Decline Warning Lights System

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Background

- Interaction between light and heavy vehicles is recognised as a Principal Hazard.
- Limited visibility underground increases vehicle interaction hazards.
- Our innovation seeks to control light and heavy vehicle interaction.

The Issue

- Cannington has a variety of controls to reduce risks from vehicle interaction - but all have limitations.
- Controls are prone to human error.
- Cannington's layout does not allow elimination of vehicle interaction.
- Changes to the traffic plan didn't deliver an acceptable level of risk.
- A better system was needed.

The Solution

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The Solution—How It Works

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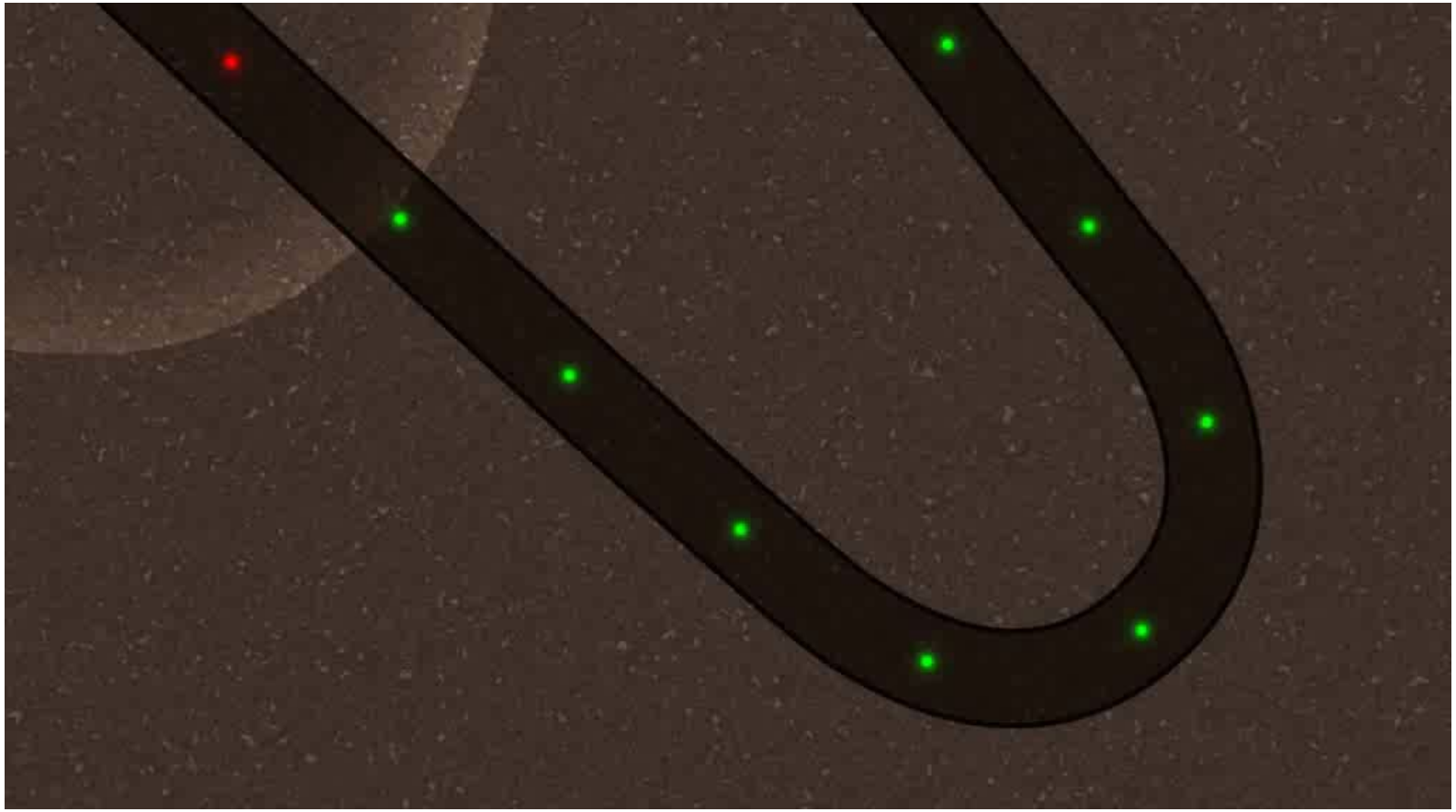

The Solution—Development

- The Decline Warning Light System was built using a robust wireless link.
- The system uses omni-directional transmitters and wireless frequencies to control the red or green lights switching on or off.
- It delivers an engineering control for a principal hazard.

The Solution—Key Milestones

- Research and development commenced in June 2010.
- A prototype was developed and a four month trial began soon after.
- The system was well received by the workforce.
- By Q3 FY12 a production version of the system will be fully implemented in the northern mining zone of Cannington Mine.

Benefits/ Effects

- The Decline Warning Lights System has been well received by workforce.
- The system has potential to:
  - minimise and prevent unnecessary vehicle interaction
  - support other collision avoidance measures
  - reduce the risk of injury
  - support and enhance the site traffic management plan.
- Installation time is short and cost is relatively low compared to the benefits of the system.

Costs

- Initial system costs are expected to be approximately $335 000 to install in the northern zone of Cannington Mine.

Transferability

- Easily incorporated into other underground mines.
- Application to install in surface operations, where limited visibility or manoeuvrability is present in areas of vehicle and human interaction.

Innovation

- Extensive research did not find a system to suit the mine's needs.
- The team spoke to site personnel to find out why other systems weren't accepted.
- The system was an original idea and creation developed by the Cannington team.

Discussion and Questions