Adaptive Driving Beam (ADB) Requirements

Requirements:
- Adjust headlight beam's shape and direction to maximize visibility for driver and minimize interference for other drivers
- When no other drivers detected, use high beams to fully illuminate road
- Point beam towards the direction of the road
- Uses a combination of cameras and sensors to detect other vehicles, road signs, and environmental conditions to adjust system accordingly
- Displays status of system to user, such as if the system is active, the adjustments being made by the system, or if the user must intervene

Invariants:
- Robust Cybersecurity measures to protect the system from unauthorized access
- System must revert to low beam mode if malfunction is detected
- User can disable system at any time

Questions for customer:
- How does the system determine what is sensitive to and should be protected from the high beam?
  - driver, pedestrian, animal?
- What steps does the user take to deactivate the system if necessary?
- What forms of adjustments does the system allow from the user?
  - Minimum/Maximum beam strength?
  - Adjustment alerts?
- Where will the user receive HMI alerts from?