MASS

A **COHORT PLC** COMPANY

DESIGN THINKING FOR CYBER SECURITY

A MASS case study in the automotive industry

Innovation at MASS

Design thinking helps MASS steer the innovation journey and enables creative engagement and effective convergence and focus. It helps identify opportunities otherwise unnoticed and makes visible the market trends and dynamics influencing our world.

When facing uncertainty or opportunity, MASS draws on the principles of structured, creative thinking to guide our journey and design thinking offers just that – a framework for understanding complexity and pursuing innovation [6].

Using a mix of analysis, systemic thinking and empathy, we have solved customer problems through innovation which has led us to identify genuine market opportunities [1–6].

The double diamond in defence:
A case study at MASS

One of our favourite methods of design thinking at MASS is the double diamond [6].

We have utilized this across numerous projects and this is our go to method for identifying problems and opportunities and developing and creating human-centred solutions.

The Innovation team in conjunction with the Cyber, Engineering and ICT teams are currently embarking on an on-going project to explore the automotive security market.

The team is following a double diamond design thinking methodology as a framework for creative engagement and exploration.
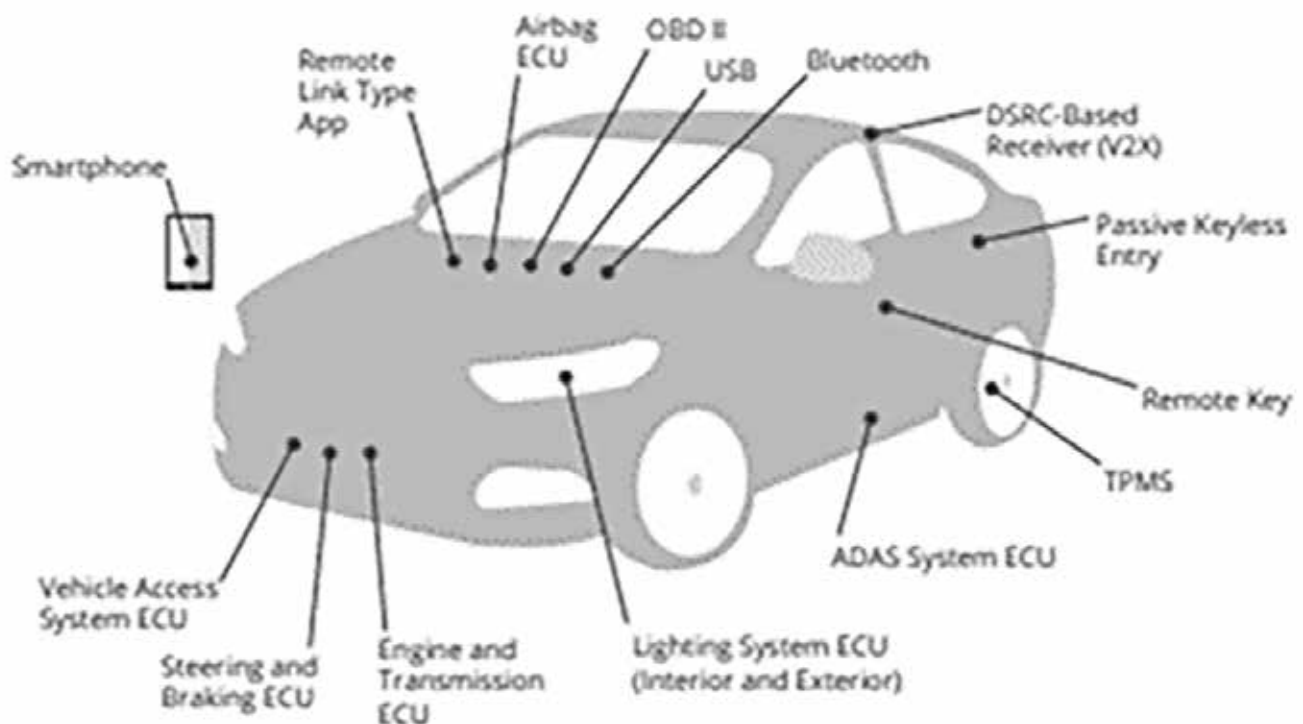
Source 12: Fifteen of the most hackable and exposed attack surfaces on a next-generation car

Double diamond phases explained:

The first diamond phases

Phase 1: Discovery

- The first phase of the project involved a market assessment and in-depth research on the automotive security market.

- This involved the Senior Researcher at MASS, in combination with the team, embarking on the following discovery journey:

- Market research: e.g. market spend and growth, SWOT, PESTEL

- Technical research: security issues in this sector e.g. services and offerings and risks and threats.

- Customer understanding: human-entered exploration of the customers need and requirements.

Phase 2: Define

- A workshop was set-up to gain insight into the market and the problems identified through discovery research. This workshop helped with ideation and synthesis to create product offerings and ideas and early insight into what services could be offered based on the discovery research. The workshop involved:

- Gathering of feedback: an analysis and interpretation of the discovery research to identify where more work and insight is needed prior to a workshop.

- Coordinated SWOT analysis to explore each solution and security issues against our current offerings and against MASS as a whole identifying our strengths and weaknesses, threats and opportunities.

- Problem statement: identifying the areas of exploration to test and potential challenges which would be solved by MASS.

Double diamond phases explained:

The second diamond phases

Phase 3: Develop

- The PV at MASS involved purchasing a vehicle and gathering experience with the automotive security space which has been documented. This has identified potential learning solutions through iteration.

- A workshop is imminent to map out scenarios and sketch ideas to develop and ideate concepts based on identified potentials.

Phase 4: Deliver

- The final phase of this project will involve testing the solution through usability testing, A/B testing and user observations and interviews. Market acceptance and an evaluation of the offering will be explored and learning analytics to explore implementation.

- Iterations of this project may be necessary which means that the process of discovery, define, deliver and develop may be performed again for innovative success.

Summary: Design thinking for evoking creativity

Using design in early-stage innovation generates a range of good ideas which can be more confidently developed towards commercialisation [2]. The perception of the defence industry does not typically encompass words such as creativity or human-centred and as such creativity and defence are mutually exclusive terms.

Whilst it is not novel to combine the two it is much less common in the world of STEM (science, technology, engineering and maths) but MASS' adoption of the design thinking double-diamond methodology is helping us to explore the different ways in which design can inform early-stage product creation.

We acknowledge that adopting design in defence evokes creation and creativity, forward thinking and innovation and we will continue to adopt these ground-breaking methods.

References

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