Seat Project A – Seat with Integrated HVAC (Heating, Ventilation and Air Conditioning) System

- Develop a fully functional proof-of-concept prototype of the most feasible solution

The deliverable is a fully functional seat-integrated HVAC system capable of controlling Insecta Cabin temperature and passenger seat. The HVAC system power and heat transfer characteristics should allow Insecta for a reasonable cooling/heating user experience in comparison to currently available technologies. The system's user-friendly HMI and control circuit should be capable of adjusting the closed-loop cabin temperature and seat temperature via one knob. A second knob will control the ratio (0 to 100 percent) between seat-surface heating/cooling and cabin heating/cooling. The control algorithm would preferably be a simple Fuzzy logic implementation based on desired temperature and actual cabin temperature. Ideally, the circuit would use automotive grade components and communicate with Insecta via the CAN bus. Students are recommended to consult with Moovee throughout the design cycle.

Industry Contact Information:

Proposed By: Donald Wong and Darius Saheb
Company Name: Moovee Innovations
Company Address: 618 East Kent Ave. South, Suite 103
Email Address: darius.s@mooveeinnovation.com
Company Phone: 6043222177
Company Website: www.mooveeinnovations.com
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Special considerations (equipment, location, constraints, existing material…):

The students are welcome to consult with Moovee for guidance, and to work on-site as required. Students may propose financial support from Moovee for their project expenditures beyond University's coverage.