

DIMENSIONERING AV VÄGAR GJORDA AV ALTERNATIVA MATERIAL FÖR ÖKAD CIRKULÄR MATERIALANVÄNDNING

Sigurdur Erlingsson, VTI

Nyttor och effekter

The goal is to enhance the utilization of residual (circular) materials in road construction, aligning with the target of achieving climate-neutral infrastructure by 2040.

The objective of this project is to investigate several recycled and residual materials for their potential usage in pavement structures and to create the necessary design basis for this, particularly by updating the ME design tool ERAPave PP.

Aktörskonstellation

VTI, <http://vti.se> – Sigurdur Erlingsson (sigurdur.erlingsson@vti.se)

Afatek A/S, <http://afatek.dk> – Sören Dyhr-Jensen (sdj@afatek.dk)

Boes Consulting, <http://boes-consulting.dk> – Torben Boes Overgaard (torben@boes-consulting.dk)

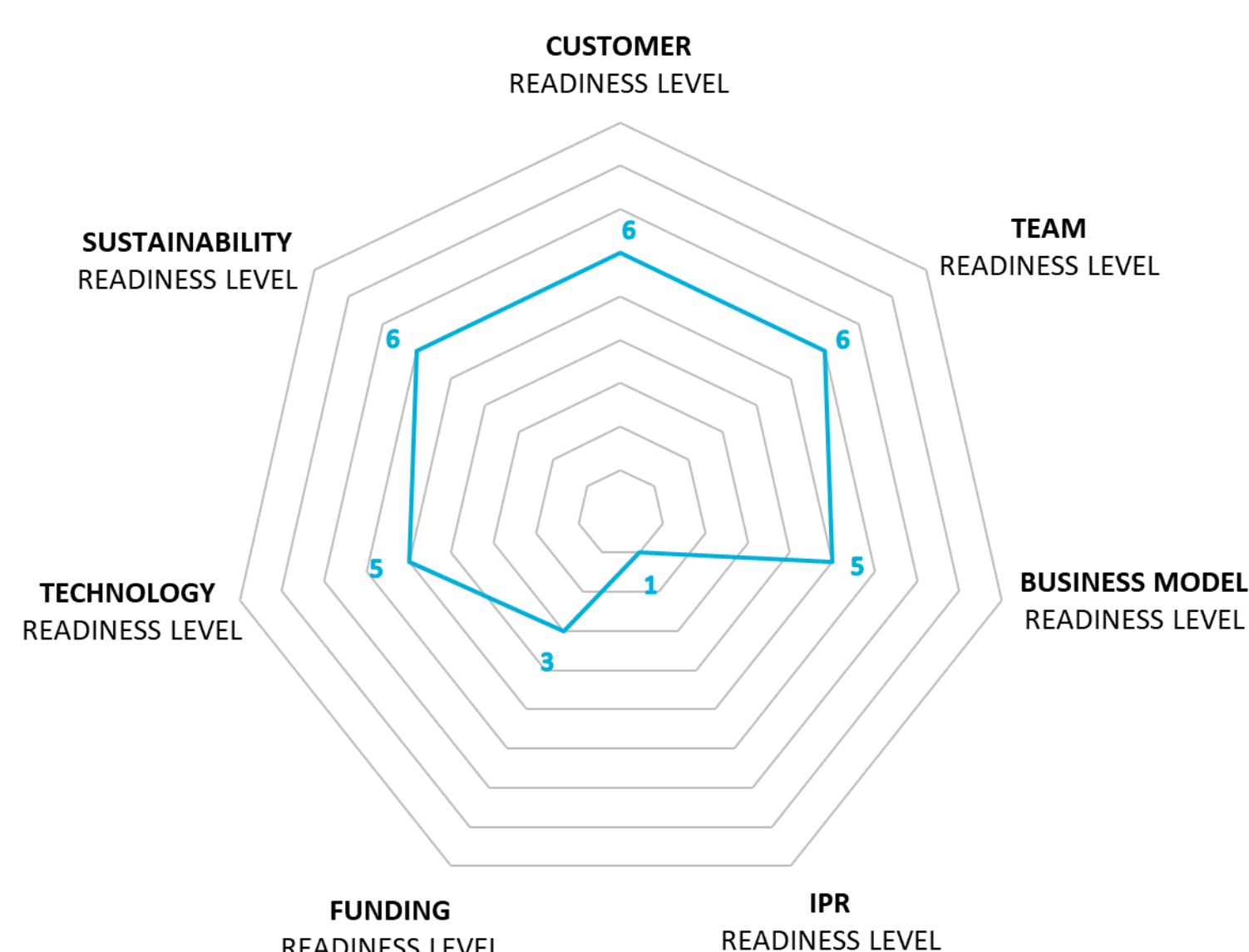
Sydskaånes Avfalls AB SYSAV, <http://sysav.se> – Raul Grönholm (raul.gronholm@sysav.se)

Trafikverket, <http://trafikverket.se> – Klas Hermelin (klas.hermelin@trafikverket.se)

Leveranser

- (1) identification of recycled and residual materials suitable for pavement structures
- (2) enhance the database of recycled material properties calibrated for field conditions
- (3) development of a design basis for using recycled materials for specific requirements road structures
- (4) increase international cooperation related to utilization of recycled and residual materials in pavement structures.

Innovationsstatus



The focus of the project is to increase the use of recycled materials in road construction in order to enhance their sustainability. This requires testing the materials in both laboratory and field in order to test suitability. The technology used for testing is well established. As the material characteristics are known pavement structures can be designed using these materials. That will enhance their usability.

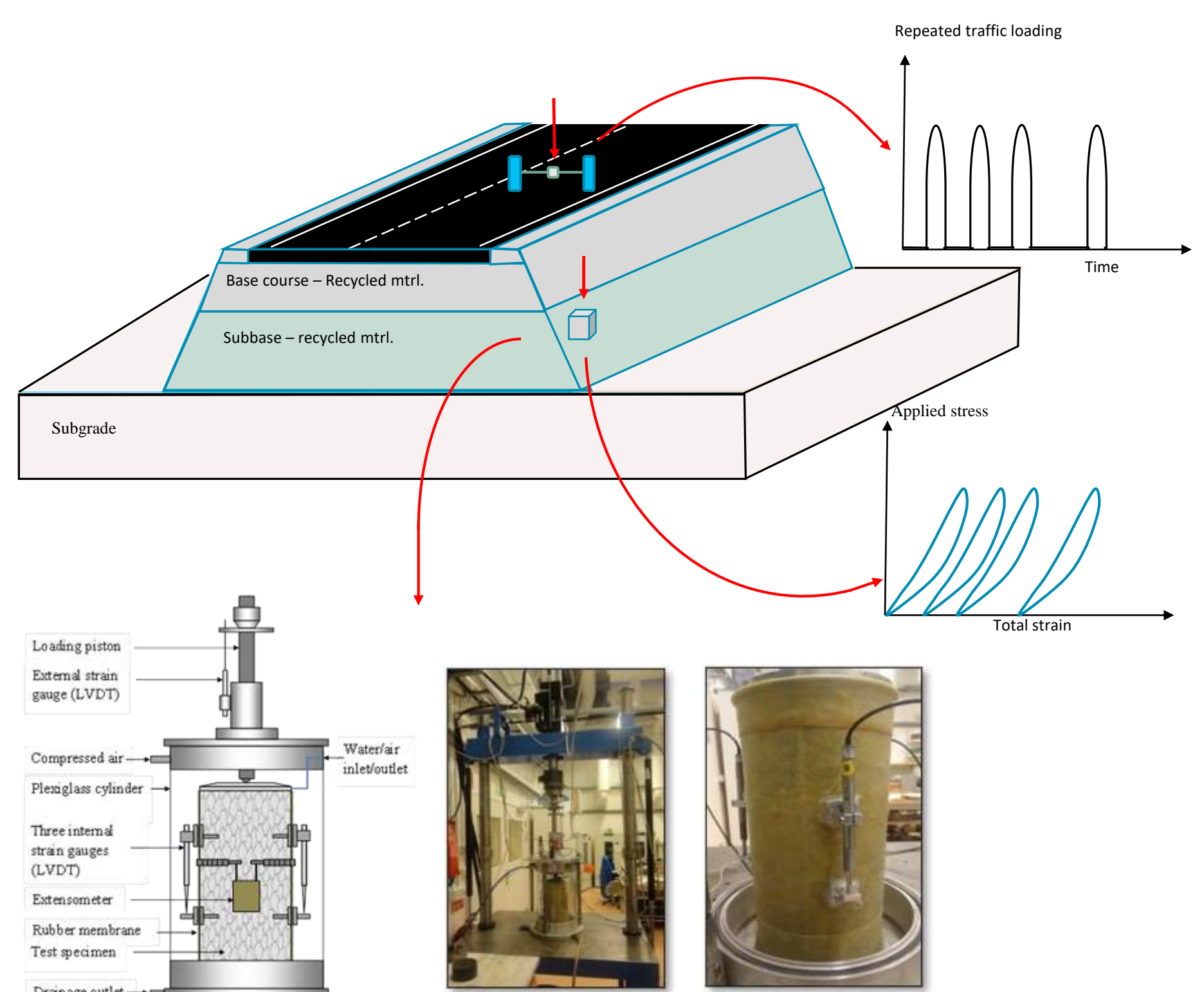


Fig. 1. Road structures, built partly of recycled materials, will be tested and evaluated. The emphasis will be on the performance on the recycled materials. The materials will be tested in laboratory (aggregate strength testing, tri-axial testing) and full-scale field performance monitoring.

Vidareutveckling och implementering

The project has recently started (June 2024).

The project partners are at the moment in a process to select residual materials for laboratory and field testing.

Thereafter the materials will be tested in laboratory for their potential usage in pavement structures.

Material parameters will be gathered and included in the materials library in the ME design tool ERAPave PP.

Full scale test structures including residual materials will be built and monitored.

Validation is planned through following the degradation of the full scale structures and compared to ERAPave calculations.

Creation of some standard pavement structures including recycled materials for different climate zones and traffic volume.

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