

MAKING MOBILITY HAPPEN.

today / tomorrow / together

HÜBNER EXPERT TALKS

SUSTAINABILITY – THE HÜBNER WAY

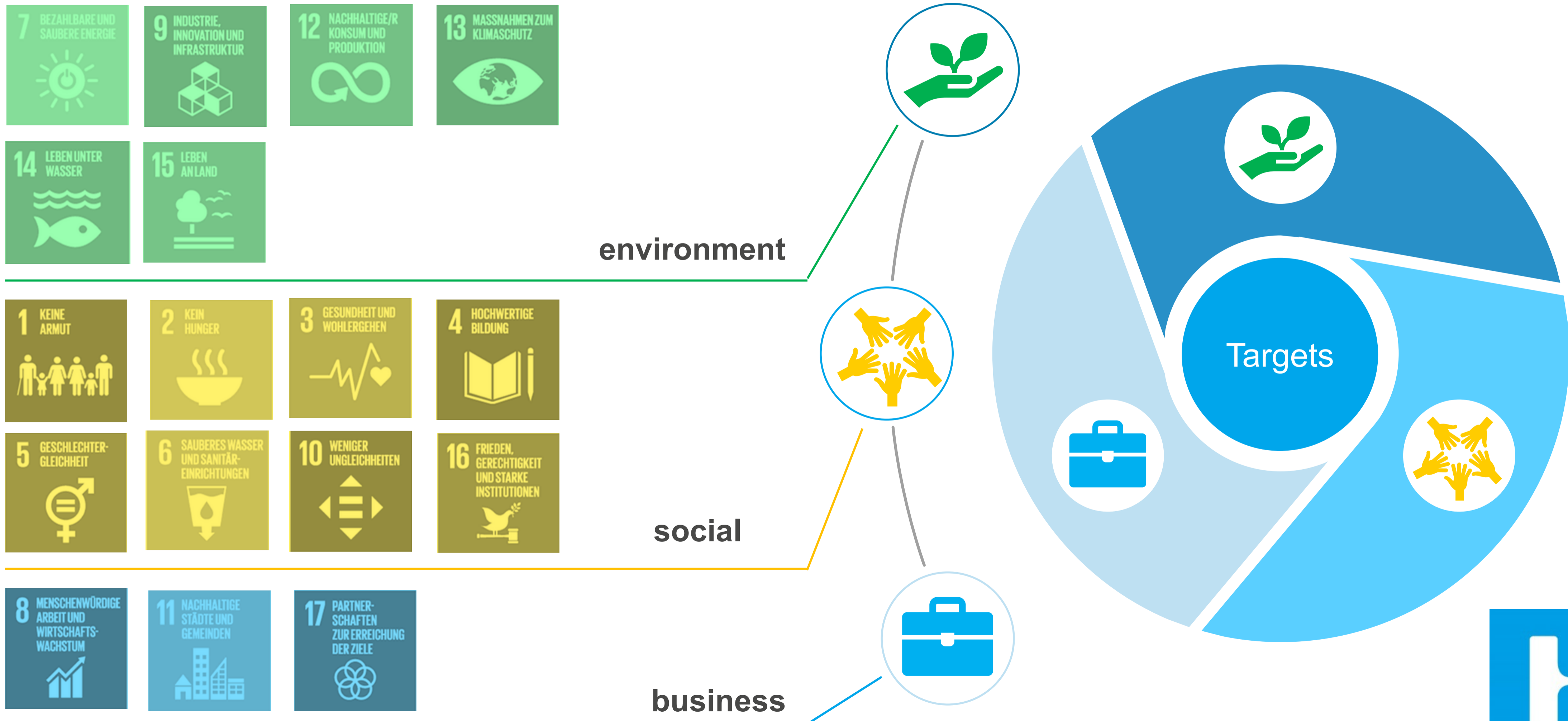
DR. ALEXANDER UNGEFUG – HEAD OF R&D TEXTILES AND MECHANICS, HÜBNER GROUP



SUSTAINABILITY
THE HÜBNER WAY

DERIVATION OF THE HÜBNER SUSTAINABILITY TARGETS

THE FOCUS AREAS OF THE UN SUSTAINABILITY MATRIX FORM THE BASIS FOR THE FORMATION OF CLUSTERS IN THE HÜBNER SUSTAINABILITY TARGET PICTURE



DERIVED SUSTAINABILITY CATEGORIES



Derived Sustainability categories per sustainability cluster



Energy

Air

Soil

Water



Work safety

Health

Acceptance & Respect

Education & Promotion



Fair business practices

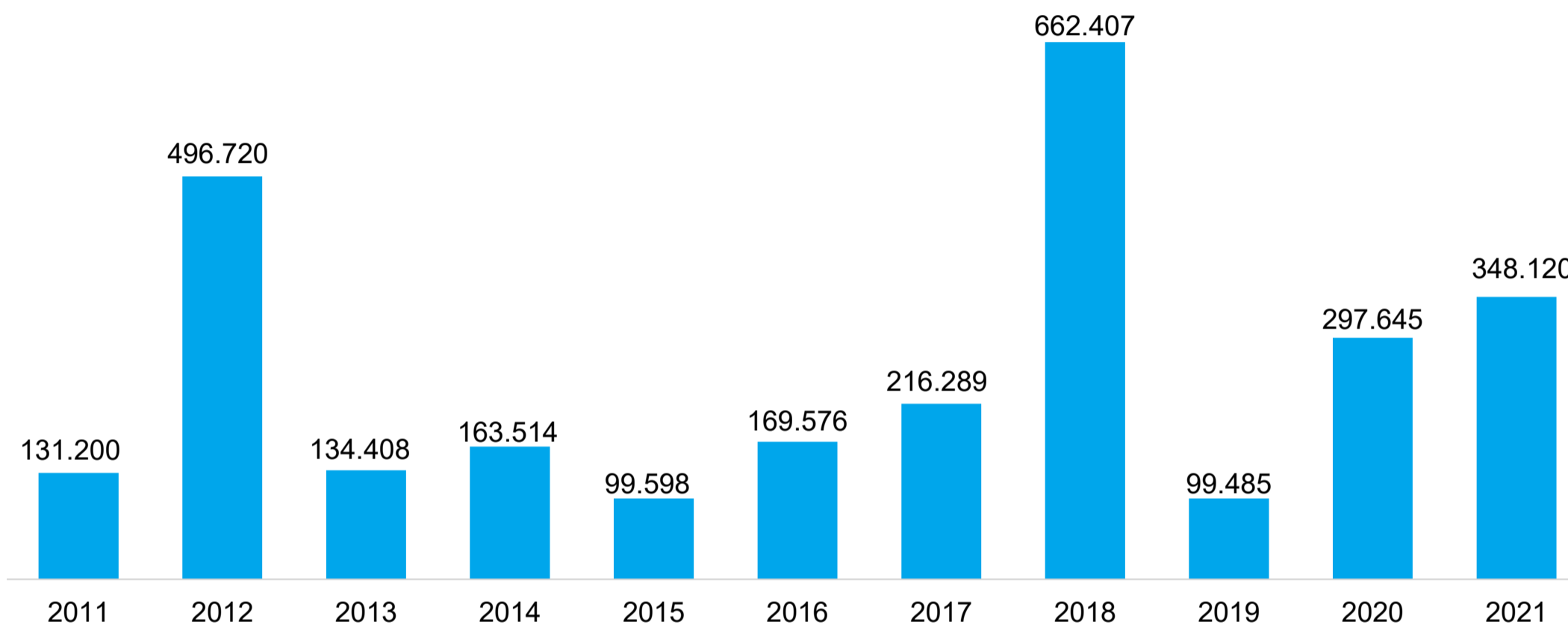
Sustainable business

Partnerships

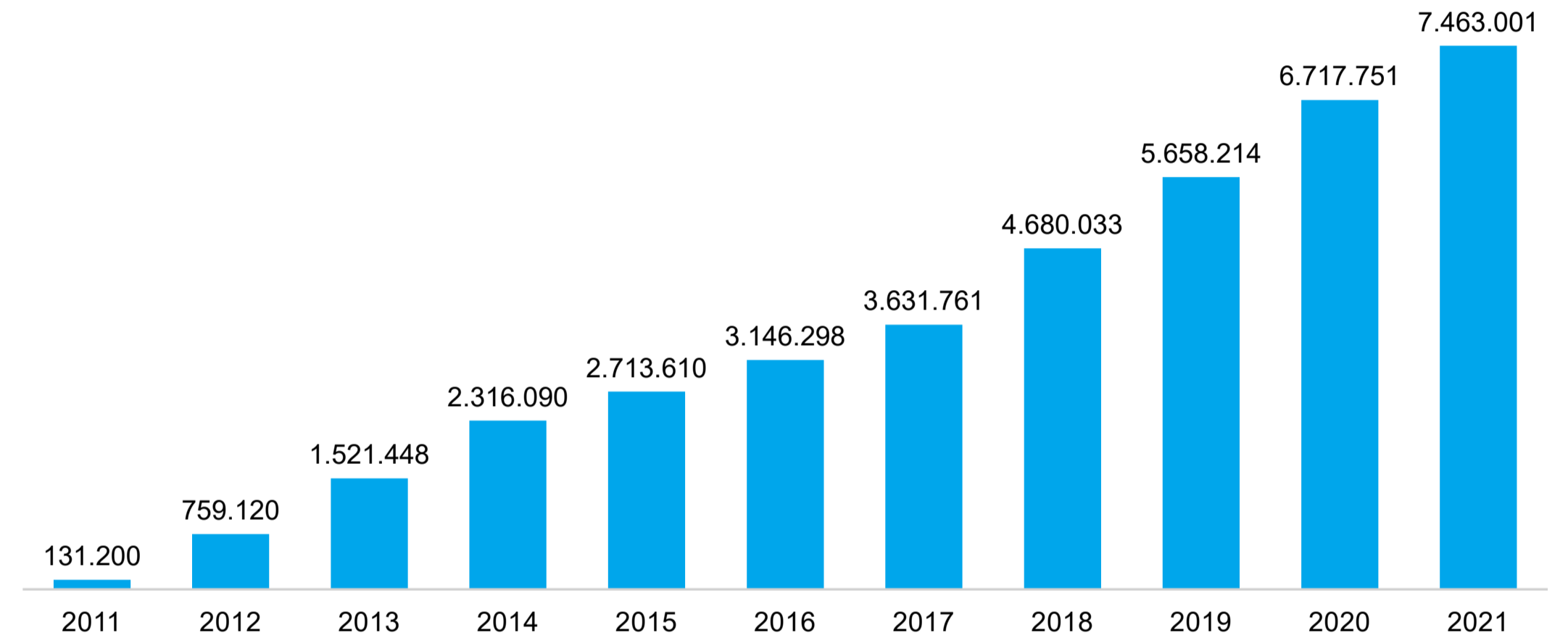
ENERGY CONSUMPTION

KASSEL

Annual energy saving in kWh



Total savings in kWh



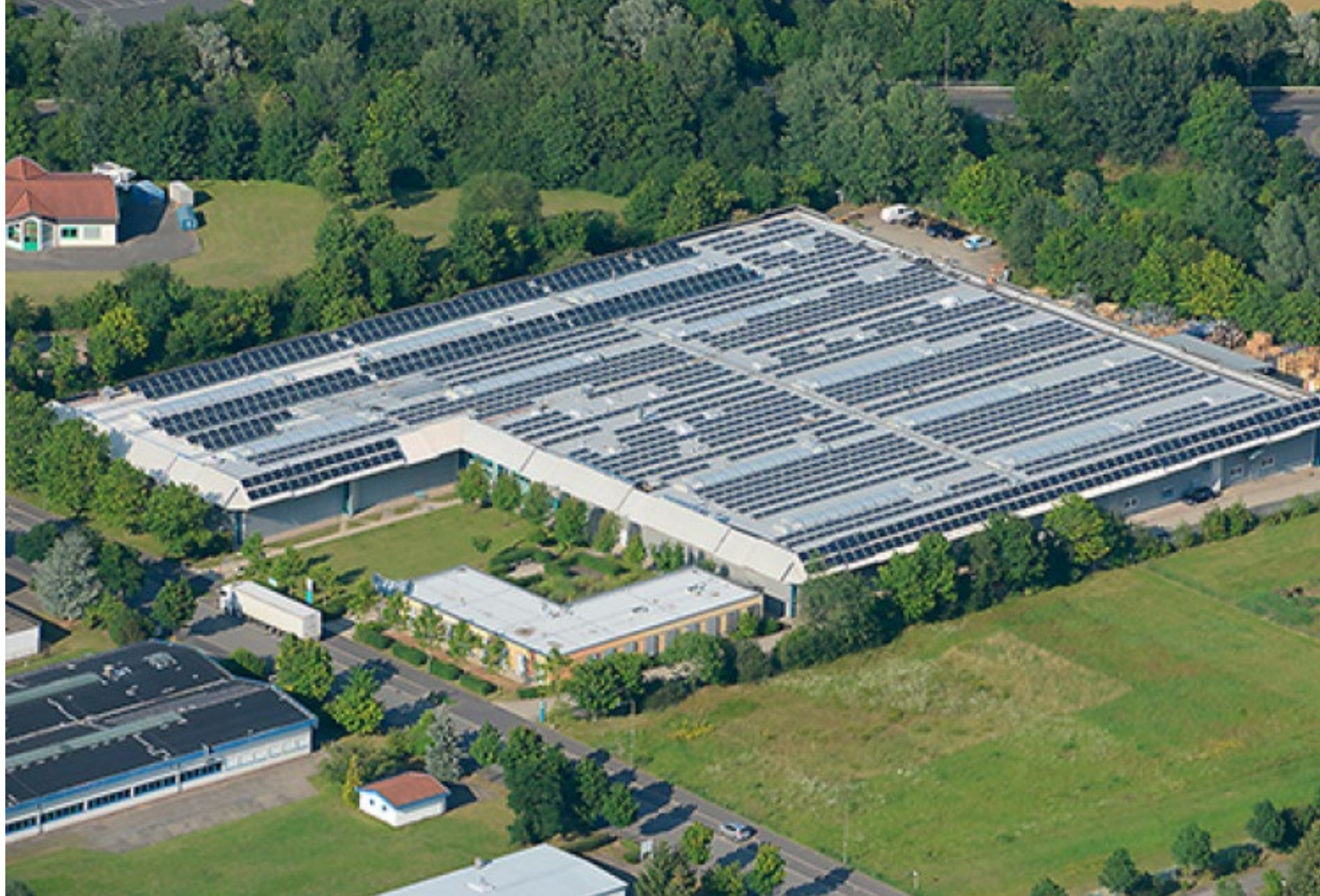
- Total savings to date approx. **8 GWh**
- avoidance of approx. **3900 t CO₂** equivalents
- current annual saving corresponds to emissions of **about 22 four-person households**
- To produce this electrical energy, the Kassel **coal-fired power** plant would have to be operated at full load for **8.5 days, 24 hours a day**



SUSTAINABILITY THE HUBNER WAY

PHOTOVOLTAIC SYSTEMS





PHOTOVOLTAIC SYSTEMS

- Photovoltaic systems are a key part in reducing our footprint regarding the necessary amount of energy for our Production

ENVIRONMENTAL MANAGEMENT

SEEPAGE AND GREEN AREAS

- Storage space for precipitation water → Regulation of the water balance
- Green roofs to compensate for sealed surfaces
- Filter and purification system
- Habitat for vegetation
- Free growth of unused areas





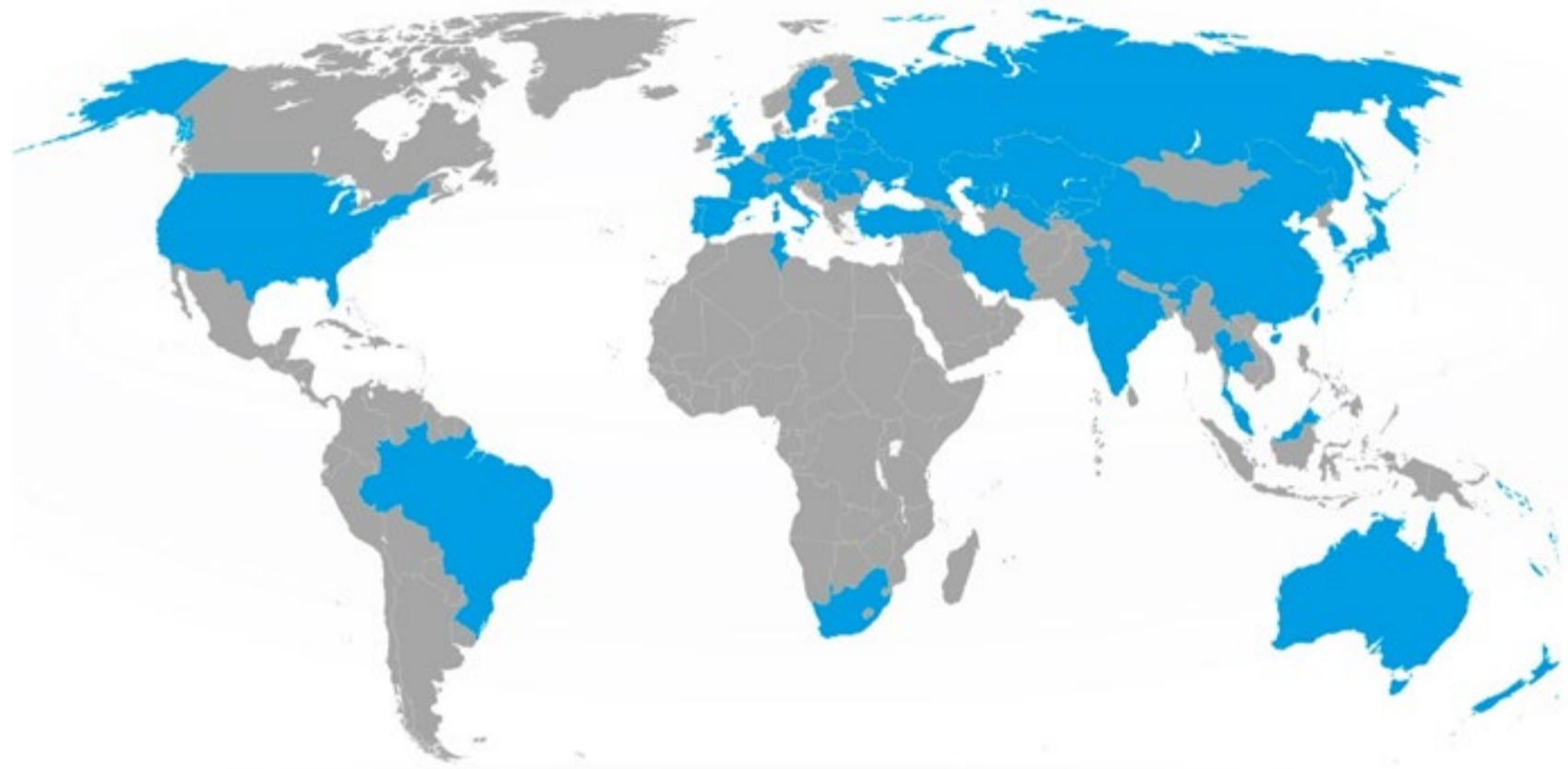
HÜBNER INITIATIVES FOR SUSTAINABILITY

SAMPLES

- Electric cars for internal plant traffic
- Substitution of harmful or even unsustainable chemical substances
- HÜBNER honeybees

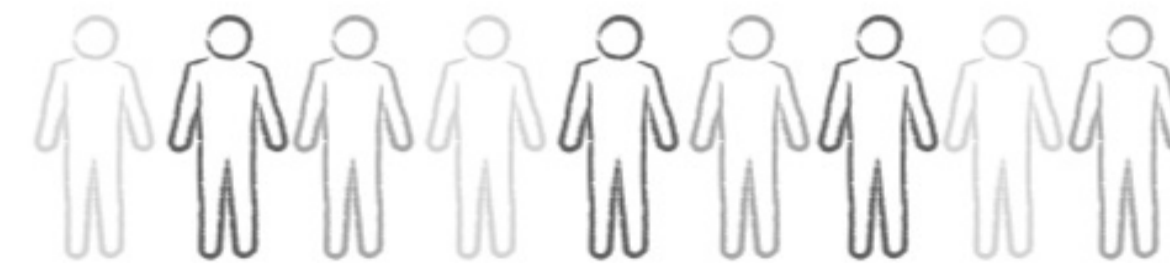


DECENTRALISED PRODUCTION

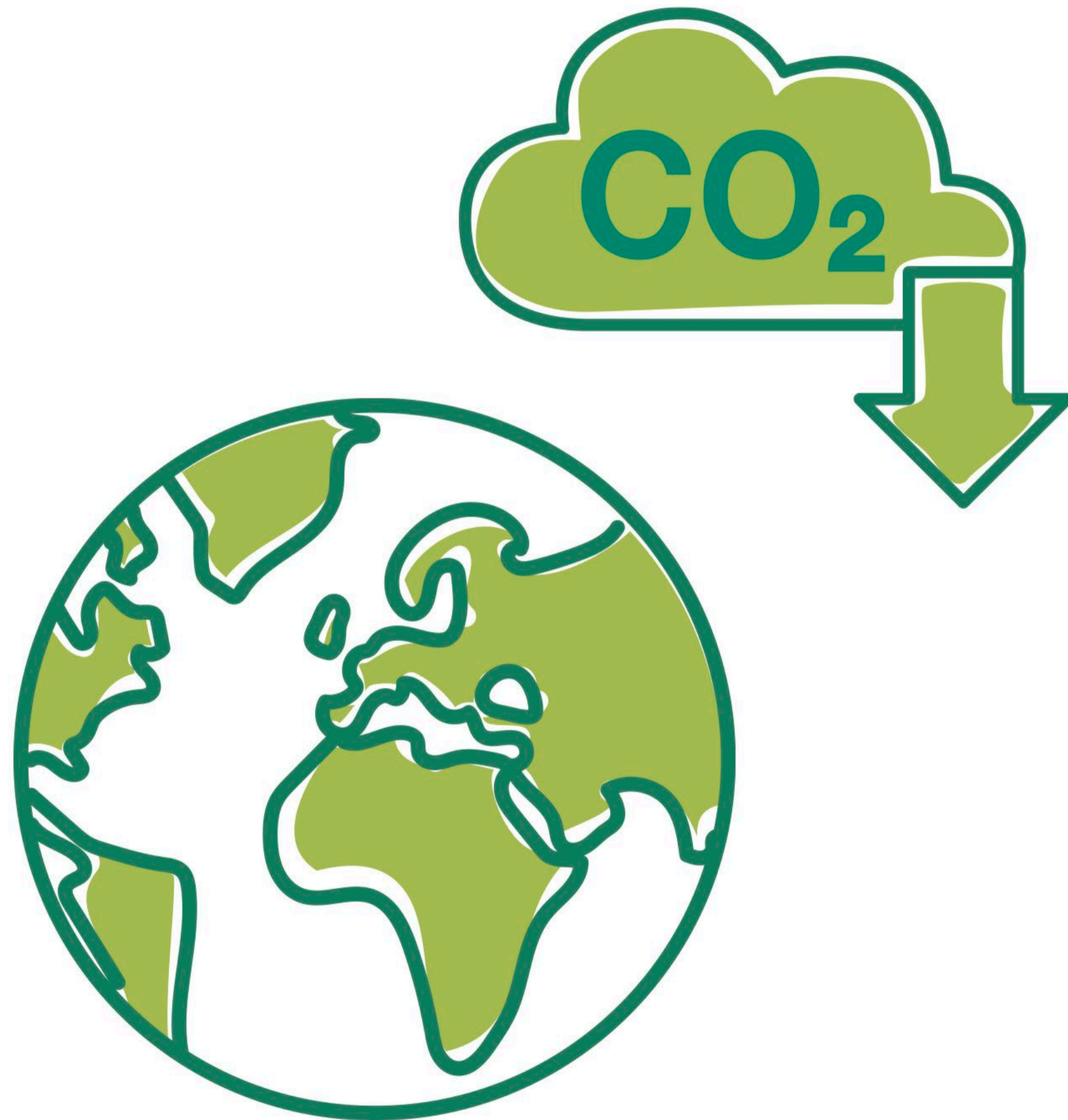


- Shorter transport routes through localization helps to save energy and CO₂
- Creation of jobs with social standards for our employees
- Implementation of our sustainability criteria in local subsidiaries

- Higher resilience regarding actual disruptions in transportation
- Shorter lead-times for our customers
- Better insights in local markets



50 NATIONALITIES



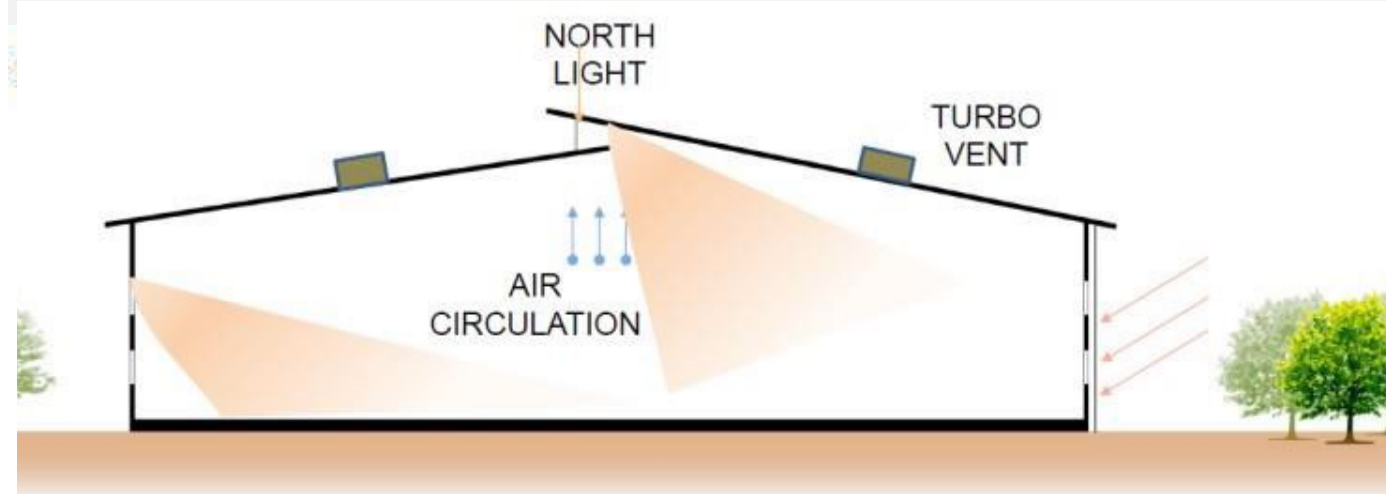
SAVINGS FOR A EUROPEAN PROJECT

- Assumption: A Project with 238 gangway systems for new metro trains in a major city in Germany
- comparison between production in India (Bangalore) and production in Hungary for final delivery in Europe
 - **37% less carbon dioxide (CO₂),**
 - **97% less sulfur dioxide (SO₂),**
 - **89% less nitrogen oxides (NOX)**
- comparison between production in China (Shanghai) and production in Hungary for final delivery in Europe
 - **40% less carbon dioxide (CO₂),**
 - **98% less sulfur dioxide (SO₂),**
 - **91% less nitrogen oxides (NOX)**



NAMMA GREEN FACTORY CONCEPT

SUSTAINABILITY BY PROTECTING NATURAL RESOURCES



- Passive Energy System → Utilization of natural fluctuations in temperature, sunlight and air
- Power → PV / Solar Panel (Filling stations for electric vehicles)
- Material → Local suppliers, use of pressed earth blocks (CSEB)
- Water → Rainwater harvesting and usage (percolation pits, Pond, irrigation of flora)
- Waste Management → Reuse, recycle, recovery, treatment and disposal of Hazardous Waste
- Layout → Less earth moving and re-use of excavated earth

REFURBISHMENT

AFTER SALES & SERVICE

- Refurbishments double the service life of a transition system
→ lower environmental imprint, less CO₂ and energy consumption
- Quantitative determination of the advantages of a refurbishment compared to new equipment is carried out by means of a life cycle assessment





NEW DEVELOPMENT

- PA 6 – 100% recycled polyamide from plastic waste, fishing nets, old carpets, fabric residues and industrial waste
- Polylactic acid (PLA) is a compostable thermoplastic polyester derived from renewable resources, such as corn starch
- Fabrics from wood applying novel sustainable processes - for man-made cellulosic fibers
- Repeatable and consistent properties from batch to batch
- A safe supply chain
- Relevant properties like tenacity, thermal stability, adhesion and elongation must not be undercut

Thank you for your kind attention!

