1. Context diagram for instrument cluster ECU (environment model):

- System under Consideration (SuC) = Instrument Cluster Electronic Control Unit (IC_ECU)
- Environment under Consideration (EuC) = Car & Users + Physical Environment
- Both SuC and EuC are systems and can be described by their architecture in terms of logical components and relevant communication between those.

The system architecture of the SuC can be (partially)
- a) prescribed in terms of design constraints
- b) described in terms of a design specification or normally left out, corresponding to how far this design specification was already elaborated as part of possibly previous IC_ECU development iterations.

The system architecture of the EuC is a result of context or domain analysis, particularly of environment modeling. UML component diagrams can be used as context diagrams too, allowing a more detailed description than usual (informal) context diagrams would do.

Notizen zum Übungsblatt 5
Vorlesung "Requirements Engineering" WS 2010/11 Mario Gleirscher, Informatik IV, TU München
Introducing a conceptual component such as "Vehicle & Users" allows for structured modeling of aspects of the EuC such as states and actions of physical objects. Latter may be relevant for specifying various properties of the Instrument Cluster and its ECU. For instance, neither may it be considered as appropriate to model the action "enterCar" as part of the interface of the Vehicle component nor as an action solely conducted by the Driver or Co-Driver without interaction with the Vehicle. For some reason "enterCar" could be treated as non-atomic, i.e. be decomposed into subactions taken by the User (e.g. move(x,y), sitDown(y)) and more tangible interactions with the Vehicle (e.g. pullHandle, openDoor(z), closeDoor(y)). Of course that would make our model much more complicated as well as increase the number of states and properties to investigate.