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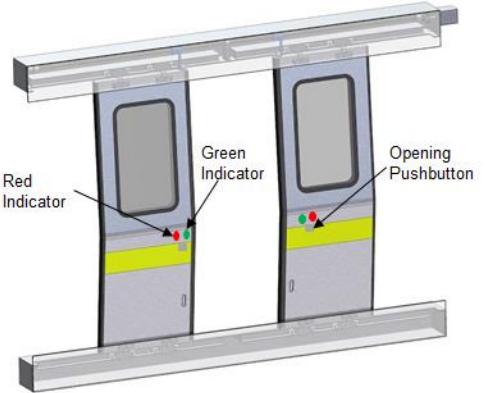
## Project Title: Metro Sliding Doors

### Objective

To design automated sliding metro doors with a safety locking mechanism.

### Project Description

- The opening gate system consists of two sliding doors.
- Each door is operated by a pneumatic cylinder.
- The two pneumatic cylinders are mounted on a compartment above the doors to provide the mechanical motion.
- The pistons of the cylinders control a mechanical linkage that drives the sliding mechanism.
- Both cylinders operate in a horizontal direction.
- Cylinder extension closes the doors, while cylinder retraction opens them.
- A third cylinder is used to control the safety locking mechanism of the sliding doors.
- All system components (actuators, cylinders, reed switch sensors, etc.) should be identified and integrated.



### Project Operation

- Door opening and closing are controlled either from the train control panel located in the driver's cabin or via individual door pushbuttons.
- Each sliding door is equipped with two indicators:
  - Green indicates that the system is active and ready for opening.
  - Red indicates that the door opening system is deactivated.
- When the activation button on the train control panel is pressed, the safety lock is disengaged.
- Each sliding door can be opened from the Master panel (in the driver's cabin) or from the individual Slave panel (located at each door).
- Closing of the sliding doors can only be initiated from the Master panel.