



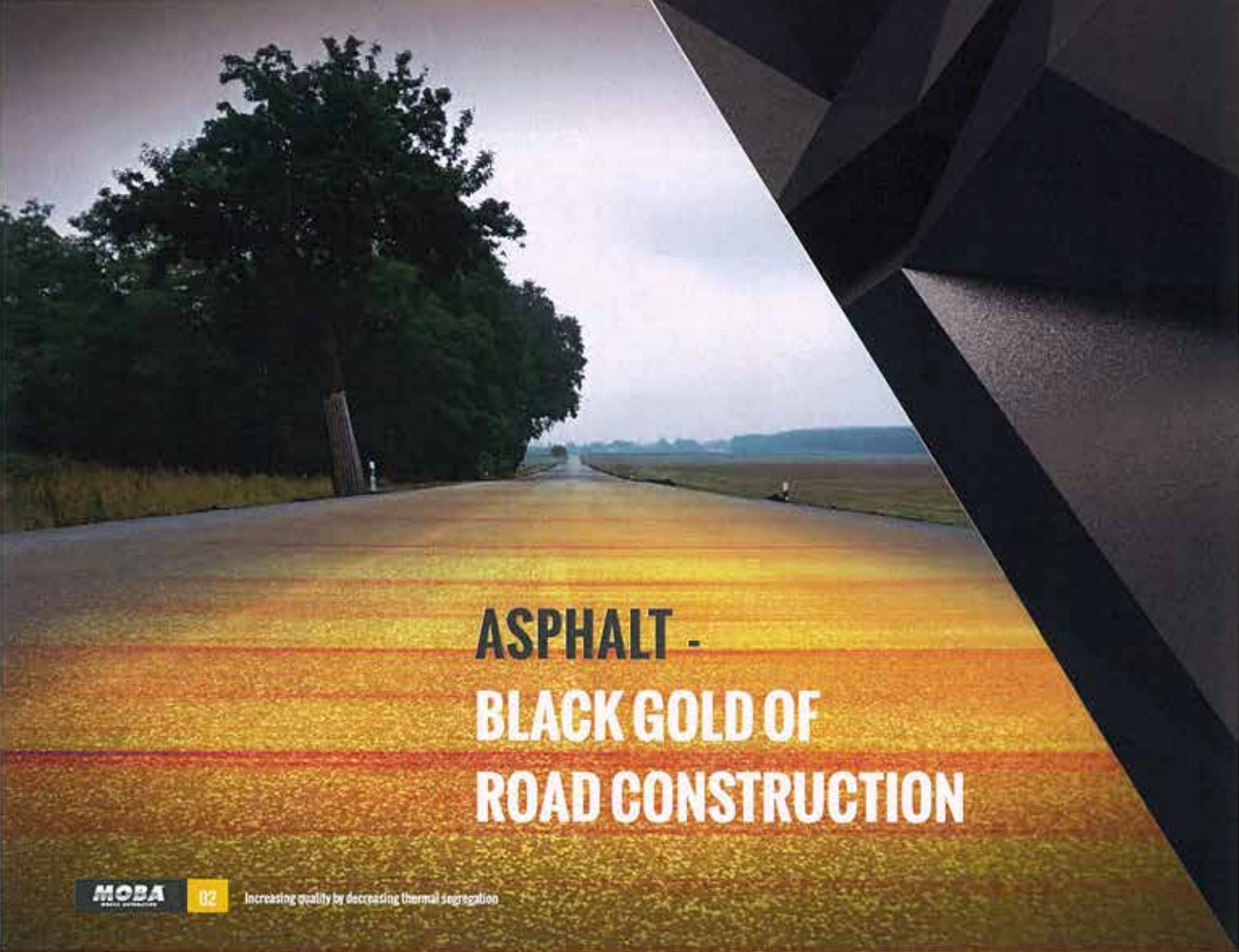
# PAVE-IR SOLUTIONS

**MOBA**  
MOBILE AUTOMATION

# THERMAL SEGREGATION - A MAJOR PROBLEM FOR ROAD FAILURES

## THE PROBLEM: THERMAL SEGREGATION

Asphalt temperature is one of the key factors for a long lasting road at the end. Compared to other industries or products, for example Automotive or quality assurance, the documentation in road construction has been a small topic until today. Only a few construction companies have their own self control procedures and measure asphalt temperature at certain points during the process.



## ASPHALT - BLACK GOLD OF ROAD CONSTRUCTION



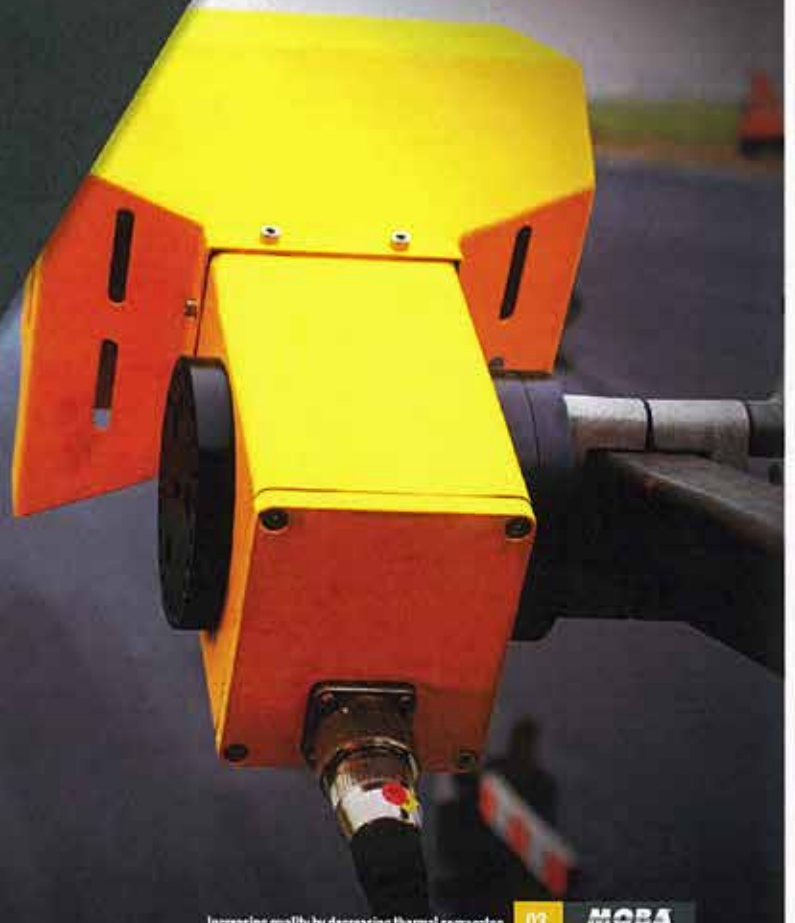
**OLD ROAD WITH DAMAGED SURFACE**



**NEW ASPHALT SURFACE**

## **POSSIBLE PROBLEMS - BECAUSE OF THERMAL SEGREGATION**

- » Burned bitumen
- » Cold /Hot nests during transportation
- » Cold chunks of asphalt
- » Additional machine wear
- » Thermal segregation assists material segregation
- » Influenced screed leveling
- » Segregated areas
- » Inhomogeneous mat temperatures
- » Bad surface structure (greasy/rough)
- » Inconsistent compaction
- » Premature road failures



# PAVE-IR SYSTEM - THE SOLUTION TO DETECT THERMAL SEGREGATION



ON-BOARD COMPUTER  
THE "HEART" OF THE SYSTEM

IR SCANNER  
ASPHALT QUALITY CONTROL



# MODULAR SYSTEM - ROBUST HARDWARE WITH SEALED ELECTRONICS

## IR TEMPERATURE SCANNER

- » Infrared sensor for measuring surface temperature
- » Automatic edge detection functionality
- » Adaptable fixed width functionality
- » Intelligent sensor, ready for future options



01

## GNSS ANTENNA

- » High precision antenna (SBAS)
- » Delivers precise coordinates and output to calculate speed and movement of the machine
- » Robust



02

## WEATHER STATION

- » Ambient conditions
- » Air temperature
- » Wind speed
- » Humidity



03

## IR TEMPERATURE SENSOR

- » Material temperature measurement
- » Position of sensor is flexible
- » Temperature information in real time
- » CAN-Interface
- » Up to four additional sensors possible

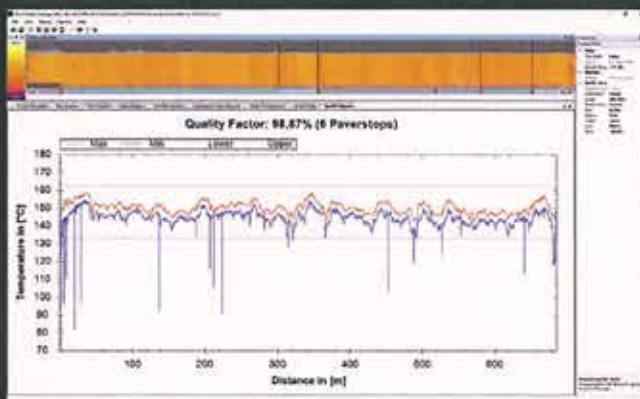


04

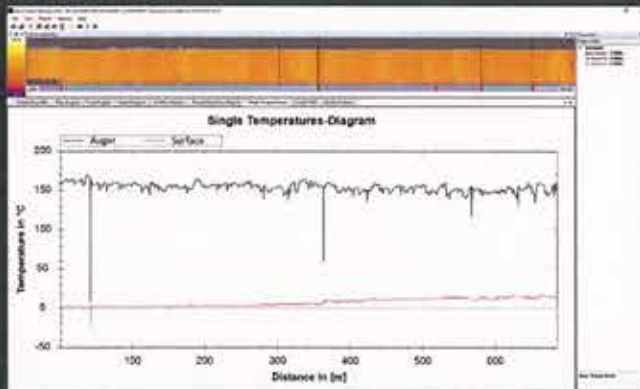
# PAVE PROJECT MANAGER - THE TOOL TO DETECT THERMAL SEGREGATION

## OVERVIEW OF MODULES

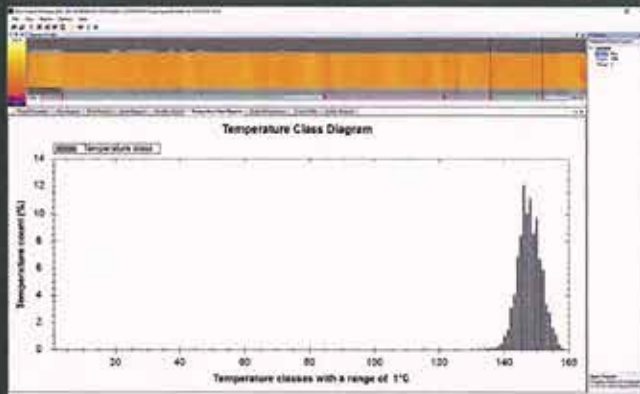
- » Single temperatures
- » Time diagram, e.g. for paver stops
- » Quality factor diagram
- » Speed diagram
- » Weather diagram
- » Map view
- » Report generation
- » Future functionalities can be added easily for your needs



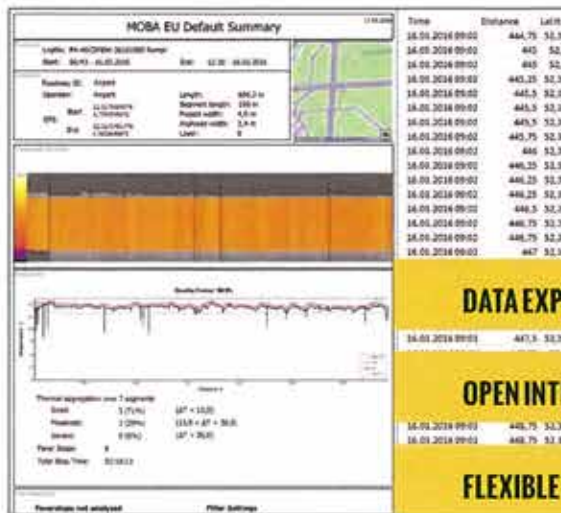
QUALITY FACTOR DIAGRAMM



ADDITIONAL SINGLE TEMPERATURES



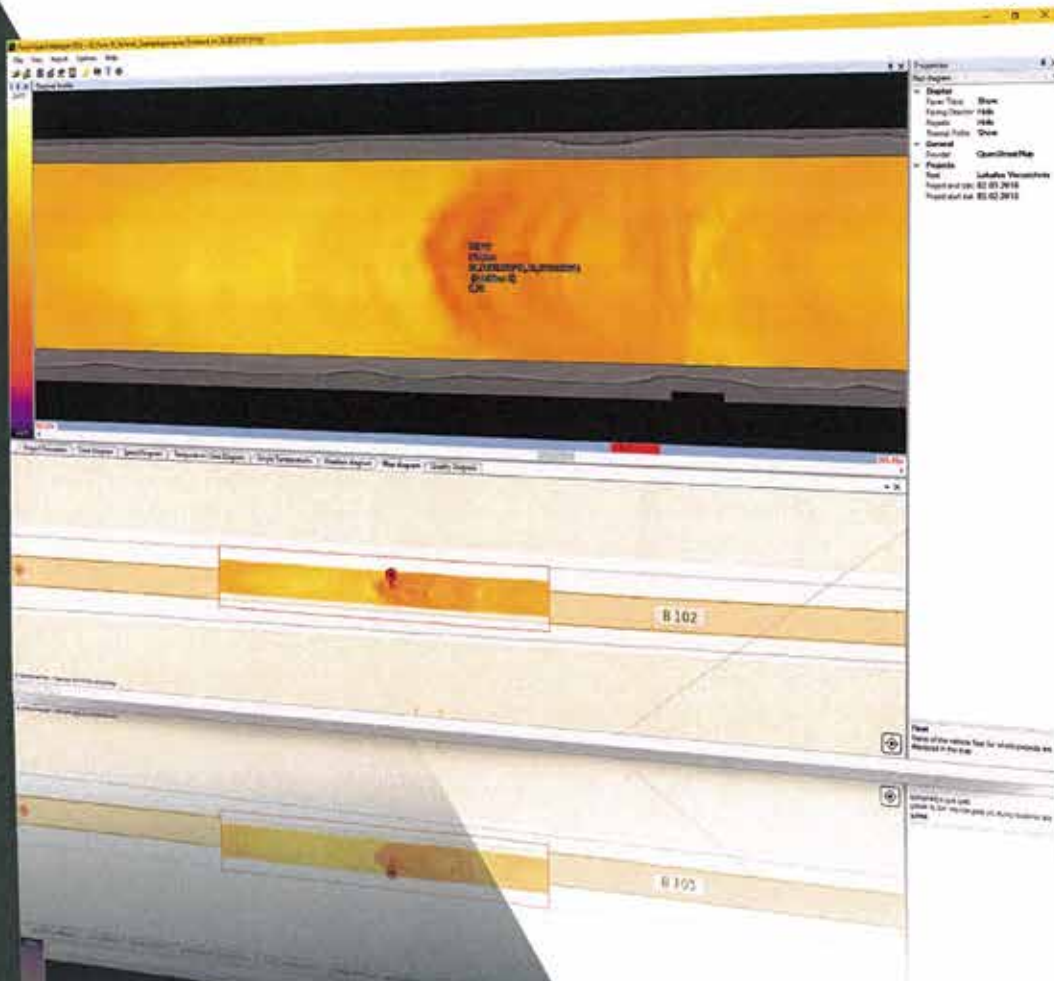
TEMPERATURE CLASSES



**DATA EXPORT TO OTHER APPLICATIONS**

**OPEN INTERFACE FOR THIRD PARTIES**

**FLEXIBLE MODULES FOR EVERY TASK**



# ONE GROUP - ONE RESPONSIBILITY



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