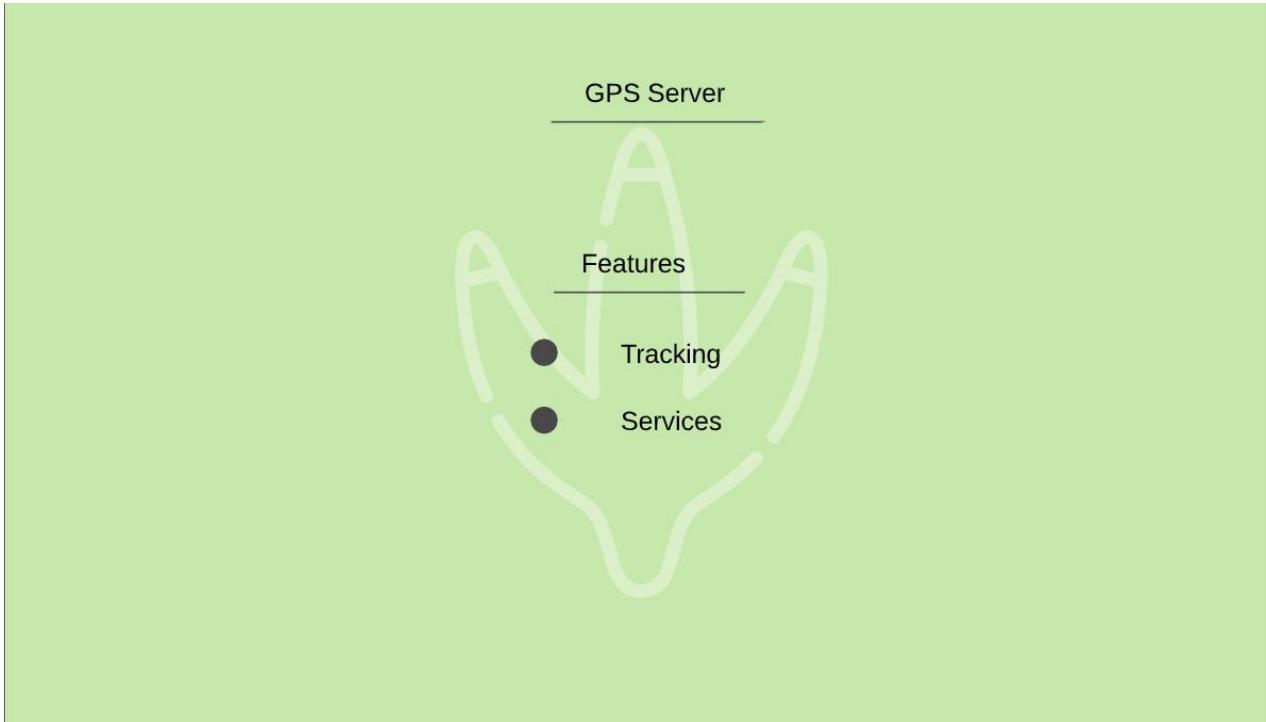
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Slide 42 Copy 1

Capa

Slide 42 Copy 2



abilities

Slide 42 Copy 3

Capabilities

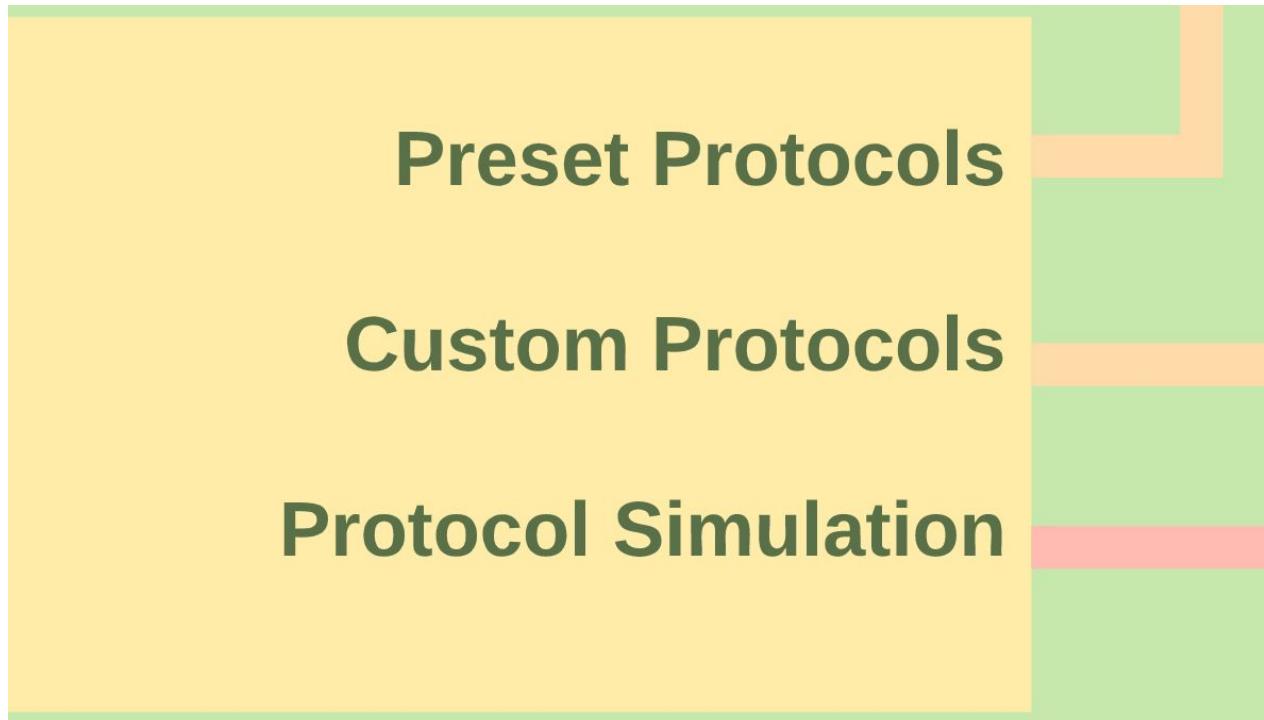
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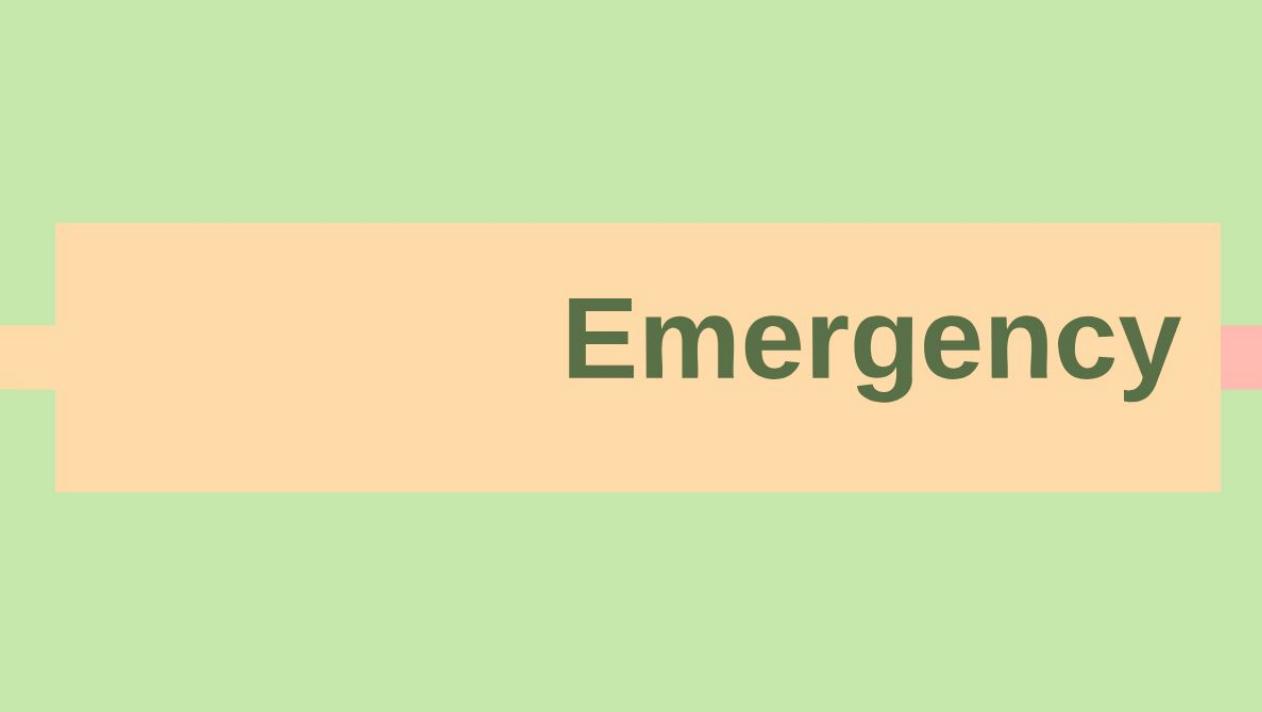
Slide 42 Copy 5

Dynamic Protocols

Slide 42 Copy 6



Slide 42 Copy 7



Emergency

Slide 42 Copy 8



Open Park

Slide 42 Copy 10



Shutdown Park

Slide 42 Copy 9



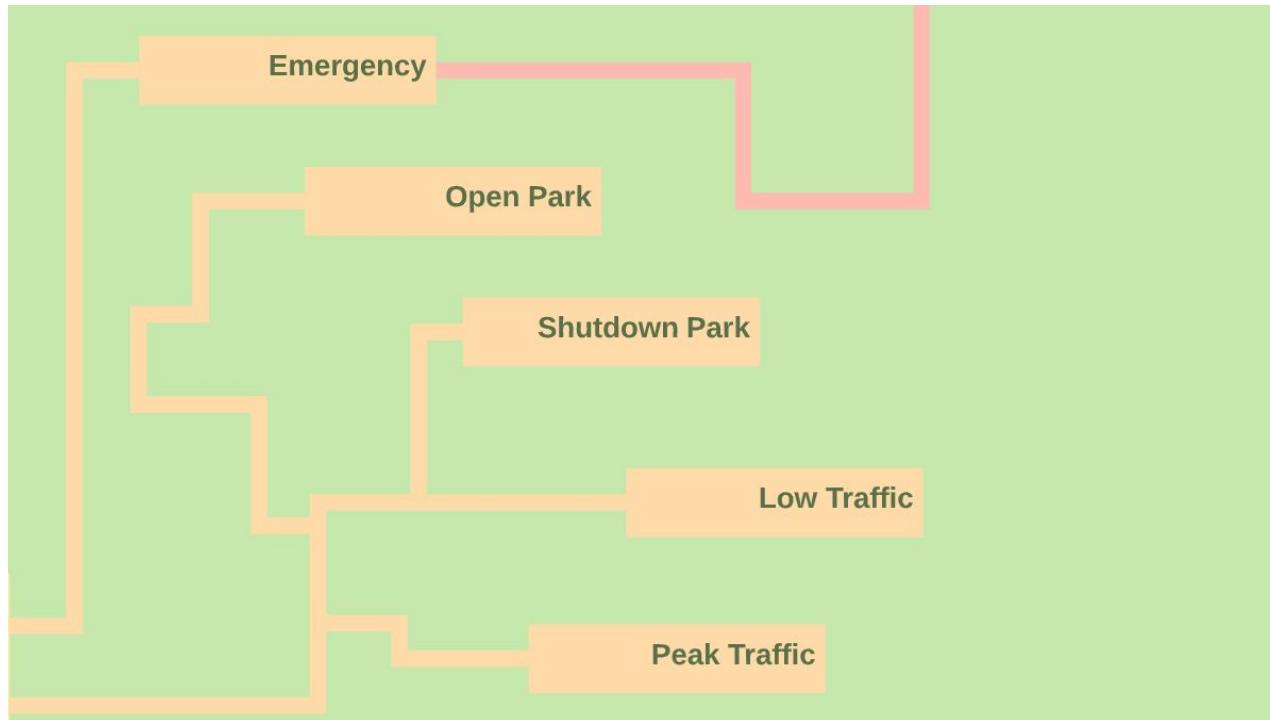
Low Traffic

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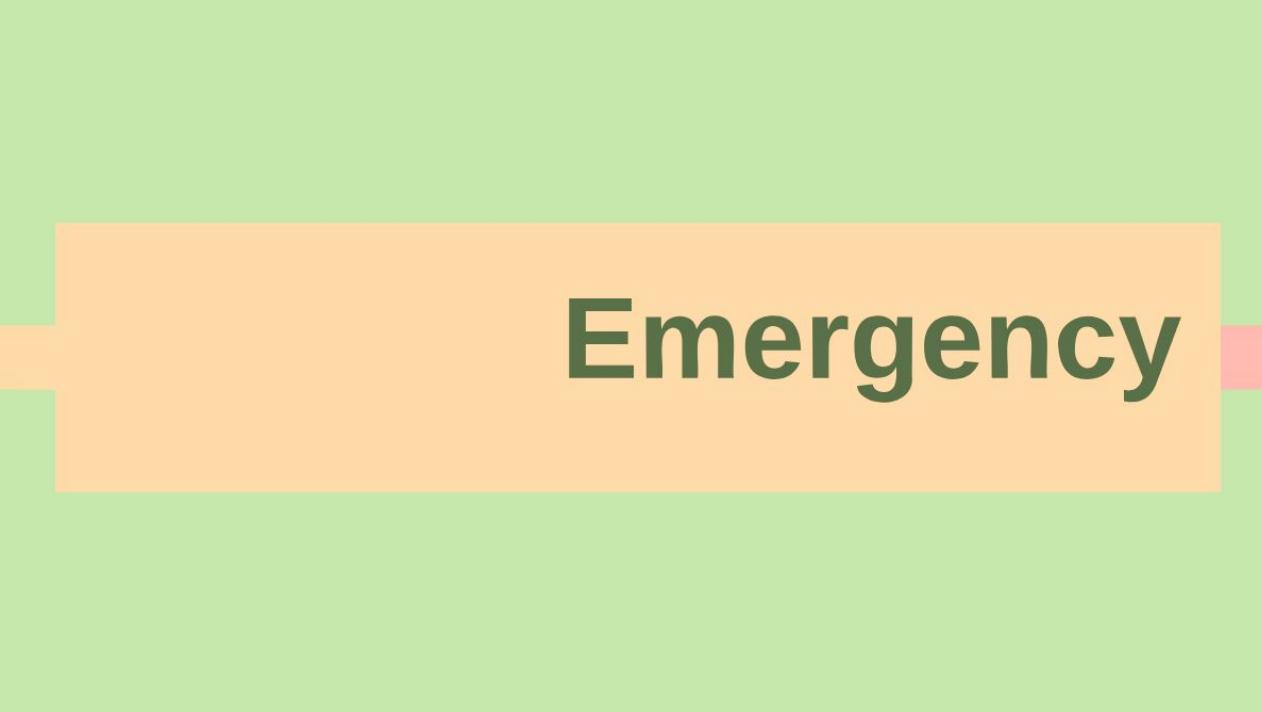


Peak Traffic

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Slide 42 Copy 13

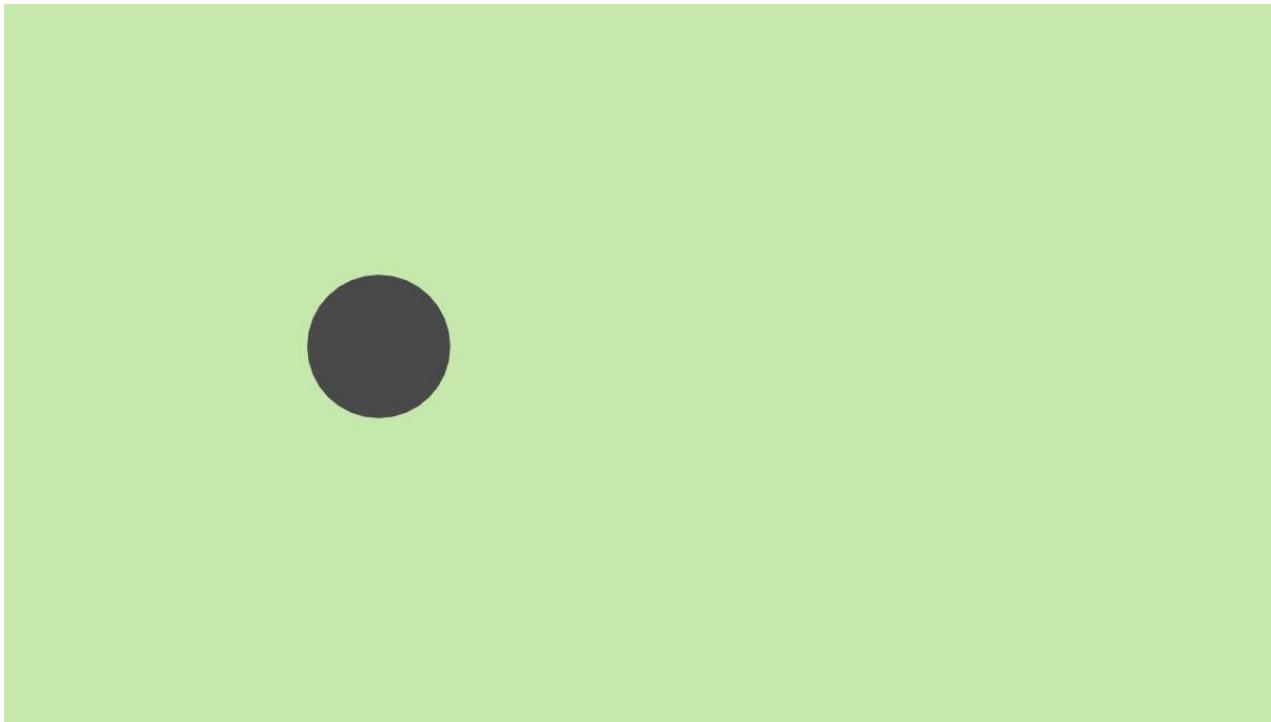


Emergency

Slide 42 Copy 14

- (a) The electric fence breach detected.
- (b) Tranquilizing agent is administered to the subject.
- (c) Through the Global Alarm System,
 - i. All speakers emit the alarm (protocol-specific) sounds.
 - ii. Instructions to find and enter the nearest vehicle are propagated through the speakers.
 - iii. Instructions are also sent to all active token devices.
 - iv. Interleaved reassurances that more available vehicles are headed north are also transmitted.
- (d) All safely occupied vehicles begin to shuttle people (guests and staff) southward.
- (e) All safely inactive vehicles are dispatched northward.
- (f) Once there, the safely inactive vehicles will receive people until safely occupied.
- (g) 5d, 5e, and 5f will be repeated emergency mode is deactivated or until all vehicles run out of energy.

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Slide 42 Copy 41

Emergency Features ■

Slide 42 Copy 15

Island-Wide Signal Propagation

External Communication

Missing Node Triangulation

Slide 42 Copy 16



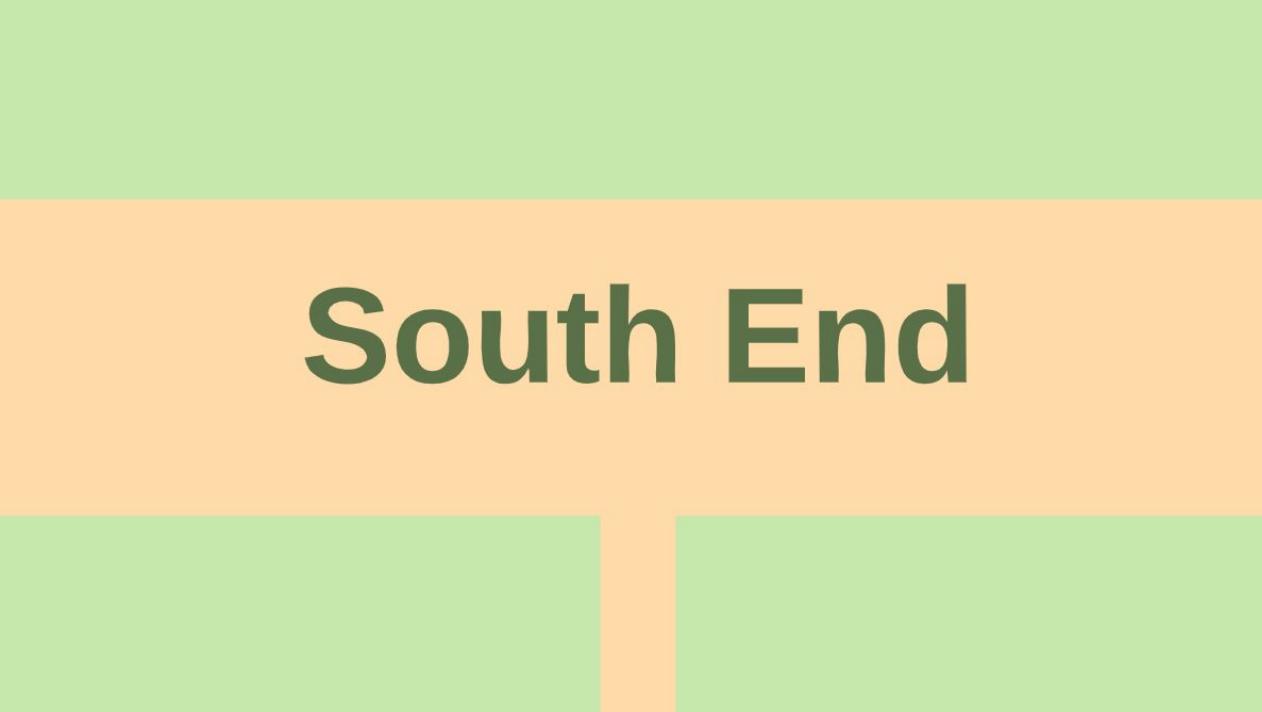
Token Devices

Slide 42 Copy 19



North End

Slide 42 Copy 20



South End

Slide 42 Copy 21



Vehicles

Slide 42 Copy 18



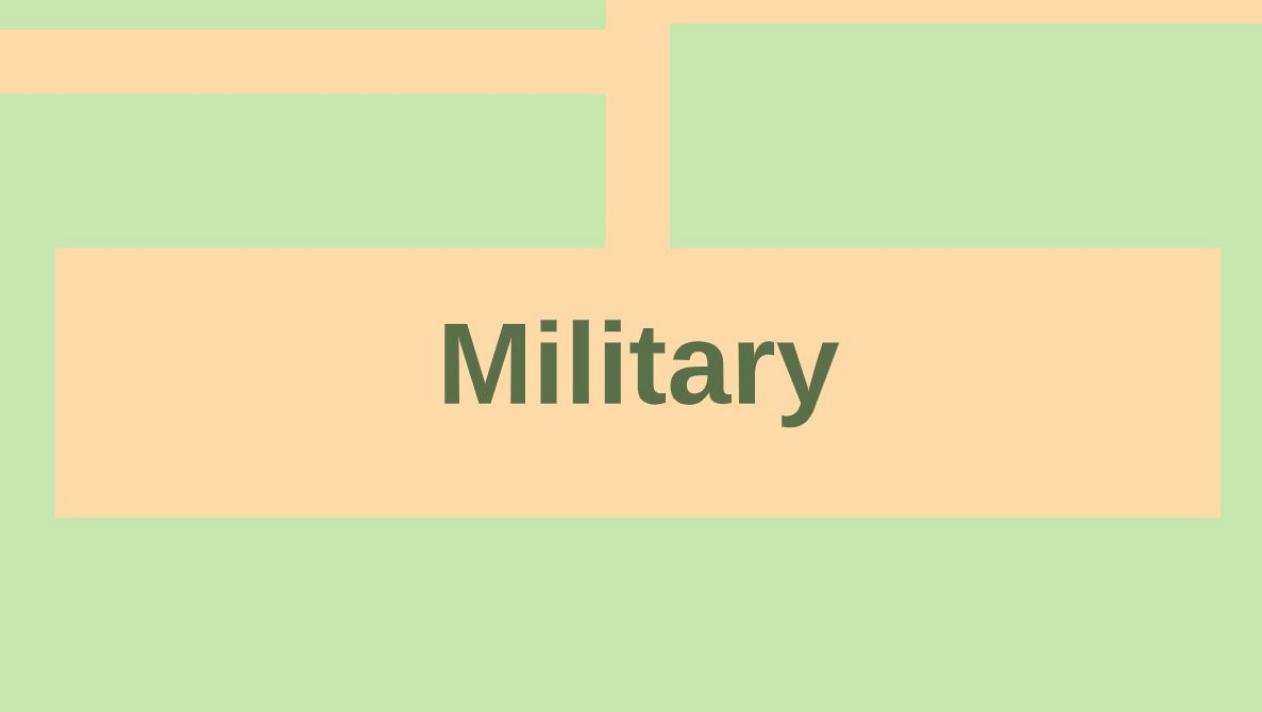
External

Slide 42 Copy 22



Communication

Slide 42 Copy 17



Military

Slide 42 Copy 24



Law Enforcement

Slide 42 Copy 25



Paramedics

Slide 42 Copy 26

Missing Node

Slide 42 Copy 27

Triangulation

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Safety Features ■

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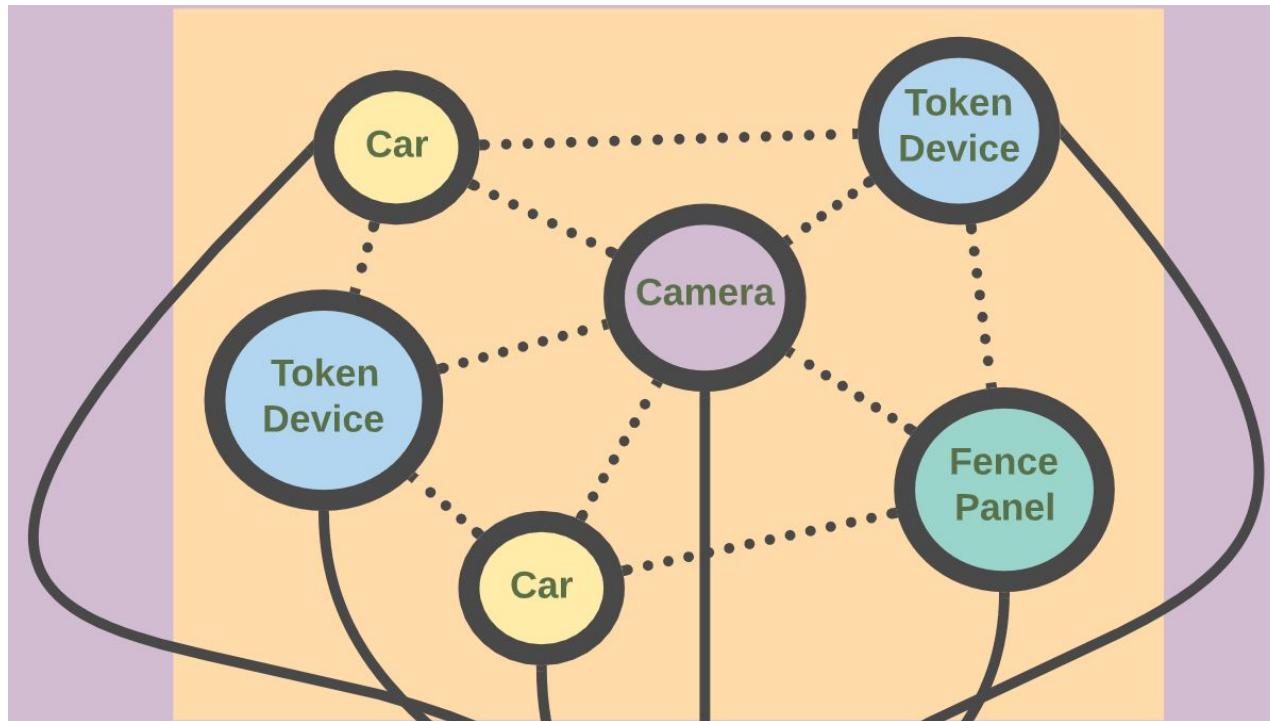
Hardware Redundancy Support

Real Time Maintenance Support

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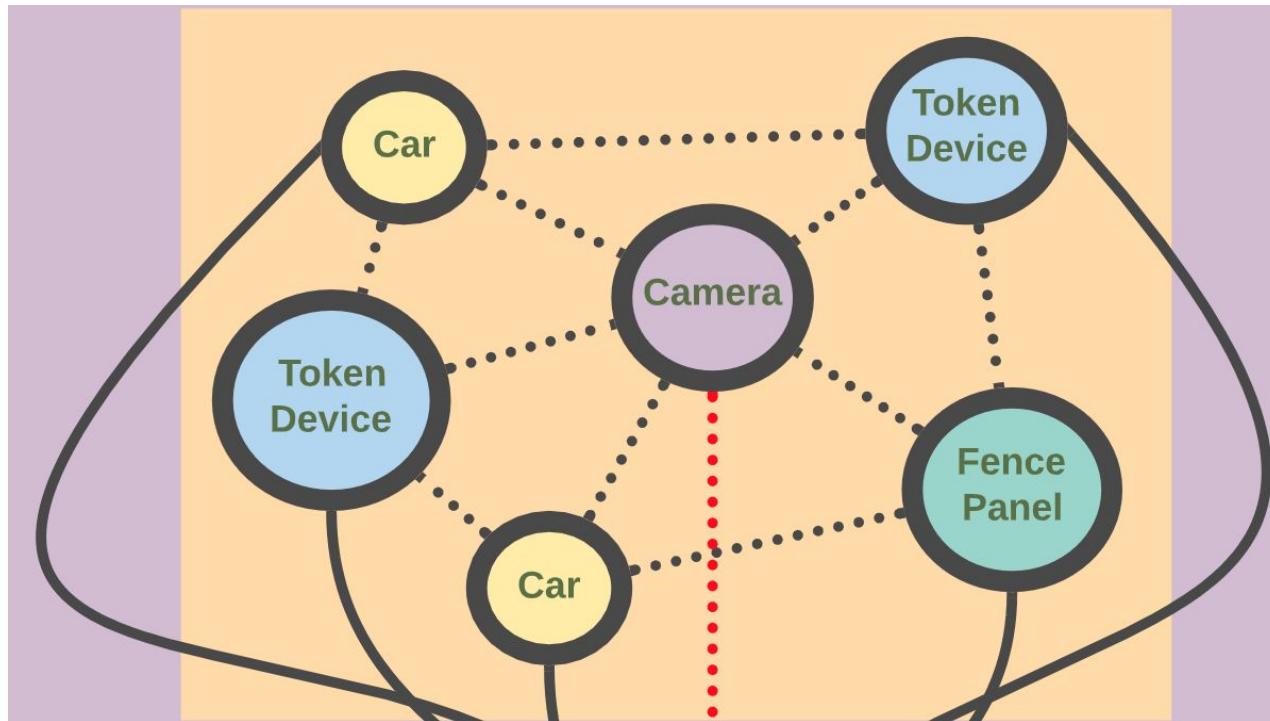
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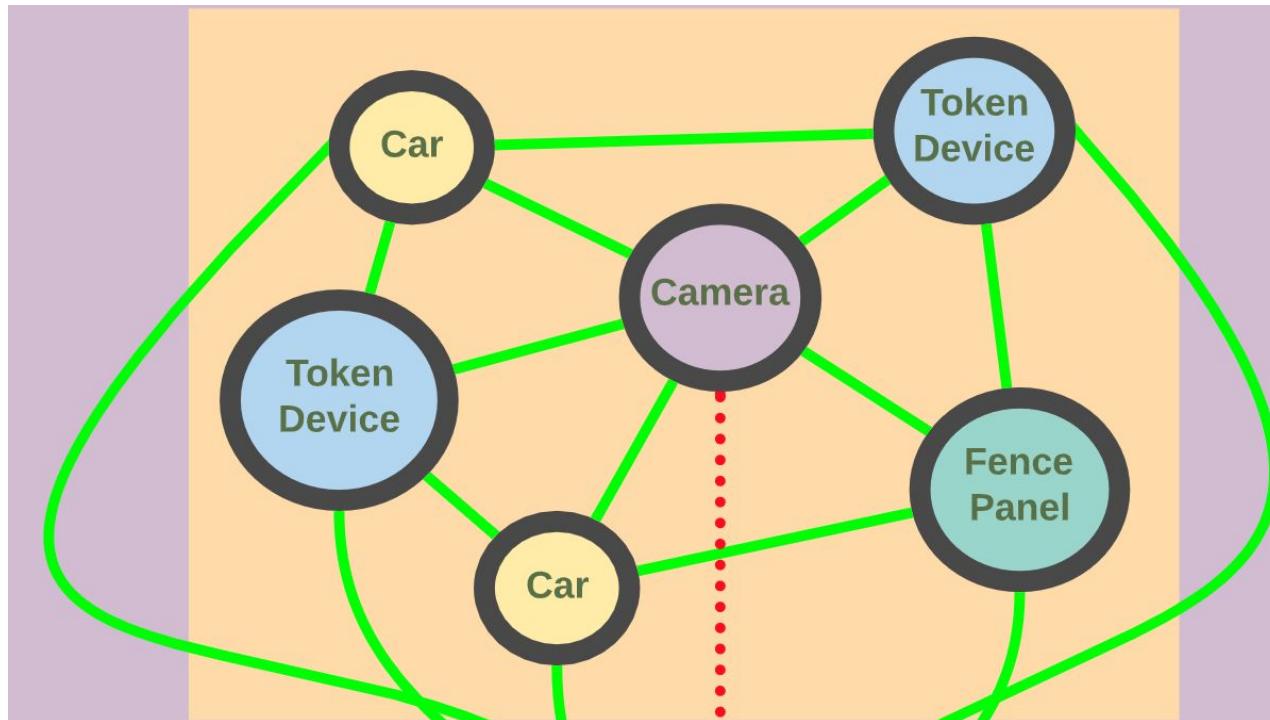
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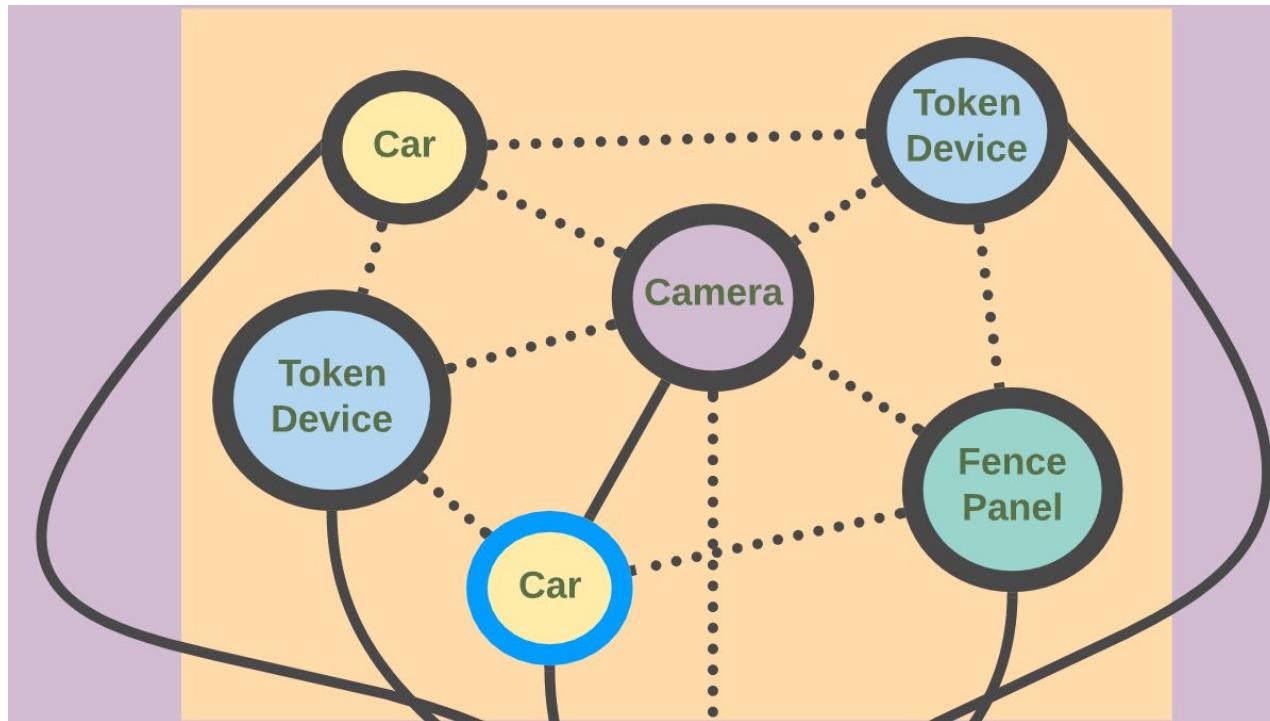
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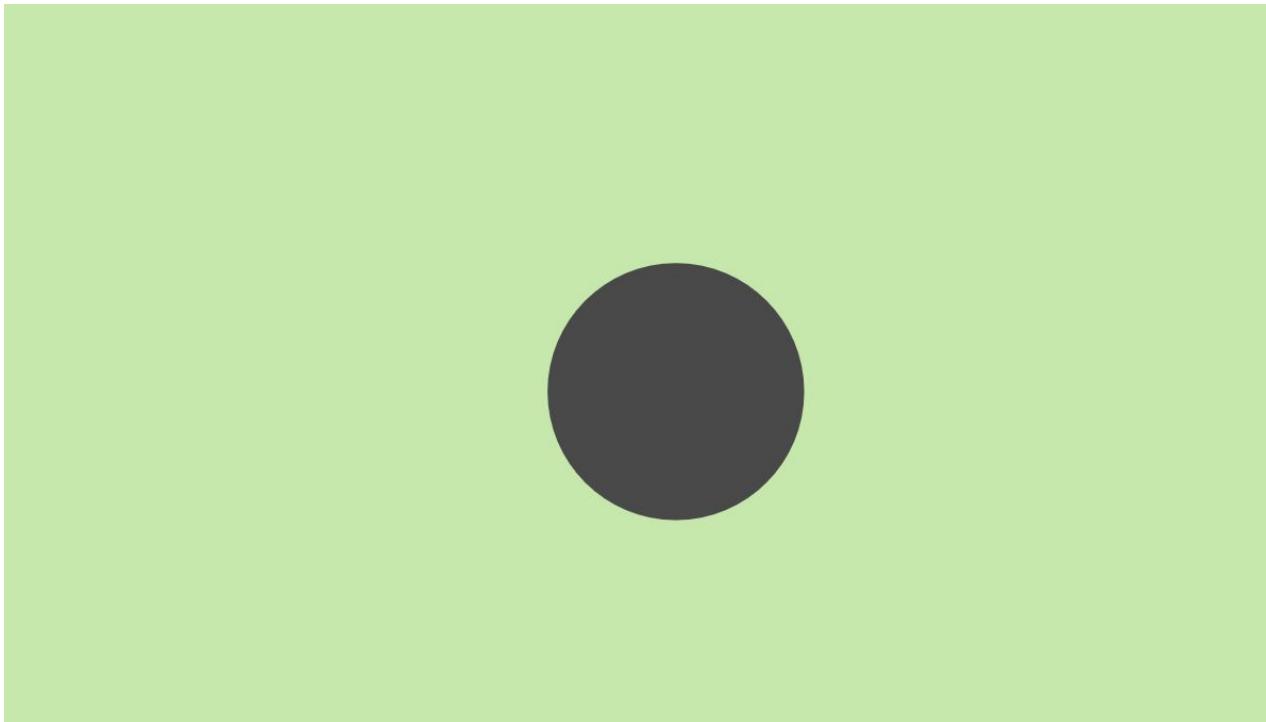
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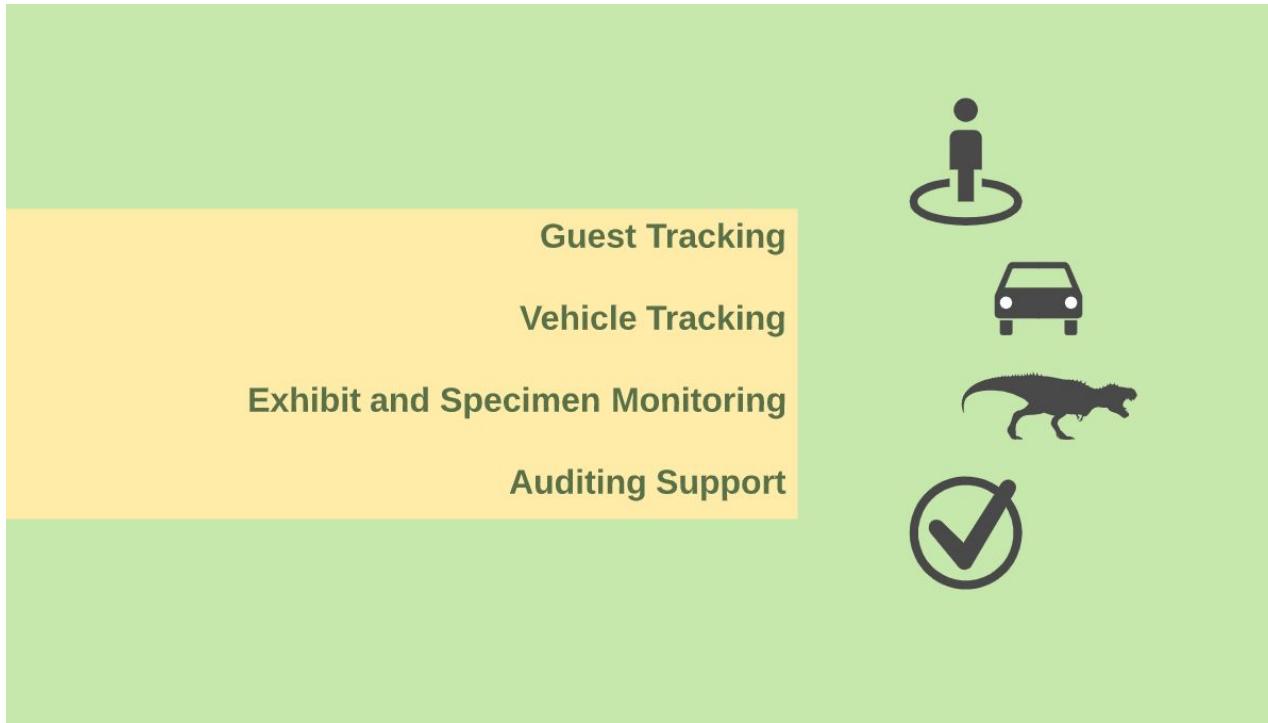
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Surveillance

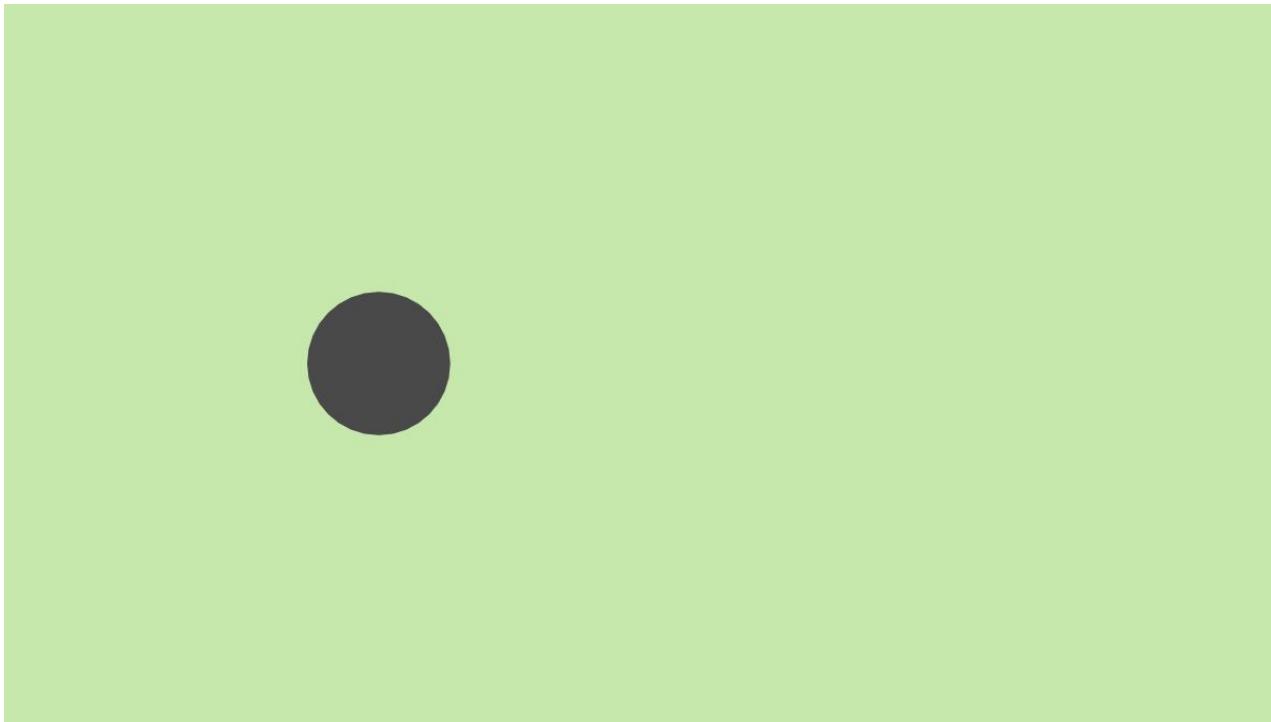
Slide 42 Copy 44

and Monitoring ■

Slide 42 Copy 46



Slide 42 Copy 39



Slide 42 Copy 45

Financial Analytics

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Record Keeping

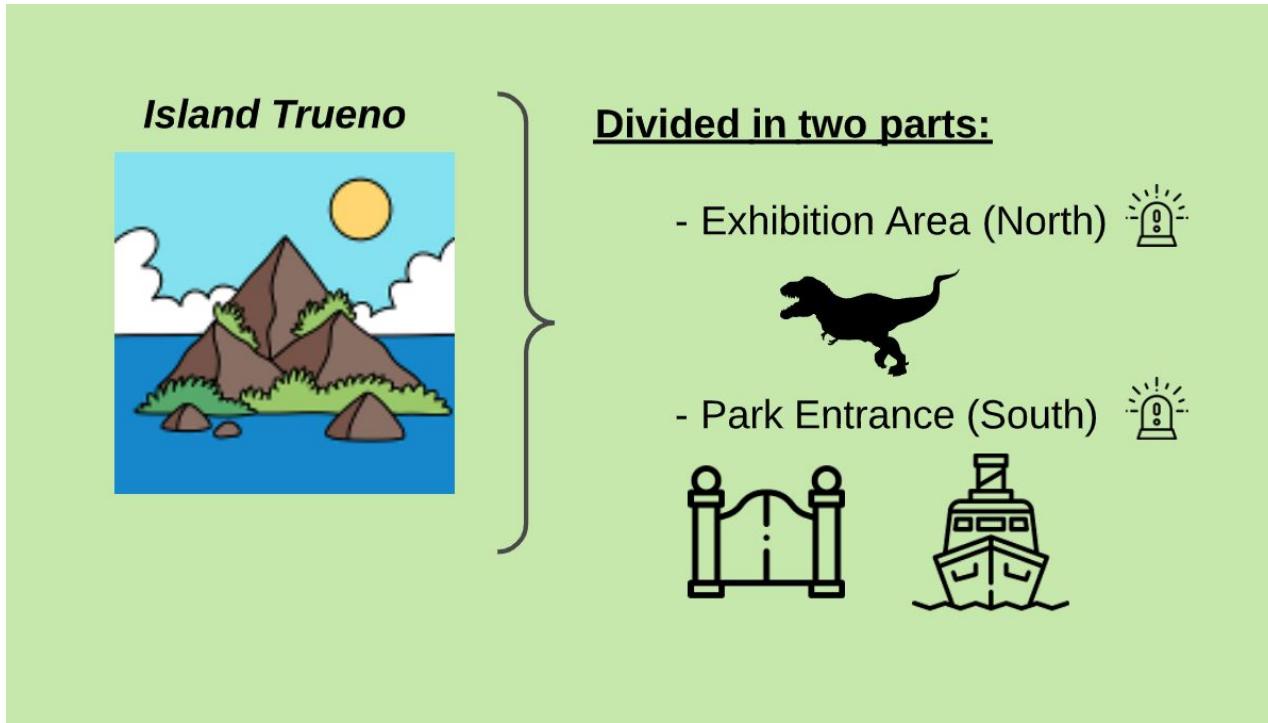
Statistics

Trend Recognition



Constraints

Slide 43



Slide 44

Transport of Guest



- Will transport the guests safely to the Exhibit area.



- Check the Guest Tokens.



- Cars will have the next sensors:



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Park Entrance



+



- Kiosk will provide a Token per Guest.



- Guest will reach the Exhibition area with self-driving cars.



x 10

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Exhibition Area



- There will be one T-Rex.



- It will be locked by electric fences.



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Emergency Protocol



- Cars available in the Exhibition Area.



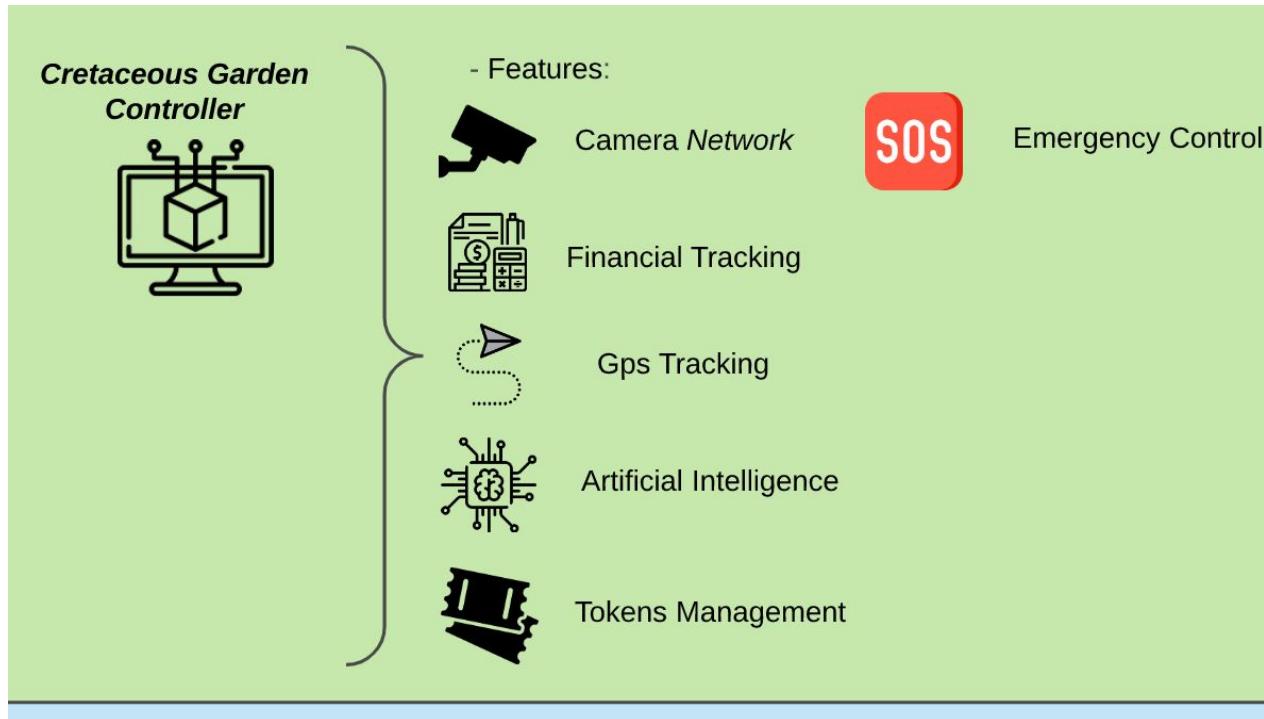
- The System of Alarms will be activated.



- Cars will drive to the Entrance of the park.



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Slide 49 Copy 1

Acknowledgments

All icons and graphics have been used from
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FREEPIK

GOOD WARE

EUCALYP

SMASHICONS

ICONIXAR

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Questions?