Safe System for Universities

Module 4 Tutorial

Transformation

Revision	Date	By	Revisions
1.0	01 Jul 2020	C Stokes	First release

Introduction:

Transformation is about creating a fundamental change in the way we approach road safety. Creating a transformation strategy means setting a target to reach zero serious and fatal injuries, and undertaking a system's approach to achieving this target. Zero 2050 is the State of Victoria's approach to transformation but is not necessarily the only way to achieve transformation. However, the steps undertaken in the Zero 2050 strategy form a logical sequence of items that can be covered in order to achieve a target of zero harm. In this tutorial, you will assume the role of instigating a transformation strategy and use similar steps to achieve your aims.

Instructions:

Students should review Module 4, Snippet 3, *Transformation: part 1* and Snippet 4, *Transformation: part 2* of Safe System for Universities before undertaking this activity.

Form a group of 2-4 students. As a group, review the case study *Lance Creek Roundabout Safe System Assessment*. As a group, discuss the following scenario and answer the following questions while considering the goal of achieving a successful transformation to zero deaths and serious injuries:

Background information

As a road safety engineer for a local government, you have been tasked with helping to develop a transformation strategy to achieve zero deaths and serious injuries on the local government network within the next ten years. You will look specifically at intersections along the local government network and form a strategy for reaching zero deaths and serious injuries at these intersections.

Road network information

The local government road network covers a total of 240 km of urban roads. There are 70 intersections along the local network. There are an additional 30 intersections with state-controlled roads, though these will be considered in a separate strategy. Over the past ten years, there were 40 fatal and serious injuries sustained in 40 separate crashes along the local network. Twenty of these fatal and serious injury crashes occurred midblock while the remaining 20 occurred at intersections. Further information regarding the intersections along the local government network is provided in Table 1.

Table 1: Information about intersections in the local government area.

Intersection type	Number	Speed limit	Fatal and serious injury crashes (by type)			
			Intersection	Single motor vehicle	Vehicle hit bicyclist	Vehicle hit pedestrian
Total number	70	Varies	10	0	4	6
Stop/give way controlled	*25*	*40 km/h*	*1*	*0*	*0*	*1*
Stop/give way controlled	*20*	*50 km/h*	*4*	*0*	*1*	*3*
*Signalised**	*5*	*60 km/h*	*5*	*0*	*2*	*2*
Roundabout	*20*	*50 km/h*	*0*	*0*	*1*	*0*

*All signalised intersections allow uncontrolled (filter) right and left turns during the green signal phase.

In developing a transformation strategy for intersections in the local government area, you have identified infrastructure treatments that could be used to transform the network. The details of each treatment are provided in Table 2.

Table 2: Intersection treatments for each intersection type.

Intersection type	Treatment type	Crash reduction*
Stop/give way controlled in 40 km/h zone	Install raised safety platform	64%
Stop/give way controlled in 50 km/h zone	Install roundabout and reduce speed limit to 40 km/h	79%
Signalised	Install raised safety platform and control all left and right turns	46%
Roundabout	Reduce speed limit to 40 km/h	40%

*Proportion of fatal and serious injury crashes that the treatment will prevent.

Questions:

1. Firstly, you will need to map the current state of the network. How many intersections are there and how many are already well-aligned to the Safe System objective of harm elimination?
2. Next, map the future of the local government network once all intersections are upgraded with their respective infrastructure treatments. Using the number of fatal and serious injury crashes that occurred over the previous 10 years as a guide, how many fatal and serious injury crashes would you expect to occur after all the intersections have been treated?
3. Using each treatment type as a key performance indicator (KPI), graph the progression of the transformation strategy over the next ten years by plotting time on the x-axis and each KPI on the y-axis. For example, a KPI could be the proportion of signalised intersections that have had raised safety platforms installed and all left and right turns controlled.
4. Do you expect that infrastructure improvements alone will be sufficient to achieve zero fatal and serious injuries at intersections along the local government network? If not, what other actions may be required to achieve this? Think about each pillar of the Safe System and the actions that could be taken that are within and outside of your control.
5. Do you think achieving zero fatal and serious injuries on the local government network is achievable within the next 10 years? If not, what gaps in our knowledge/ability would need to be addressed in order to achieve this?