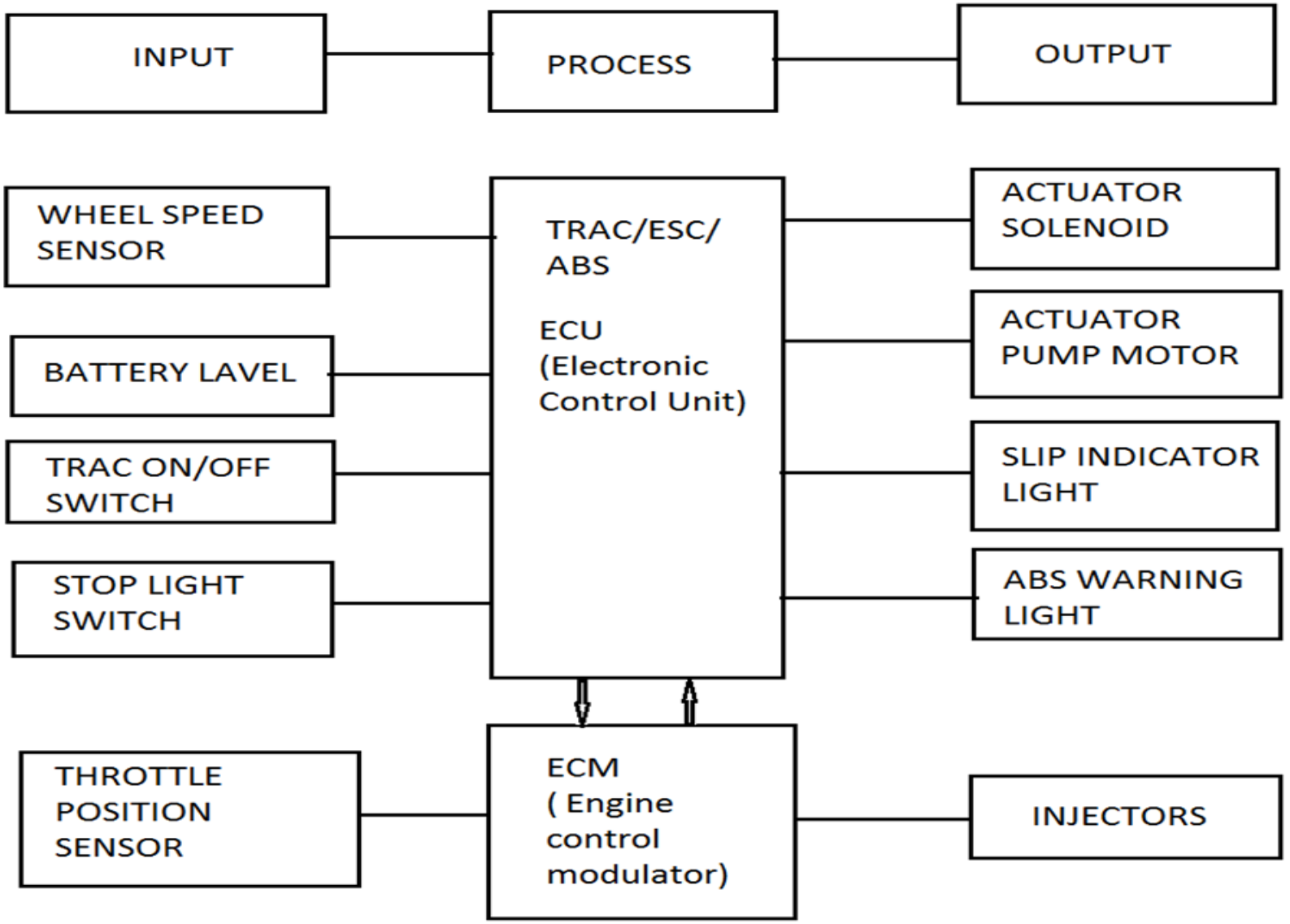
TRACTION CONTROL SYSTEM

INTRODUCTION

- **Traction** is the maximum frictional force that can be produced between surfaces without slipping.
- **Traction control TRAC** helps drivers to avoid crashes by reducing the danger of skidding or losing control
- The TRAC includes both mechanical and electronic components in systems

BLOCK DIAGRAM OF TRAC

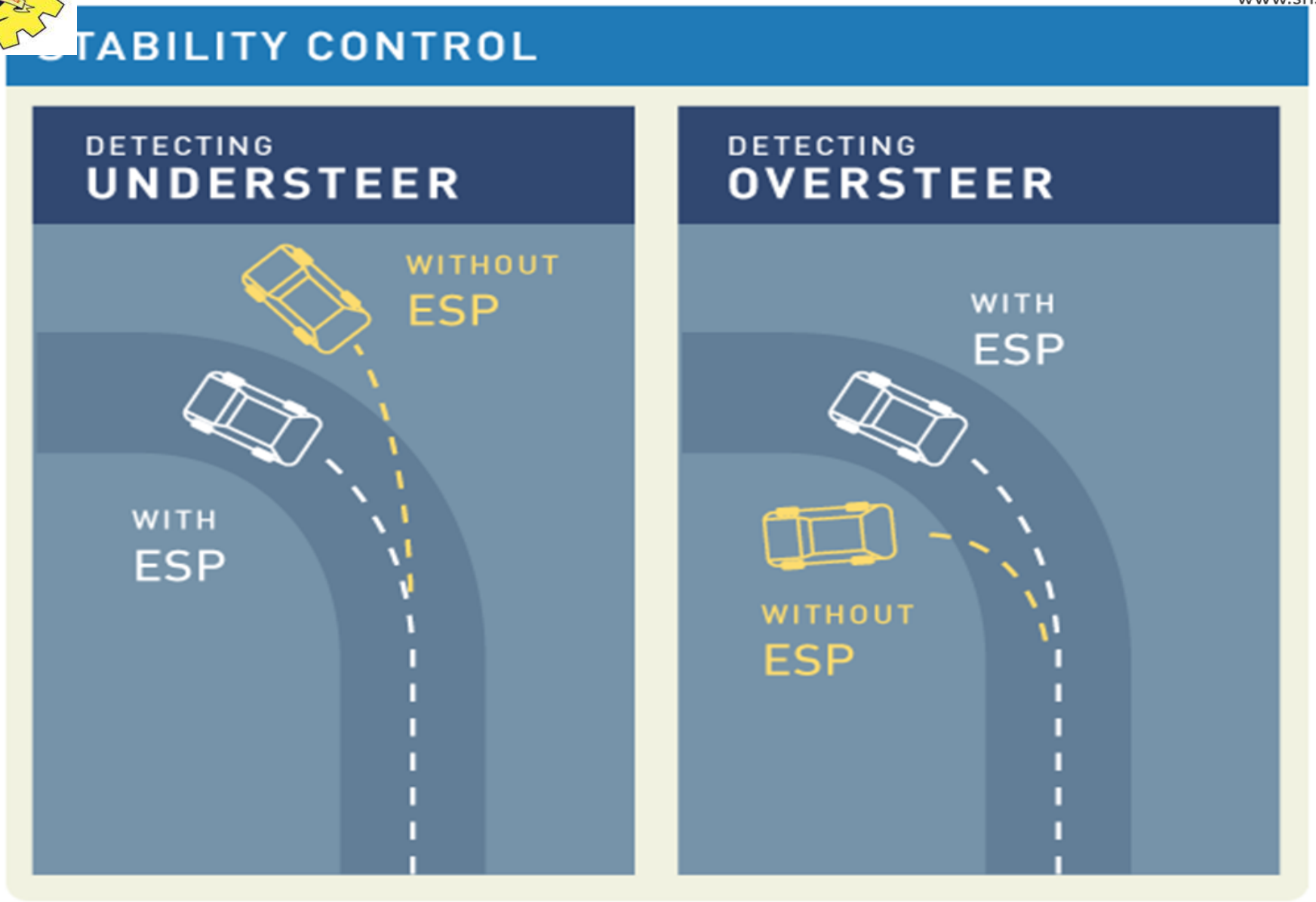


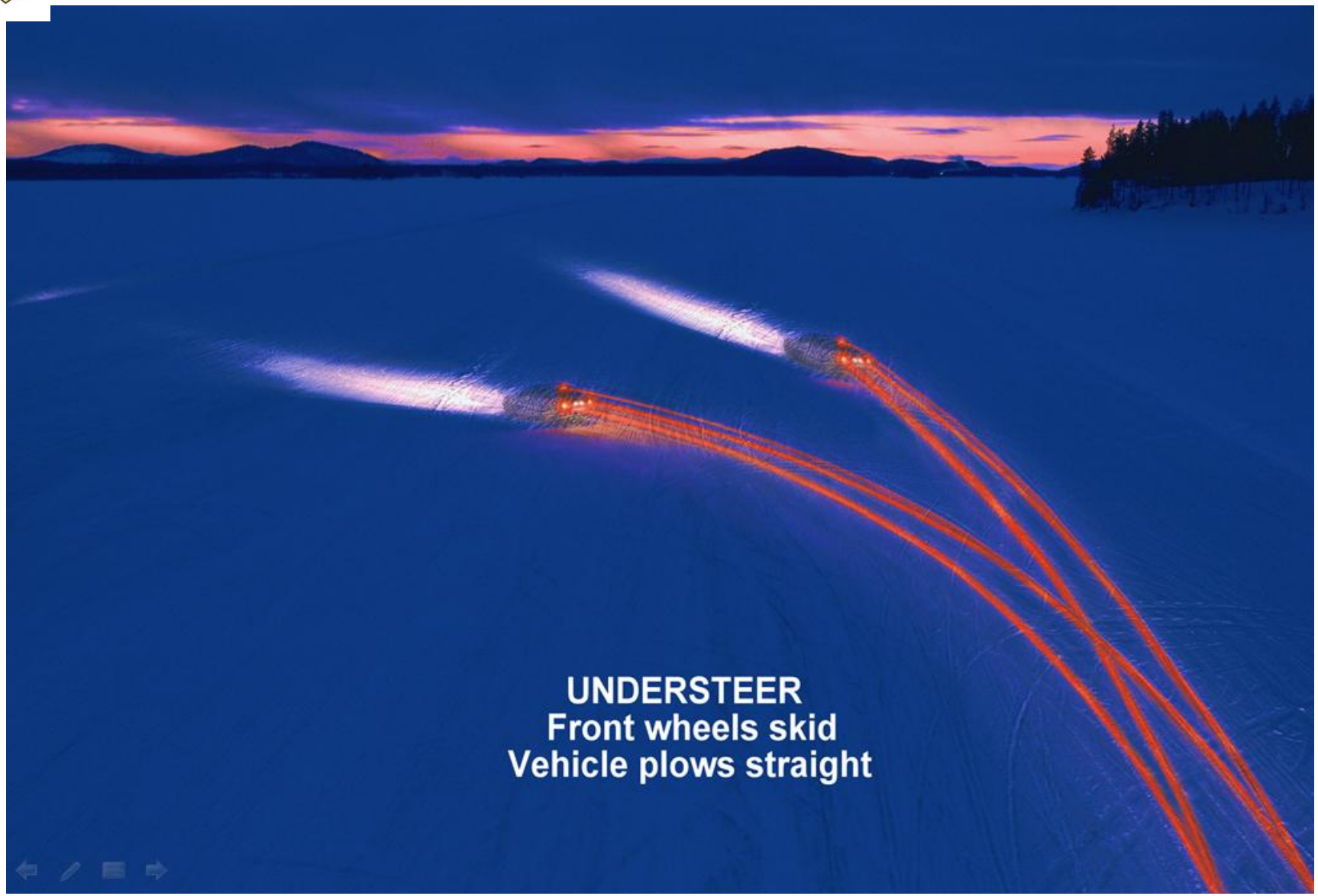
The safety devices in car

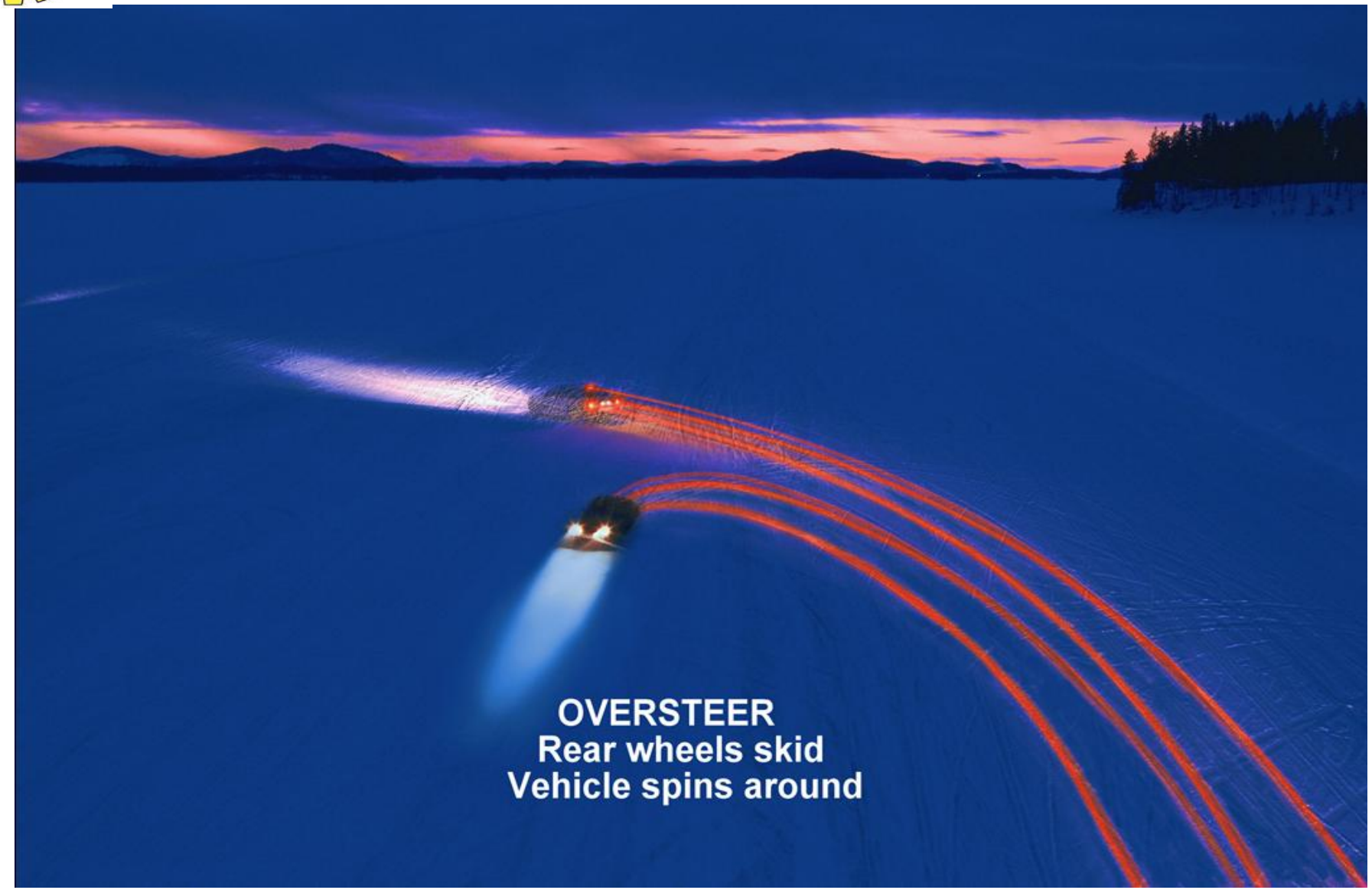
- Electronic Stability control ESP / Traction control TRAC
- Air Bags
- Anti lock Braking system
- Seat belts

TRAC TURND OFF

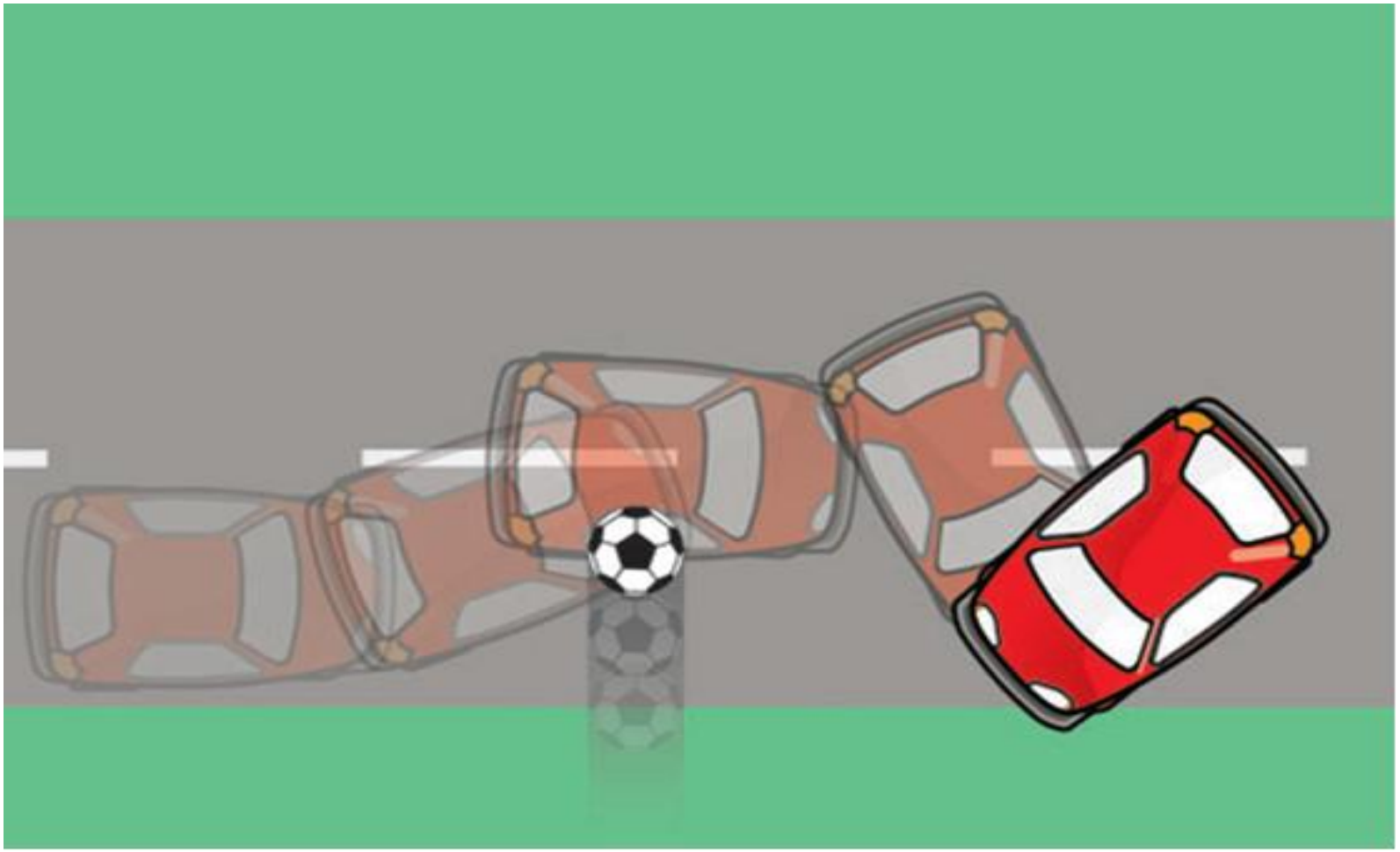
TRAC TURND ON


TABILITY CONTROL
DETECTING
UNDERSTEER
WITHOUT
ESP
WITH
ESP
DETECTING
OVERSTEER
WITH
ESP
WITHOUT
ESP

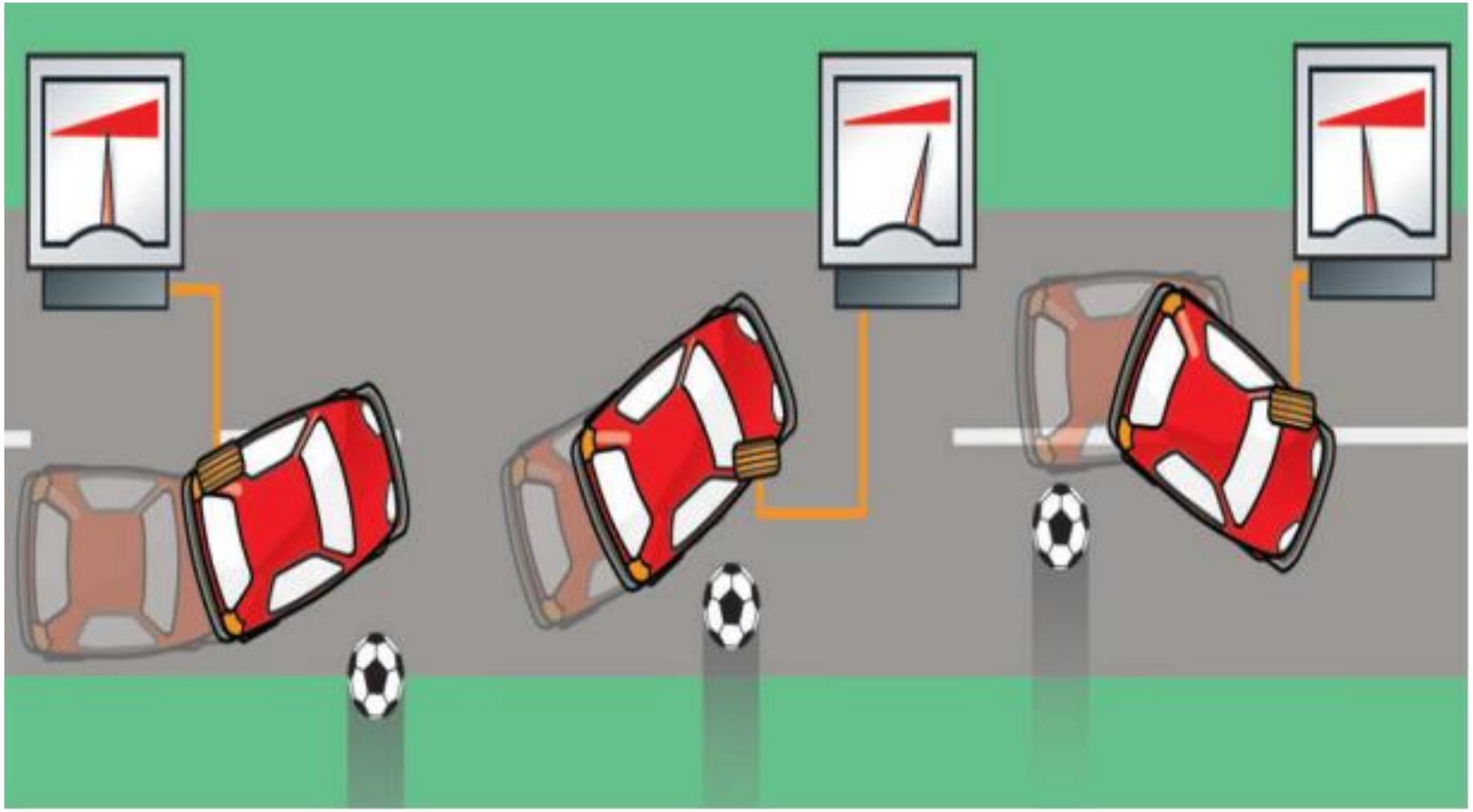

UNDERSTEER
Front wheels skid
Vehicle plows straight


OVERSTEER
Rear wheels skid
Vehicle spins around

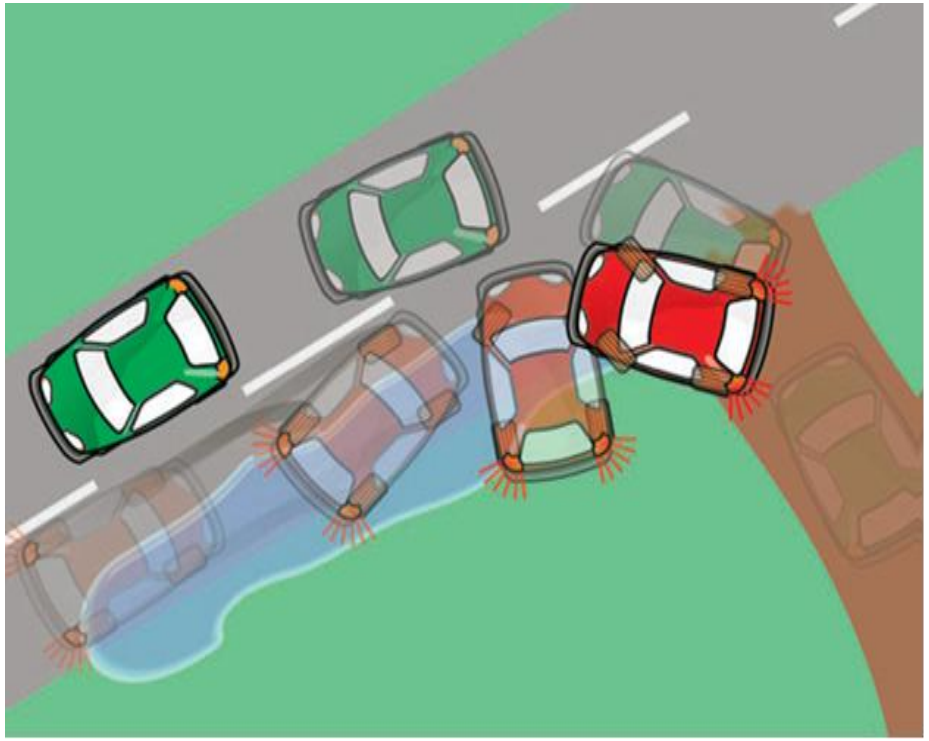
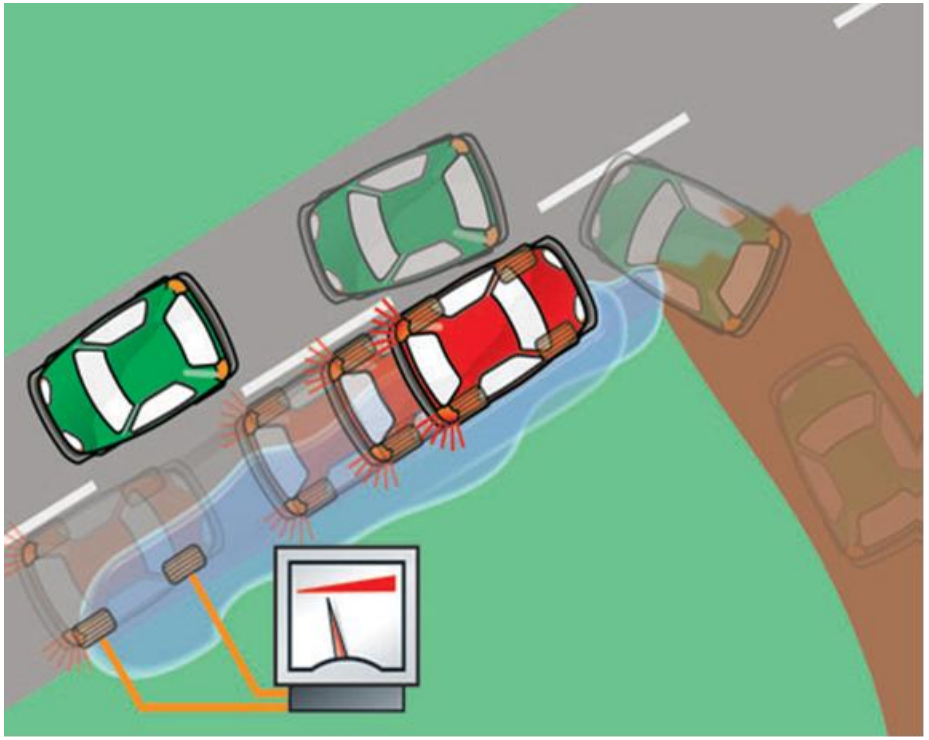
WHEN TRAC IS OFF



WHEN TRAC IS ON



ANTI–LOCK BRAKE SYSTEM ABS

WITHOUT ABS	WITH ABS
	

Advantages of Traction Control:

1. Avoiding accidents
2. Sudden twists and turns
3. Slippage of the wheels
4. Stopping distances
5. Driving a powerful car
6. Most gripping

Disadvantages of Traction Control

1. wear on brake components.
2. Allows 10 % wheel slip.
3. Its banned in F1 racing

Applications

1. Safety

2. In road cars

4. In race cars

3. In motorcycles

4. In off road vehicles