Interior design proposal for the Hulme F1 supercar

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Abstract

This research project focused on the development of an appropriate interior design proposal for the Hulme F1 supercar. The Hulme F1 supercar, originally designed by Hulme Supercars Ltd, draws exterior design references from contemporary Formula One Grand Prix race cars. In addition, the Hulme F1 supercar integrated visual design cues expressing luxury, high-performance and exoticness. The existing design established the package, window openings, basic controls and door architecture for this study.

Based on this material, the interior study focused on an overall aesthetic and its integration with ergonomic, technical and functional requirements. The conceptual nature of this project allowed for the inclusion of speculative and experimental design proposals that were not constrained by local contemporary manufacturing and economic issues. Consequently, the project based itself on a technological forecast of five to ten years.

Research first explored and defined several key design motifs central to the Hulme F1 supercar. This involved studies into supercars, luxury, high-performance, exoticness, contemporary Formula One Grand Prix racing and the existing exterior form language. The results from this research established initial themes for development of the interior design proposal.

A review of contemporary theory in visual product communication and experience was undertaken to identify an appropriate framework for this investigation. The research of Monö (1997), Norman (2004a) and Warell (2007) was reviewed. Review

focused on two areas; a structure appropriate for defining design criteria and a comprehensive framework for visual analysis of exemplars to identify visual design trends. The Visual Product Experience (VPE) framework by Warell offered the most appropriate visual framework for this investigation.

Using the VPE framework, a visual analysis of contemporary luxury motorcars, professional race cars and supercars was undertaken. Analysis focused on interior and interior/exterior related design trends. Findings illustrated that luxury motorcars have simple aesthetic compositions with frequent interior/exterior form element repetition. Conversely, professional race cars have complex aesthetic compositions with minimal interior/exterior form element repetition. Meanwhile, supercar interior aesthetics and appear to vary between these two spectrums depending on their overall aesthetic expression. To this end, the analysis illustrated the opposing visual qualities between luxury and high-performance.

This suggested the interior design proposal required a delicate balance between complex and simple aesthetic elements to obtain an appropriate overall visual expression. Consequently, the interior design proposal used a combination of flowing soft surfaces and complex detailing to express luxury and high-performance.

Research also established criteria for the design of interior functional systems required within the interior design proposal. Interior functional systems included control, body-support, display, storage and safety systems.

The development process for the interior design proposal consisted of iterative

design methods. This included concept generation, concept development and three–dimensional form studies. Throughout the development process, concepts were screened against design criteria in order to further direct the iterative process.

Contemporary Formula One race car illustrated an abundance of visual inspiration for the interior design proposal during the development process. Elements such as exhaust and aerodynamic wing details were referenced within the interior design proposal. The intent of this was to create visual harmony between interior and exterior aesthetics.

Research into ingress and egress found a conventionally fixed steering unit impeded participants. As a result, the final design proposed a steering unit that swung to–wards the centre of the interior for greater entry/exit space.

The interior design proposal was assessed by internal and external ' design evalua–tion' methods. Testing indicated that the interior design proposal had fulfilled most of the experience and performance design criteria and achieved the aim of this research.

Overall, this investigation designed an interior design proposal to compliment the exterior design of the Hulme F1 supercar. The interior design proposal was sup–ported by visual framework developed from this research investigation. In addi–tion, the investigation proposed functional and ergonomic solutions to support the interior design proposal.

Keywords: Supercar, aesthetics, interior, visual product experience, expression, design.

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Reading guide

The overall purpose of this written component is to compliment, document and present creative design work undertaken during this study. Research data is analysed and discussed to inform the design process of issues relating to perception, functionality and ergonomics. Ultimately, this written component provides background support and context for the decisions made during design work.

This written component is structured into 13 main sections. For an overview of this written component, the content of each section is also outlined within Figure 001.

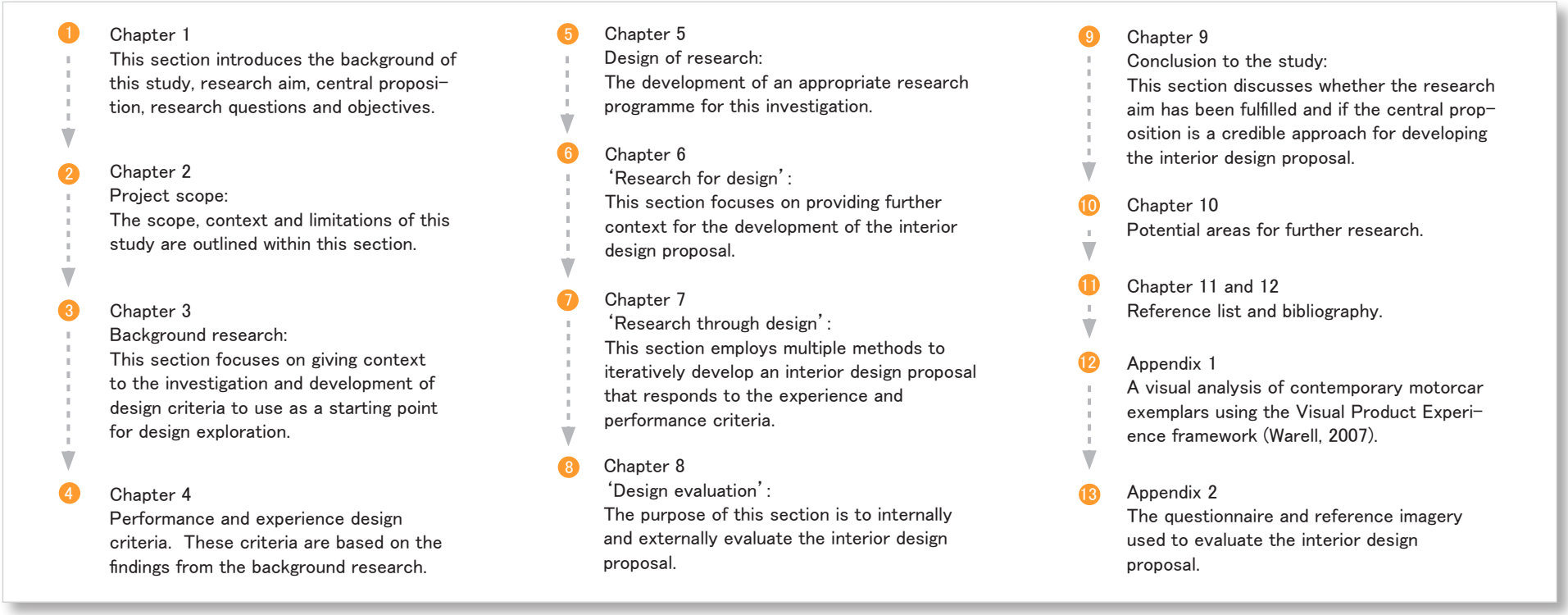

Figure 001. *Reading guide.*