



Design Process
Mobility

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Mobility

In an era of unprecedented change in the automotive industry, mobility is at a tipping point due to legislation, technology and social changes, this is opening up new areas of opportunities. This disrupted market will have multiple newcomers, winners and losers until the market starts to settle back down, if it ever will! So how do you go about identifying opportunities and developing products and services that will have a success in a fast changing market?

The success of a product in a competitive market relies on many factors, you can have a great idea with poor execution, or have a great product and not have adequate distribution or poor aftersales support. For the stars to align, every step in the product journey needs to be world class and design has a key role to play in each phase of this process, as design is the process where an idea comes to life.

At Astheimer Design we have a user-centric, end-to-end design process that helps our clients identify the opportunities and then develop products and services that have had great successes in their markets. We do this through a process of understanding, exploration and execution, ensuring the products we design are relevant, unique and desirable.



UNDERSTANDING

To ensure product relevance, the start to any process is understanding. Understanding your clients objectives and vision, the market, the user, the use case, the competitors, the technologies, materials and resources available and the brand identity that the customers will relate to.

The user will have a choice, so understanding their needs and desires and developing a user centric approach is key. The best way to really understand is through first hand experience, and we do this at the start of every project, as we did with the Volta Zero. After spending several days with the founders of Volta Trucks understanding their vision and business objectives, we then set out to get a clear overview of the market.

Use case - we spent a whole day making deliveries with Breytner in Rotterdam, we then interviewed drivers, fleet managers and logistics directors, we spoke with TFL (Transport for London) and the IOC (Institute of Couriers) to get a clear idea of the pain points and future requirements from all stakeholders in this market.



First-hand Volta Research, Rotterdam

Competition

We analysed and tested the competition, establishing where we should be positioned in the competitor landscape.

Technology

We researched various sustainable materials and technologies including powertrain solutions, ADAS and HMI systems, and various manufacturers of sustainable materials.

Brand Identity

We helped the founders position the brand, establishing the brand pillars, design values and design language.

The results of the research and analysis helps to define the brief for the project, which will include a hierarchy of factors which will be used as decision making criteria at each gateway in the process.

This will include the use case scenarios for the product, an initial specification with all the key attributes of the product and the positioning of the product, and how it fits within the product portfolio and cycle plan.

With the constraints of the project clearly understood and agreed, we can then start to explore different concepts and ideas.



Volta Zero

EXPLORATION

Once the brief is set, we explore concept options within the constraints, and we stress test those constraints by pushing the boundaries looking at multiple options. The multiple concepts are evaluated by the criteria set out in the brief, selecting the options that best fit the briefing criteria, refining the concepts with further feasibility constraints in a funnel process until we have selected a final direction further distilling the theme to its purest synthesis, whilst rationalising the design around the mechanical package respecting the manufacturing constraints.

Design is not a linear process of simply joining the dots, it requires a sensitivity to interpret the user needs and desires, and skill to be able to express that in form, and it requires curiosity to push past the obvious exploring new combinations of form, features and functions, much like any other creator, whether they are musicians, cooks or film directors.

On top of the constraints set out with our clients, we also add our own. Although we are not tied down to any particular design aesthetic, we do have design principals we stick to for good reason.

Purity – We believe that every aspect of the product should be there for a reason - a products' design and personality should reflect its functionality and emotional connection to the user. By boiling down the design theme to its purist essence removing the superfluous, the identity becomes stronger and more memorable, and will stand the test of time.

Innovative – We should always look to push the boundaries in each project we do, innovative design should develop in tandem with innovative technology.

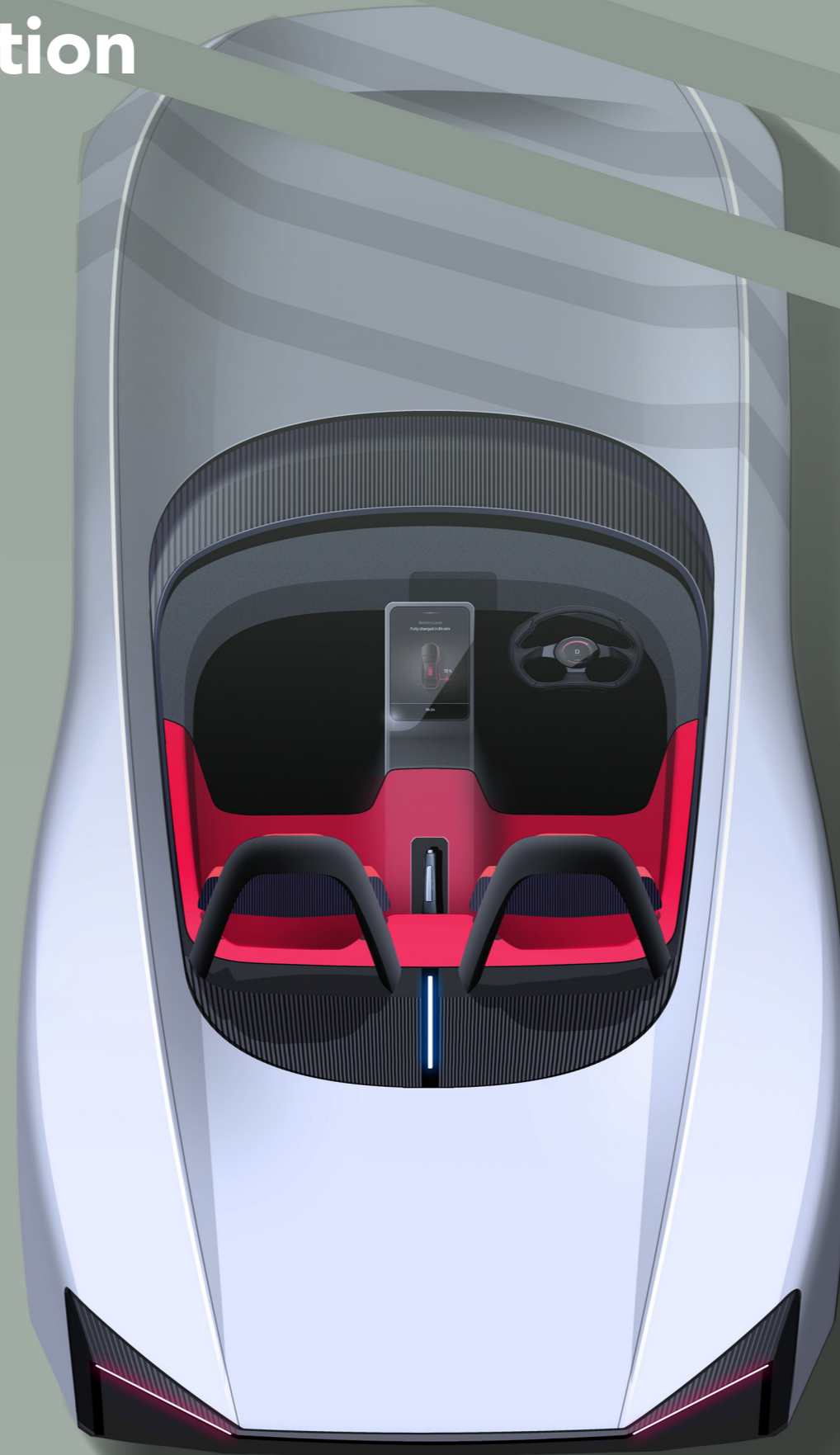
Harmonious – The design theme is the manifestation of the brand identity, and should run through every touch point of the product - proportions, surface treatment and every detail, creating a coherent design language, there needs to be harmony between all elements of the design which to we put together in a considered way.

Design is putting form to an idea, translating brand values into a tangible product or service.

The starting point is still 2D sketching - a core skill of the studio, "the designers' language" helping to develop and assess 3D form and space efficiently and effectively.

We move quickly into virtual 3D, using the latest hardware and software to develop, visualise and validate the proposals including the latest VR and visualisation technologies. As we refine and define the chosen direction, alongside the realistic visualisation, we create full scale ergonomic models, to check sight lines, ingress/egress and all physical functionality. We also use this as a proportion model with milled foam using our in-house 8m milling machine, so we can move into the execution phase of the project with confidence.

AURA Sketch Ideation



Strong 20
ASTHEIMER DESIGN TEAM

EXECUTION

At Astheimer design we have a multi-disciplinary team and a wealth of experiences in all phases of the product development process, from the artistic form development aspect of the project through to the design engineering skills needed to realise the concept. This ensures our projects are efficiently delivered with visionary designs and engineering excellence.

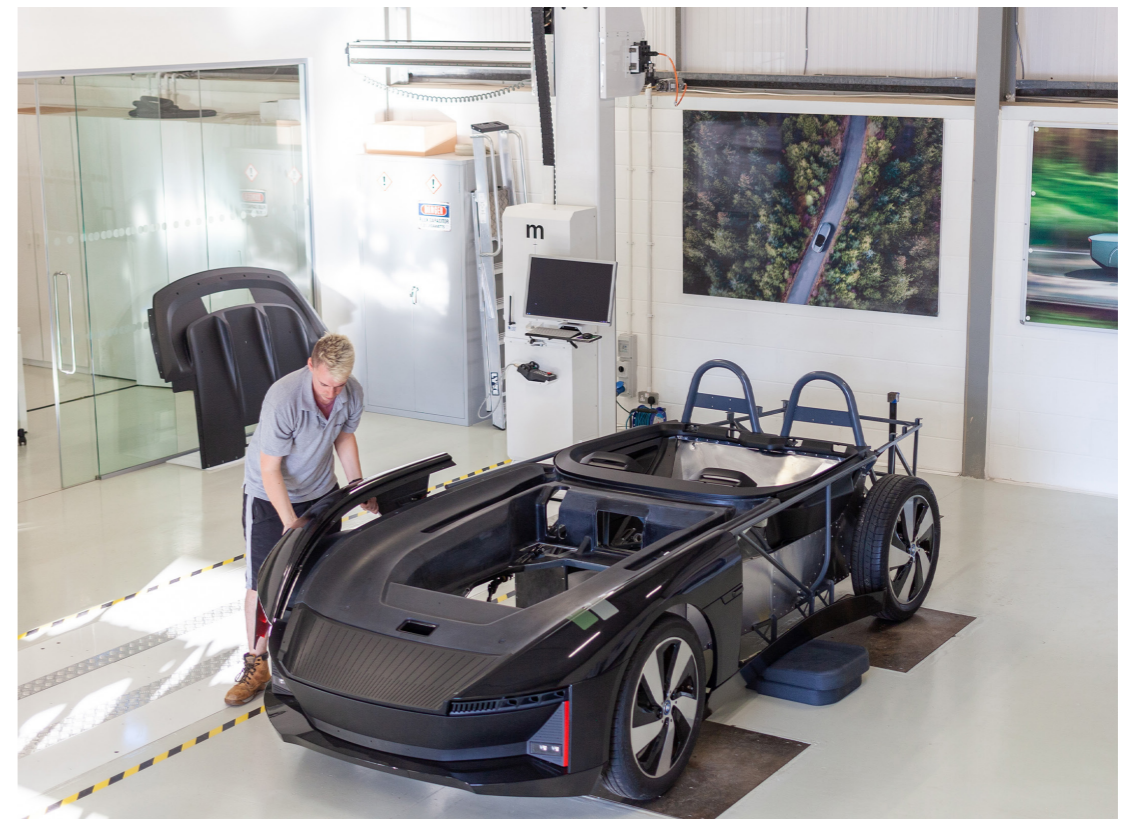
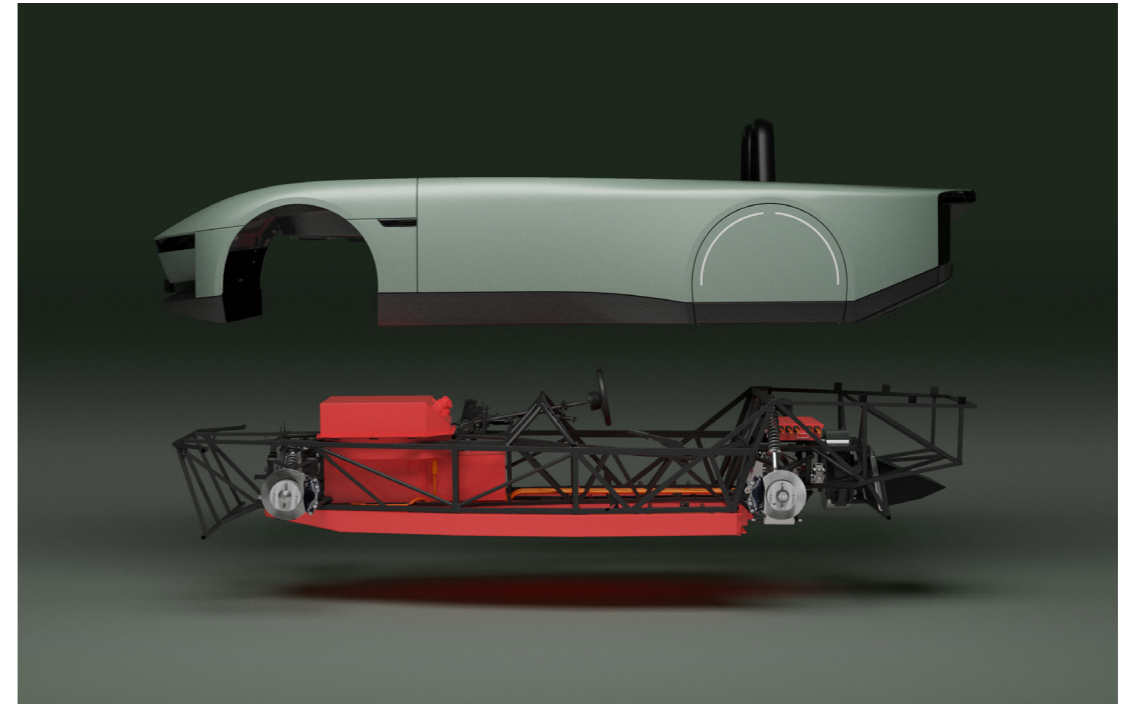
Once the concept is signed off, we move into the build strategy and detailed design phases. This starts with a full feasibility study into all aspects that will affect the design, part split, gap strategy, materials and manufacturing processes, supplier selection, available technologies.

We develop a macro build strategy building a comprehensive BOM (bill of materials) with all relevant details, part sizes, materials, weights, supplier options, costings.

With this information our design engineers and surface modellers develop a detailed design model respecting all feasibility aspects culminating in a first full surface release (SF1) of all visible parts of the product both exterior and interior, HMI and colour and trim. If this data is used for the initial prototype we will develop a prototype, build strategy and develop the B surfaces as well and select suppliers for part build for the parts we cannot make in-house. The initial prototype will then be assembled in our workshop which sits below the design studio.

We develop our designs up to the production of the product with full production drawing release. Depending on the complexity of the product, we will go through multiple surface release and feasibility loops, until the product is production ready.

The most successful design projects, and the skill of the designer is to maintain the purity and clarity of the initial idea throughout the product development process, delivering an immaculately executed coherent design.



AURA Build