

# NDP [TIME PHARAOHS]: AN APP TO PREVENT JAYWALKING (A DIRTY PROTOTYPE)

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# PART A: STORYBOARD

1. Our aim. . . . . [Slide 3](#)
2. How we came up with this project. . . . [Slide 4](#)
3. Our reason. . . . . [Slide 5](#)
4. Statistics. . . . . [Slide 6-8](#)



# AIM

- An App to help **prevent** elderly 60 years old and above from **jaywalking**.



# HOW WE CAME UP WITH THIS PROJECT:

- One of us witnessed the elderly jaywalking on several occasions and suggested this project to help prevent the elderly from jaywalking for their own safety.
- It is important that we help the elderly as their numbers are increasing (Singapore is an ageing society).

# REASON

**Jaywalking increase the risk of being struck by a vehicle, especially for the elderly as they are less agile and more fragile.**



# STATISTICS



From our research and analysis, we found that there is a growing trend that more than half of the traffic accident fatalities involving the elderly is due to jaywalking.

## **Quote from Traffic Police Report for Year 2022:**

*“Elderly pedestrians continue to account for a disproportionate number of road traffic accidents resulting in injuries or death. Fatal accidents involving elderly pedestrians accounted for about 70% of fatal accidents involving pedestrians in 2022.”*

# STATISTICS

## ANNUAL ROAD TRAFFIC SITUATION 2022



Traffic accidents resulting in fatalities and injuries increased slightly, partly due to the increase in traffic volume with the resumption of more activities in 2022.

However, the number of traffic accidents and violations remained generally lower than the pre-COVID-19 period.



ACCIDENTS RESULTING  
IN FATALITIES

↑ 4.0%

2021 100  
2022 104



FATALITIES

↑ 0.9%

2021 107  
2022 108



ACCIDENTS RESULTING  
IN INJURIES

↑ 13.8%

2021 5,939  
2022 6,760



INJURED PERSONS

↑ 14.0%

2021 7,240  
2022 8,252

### Elderly pedestrians and motorcyclists remain vulnerable

They account for a disproportionate number of traffic accidents resulting in injuries or death

Jaywalking is the cause for 73.9% of all fatal accidents involving elderly pedestrians



Accidents involving  
elderly pedestrians

↑ 14.6%

2021 205  
2022 235

Fatalities among  
elderly pedestrians

↑ 53.3%

2021 15  
2022 23

Injured persons among  
elderly pedestrians

↑ 10.4%

2021 193  
2022 213

Motorcyclists or pillion riders were involved in 56.1% of overall traffic accidents, and made up 43.5% of traffic fatalities



Accidents involving  
motorcyclists

↑ 11.3%

2021 3,464  
2022 3,854

Fatalities among  
motorcyclists or  
pillion riders

↓ 6.0%

2021 50  
2022 47

Injured persons  
among motorcyclists  
or pillion riders

↑ 12.8%

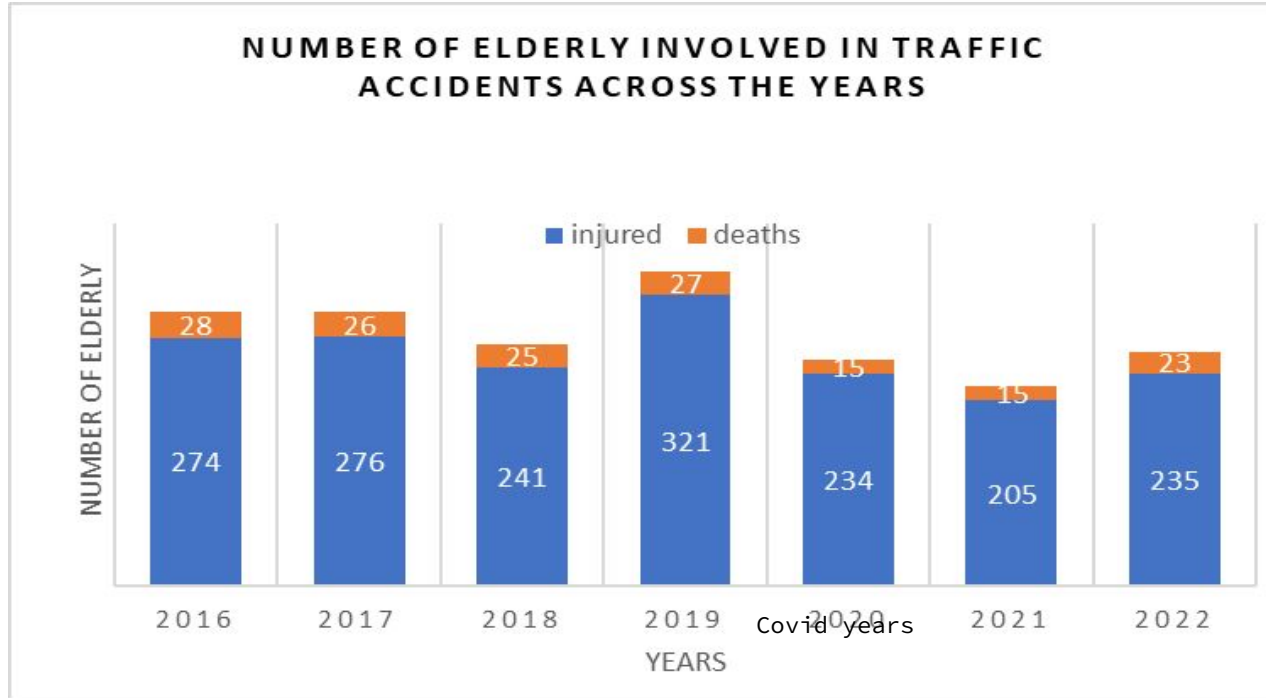
2021 3,693  
2022 4,165



SINGAPORE  
POLICE FORCE  
SAFEGUARDING EVERY DAY



# STATISTICS



From

- <https://www.channelnewsasia.com/singapore/more-traffic-accidents-involving-elderly-pedestrians-2022-fatalities-spf-police-traffic-police-3276866#:~:text=Fatal%20accidents%20involving%20elderly%20pedestrians.50%20per%20cent%20in%202021.>



# PART B: THE APP ITSELF

We will include the following segments:

1. The functions of our app. . . . . [Slide 10](#)
2. The user interface. . . . . [Slide 11-14](#)
3. User case scenarios . . . . . [Slide 15-16](#)

# FUNCTIONS OF OUR APP:

1. It can remind the elderly not to jaywalk by sending vibrations and/or sound notifications based on the elderly's preference. [[Reminder/ Notifications](#)]
2. It can detect the nearest road crossing from the app-user, linked to Google Maps. [[Location Tracking](#)]
3. (\*) It has a point/reward system where every 50 points earned by the user can exchange for a dollar.
4. It can enable NOK or caregiver profiles to alert the elderly's family members when the elderly is jaywalking.

(\*) How to earn points?

- User has to heed or obey the app's Reminders/ Notifications when he/she tries to jaywalk. User will earn 5 points if he/she heeds the Reminder; and lose 5 points if he/she ignores the Reminder and jaywalks.
- User will be given 50 points at the start of every month as an encouragement.

# USER INTERFACE:

## 1. Menu

- Settings
- Maps
- How to use
- Contacts
- Points

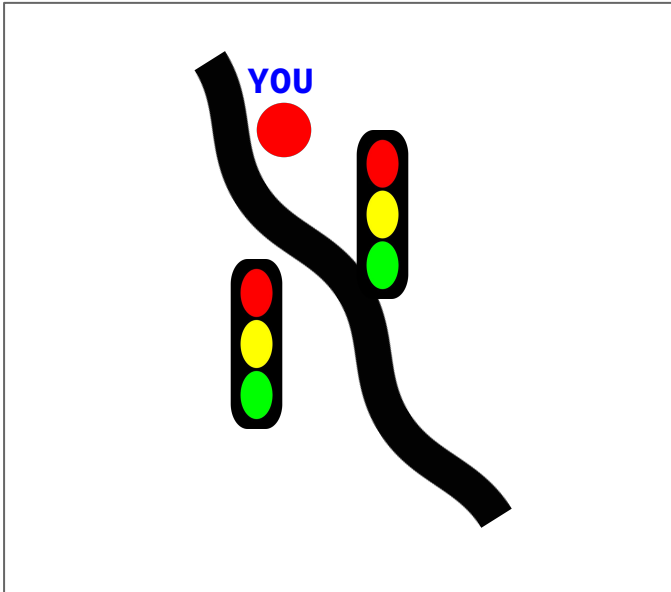
## 2. Settings

- Language
- Font/Text Size
- Customise Reminder Style:
  - Sounds
  - Vibration
  - Recorded Voice (of loved ones)
  - Notification Frequency (repeat in intervals of 20 seconds? or No repeat}
- Customise Volume

# USER INTERFACE:

## 3. Map

This map shows where the user is. It also shows where the nearest crossing is.



## 4. How to use

- Show a tutorial of how to use this app
- Show a tutorial of how to change its settings
- How to add 1 or 2 of your closest contact.

# USER INTERFACE

## 5. Contacts/Profiles

- Family [NOK]
  - Spouse
  - Daughter
  - Son
  - Sibling
- Caregiver
  - Social worker
  - Guardian
- Friend

## 6. Points

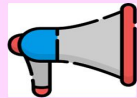
An Example:

- Start of using app: 50
- Today: 50
- This month: 200
- Money redeemable: \$4 NTUC voucher

# USER INTERFACE



Hi, Mrs Lee



**Please do not jaywalk**

**Directions to nearest crossing:**

**1<sup>st</sup> contact:**  
**Son**

**Points I have:**  
**200**

**Log History**

# USER CASE SCENARIOS

- If an elderly decides to jaywalk, the app will detect this when she/he takes her/his first step on the road and send her/him a text message along with a voice recording reminding the elderly not to jaywalk. [[Reminder](#)]
- If the elderly follows/obeys the reminder, the app will add 5 points earned.
- If the elderly does not follow the reminder, the app will then deduct 5 points; and send out a notification to the elderly's guardian/caregiver. The incident will be logged in the app's Profile History. [[Incident Report/ Log](#)]

# USER CASE SCENARIOS

- If the elderly earns 50 points, then she/he will be able to redeem it for one dollar. [[Incentive/ Reward system](#)]
- If the elderly has friends/family members/caregivers who want to track if the elderly is jaywalking, then the elderly can add them on their phone and the friends/family members/caregivers will be able to view the elderly's exact location and how many times they jaywalked in the past. [[Log/ Profile History](#)]



THANK YOU!