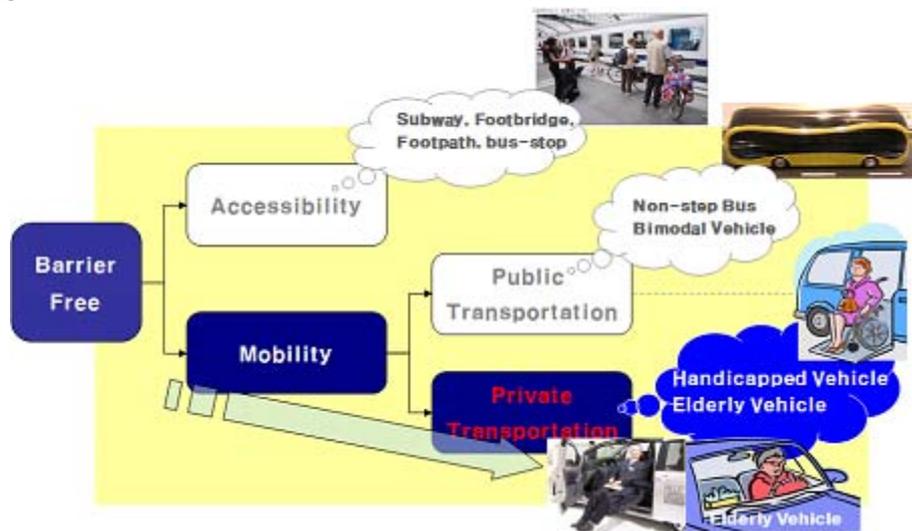


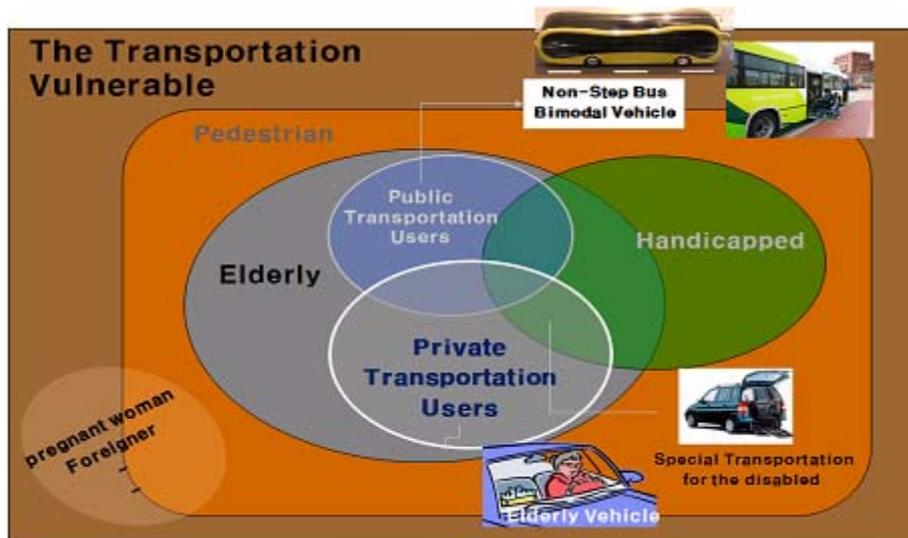
Elderly Friendly Vehicle Project : Safety and Convenience

Objective

Because of the global trend of the societal aging with more than 20% of elderly population, auto manufactures in the advanced nations such as US and Japan concentrate their endeavors on the development of the technologies for the elderly vehicle (elderly-friendly vehicle). The forecast in reaching the aging and highly aging domestic societies is also 2018 and 2026, respectively. Therefore, Korean government and domestic auto makers are putting their enormous efforts to develop key technologies for the elderly vehicle. This research, coupled with the CTIP's 1st stage basic plan for the comfort improvement of the transportation with vulnerable people, preparing the aging society, consists of the following 5 categories that will provide a safe and convenient transportation to elderly population.

- 1) Improvement of the transportational safety for the elderly and the study for technical prescriptions.
- 2) Development of the design technology for convenient driving and comfort riding devices by characterizing the driving features of the elderly and by utilizing the associated analytical human body model.
- 3) Development of crash injury criteria, analytical human body model, and safety restraint system for the elderly.
- 4) Development of the improved night frontal vision system for the elderly
- 5) Study on institutional system for the elderly vehicle and economical analysis

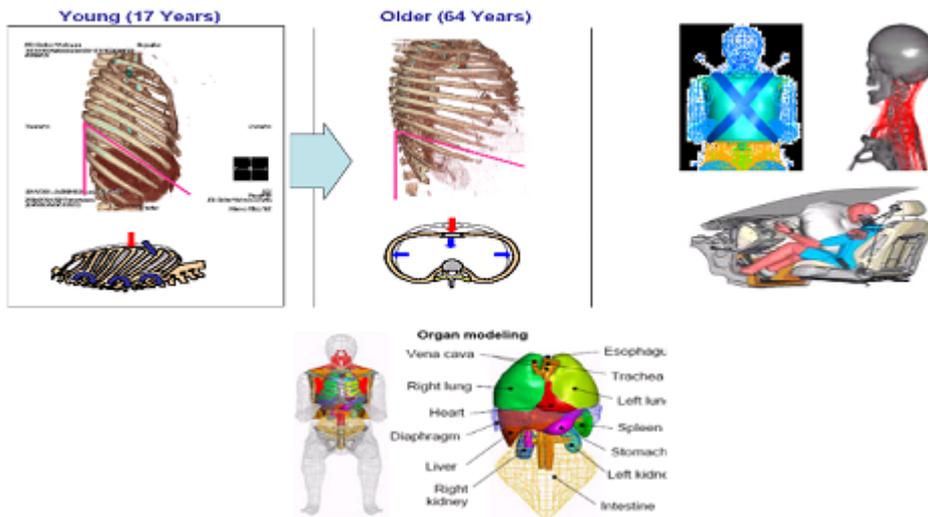




Task

Improvement of the transportational safety for the elderly and the study for technical prescriptions.

- Assessment and technical prescriptions for the safety improvement of the special ingress and egress devices that enhance the use of the elderly.
 - The research and development for the supporting system with a ministerial policy.
- 1) Development of the design technology for convenient driving and comfort riding devices by characterizing the driving features of the elderly and by utilizing the associated analytical human body model.
 - Research and development of automobile convenience equipment technology : development of digital human model for elderly drivers
 - Improvement of the maneuverability of the instrumental panel design for the enhancement of the elderly driving comfort and the development of ingress and egress devices
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 - 2) Development of crash injury criteria, analytical human body model, and safety restraint system for the elderly.
 - Development of crash injury criteria and human body model in consideration of biological characteristics of the elderly
 - Design the safety restraints such as seat belt system, airbag, head restraint for the elderly driver and occupant in order to reduce the crash injury risk.



- 3) Development of the improved night frontal vision system for the elderly
- For the accident prevention and driving comfort, improvement of vision system (head lamp and etc.) during the night and bad weather.
- 4) Study on institutional system for the Elderly vehicle and economical analysis
- Certification, standardization, supporting regulations of the Elderly vehicle for the construction of ministerial policy.

Output

- Assessment and technical prescriptions of special devices for the Elderly.
- Digital human model for Elderly drivers
- General characteristics of the aged drivers behavior
- Crash injury criteria for Elderly Occupant.
- Improved restraints such as seat belt system, airbag, head restraint for the Elderly occupant
 - Auto Beam Switching(and Foul Weather Adaptive Auto-Convert) for the aged drivers
- Economic effect of technology development of the Elderly vehicle

