

CASE STUDY RAP PARTNERSHIPS SAVING LIVES Central Cross Island Road, Samoa

**STAR RATING
FOR DESIGN**
Improving safety of roads at the design phase

Road safety improved at the design phase

USD\$40 million ADB investment - a first for Samoa

3-star or better road length increased from 23% to 73%

Potential 17 people saved with benefit of \$3 for every \$1

Safer more efficient road that is climate and disaster resilient.

Star Rating for Design enabled improvements **prior to construction**, increasing the 3-star road length for vehicle occupants from 23% to 73%.

- The Central Cross Island Road (CCIR) is one of Samoa's most critical arterials. It stretches 22 km with 20km upgrade providing access to 8 villiages, 7,000 residents and hundreds of businesses between the capital, Apia, and the island's south. It is an important alternative route for cyclone evacuation and post-disaster relief.
- The corridor was badly damaged in Tropical Cyclone Evan. It is narrow and lacks pedestrian facilities in semi-urban areas to protect commuters and pedestrians, including school and college students, walking at the road side. The road alignment in hilly sections is unsafe, particularly in wet conditions.
- The existing 2-lane narrow carriageway (4-5m wide) carries up to 7,116 vehicles per day along the first 4.2km and 1,347 vehicles per day for the remaining road section.

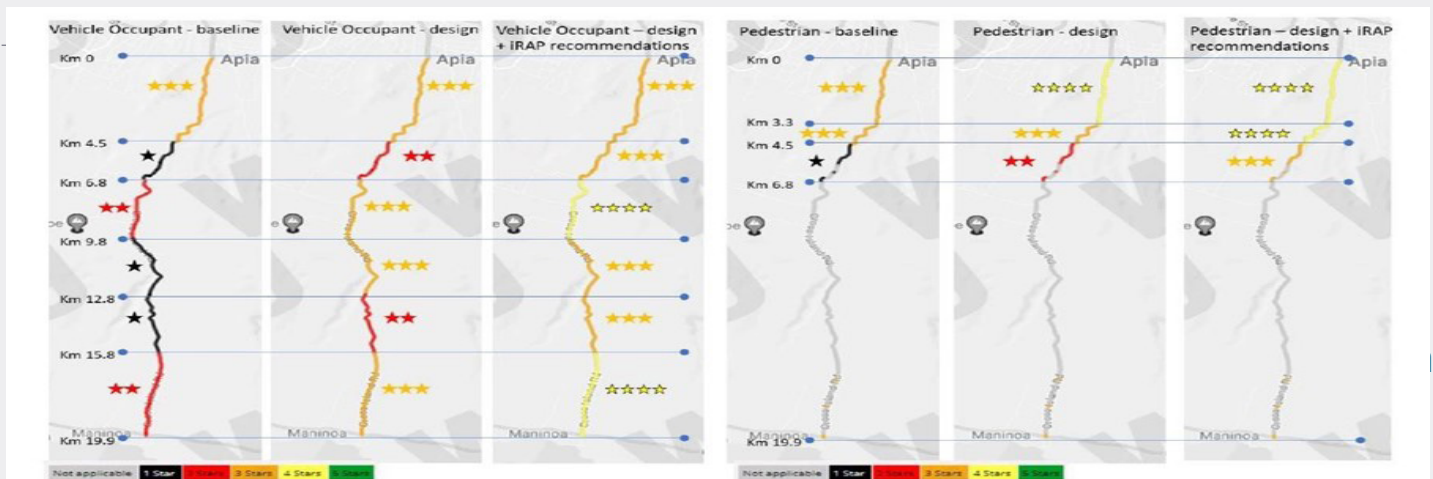
ADB INVESTMENT WELCOMED

- A USD\$40 million grant upgrade project is underway, funded by Asian Development Bank (ADB), to make the road safer, more efficient and climate and disaster resilient. The project will upgrade the CCIR by building 8.4 km of footpaths and establishing 113 streetlights, 19 safe bus stops, and 12 pedestrian crossings.

SAFER BY DESIGN

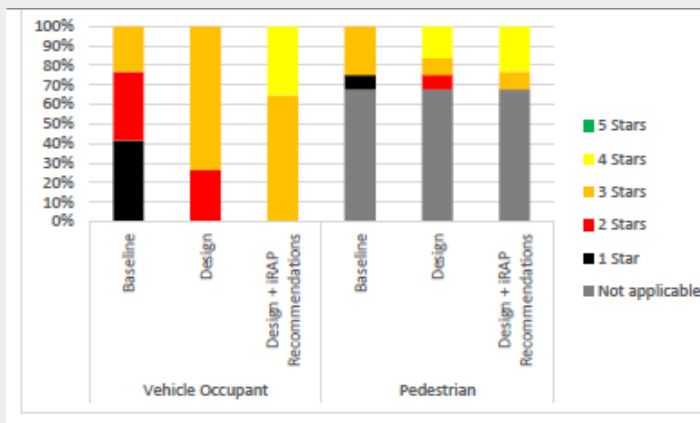
- To maximise the safety of the investment before construction, the road designs, prepared for the Land Transport Authority (LTA) by SMEC in association with MMSM Ltd, were Star Rated by iRAP.
- Recommendations were made to improve the proposed designs to achieve a 3-star or better safety rating. The Safer Road Investment Plan proposed cost-effective countermeasures to further reduce risk including the removal of roadside hazards, enhanced delineation at curves and improved pedestrian facilities at identified locations.
- The Star Rating for Design assessment showed the highest risk (1- and 2-star) roads could be cost-effectively eliminated, bringing the new road to 3-stars or better for the entire length of the corridor for vehicle occupants and pedestrians (where present).

Star Rating maps comparing baseline, design and iRAP recommendations





The Star Ratings for baseline, current design and design plus identified cost-effective treatments



- The road length achieving a 3-star or better rating for pedestrians (where present) remains the same at 77%, however the 1-star section has been successfully eliminated.

The SRIP prepared for the proposed road design indicates:

	SRIP Plan
Cost of implementing recommended treatments	USD\$0.3 million
Additional fatalities and injuries prevented	17
Safety benefit	USD\$0.9 million
Benefit to cost ratio	3

By improving the road design prior to construction, an additional 17 people can be saved with a benefit of \$3 for every \$1 spent.

“The Government of Samoa is grateful for ADB’s assistance to upgrade and climate-proof the Central Cross Island Road that provides shorter travelling time for all motorists, a safe inland route for first responders in the event of a natural disaster, and ultimately provide a boost for tourism, agriculture, and trade in Samoa.” - Land Transport Authority CEO Galumalemana Ta’atialeoititi Agnes Tutuvalu-Schwalger.

SAVING LIVES INTO THE FUTURE

- Approximately 30 people die each year on Samoa’s roads (WHO 2015).
- This project supports the Samoan Government’s work towards achieving the UN Target of > 75% of travel on 3 star or better roads by 2030 and to reduce the number of deaths and serious injuries on national roads.
- According to iRAP’s Big Data tool, achieving UN Targets 3 and 4 for >75% of travel on 3-star or better roads for all road users in Samoa by 2030 stands to save 2,640 lives and serious injuries each year with an economic benefit of USD\$1.75 billion.

ABOUT STAR RATING FOR DESIGN

- Star Rating for Design is a tool and evidence based programme of applications informed by the iRAP Methodology which enable the simple and objective measure, and improvement, of the level of road safety ‘built in’ to a road design for vehicle occupants, motor cyclists, pedestrians and cyclists, before the implementation of civil works.



FOR MORE INFORMATION

- iRAP Star Rating for Design - for the free web app tool and training, recommended 6-stage plan for organisations wanting to build SR4D capability and how to include Star Ratings in the tender process, visit <https://irap.org/3-star-or-better/#mytabs3>
- ADB Central Cross Island Road Upgrading Project - to track project progress, visit <https://www.adb.org/projects/51268-001/main#project-overview>



A world free of high risk roads: #3StarorBetter

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The International Road Assessment Programme is a global registered charity. iRAP partners with automobile associations, governments, funding agencies, research institutes and other non-government organisations in more than 100 countries to provide the tools and training to make roads safe. **Registered Charity Number:** 1140357 **Registered Office:** 60 Trafalgar Square, London, WC2N 5DS, United Kingdom **Published:** July 2021