



- ① **Mapvision HQ**
Helsinki, Finland
- ② **Mapvision GmbH**
Munich, Germany
- ③ **Mapvision CZ**
Liberec, Czech Republic
- ④ **Mapvision Inc**
Ohio, United States
- ⑤ **Mapvision Ltd**
Shanghai, China

01 Global Footprint

300+
SYSTEMS DELIVERED GLOBALLY

90%
RETURNING CUSTOMERS

30+
YEARS OF EXCELLENCE

SAFE QUALITY CONTAINMENT

Detect out-of-spec parts as soon as they are produced to safely contain them within your facility. Avoid OEM line shutdowns and expensive warranty claims. Build a reputation for 100% delivery quality for all your parts.

REAL-TIME PROCESS DATA ANALYTICS

Monitor your process performance for each feature, component, and production cell in real-time. Utilize deep-dive data to reveal complex variation patterns and trends. Prevent scrap and enable advanced closed-loop manufacturing processes.

ADVANCED TRACEABILITY

Associate each part produced with its whole production history, inspection results, and raw inspection data for advanced part traceability and retroactive inspection. Eliminate OEM sorting, avoid batch recalls, and measure parts that are no more physically available in your premises.



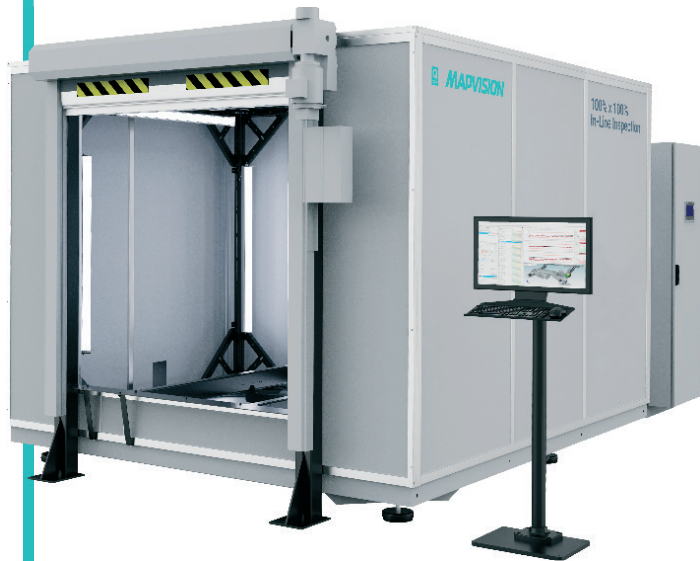
02 100% x 100% In-Line Inspection

Inspect 100% of the features for 100% of the parts you manufacture within Takt time – even for the most complex parts with hundreds of inspection points.

03 Measurement Process Flow

CAPTURE THE PART IMAGES

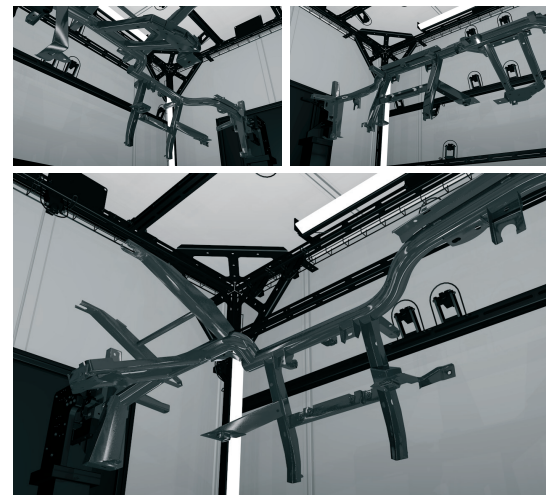
An extensive set of fixed cameras capture images of the whole inspection volume and features from multiple angles within few seconds.



VIA HARDWARE ON SITE

SAVE IMAGES TO DATABASE

The part images are saved to the image database of the measurement unit to be used by Mapvision's smart inspection algorithms.



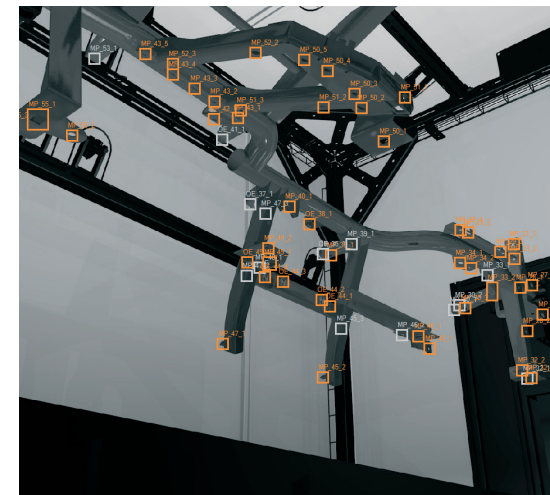
COMPLETELY VIA SOFTWARE
100% DIGITAL

RETROACTIVE INSPECTION

Users can go back to the database to inspect completely new features or to re-run inspections for modified specifications – even if the parts are not physically available any more in their premises.

INSPECT ON THE PART IMAGES

Mapvision's smart software conducts geometric measurements and presence check directly on the collected images, making digital twins of the part available.



30 SECONDS INSPECTION CYCLE TIME PER PART

ANALYZE & MODIFY

Results are available in real-time to conduct deep-dive analysis. Users can adjust the measurement, add new inspection points and manage the whole process remotely at any point.





3D GEOMETRIC LOCATION



PRESENCE CHECK



FEATURE DISTANCE



TRUE POSITION



CONCENTRICITY



ANGULARITY



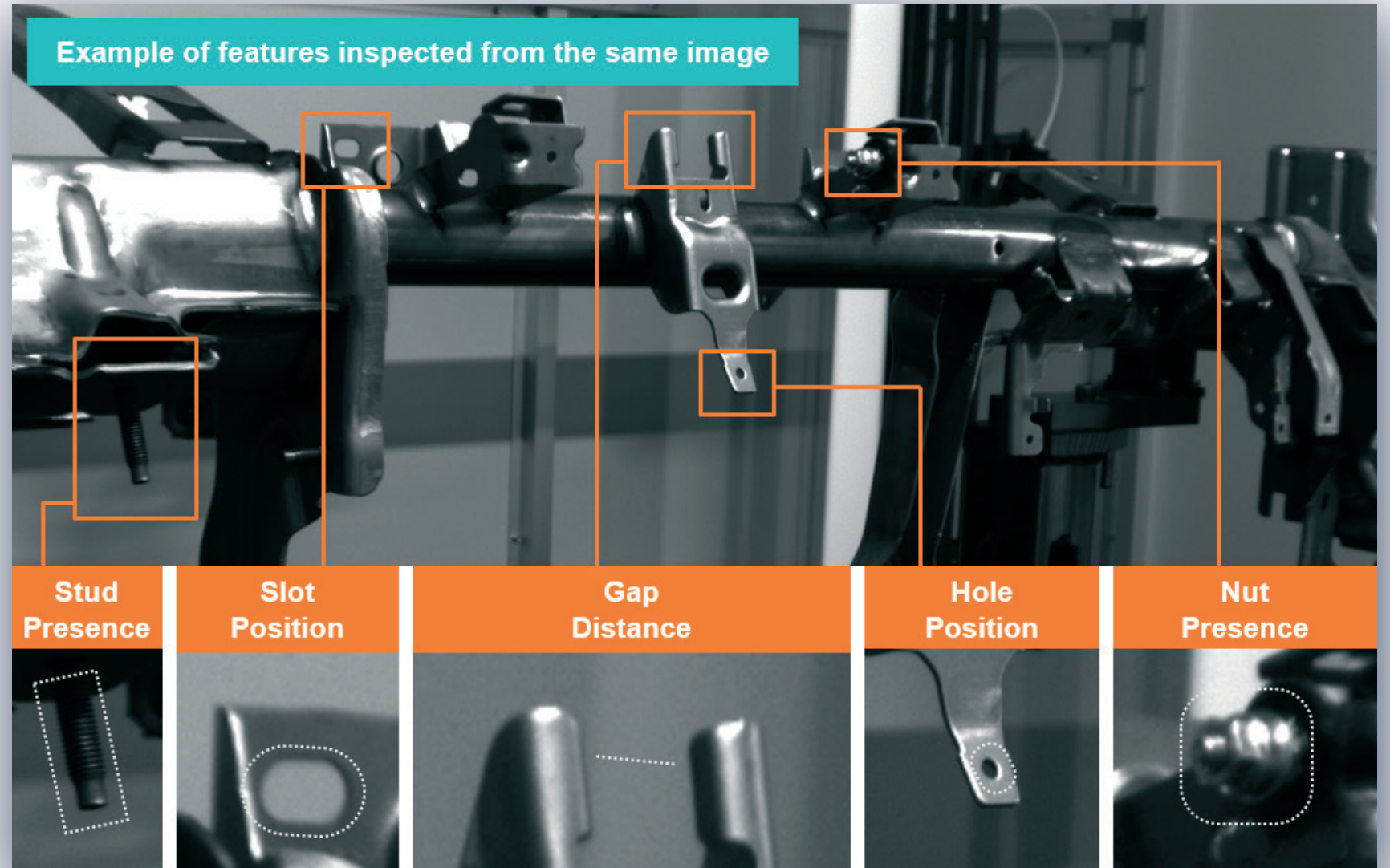
PARALLELISM



SURFACE FLATNESS



PERPENDICULARITY

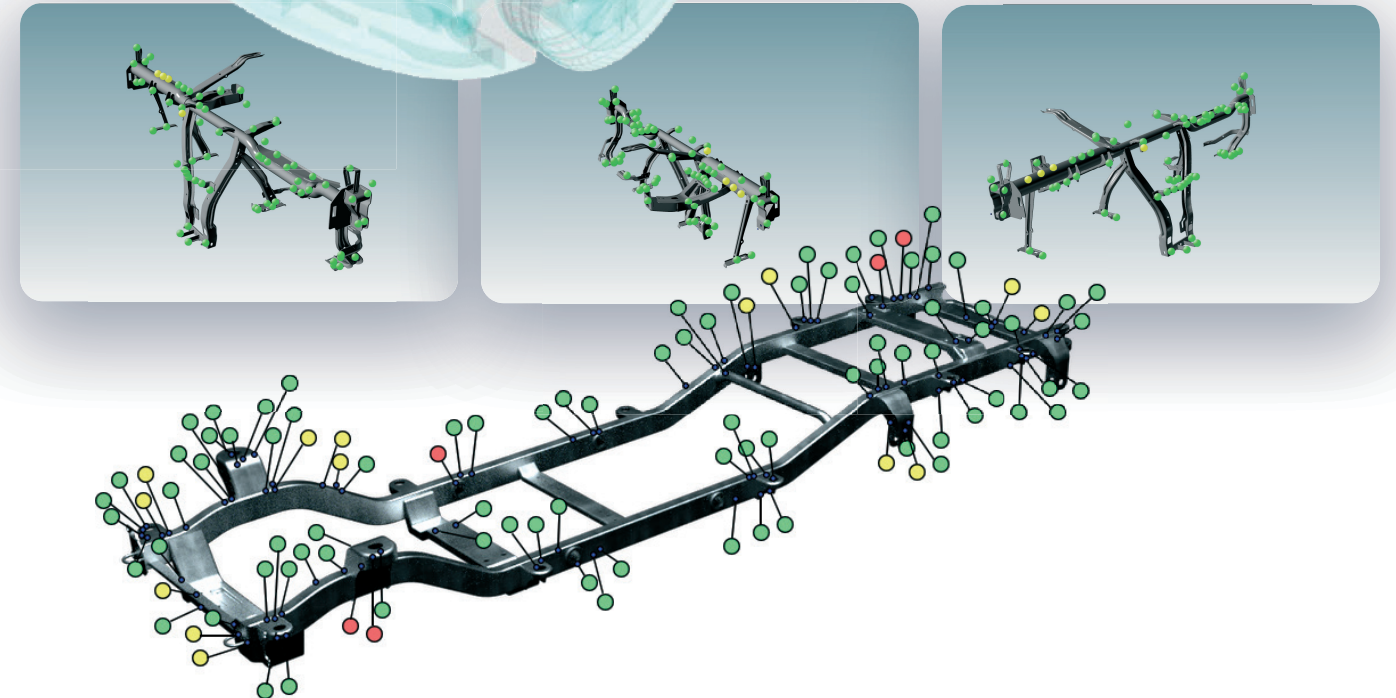
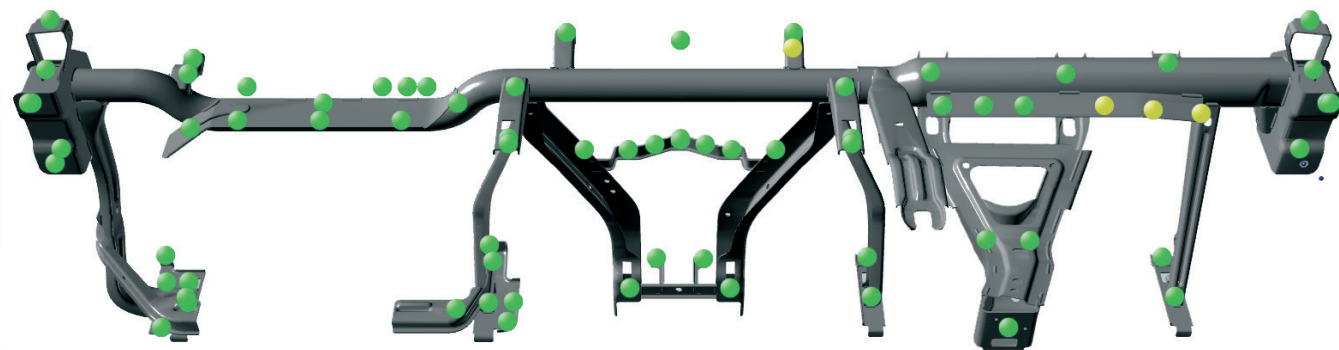


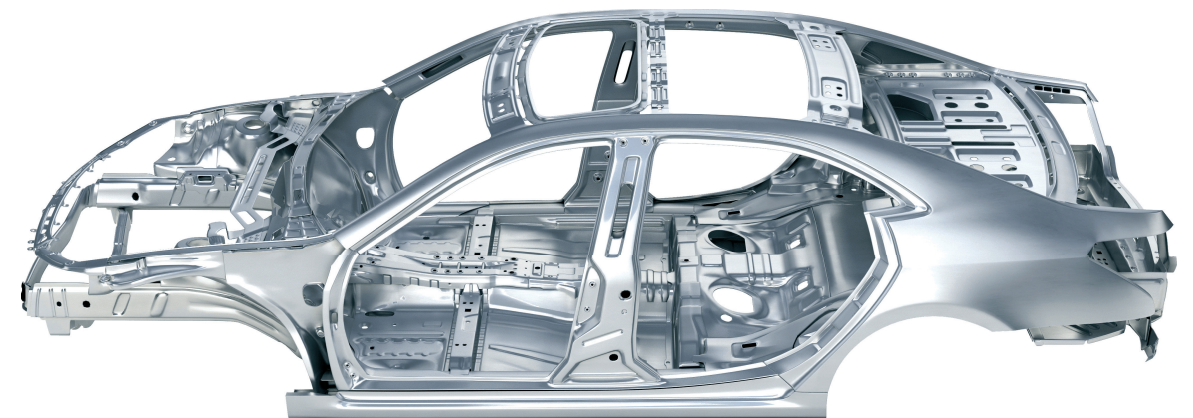
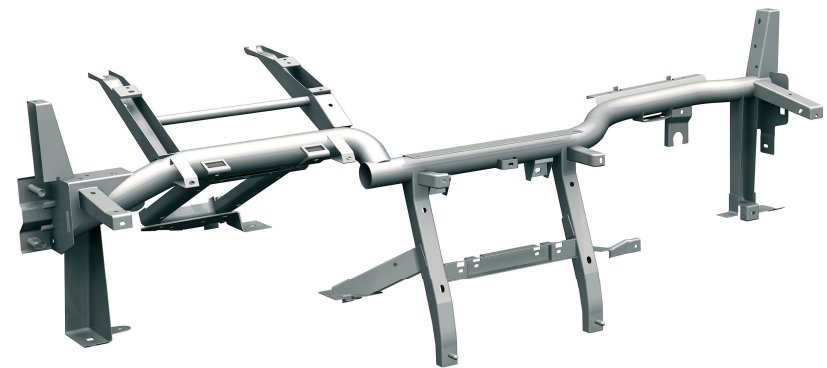
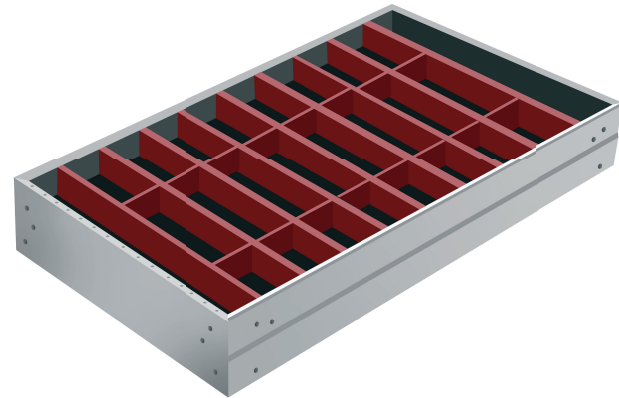
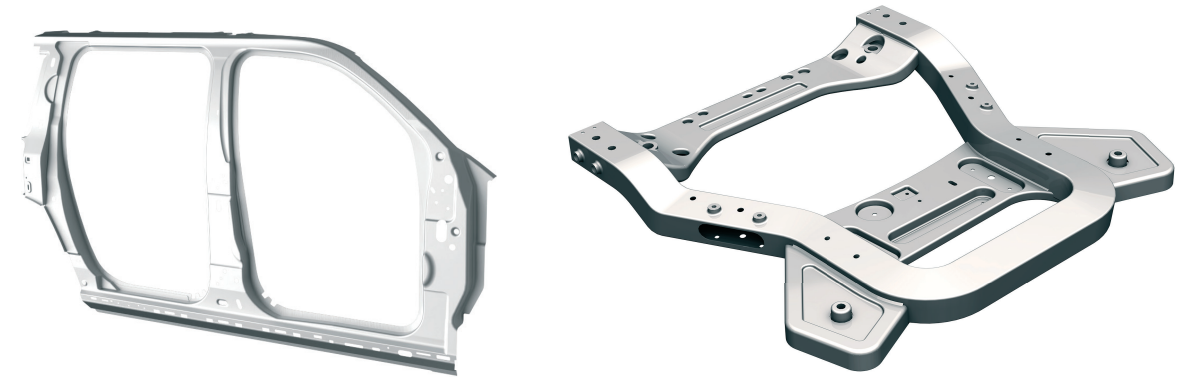
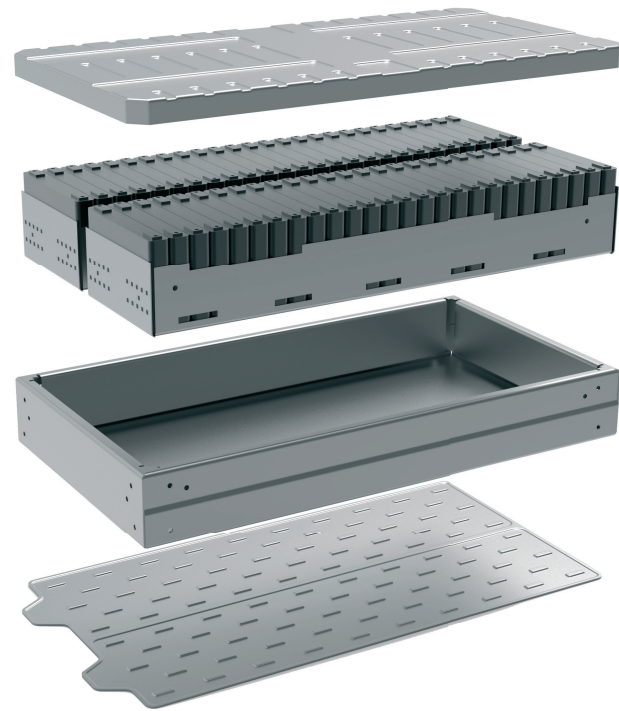
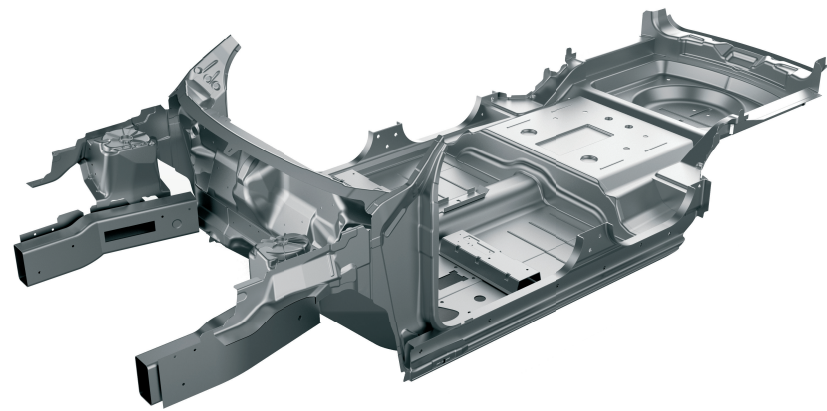
04 Mapvision Q-Series: Feature Inspections

05 Inspect All Parts



Inspect a wide range of **welded, cast, and stamped** components to ensure a stable output quality – no matter how large or complex your part is. From side beams and axle components to front end modules, underbody modules, entire ladder frames, and EV battery packs; Mapvision helps you increase productivity and quality.





06 Application Examples

1200+

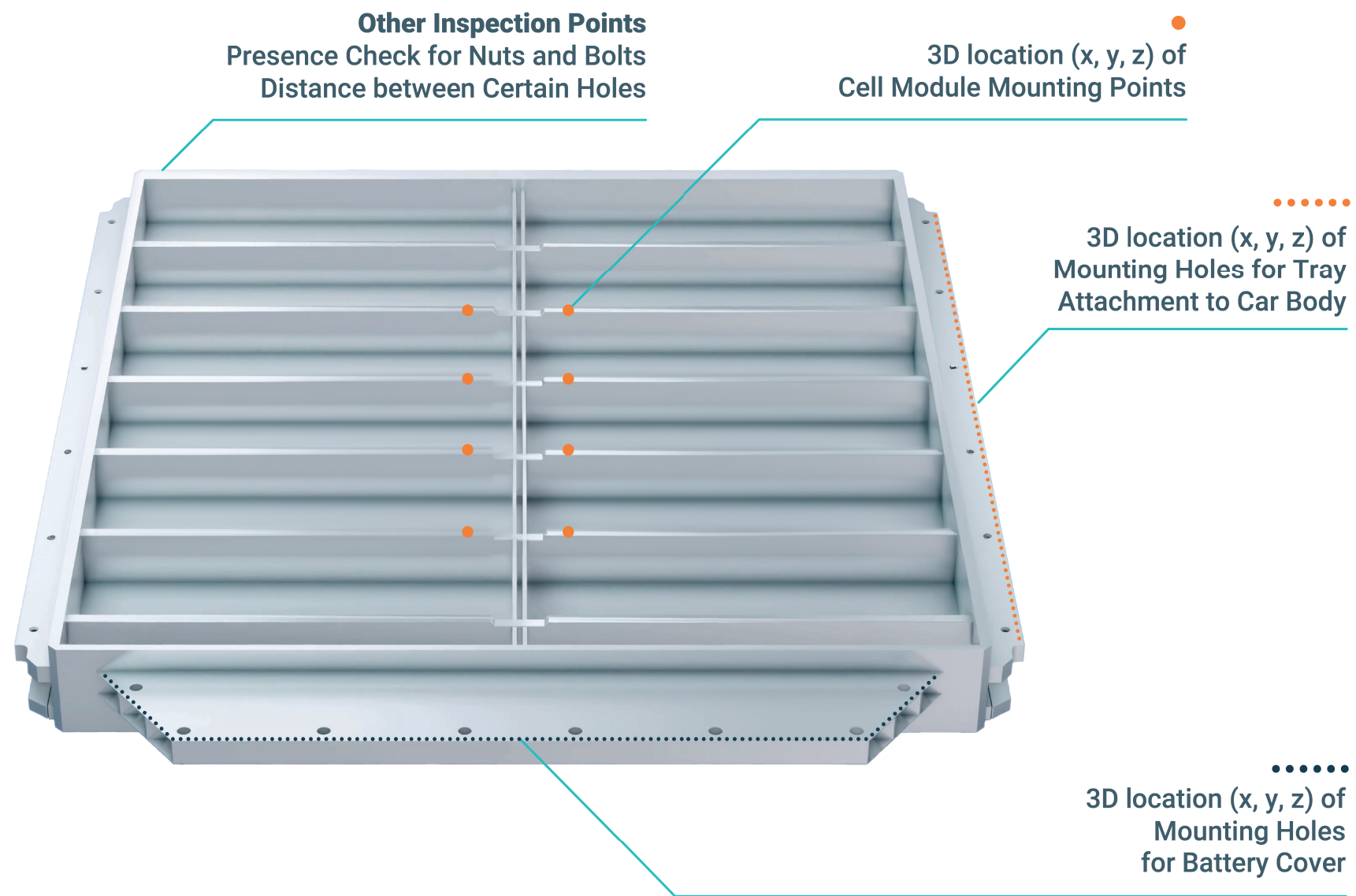
FEATURES INSPECTED

30_{SEC}

INSPECTION TIME

EXAMPLE INSPECTION POINTS

- 3D location (x, y, z) of cell module mounting points
- 3D location (x, y, z) of mounting holes to attach tray to car body
- 3D location (x, y, z) of mounting holes for the battery cover
- Distances between certain holes
- Presence check for nuts and bolts



01

EV Battery Tray Inspection

800+

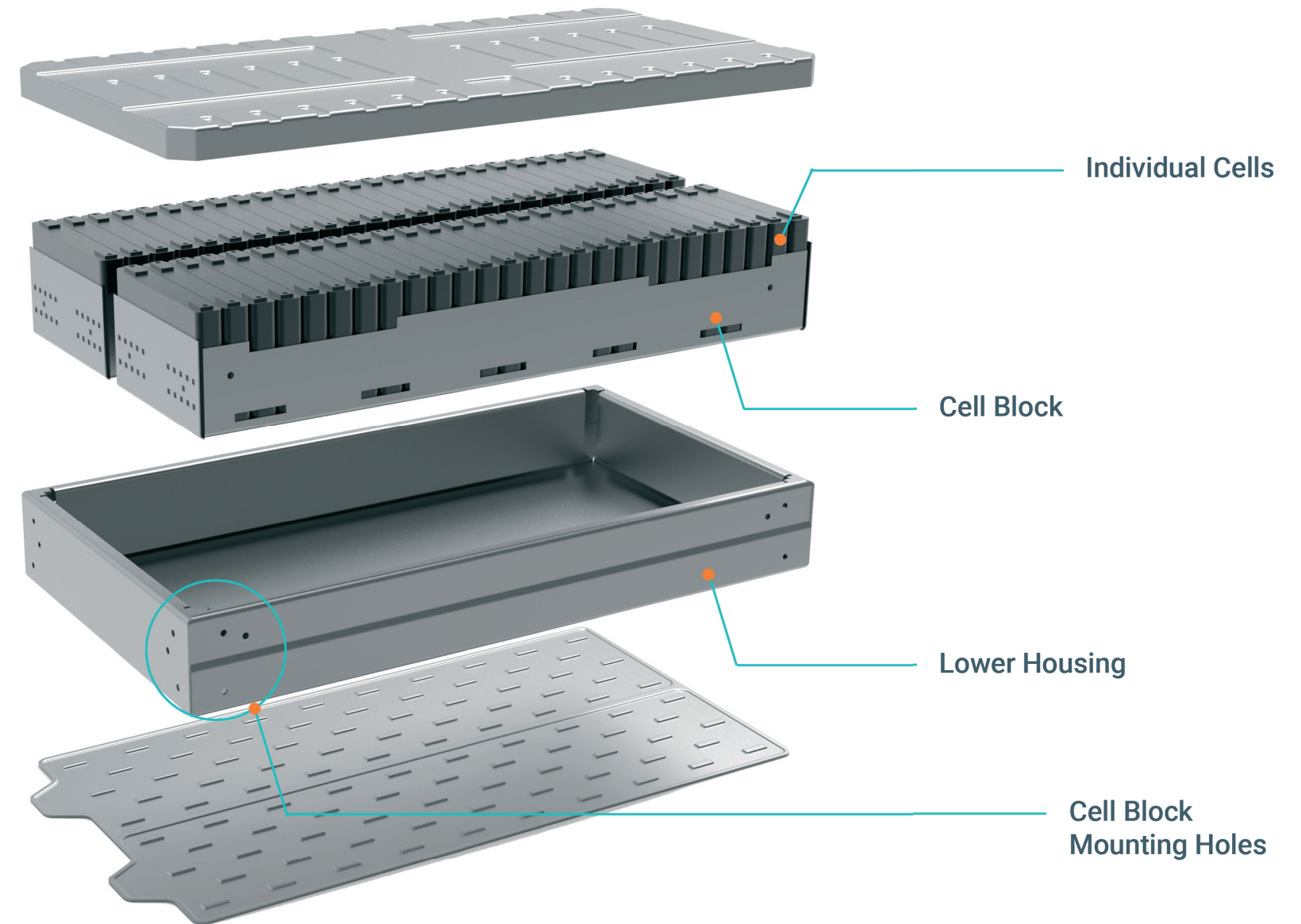
FEATURES INSPECTED

30^{SEC}

INSPECTION TIME

EXAMPLE INSPECTION POINTS

- Cell block position on the defined planes
- 3D location (x, y, z) of individual cells
- Distance between cell block and lower housing side
- 3D location (x, y, z) of the lower housing corners
- Side flatness of the lower housing
- 3D location (x, y, z) of the cell block mounting holes



02 EV Battery Module Inspection

150+

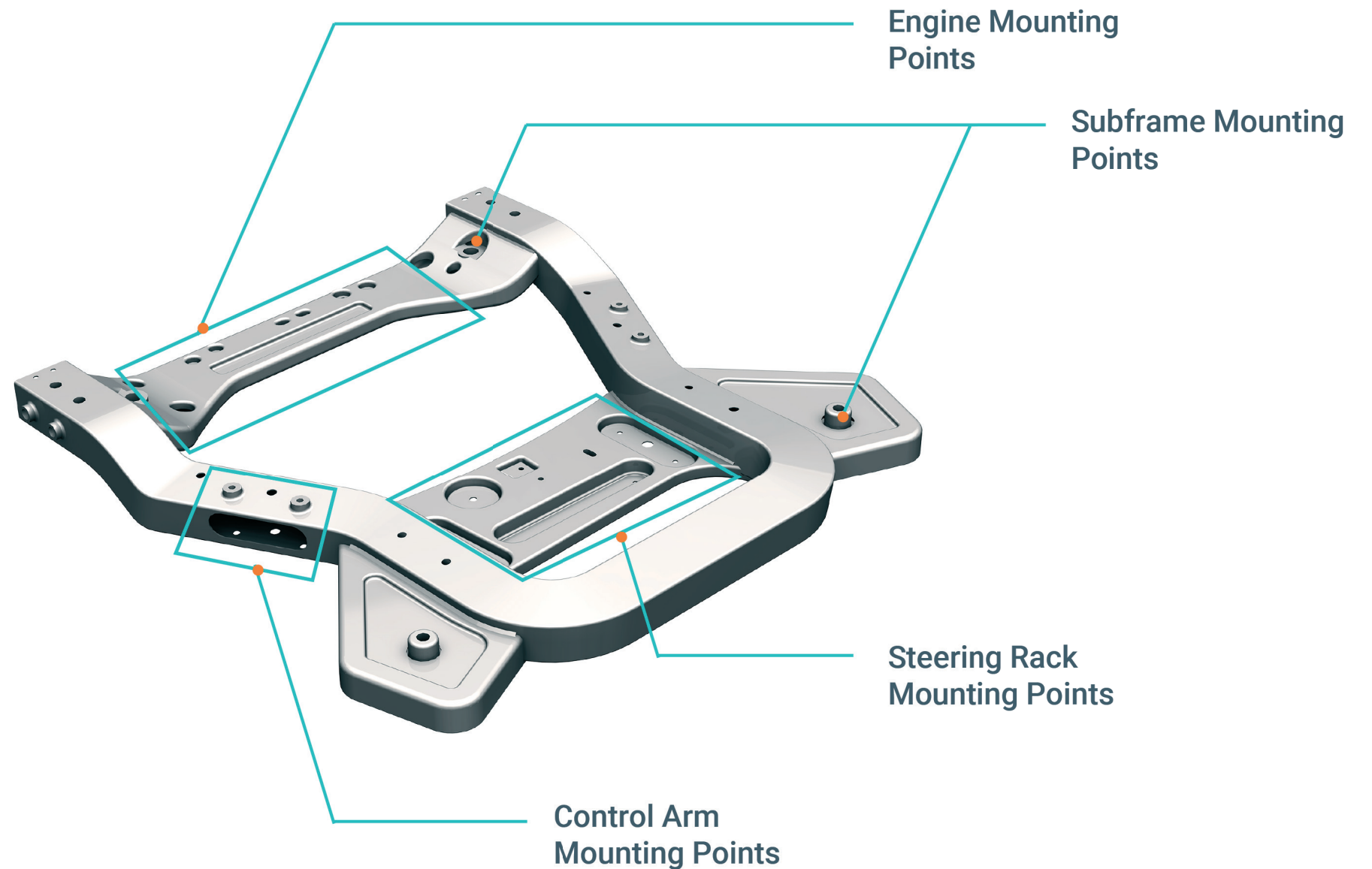
OF FEATURES
INSPECTED

30^{SEC}

INSPECTION
CYCLE TIME

EXAMPLE INSPECTION POINTS

- Mounting points of the subframe
- Control arm (e.g. tension arm) mounting points
- Engine mounting points
- Steering rack mounting points
- Various other critical mounting points



03 Subframe Inspection

200+

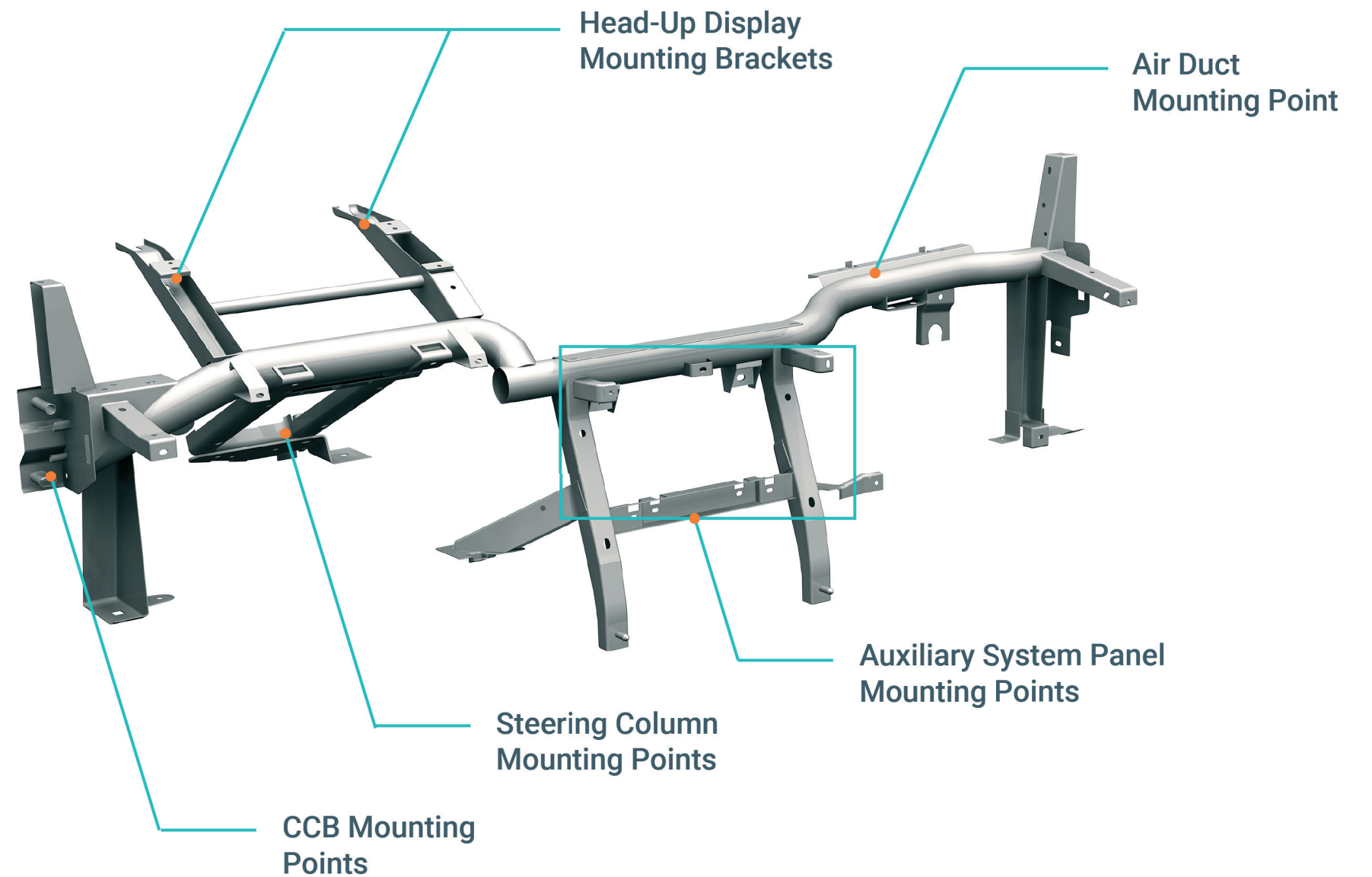
OF FEATURES INSPECTED

30^{SEC}

INSPECTION CYCLE TIME

EXAMPLE INSPECTION POINTS

- Location of the mounting points of the CCB
- Head-up display mounting brackets
- Steering column mounting points
- Auxiliary systems panel mounting points
- Other mounting locations



04 Cross Car Beam Inspection

500+

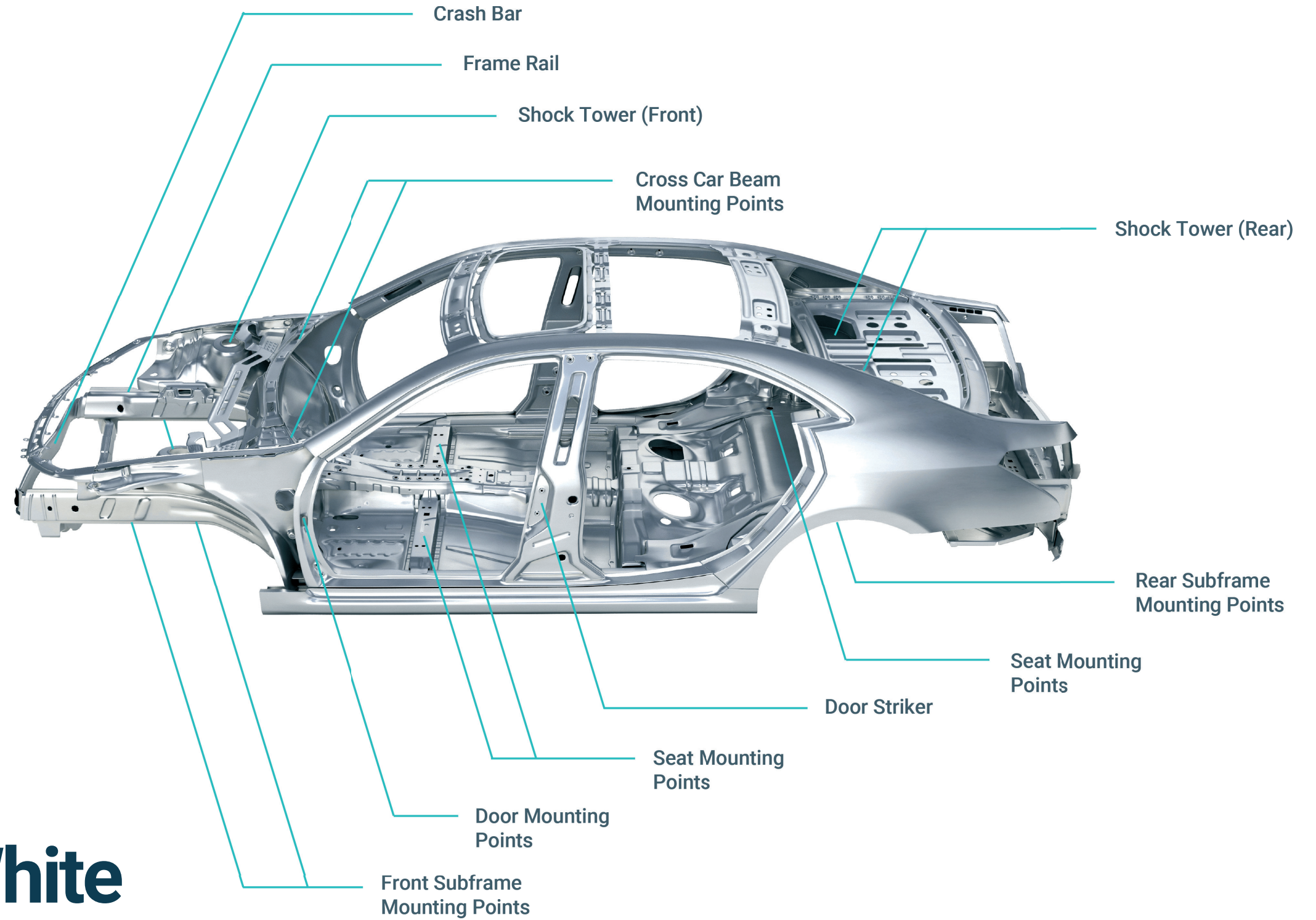
OF FEATURES
INSPECTED

40^{SEC}

INSPECTION
CYCLE TIME

EXAMPLE INSPECTION POINTS

- Mounting points of the subassemblies (front subframe, rear subframe, etc.)
- Shock towers
- Seat mounting points
- CCB mounting points
- Door mounting points
- Frame rail
- Crash bar
- Steering column mounting points
- Firewall
- Battery pack mounting points (for EVs)



05

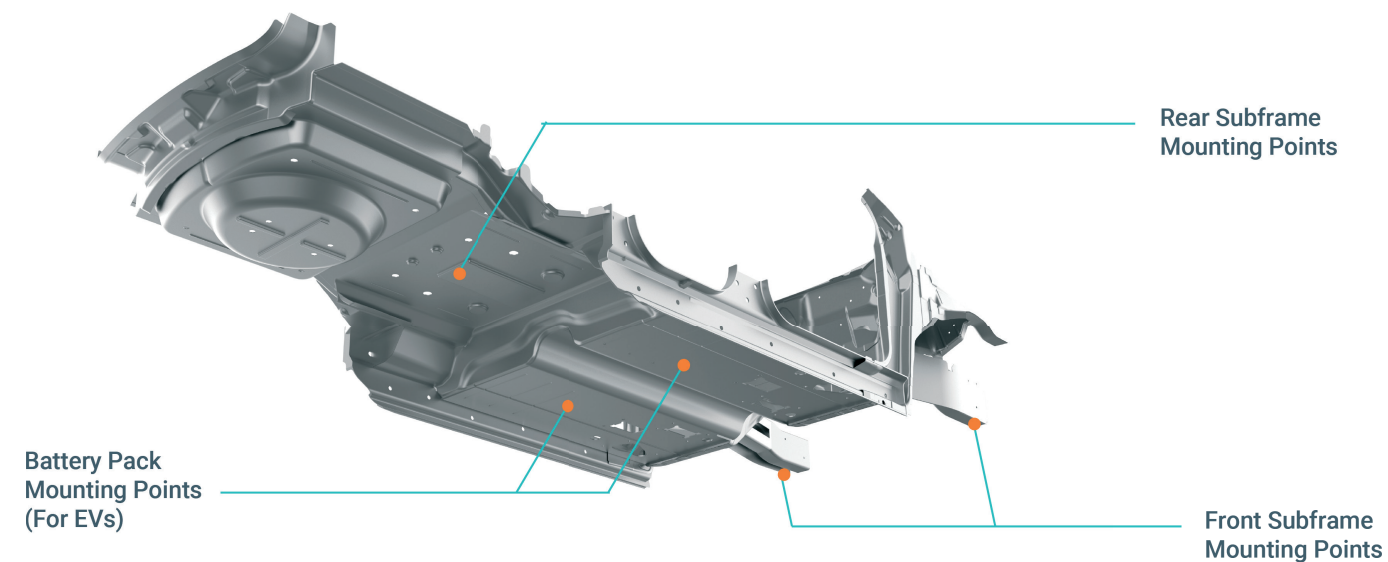
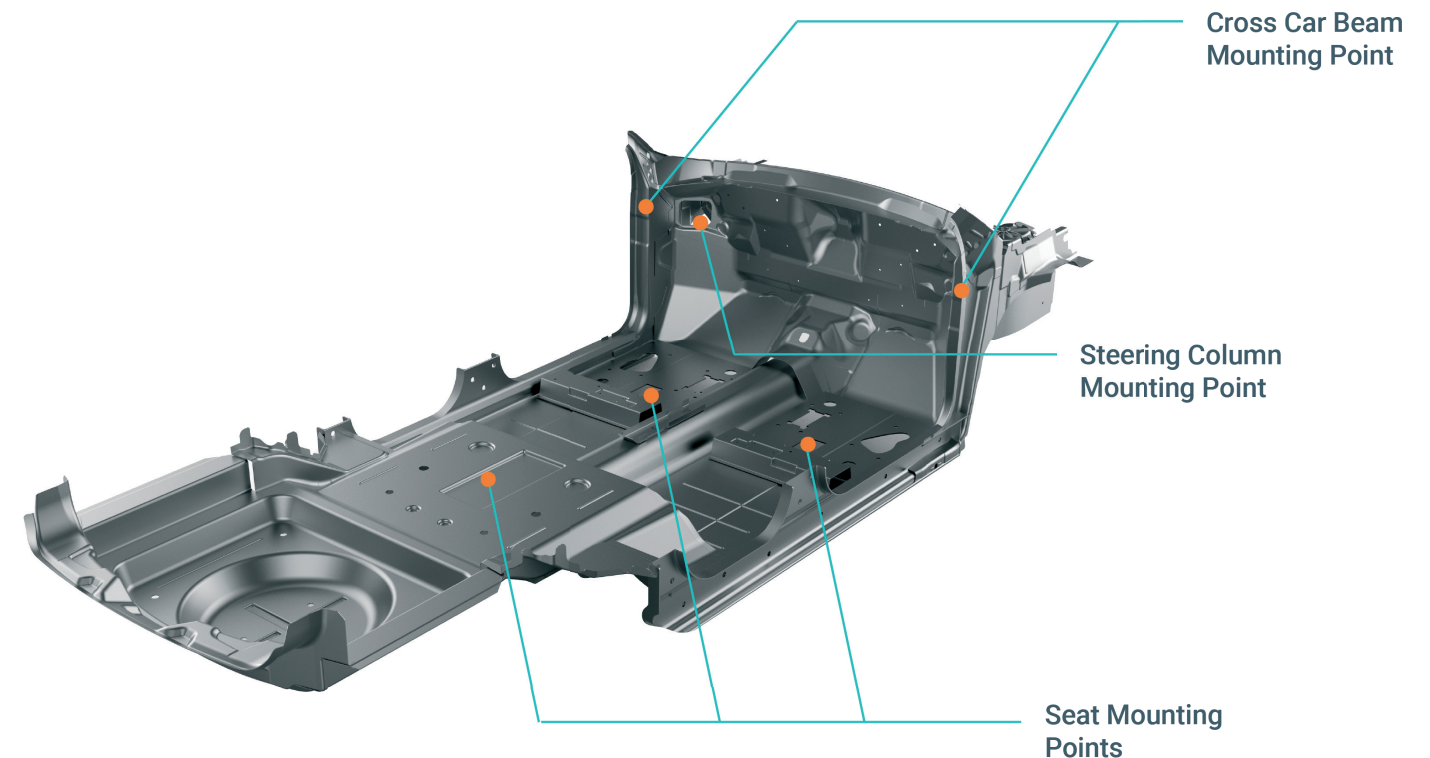
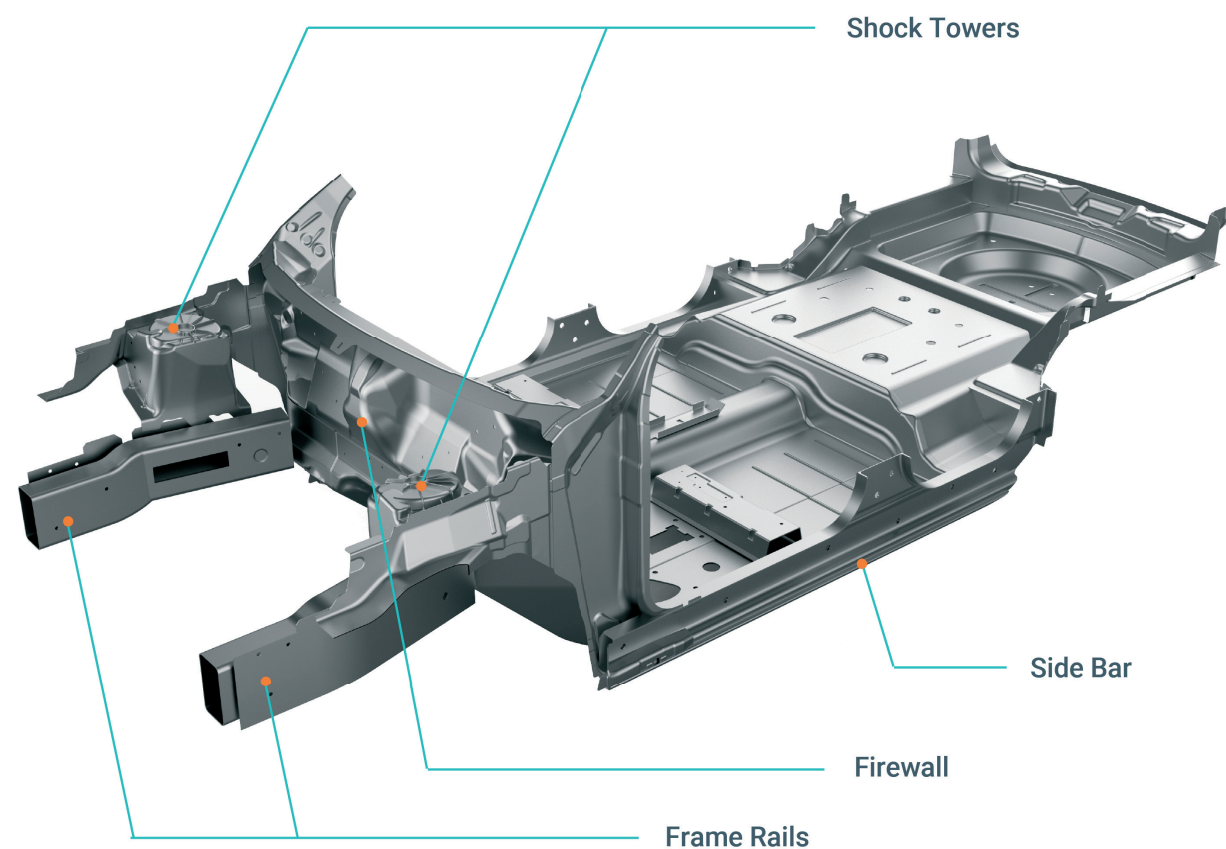
Body-in-White Inspection

400+

FEATURES INSPECTED

35^{SEC}

INSPECTION TIME



06 Underbody Inspection

EXAMPLE INSPECTION POINTS

- Frame rail location
- Fire wall positioning
- Shock tower
- Shock tower location and placement
- Shock absorber mounting holes.
- Mounting holes of the seats
- Mounting places for the subframes
- Positioning of the crash tubes
- Battery pack mounting points (for EV underbodies)

250+

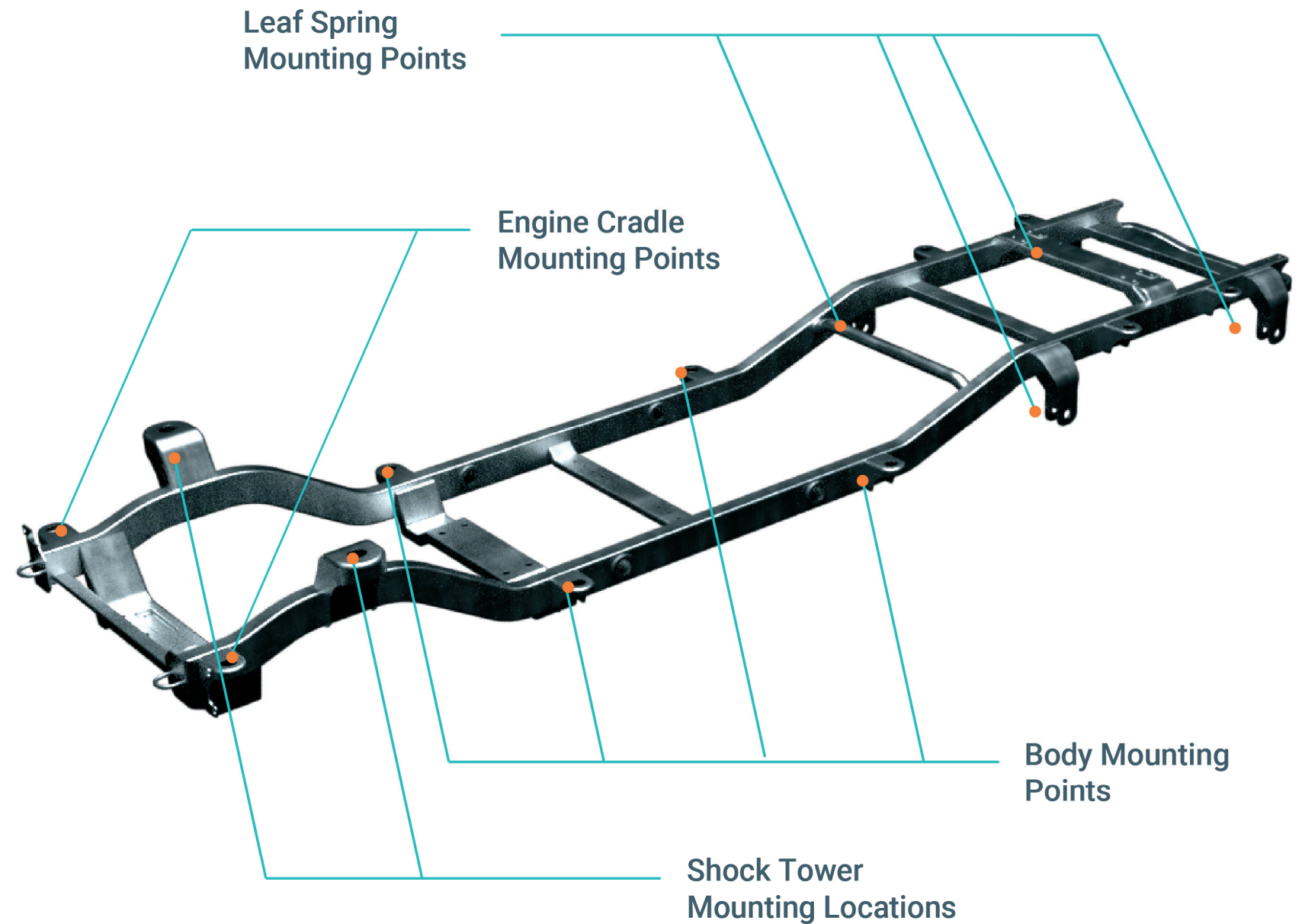
OF FEATURES INSPECTED

35^{SEC}

INSPECTION CYCLE TIME

EXAMPLE INSPECTION POINTS

- Mounting points of the body
- Shock tower mounting locations
- Engine cradle mounting points
- Leaf spring mounting points
- Other functional mounting points



07 Ladder Frame Inspection

250+

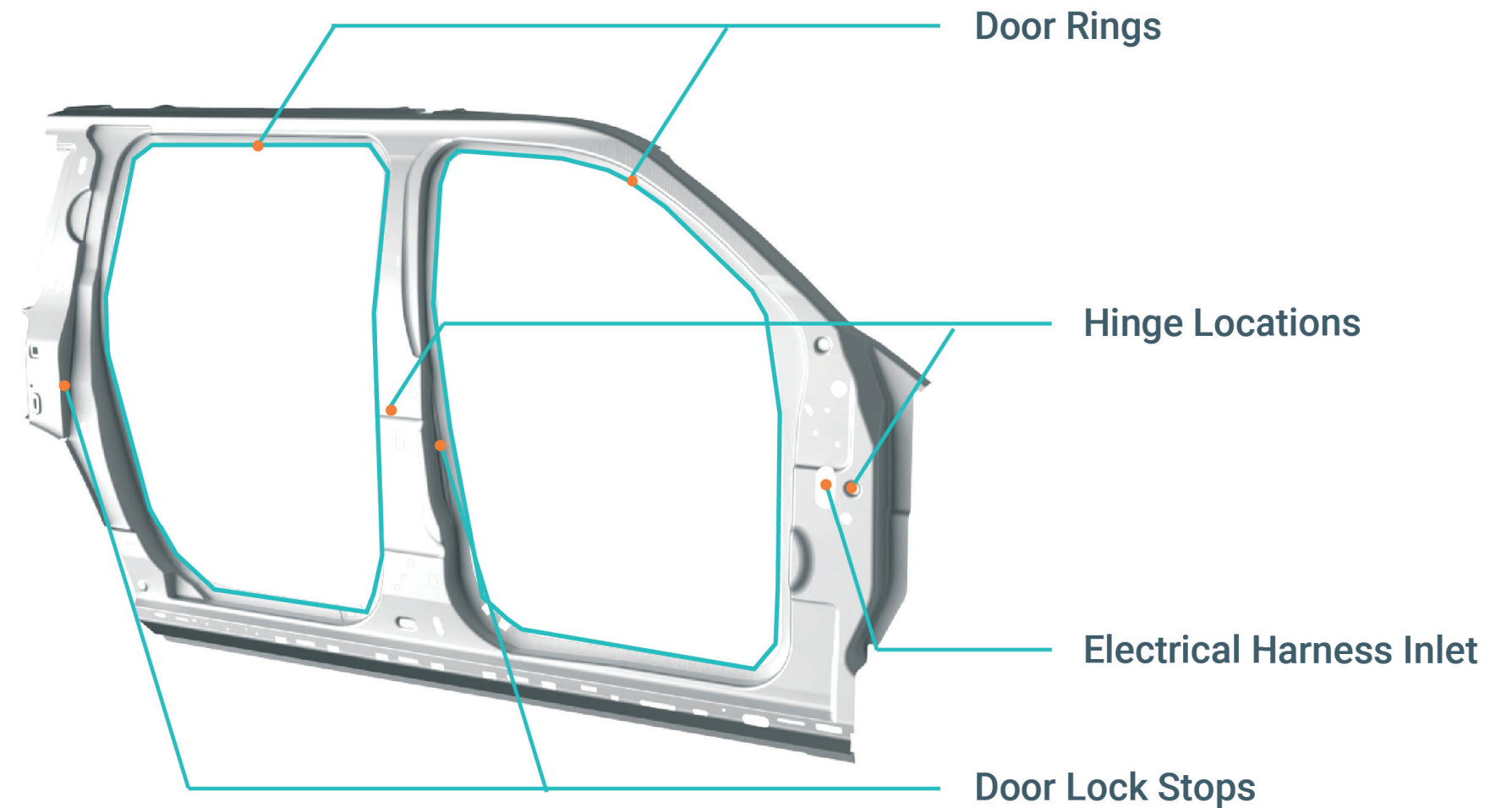
OF FEATURES
INSPECTED

35^{SEC}

INSPECTION
CYCLE TIME

EXAMPLE INSPECTION POINTS

- Mounting locations of door hinges
- Mounting locations of door lock stops
- Critical edge location points of the door ring
- Electrical harness inlet



08

Body Side
Inspection

300+

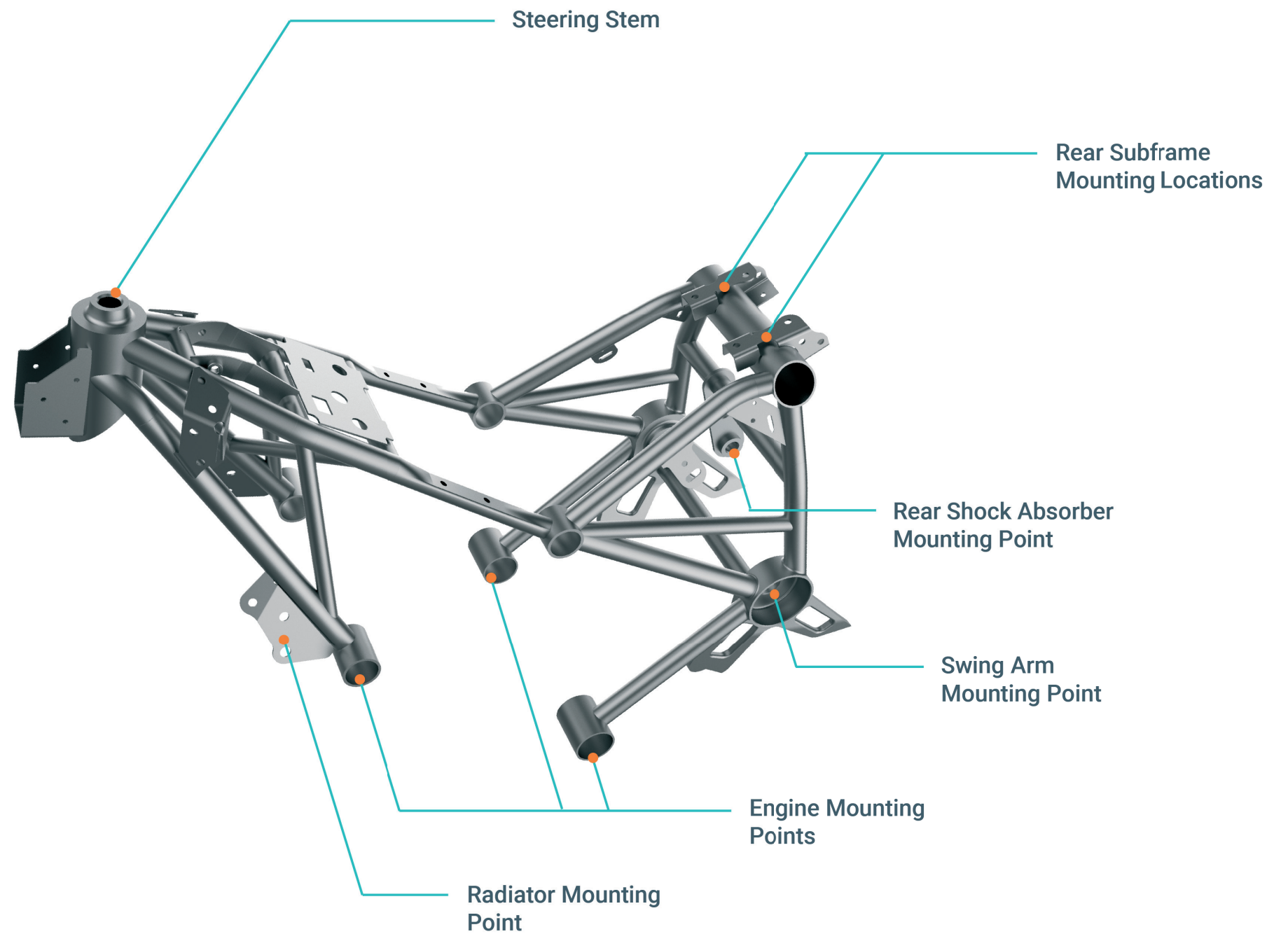
OF FEATURES INSPECTED

30^{SEC}

INSPECTION CYCLE TIME

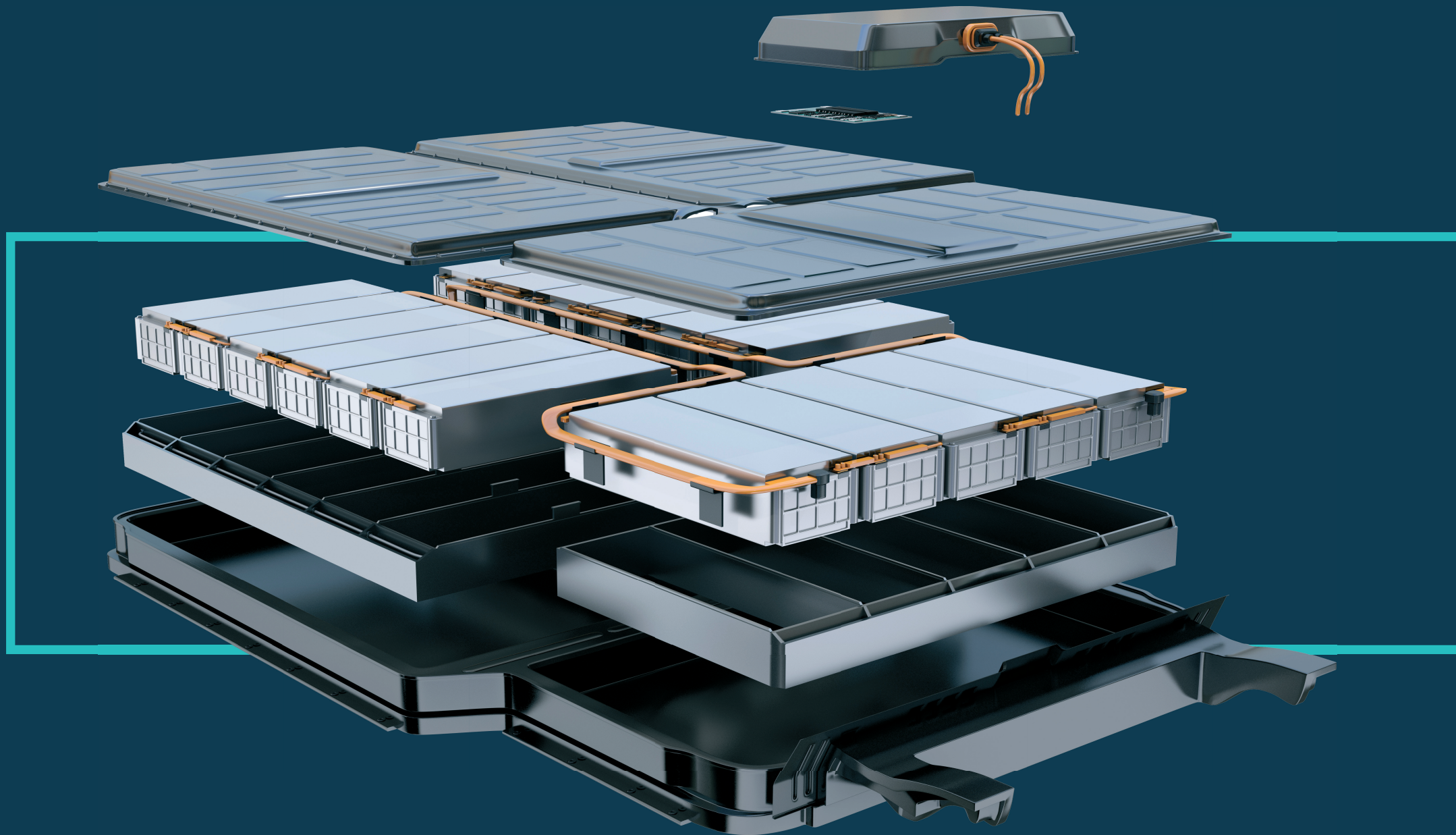
EXAMPLE INSPECTION POINTS

- Position of the steering stem
- Radiator mounting points
- Engine mounting points
- Rear subframe mounting points
- Rear shock absorber mounting points
- Swing arm mounting points
- Distances between various features
- Various child component presence checks



09 Motor Cycle Frame Inspection

MAPVISION
THE EYES OF SMART FACTORIES



CONTACT US
WWW.MAPVISION.FI

Mapvision HQ
Helsinki, Finland

Mapvision Ltd.
Malminkartanonkuja 4
FI-00390 Helsinki, Finland

Mapvision EMEA
Munich, Germany

Mapvision GmbH
Oskar-von-Miller-Ring 20
DE-80333 Munich, Germany

Mapvision America
Ohio, United States

Mapvision Inc.
5601 Creek Road, Suite C
Cincinnati, OH 45242, USA

Mapvision China
Shanghai, China

Mapvision Ltd.
麦普威有限公司
34th Floor, BLDG.A, 391 Guiping
Road, Xuhui District, Shanghai