A DESIGN APPROACH FOR THE DEVELOPMENT OF A DEDICATED MEALS TRANSPORTER MOBILE ROBOT

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In this paper we present the design of a dedicated meals transporter mobile robot, motivated by the need to increase the quality of the meals transportation service inside hospitals and health care centres (HHCC). This robot has isolated walls and a heating system which keeps meals temperature at acceptable levels to prevent bacteriologic proliferation. The project has been developed within the compass of the Master in Engineering Design, at the Technical University of Lisbon. The product development addressed many knowledge areas such as project management, geometric modeling, ergonomics, mechanical technology and materials, structural and thermal validation, micro-electronic, control systems, artificial intelligence and communication networks, some of which are presented in this paper. A prototype was developed to be presented to stakeholders that would be interested in the project.