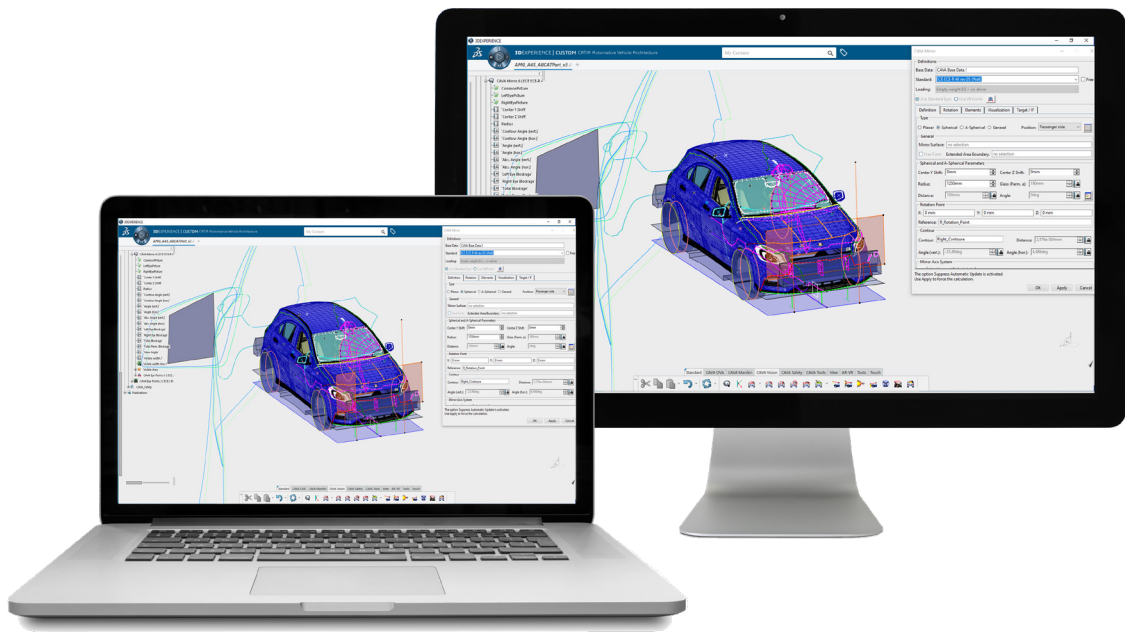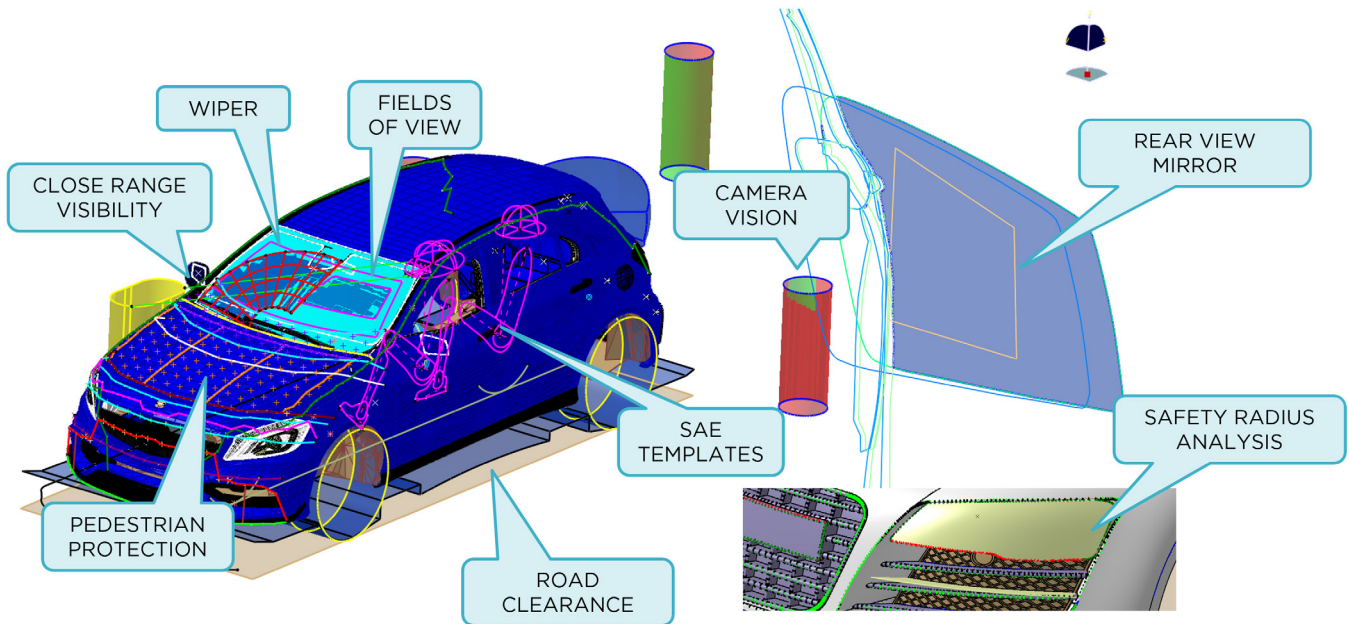# CAVA

LEGAL COMPLIANCE FOR VEHICLE DESIGN IN CATIA

Validate Vehicle Design Compliance and Architecture to Meet International Standards

Vehicle compliance is a compulsory part of automotive and aircraft design. That's why we work together with renowned automotive OEMs, including Audi, BMW, Daimler, Porsche, and Volkswagen, to develop CAVA (CATIA Automotive Extensions Vehicle Architecture).

CAVA is the only industry-proven software developed in collaboration with world-leading OEMs to cover key, global homologation regulations.

Efficiently and confidently validate vehicle design and architecture compliance to meet international standards and regulations.

EXPERIENCE PACKAGED

TECHNIA
ADDNODE GROUP

WIPER

FIELDS OF VIEW

CLOSE RANGE VISIBILITY

CAMERA VISION

REAR VIEW MIRROR

SAE TEMPLATES

SAFETY RADIUS ANALYSIS

PEDESTRIAN PROTECTION

ROAD CLEARANCE

Ensure Compliance with Industry Regulations and Standards from Concept to Homologation

Vehicle manufacturers are required to fulfil rules, norms and standards during release and homologation. These requirements vary according to the country in which the vehicle will be taken to market.To make things easier for you, CAVA provides these rules as CATIA features and checks your vehicle geometry meets the legal requirements.

Mutual Dependency of Vehicle Parameters:

- Quick, associative reactions on modifications of car parameters and component geometry are required to evaluate the standard conformity of the current design state.
- Many iterations are developed to find the optimal vehicle design during the concept phase.
- Geometry may be modified during component development.
- CAVA's regulations are constantly evaluated and updated in collaboration with industry contacts.
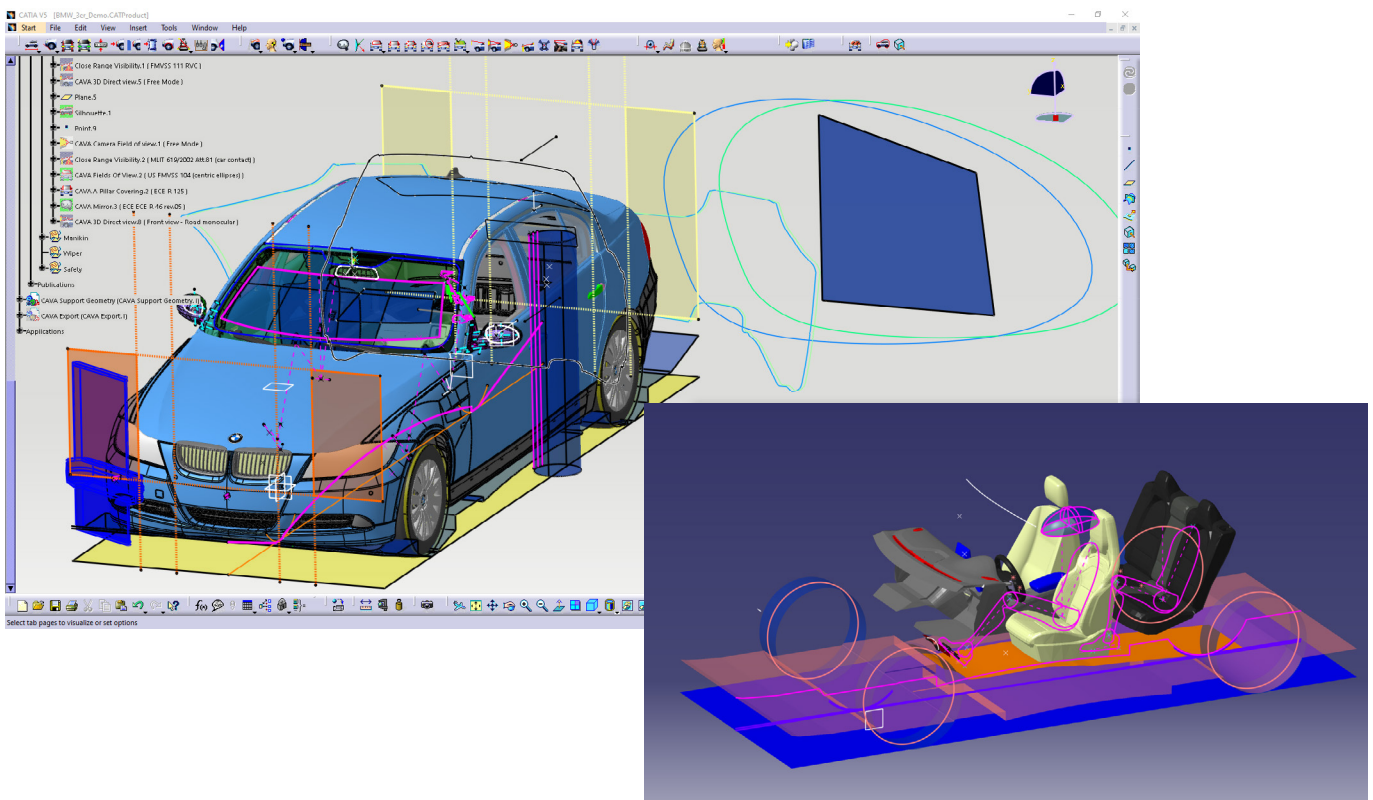
National & International Standards Examples:

- **Rear view mirror:** FMVSS 111, ECE-R 46
  Seat belts: ECE-R 14/05, FMVSS210
- **Bumpers:** ECE-R 42, FMVSS 215
- **Manikin:** Eye Ellipse - SAE J941, 2D-Template - SAE J826
- **Fields of view:** FMVSS 104, ECE-R43, ADR 15/16
- **Head impact:** FMVSS 201
- **Japanese "Close range visibility":** (MLIT 619/2002 Att.81)

Standards are fully configurable (XML based).

- CAVA can be fully integrated into CATIA as a separate workbench or app, providing access to all CATIA parameters for faster updates after modification.

- Features update automatically on any change of input parameter or geometry, as CAVA features are stored directly within the CAD data.

- Standards update automatically and are readily accesible throughout the design phase, as they're integrated as associative features within the car feature tree.

- CAVA is completely open and configurable. Create company-specific standards, or simply select supported standards supplied as readable .xml files.

- Results can be exported as regular CATIA Geometry for downstream applications, making them readable without CAVA. Results can also be used to create textual, excel and drawing reports using customizable report templates.

CAVA is available as a complete product or as individual sub products for specific application areas:

CAVA VISION
For compliance relating to the driver's direct and indirect vision.

CAVA MANIKIN
Two Dimensional test dummy for use in determining various passenger positions.

CAVA WIPER
Simulate the geometry of the wipers and determine the wiped area on the windscreen.

CAVA SAFETY
Verify the minimum radius requirements and calculate impact zones for the direct safety of passengers and pedestrians.

CAVA OVERALL VEHICLE ARCHITECTURE (OVA)
Manage vehicle parameters, such as dimensions and seat positions. Verify vehicle component placement.

CAVA TOOLS
A collection of functions available in the CAVA All bundle but in none of the single products.

#1 Knowledge Leaders in PLM

At TECHNIA, we pave the way for your innovation, creativity, and profitability. We combine industry-leading Product Lifecycle Management tools with specialist knowledge, so you can enjoy the journey from product concept to implementation.

Our experience makes it possible to keep things simple, personal and accessible so that together, we transform your vision into value. With over 30 years' experience, more than 6000 customers worldwide and world-class knowledge in PLM & Intelligent Engineering, we work together as true partner and extension of your team to create an exceptional PLM experience.

Our team of more than 680 people work from 32 locations around the world, across vertical industries, delivering a premium service with a global infrastructure and a local presence. We adopt the latest technology and agile methodologies so, even as technology changes, our relationships last a lifetime.

Discover more at www.technia.com/software/cava

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