

Leading Business by Design: Automotive sector

About Design Council

Design Council is an enterprising charity which improves people's lives through the use of design. Our work places design at the heart of stimulating business growth, helps to transform our public services and enhances places and cities to ensure a sustainable future for everyone. We advance new design thinking, encourage debate and inform government policy. Our vision is to create a better world by design.

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About Warwick Business School

Located at the centre of an outstanding university, Warwick Business School (WBS) is one of the world's elite business schools, providing top-class programmes for ambitious people. WBS is led by innovation, creativity and change, and engages with the big debates in business and public policy. Its vision is to be the leading university-based business school in Europe. Its mission is to produce cutting-edge research and world-class, socially responsible leaders capable of shaping the way organisations operate and businesses are managed.

About the Warwick Business School – Design Council partnership

In 2011, WBS and Design Council formed a new collaboration to explore the intersection between design, business and behavioural science. Its mission is to place design at the heart of business education and research, and transform the science of behaviour into real-world solutions.

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Executive summary

*“ Design is organisation.
Design is image, absolutely.
Design is the story, design
is the material that you end
up with, design is the object
that you then are selling,
promoting or making
someone look at. ”*

Design Director, Aston Martin

The automobile is arguably the most iconic product of the twentieth century and hugely important to the UK economy as it is responsible for nearly 7% of UK turnover and employs around 730,000 people. Design's role in the automotive industry has progressively moved from sculpting pure form ('styling') to connecting technology to consumers' needs and desires. More recently, the appearance, use and significance of cars has begun to be profoundly affected by changes in the wider automotive ecosystem, including: the introduction of increasingly intelligent vehicles, decreasing car ownership in urban areas, rising environmental standards and the entry of new companies.

To better understand the current and future roles of design in the automotive sector, Warwick Business School has conducted a research project on behalf of Design Council, building on evidence produced in our 2014 report *Leading Business by Design*.

Four themes have emerged:

- 1 Design is one of the most important drivers of innovation and competitive advantage
- 2 Good design is the result of effective collaborations and partnerships within and between organisations
- 3 Changes in the broader automotive ecosystem increasingly require designers to develop a wider skillset
- 4 In the future, design will play a more fundamental role in integrating products and services and enhancing customer experience.

Main themes

Innovation and growth

Several companies are using design to propose and introduce new ideas. Avoiding the trap of 'designing by committee', some car manufacturers (known as original equipment manufacturers or OEMs¹), in collaboration with key suppliers, have been able to experiment with and test new 'languages' through concept cars, prototyping successful models with novel exterior and interior designs and interfaces. Here, design has played a fundamental role in:

- exploiting opportunities arising from innovations in new materials
- reinforcing existing brands and giving them greater relevance
- communicating and facilitating adoption of new technology.

Collaboration

Effective collaboration within and between organisations is fundamental for successful products and services. Examples in this report show the benefits of cross-functional collaborations, strategic partnerships between automotive firms and new collaborations with traditionally non-automotive companies. In the context of collaboration, design is able to help:

- provide alternative viewpoints and challenge existing offerings
- convert ideas into objects through visualisation and interpretation
- enhance brand complementarity in buyer-supplier collaborations.

However, these benefits depend on designers' early involvement in development, collaborative work with buyers/suppliers, support from top management and the ability of the Design Director to act as design champion.



1. OEMs are companies which provide parts to other companies' end products. As many automotive companies use parts from various brands within the manufacturing process, a majority of car companies are in fact OEMs.

Designers' skills and competences

Traditionally, automotive industry designers have been able to bring together aesthetics, functionality, ease of use and product manufacturability. In line with current trends, however, they must develop a wider set of skills that go beyond traditional automotive design and be able to work across fields and collaborate with various functions and suppliers, particularly new ones. They will need to:

- be familiar with emerging market trends across an array of industries in addition to automotive, including the development of new materials and new technologies
- become more involved in organisational processes, stakeholder management and cultural change
- look beyond the present needs and capabilities of the vehicle
- consider products and services more holistically
- increasingly focus on user experience rather than the product per se.

This will create opportunities, especially for user experience and interaction designers.

Future trends

Increasing vehicle automation, pervasive digital technology, entry of non-automotive firms, environmental and safety concerns and changes in consumer habits – eg, the shift from car ownership to car as service – are considerably impacting the industry and affecting design. For example, fast-moving digital technology must be incorporated in models with much longer life cycles. Here, design could:

- help reconcile the physical and digital car by creating processes and models with high inbuilt flexibility
- use new technology to automate mundane, repetitive tasks and create new features which are valued by customers
- create appealing interiors and human-machine interfaces (HMI)² that meet emotional needs, as driving, even if autonomous, will still be experiential.



2. HMI manages how people interact with and use a car's features and capabilities (eg, the responsiveness, efficiency, sensations and intuitiveness); it is becoming very important, as vehicle users are increasingly expecting to interact with technology in cars, but this should not become a source of distraction for drivers.