

MAHA INNOVATION CENTER

PIONEERING SOLUTIONS FOR THE MEASUREMENT
AND TESTING TECHNOLOGY OF TOMORROW.

**STILL IN
DEVELOPMENT**
PILOT CUSTOMERS
WANTED



TRUELIGHT SCAN

MEASURING MATRIX HEADLIGHTS COMPLETELY.

made by MAHA
 made
in
Germany



MATRIX AND DYNAMIC.

Matrix LED headlights are made up of **many individually switchable light segments**. They are adaptive, providing cornering light, high-beam masking and pedestrian marking. The light field **doesn't just change spatially; it changes dynamically too**.

Traditional headlight testing measures at one point, at a fixed distance, under static conditions, which is adequate for a standard low beam. **But not for a matrix system.**

What that means in everyday testing practice is illustrated by the three gaps on the left. **TrueLight Scan closes them: with a robot arm that captures the entire light field, from many perspectives, even in motion.**

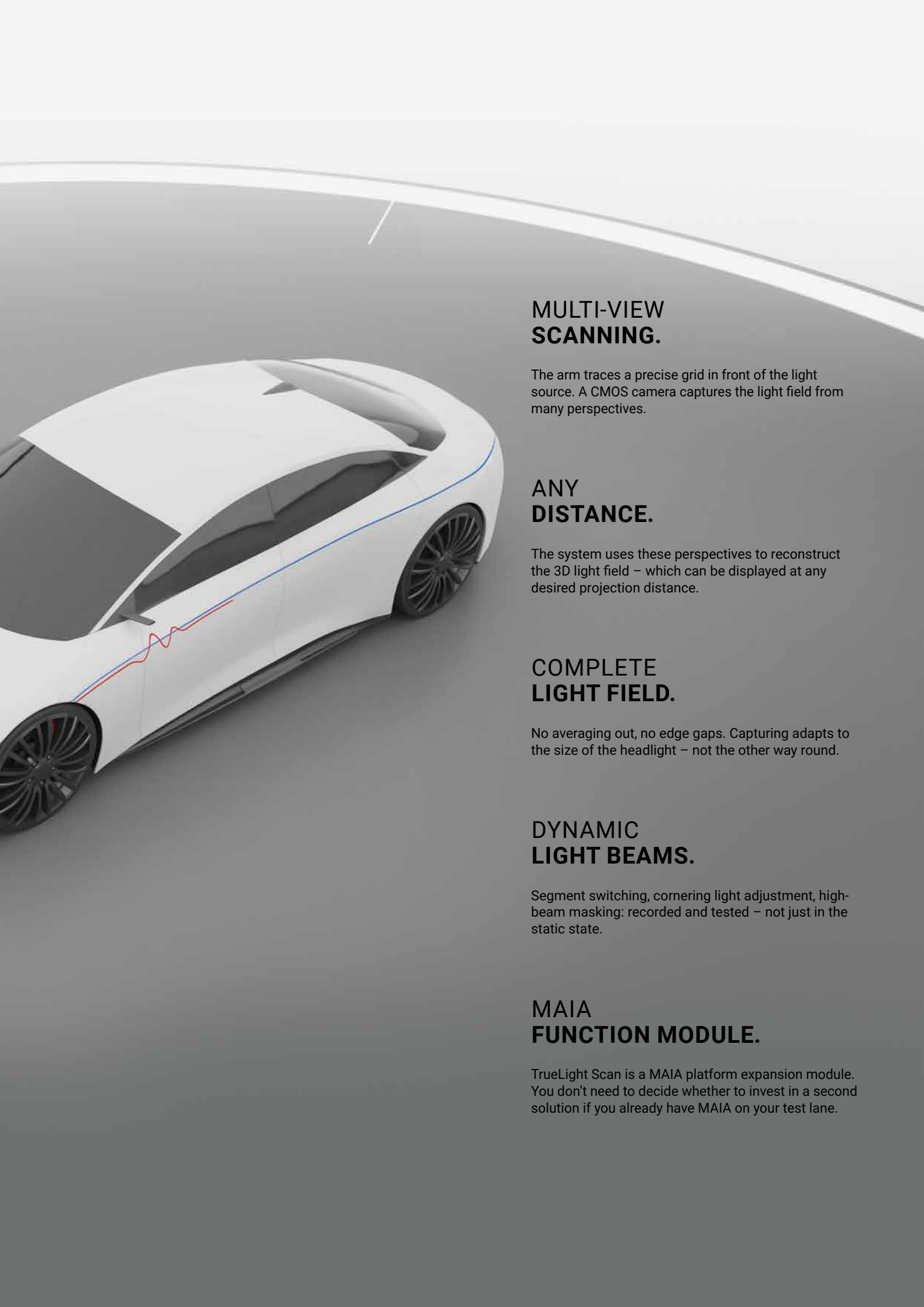
WHAT TRADITIONAL TESTING DOESN'T DELIVER:

- **Excessively coarse light edge:** Pixel transitions are averaged out at a projection distance of ten metres.
- **Area incomplete:** The headlight's light-emitting surface exceeds the capture field encountered on traditional units.
- **Can't capture dynamics:** Adaptive light adjustment isn't tested, because the measurement is static.



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TRUELIGHT SCAN. MEASURING MATRIX HEADLIGHTS COMPLETELY.



MULTI-VIEW SCANNING.

The arm traces a precise grid in front of the light source. A CMOS camera captures the light field from many perspectives.

ANY DISTANCE.

The system uses these perspectives to reconstruct the 3D light field – which can be displayed at any desired projection distance.

COMPLETE LIGHT FIELD.

No averaging out, no edge gaps. Capturing adapts to the size of the headlight – not the other way round.

DYNAMIC LIGHT BEAMS.

Segment switching, cornering light adjustment, high-beam masking: recorded and tested – not just in the static state.

MAIA FUNCTION MODULE.

TrueLight Scan is a MAIA platform expansion module. You don't need to decide whether to invest in a second solution if you already have MAIA on your test lane.

THE TECHNOLOGY AT A GLANCE.

ROBOT-ASSISTED MULTI-VIEW SCANNING.

The robot arm traces a precise grid in front of the headlight. The CMOS camera captures the light field from many perspectives.

CAPTURING ENTIRE LIGHT BEAMS.

The capture grid adapts dynamically to the size of the headlight. No edge gaps, no averaging-out of pixel transitions.

ANY DISTANCE.

Whether 1 m, 10 m, 25 m or beyond, the scan converts the light distribution to any projection distance.

DYNAMIC LIGHT BEAMS.

The scan records matrix switching, cornering light adjustment and high-beam masking directly, as they happen.

MEASURED AUTOMATICALLY.

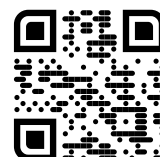
A headlight's complete light field is measured in seconds – reproducibly and automatically.

RUNS ON THE MAIA PLATFORM.

TrueLight Scan docks onto the MAIA platform as a module – MAIA operators don't need any new infrastructure.



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