AsahiKASEI

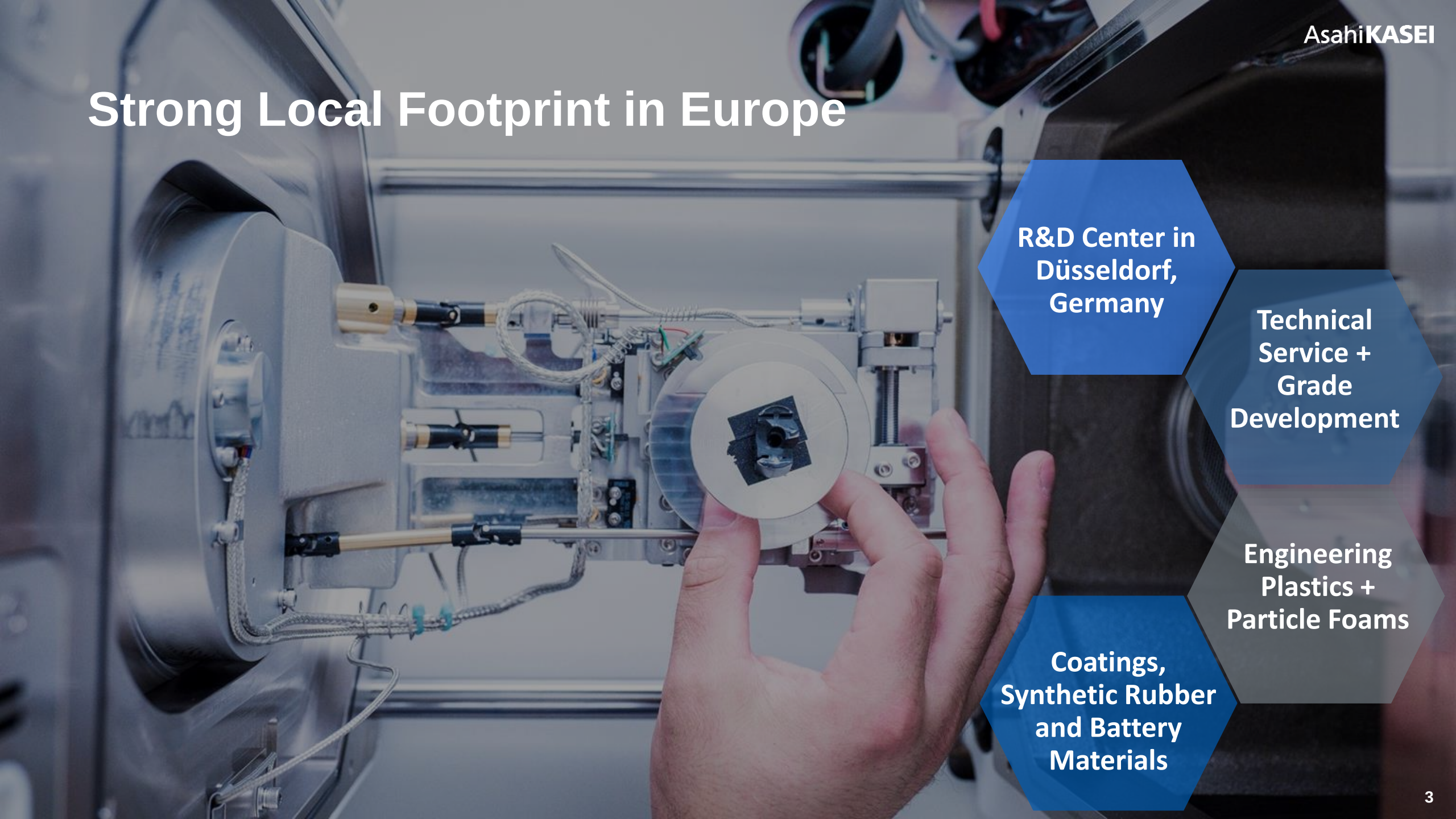
Rethinking Mobility

Diversified Material Solutions for Automobiles of the Future

Smart Plastics Forum | Javier Robert

Pushing the Boundaries for One Century

Strong Local Footprint in Europe



- R&D Center in Düsseldorf, Germany
- Technical Service + Grade Development
- Engineering Plastics + Particle Foams
- Coatings, Synthetic Rubber and Battery Materials

Customer Demands - More Complex Than Ever

Good-looking

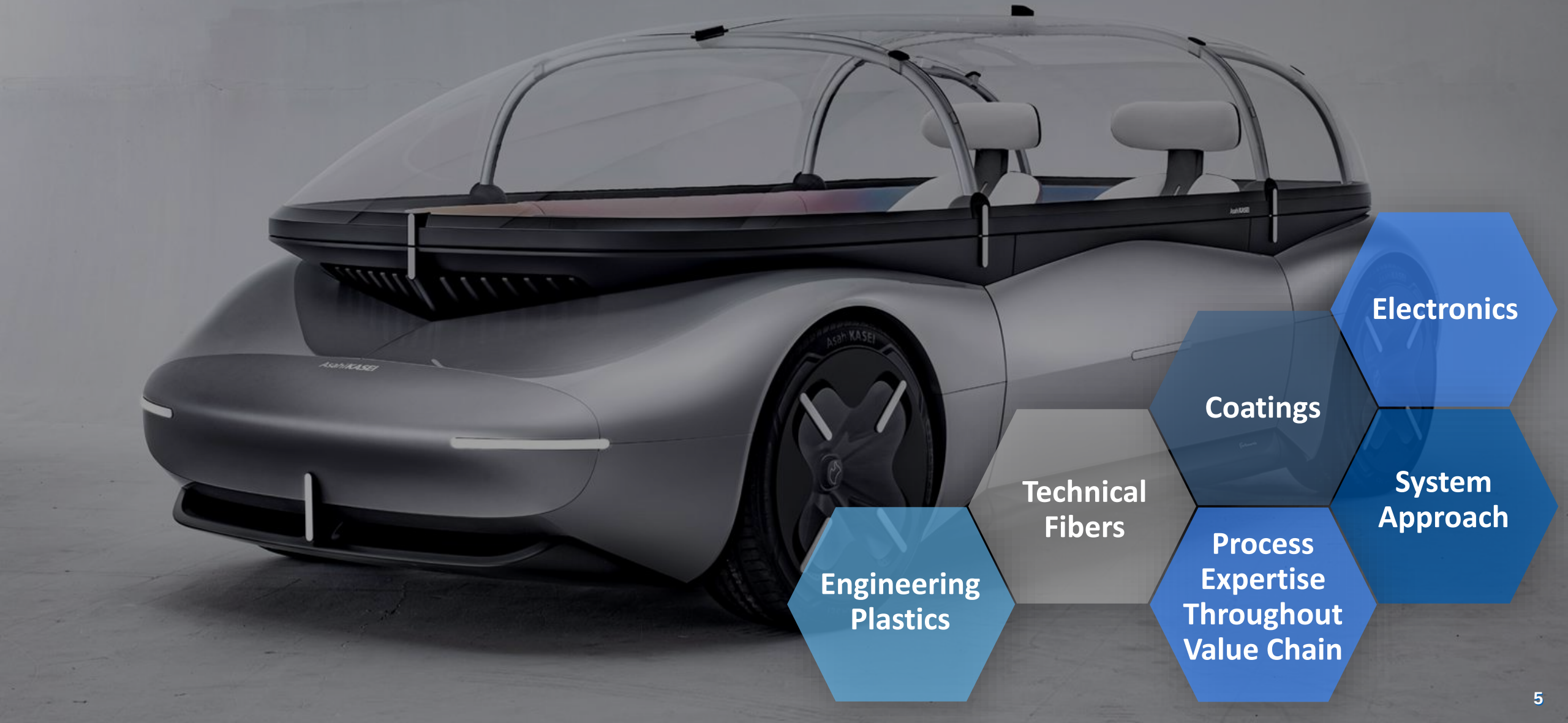
Clean + Comfortable

Functional + Efficient

Sustainable

Affordable

AKXY2 - Leveraging Cross-Divisional Material Expertise



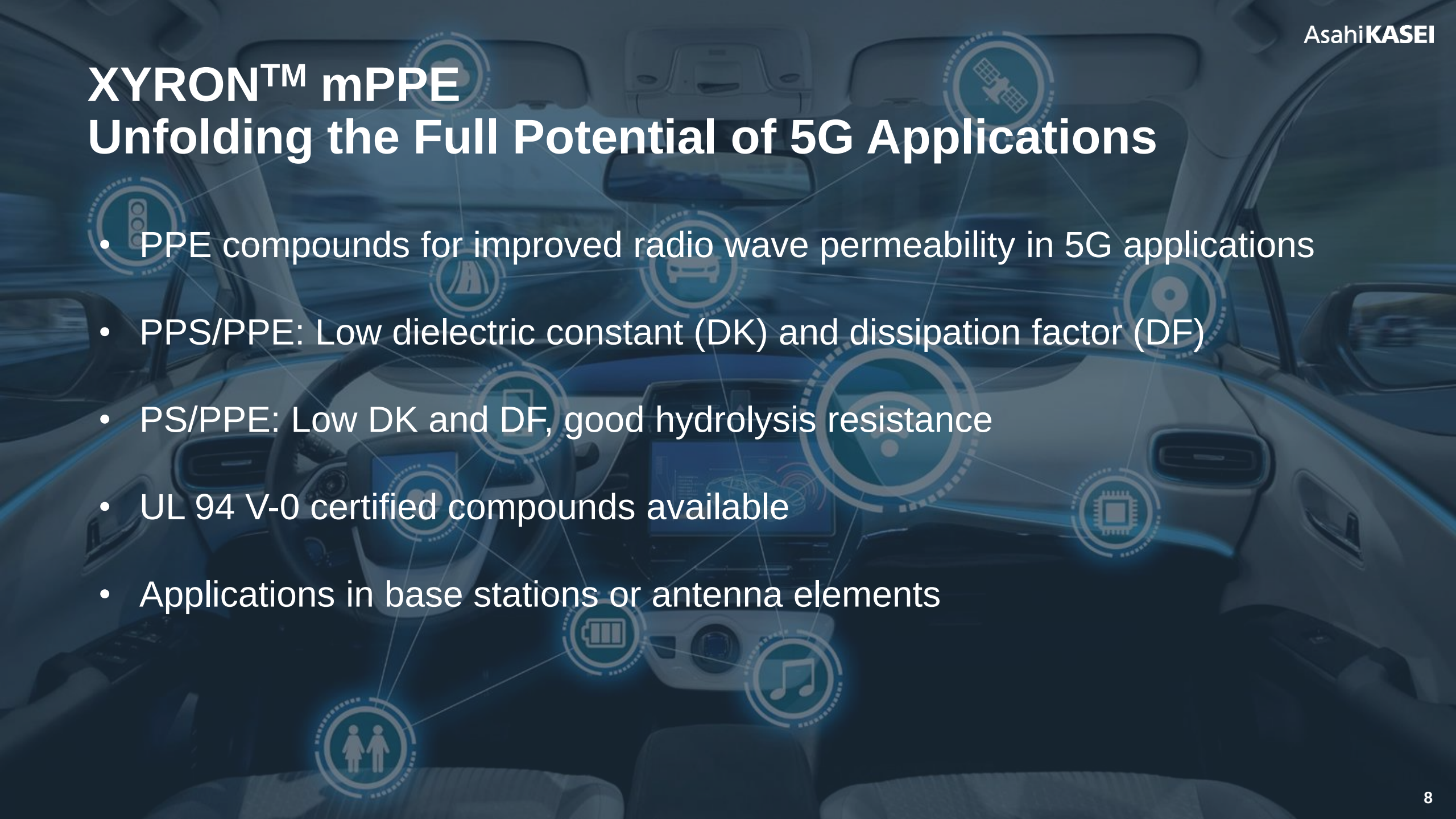
LEONA™ SG PA66+6I
Class-A Surface Material with Metal-Like Performance

- Excellent surface quality and glossy appearance
- High processability with reduced cycle times
- High flowability for thin-wall moulding
- Perfect material for metal replacement
- Available in grades with 40%, 50% and 60% GF content

TENAC™ + TENAC™-C
Homo-/Copolymer Polyacetal

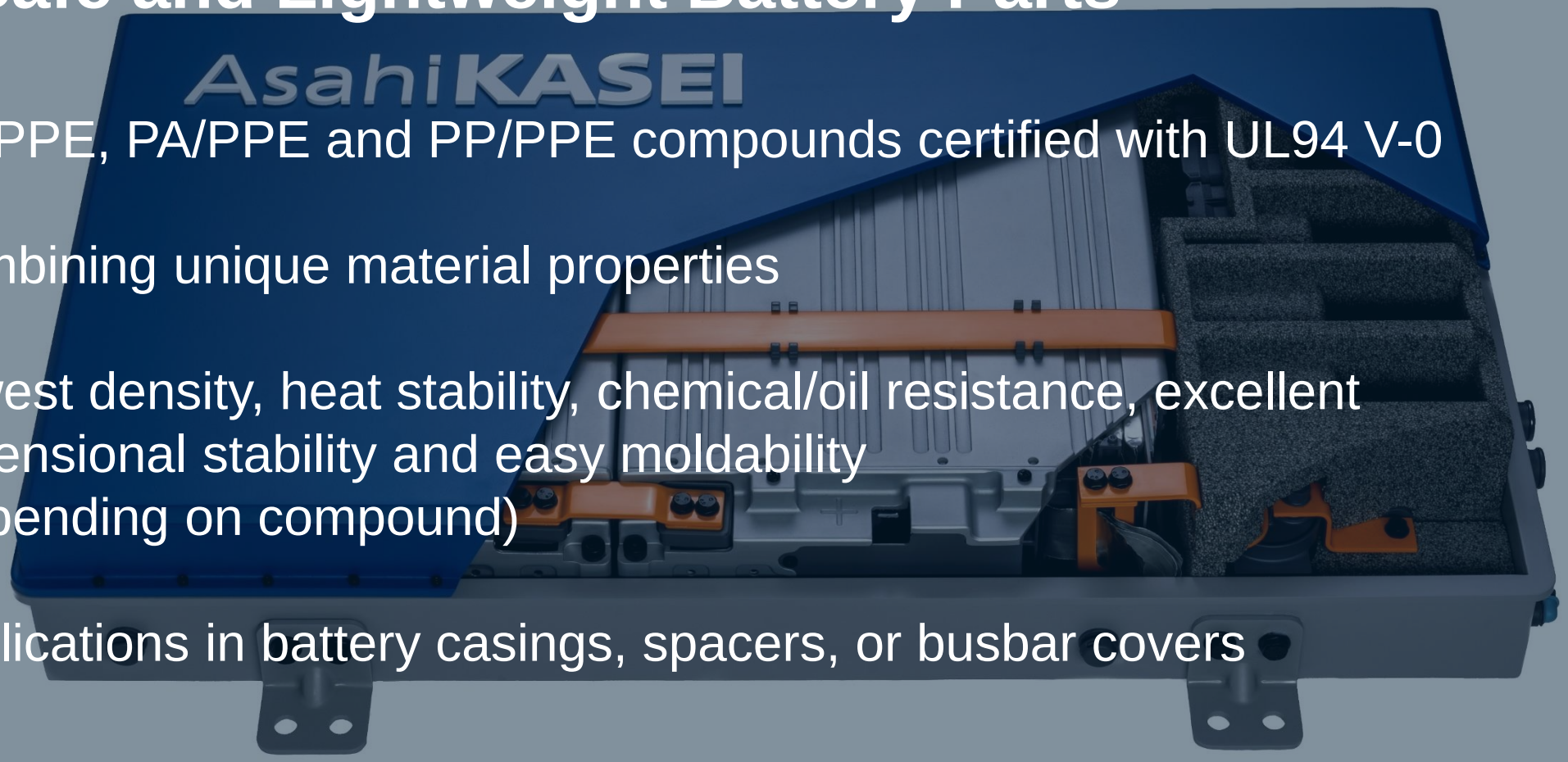
- Asahi Kasei the world's only manufacturer of both homo- and copolymer POM
- Grades with lowest-class VOC emissions (<2ppm)
- Excellent long-time wear and friction resistance
- Excellent fatigue and creep properties
- Applications in seat systems (lumbar support, gears, etc.) and other automotive interior parts, industrial parts

XYRON™ mPPE
Unfolding the Full Potential of 5G Applications



- PPE compounds for improved radio wave permeability in 5G applications
- PPS/PPE: Low dielectric constant (DK) and dissipation factor (DF)
- PS/PPE: Low DK and DF, good hydrolysis resistance
- UL 94 V-0 certified compounds available
- Applications in base stations or antenna elements

XYRON™ mPPE
For Safe and Lightweight Battery Parts



- PS/PPE, PA/PPE and PP/PPE compounds certified with UL94 V-0
- Combining unique material properties
- Lowest density, heat stability, chemical/oil resistance, excellent dimensional stability and easy moldability (depending on compound)
- Applications in battery casings, spacers, or busbar covers

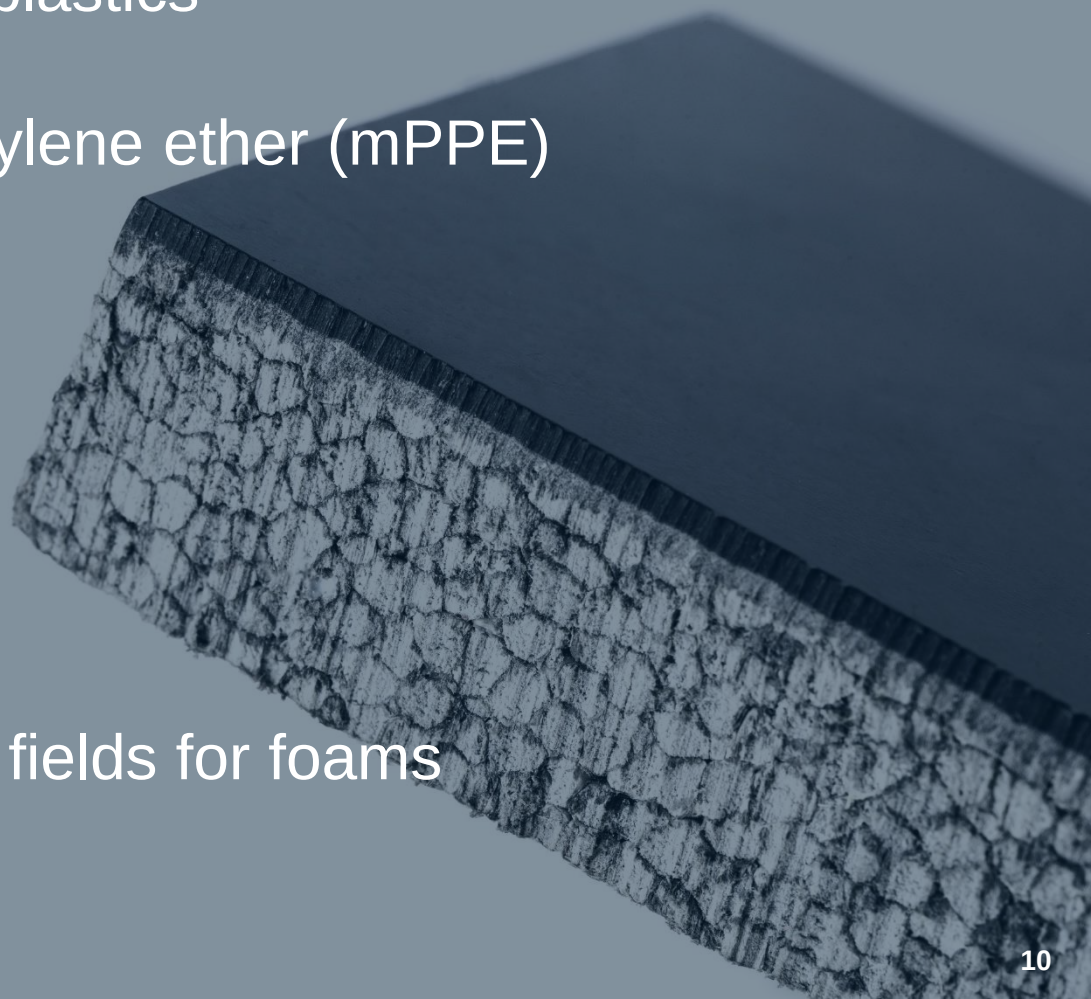
SunForce™
The Next Generation of Particle Foams

- Particle foam family based on engineering plastics
  - **SunForce™ AS** polyamide (PA)
  - **SunForce™ BE/BH** modified polyphenylene ether (mPPE)

- Broad variety of possible combinations with FRP, plastics, metals and fibers

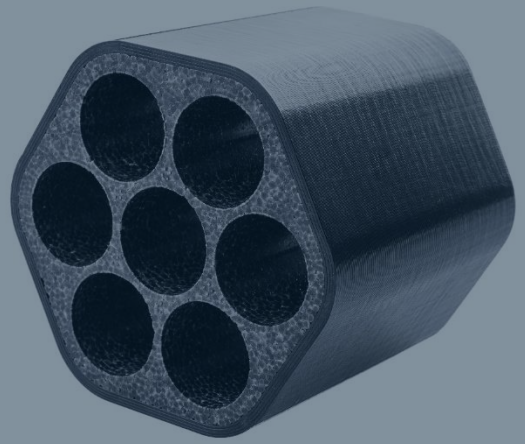
- Processable on standard particle foam molding machines

- Unique properties open up new application fields for foams



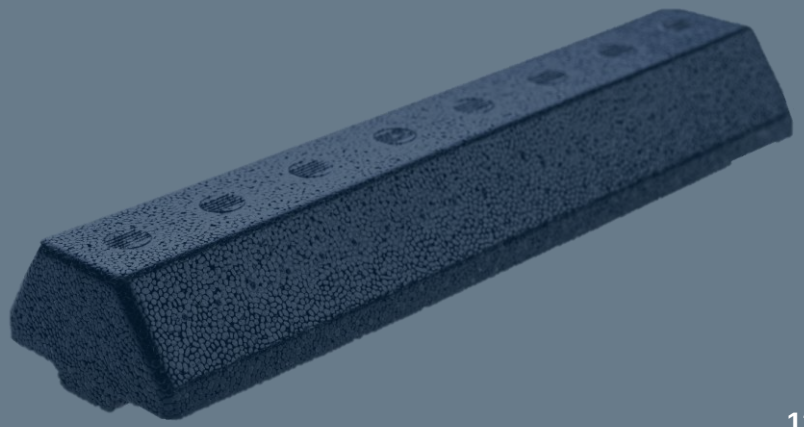
mPPE Particle Foam SunForce™ BE - For Efficient and Easy-to-Assemble Battery Packs

- m-PPE type SunForce™ BE with lowest density, superior thermal insulation, dimensional stability and UL94 V-0 flame retardance
- Round cell holder (4680 + 2170) for increased battery efficiency due to thermal insulation and electrical properties of SunForce™ BE
- Precise and efficient alignment of round cells without glue
- Easy assembly and maintenance of battery modules



PA Particle Foam SunForce™ AS - For Lightweight Structural Parts

- Features PA-typical resistance against heat and solvents
- High stiffness and mechanical strength
- Ideal for metal replacement in structural automotive parts
- Allows for the design of lightweight and space-saving parts with complex shapes



Carbon Footprint Transparency

- Disclosure of cradle-to-gate carbon footprint data for LEONA (PA66), TENAC (POM), TENAC-C (POM Copolymer), XYRON (m-PPE) and Thermylene (GF-PP) since May 2022
- Since June 2022 disclosure of carbon footprint data for synthetic rubber and elastomer products

A New Generation of Engineering Plastics

- Renewable-attributed POM (production from 2023)
- Renewable-attributed PPE (production from 2023)
- Bio-based PA66 (in development)
  Collaboration with US-based Genomatica on bio-HMD
- Asahi Kasei aiming to become first-to-market for bio-based PA66

Thank you!

AsahiKASEI

Our trusted partner for LEONA™ (PA66), TENAC™ (Homo/Co-POM) and XYRON™ (mPPE) in Italy

DAIRE CHEMICALS

See you at K 2022 | Hall 8a, Booth E23

AsahiKASEI

Creating for Tomorrow

THE COMMITMENT OF THE ASAHI KASEI GROUP:

To do all that we can in every era to help the people of the world
make the most of life and attain fulfillment in living.
Since our founding, we have always been deeply committed
to contributing to the development of society,
boldly anticipating the emergence of new needs.
This is what we mean by “Creating for Tomorrow.”