



# NVH Engineering Services

## Head Empirical Assessment Ride

HEAR! – Noise rating with context

# Benchmarking | Customer clinics | Target sound development

Vehicle assessment and target noise definition using test drives

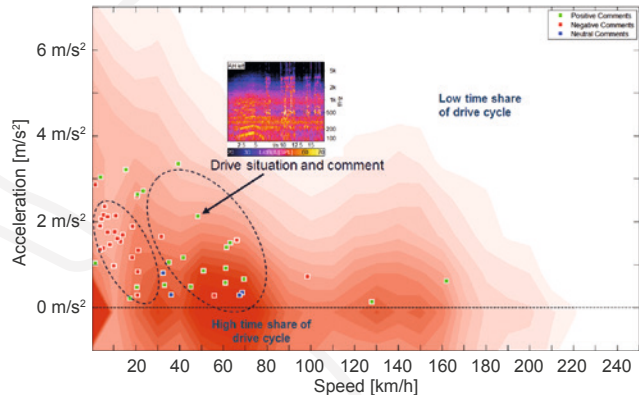
## Discover how customers experience your product:

- What are their expectations?
- How do they drive?
- When do they like the sound or complain about the sound?
- How often do these situations occur during normal driving?
- Which NVH issues are really important?
- How do they compare it to the competitors' vehicle?
- What target sound really fits the vehicle?

Our HEAR! method offers an integrated approach for the evaluation of vehicle sounds and for target sound development.

## Assessment in a realistic environment

- Selection of a suitable test course
- Vehicle evaluation during real driving
- Consideration of vehicle context and interaction
- Potential customers can be integrated in the evaluation
- Analysis of the typical driving style



HEAR! combines free comments of the test individuals, psychoacoustic analyses and statistical evaluation of driving conditions in a unique process.

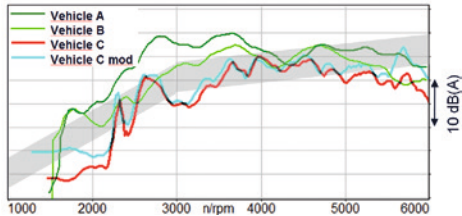
The process is based on the scientific experiences of EU project BE-96-3727 OBELICS (Objective Evaluation of Interior Car Sound) and the EVE-method (Explorative Vehicle Evaluation) resulting from the interdisciplinary cooperation with the TU Berlin and Prof. Dr. Schulte-Fortkamp.

# Target sound development

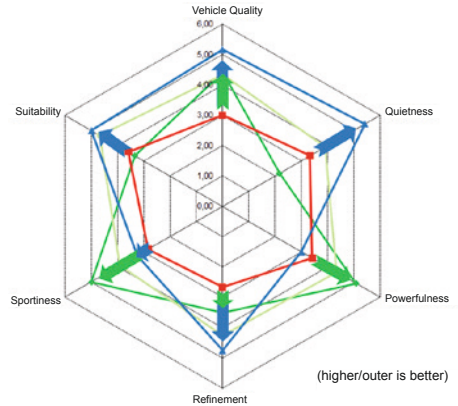
Satisfying the NVH preferences of your customers

## Using HEAR! we develop target sounds

- Fulfilling the expectations of the customer for your product
- Prioritized by the acoustically relevant driving conditions
- Fitting the character of the vehicle and the brand
- Surpassing benchmark comparisons with competitors



- Vehicle A original
- Vehicle A target smooth
- Vehicle A target sporty
- Vehicle B



(higher/outer is better)

## Gain flexibility with our full range of lab services

In our test facilities we are equipped to carry out complex measurement tasks using the latest HEAD acoustics technology. In addition to our in-house jury test studio, we offer a mobile jury test system for the reliable acquisition of subjective judgments. We would welcome the opportunity to visit you for a detailed introduction. Find out more about interesting topics from our engineering services portfolio on the web.



# Success



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Let us help you meet your NVH objective on-site with our know-how and our products! Benefit from the latest acoustics measurement technology. Our experts will support you throughout your projects – from simple measurements to complex development tasks.