



**SVENSK
BELÄGGNINGS-
FÖRENING**

Experiences from improving the climate impact of the Swedish paving industry

Johanna Andréasson, chair of the Swedish Paving Association

2021

Start of the
association

23

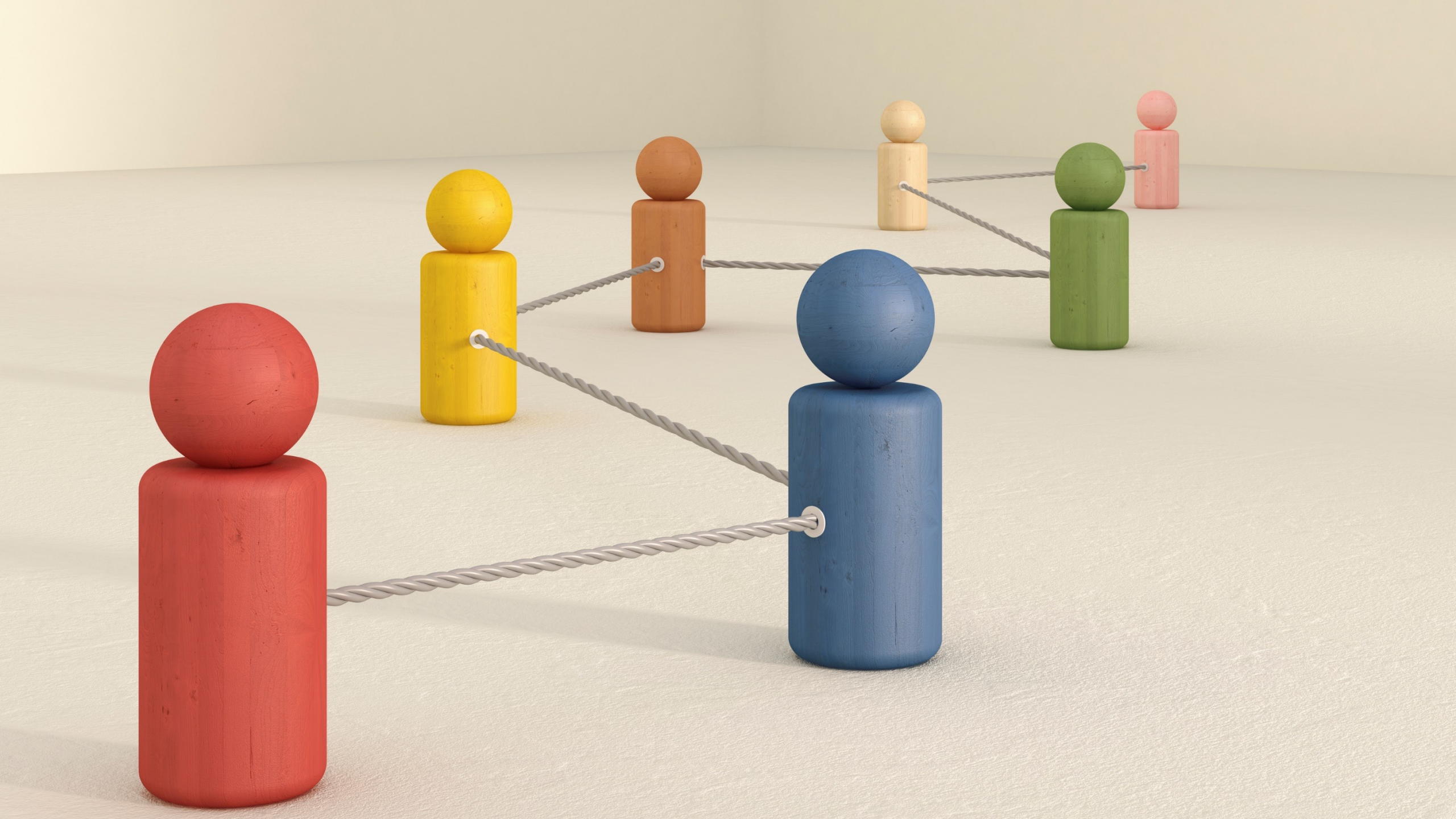
Member
organisations

4

Committees

SBF aims to create a modern, sustainable and attractive industry that contributes to the sustainable transition.

We do this by creating networking spaces for transparent, respectful and courageous collaboration between relevant actors.





FOCUS AREAS

Safety



Sustainability



Workforce
Development



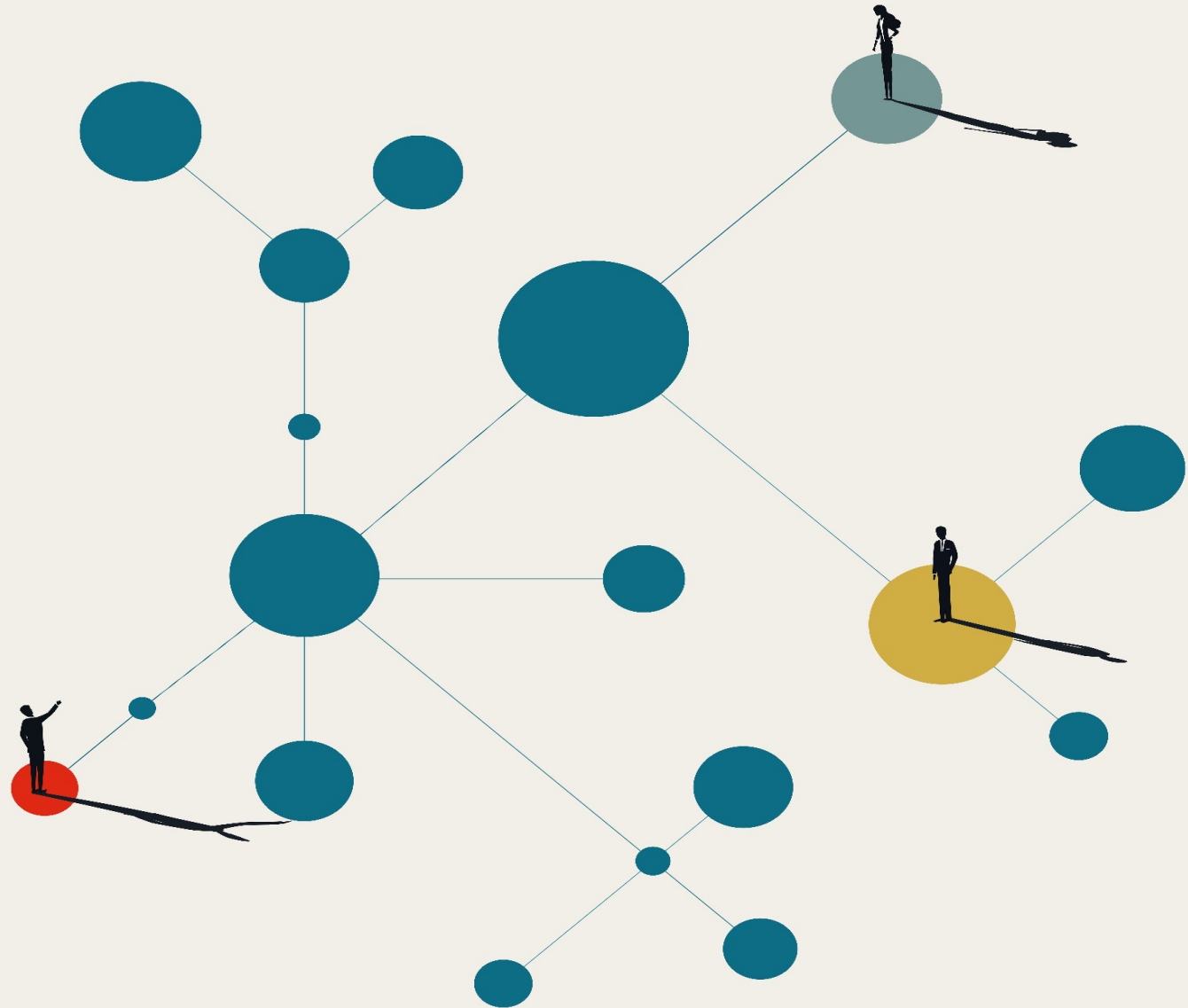
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committees

- Environment and climate
- Event
- Occupational health and safety
- Professional development

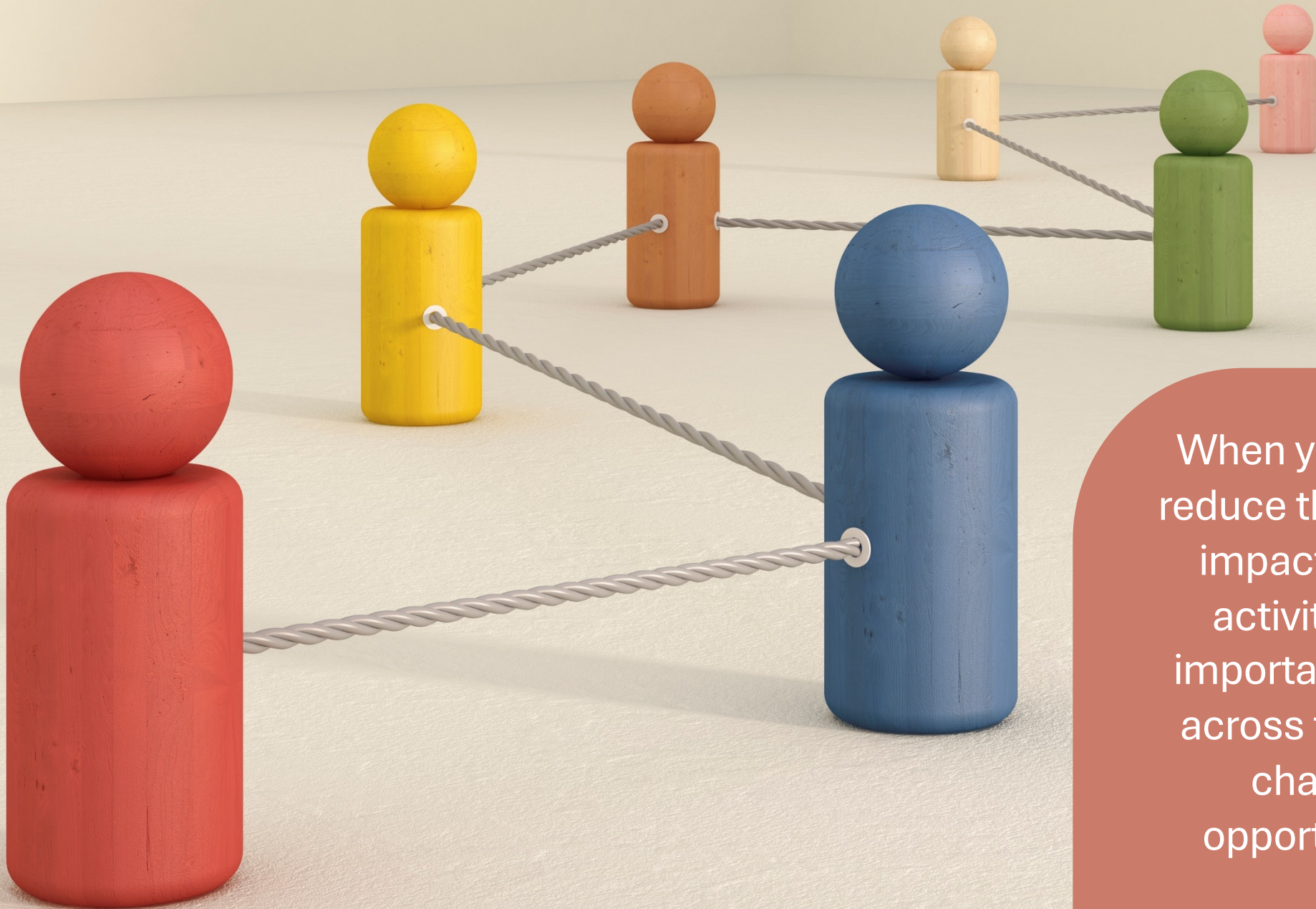
- Environment and climate Climate roadmap
- Event Asphalt Days, specialist seminars
- Occupational health and safety Sharing learnings, tools
- Professional development Asphalt Academy

Working together is
the best and
fastest way of
developing our
industry, which is
why the
cooperation
between industry
associations is a
powerful tool for
progress.



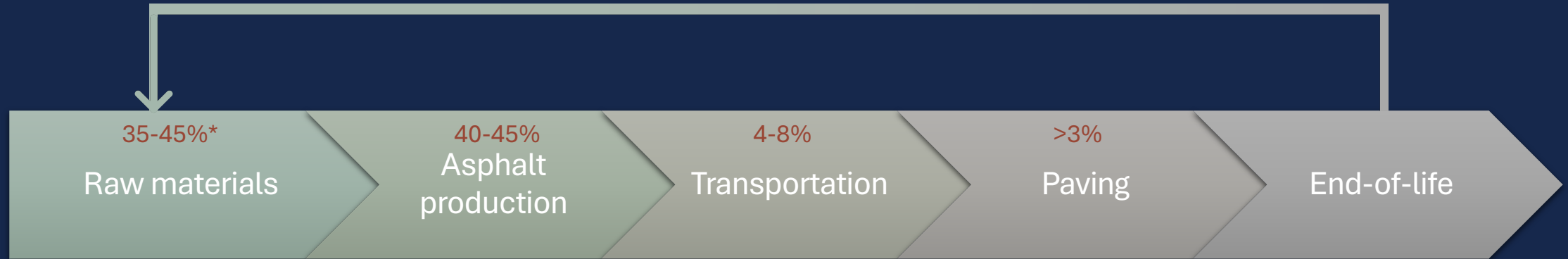
The background of the slide is a dense field of 3D-rendered numbers in various shades of blue and white. The numbers are of different sizes and are scattered across the entire frame, creating a sense of depth and complexity. Some numbers are more prominent than others, while others are partially obscured.

The Swedish paving industry does not currently gather statistics, therefore this presentation contains limited quantitative information.



When you aim to reduce the climate impact of your activities, it's important to look across the value chain for opportunities.

2017



Alternative materials

Reduced production temperatures

Lower-emission energy for heating

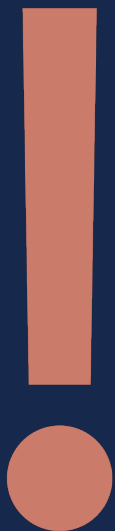
Lower-emission energy for transportation

Reduced compaction temperatures

Lower-emission energy for construction equipment

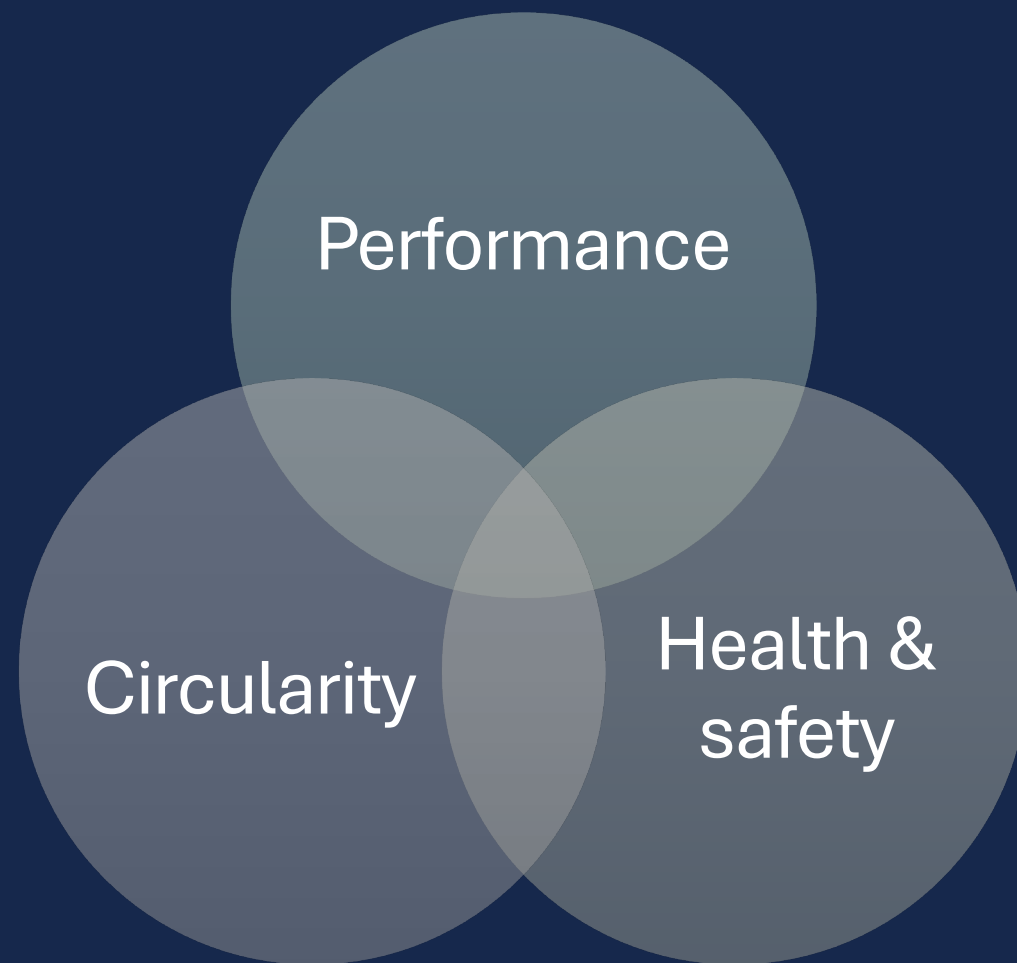
Increased use of RAP

(Extend as much as possible through high-performing pavements)



When testing out new solutions it is vital that we do not compromise with the useful life (pavement life), the ability to re-use or recycle nor create negative health and safety impacts.

We do not want to implement solutions that make things worse on any of these aspects!

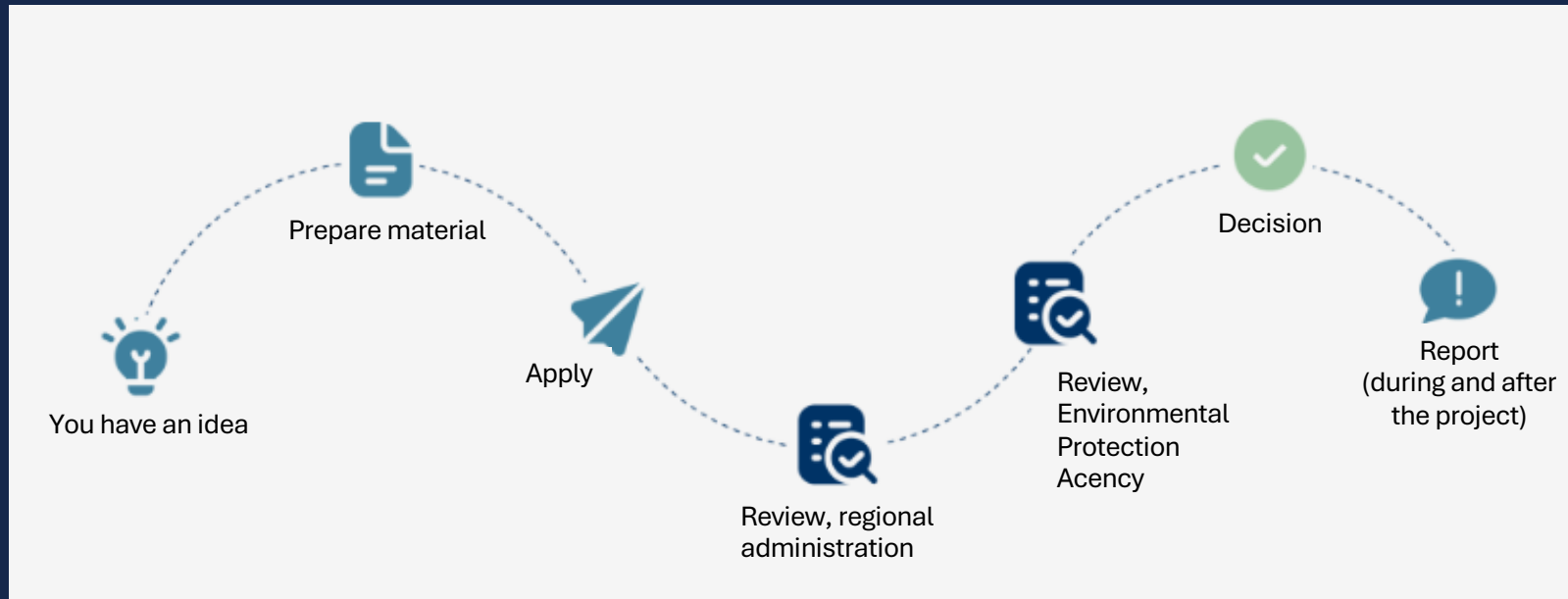


Levers that have worked well in Sweden

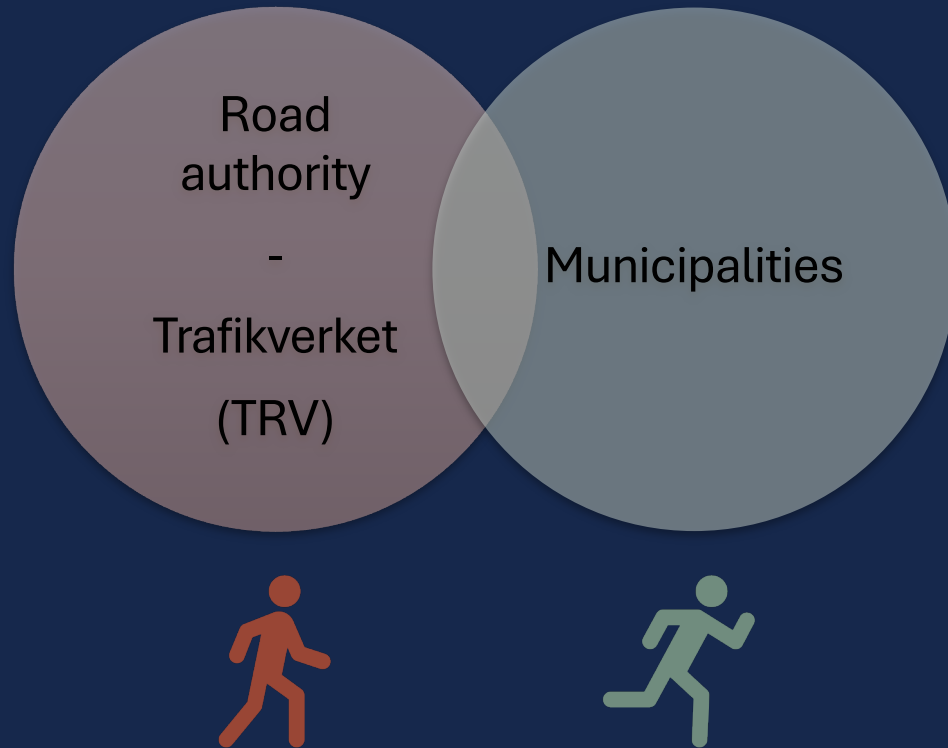


The Climate Leap

- Government initiative, 2015-
 - Investment support allowed the industry to **invest in** the capability to use **lower-emission energy sources** (bio-oil, pellets et c) to heat **asphalt plants**



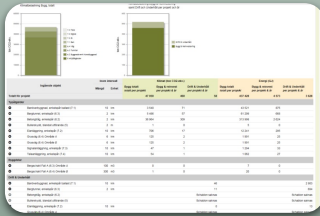
Climate demands from road owners



- TRV - strategic target: climate neutral infrastructure at the latest by 2040.
- Municipalities acted as a driver of the development of climate requirements
 - In cooperation with the industry
- Latest climate requirements for asphalt – jointly TRV and the three largest cities: Stockholm, Gothenburg, Malmö

TRV – From targets to requirements

Standards and
technical
requirements



Reduction based on CO₂e calculation

- Projects > 150 million SEK
- Percentage reduction requirements in line with climat targets
- Baseline updated stepwise through the phases of the project
- Alternative: "post-calculation"



Material and products – max kg CO₂eq per tonne or m³

- Asphalt (approx. 10 mix types), concrete, rebar
- ...



Construction, maintenance and operation

- Vehicles and construction equipment (proportion zero-emission vehicles and equipment)
- Fuels
- Operational contracts

Follow-up using

Climate
declaration in the
tool "Klimatkalkyl"
(Climate calculus)

EPD –
Environmental
Product
Declaration

Fuel template,
vehicle/equipment
list/template

New requirements for asphalt since 2024

- Valid for all tenders that include asphalt, regardless of contract size and type of action.
 - Exception: Routine road maintenance contracts
- Based on a **maximum emission level per asphalt mix type**
 - Maximum level reduced over time → 2030
- Reporting using **third-party verified EPD** (Environmental Product Declaration)
 - Includes life-cycle phase A1-A3¹ and the indicators GWP-fossil and GWP-luluc² (EN 15804)

¹ Cradle to asphalt plant gate

² Global Warming Potential – Land Use and Land Use Change

Road authority climate demands

Maximum emission levels (selection)

Asphalt mix type	Maximum emission in kg CO ₂ eq per tonne*			
Year	2024	2025–2026	2027–2029	2030
ABT	34	26	24	19
ABT PMB	40	34	32	29
ABS	40	30	27	24
ABS PMB	45	38	36	33
ABb	30	26	24	22
ABb PMB	36	31	28	26
AG	28	24	22	20
AG PMB	34	29	27	25



Based on
Eurobitume
LCI 2020

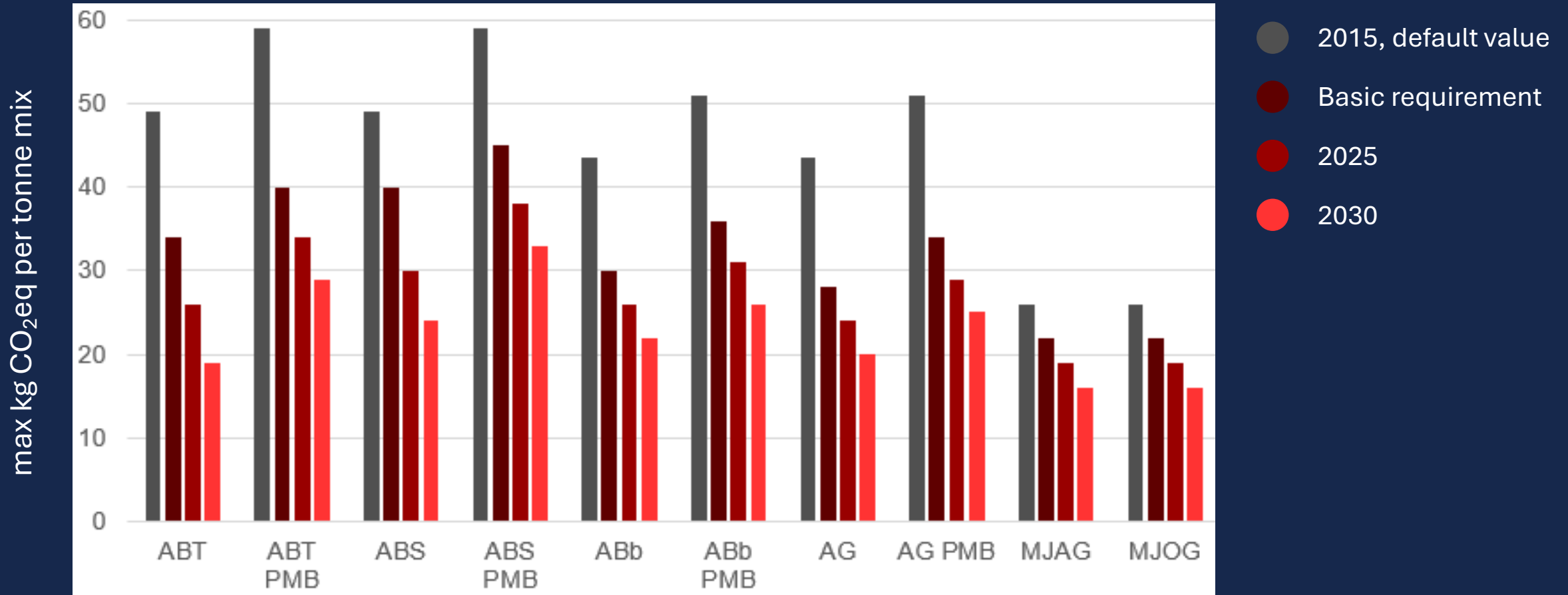
ABT = Tät asfaltbetong = Asphalt Concrete Surface Course (AC Surface)

ABS = Stenrik asfaltbetong = Stone Mastic Asphalt (SMA)

ABb = Bindlager av asfaltbetong = Asphalt Concrete Binder Course (AC Binder)

AG = Asfaltgrus = Asphalt Concrete Base Course (AC Base)

Comparison 2015-2030 per mix type



Easing of RAP limitations

~~RAP
LIMITS~~



- All layers
- Needs to fulfil specification
- Exceptions:
 - ABS
 - PMB mixes

} max 10% RAP

 - Discussions about the ability to increase amount of RAP for PMB mixes when the RAP contains PMB
- No adverse effects seen in terms of pavement life

Openness to innovation & cooperation

SBUF – The Development Fund of the Swedish Construction Industry

- Co-financing of research and development projects
- Minimum 2 member organisations participating
- Additional participants can authorities/municipalities, contractors, suppliers,...
- Project report made available

Reminder:



Kiitos teille!