



The ABCs of Audi Design

Ingolstadt, Wednesday, July 15, 2021. What do Color & Trim experts actually do? What is a mood board for? What's the story with the package? A reference guide for important everyday terms from the Audi Design world.

Clay: The automotive industry predominantly uses special industrial clay to build models. The material is a light brown, wax-based modeling clay also known as plasticine. Before handling, it is first heated to 50 degrees Celsius. In its resulting putty state, it allows detail work to be done on the surface by hand or with the use of milling machines or modeling tools like rasps, scrapers, knife edges, molds, or glazing. The special thing about clay is that it doesn't harden or dry out and can be shaped and reshaped. That means that models can still be changed again even after they've been in storage. At Audi, clay models are produced at 1:1 or 1:4 scale.

Concept car: Audi introduces concept vehicles at regular intervals – sometimes as precursors to upcoming series models, often anticipating far into the future. These are innovation leaders that represent a design vision or present new technologies.

Color & Trim: The need to customize individually configurable vehicles is constantly growing. That is why a stylish selection of combinable colors and materials in the interior is increasingly important. For the harmonious and emotional surface designs that are found inside and out, the Color & Trim designers draw on hundreds of color, material, leather, wood, and metal models. As current trends show, customers are increasingly attentive to sustainable and recycled materials. That's why the Audi e-tron GT offers a completely leather-free interior package. The equipment consists entirely of recycled materials. In other words, it is made of polyester and weaving scraps with finely grained artificial leather and sustainably produced textiles. This combination creates a melange effect and feels like wool – natural and pleasant. With this layout, the carpeting and floor mats are made of recycled Econyl fibers.

C3 process: Audi Design uses the opportunities that digitization offers to quickly and vividly visualize ideas and thereby shorten the path from the first draft to the final series model with higher quality. C3 stands for CAD, concept, and clay milling – three central components of the digital design phase.



Data control model: The digital data control model harmonizes design ideas with technical feasibility in construction. With this visual simulation solution, current design versions and interior as well as exterior components can be calculated and depicted in a fraction of a second. The data control model allows possible errors or desired optimizations to be discussed and the vehicle ultimately to be accepted.

Design freeze: Once Audi's product development process starts four years before the new model debuts, the design is "frozen" with all its specifications at the stage it has reached two years before the start of the series. From that point on, the design is in the implementation phase and gets its final touches in collaboration with the Surfaces division (see definition). This phase is usually initiated two years before series production.

Design specifications: The stylistic specifications contain a series of guidelines that roughly define the design development. These includes, for example, sociodemographic information about the target groups that the vehicle is aimed at or information about the corresponding product environment that the design is supposed to fit into.

Design model: The 1:4-scale 3-D model or the full-scale 1:1 model serves assessment and decision-making purposes. At Audi, the model is produced in virtual spaces across locations. However, final approval goes to the clay model. Unlike the prototypes, the design model is purely a sample for approval without any technical equipment or functions.

Hard model: Unlike the clay model, the hard model is an approval model made of plastic with a high degree of attention to detail. For that reason, it already has many realistic mounted parts like chrome trim strips, lights, gaskets, and elements of the radiator grill.

Mood board: Whether for vehicles, product packaging, or *haute couture*, designers across industries are using mood boards today. These collages gather together everything that speaks to a topic or excites creatives about it. That includes objects from nature, newspaper clippings, images, individual words, or even short text passages. The collage arouses associations among the designers and inspires them with new ideas.

At the same time, mood boards serve Audi's design teams as shared bases for visualization and a starting point for concrete designs.



Package: The foundation for every design is what is known as the package, which is the design's technical architecture, so to speak. It includes all the technical guidelines about the design. On that basis, the designs are implemented so that the dimensions and proportions fit.

Prototype: The prototype is a roadworthy pilot-production vehicle that is manufactured individually.

Rapid prototyping: This is a collective term for various processes with which model components and prototypes are produced particularly quickly based on CAD data. Among other things, that includes the polygraphic 3-D printing process. To manufacture a workpiece, printheads on a construction platform spray a photopolymer layer by layer, which is then hardened with UV light.

Rendering: A computer-generated, graphic depiction derived from an outline, a model, or CAD data.

Show car: A specially developed vehicle for testing resonance with the public. It is primarily presented at international motor shows. An Audi show car often presages upcoming series models, which is how the Audi prologue concept design ideas from the subsequent luxury class generation were interpreted with respect to the A8, A7, and A6.

Seat box: A seat box is a 1:1 model for depicting and designing the car interior. In the seats, designers and test persons can sit down completely normally. Among other things, the seat box allows the people involved to assess and choose ergonomic approaches and Color & Trim designs.

Surfaces data: These data form a bridge between Design and the Construction department. In the final convergence process, all surfaces in the interior and exterior of a model are digitally, geometrically depicted precisely, down to the hundredth of a millimeter.

Tape: "Tape" is shorthand for "tape rendering" and it refers to a representation technique. Vehicle designs can be visualized at 1:1 or 1:2 scale using black, flexible adhesive tape applied to clay models. The advantage is that lines and surfaces can be changed by simply removing the tape.

UX design: UX design is shorthand for user experience design. User-centered design is at the heart of UX in order to design the human-machine interface in the cockpit as optimally as possible for the passenger and to create a holistic experience.



UI design: UI design is shorthand for user interface design. It is a branch of UX design and it focuses on user interfaces like display, dashboard, and menu navigation.

Virtual reality: Virtual reality is a computer-generated reproduction of reality that can be experienced by participants in different places at the same time with the aid of special data glasses. The Audi Design team is using this technology to interactively coordinate 3-D model designs across departments and locations.

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