

NanoEquity Europe 2006

Nanotechnology in the Automobile Sector

Dr. Bernd Steingrobe



PROJEKTRÄGER FÜR DAS



Bundesministerium
für Bildung
und Forschung



Bundesministerium
für Wirtschaft
und Technologie



Bundesministerium
für Umwelt, Naturschutz
und Reaktorsicherheit

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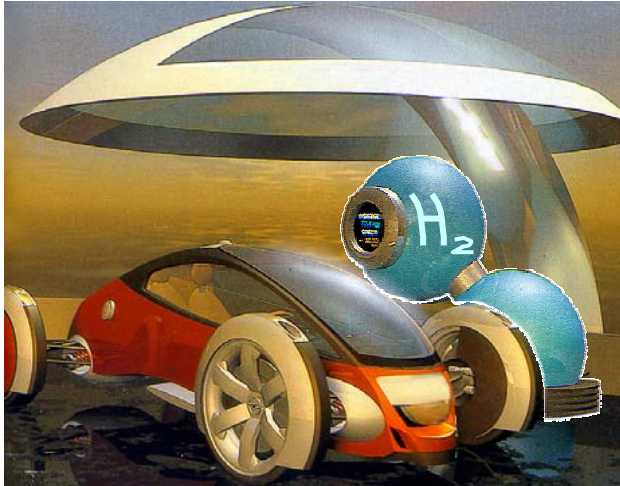
Projektträger für das
BMBF, BMWi und BMU,
die EU
und für die Länder
Baden-Württemberg,
Bayern,
Berlin,
Mecklenburg-Vorpommern,
Nordrhein-Westfalen



Projektträger Jülich

Forschungszentrum Jülich GmbH

Trends in Society and Automobile Technology

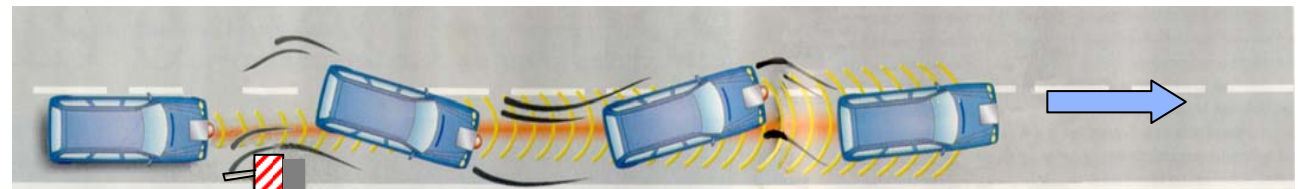


Ecology

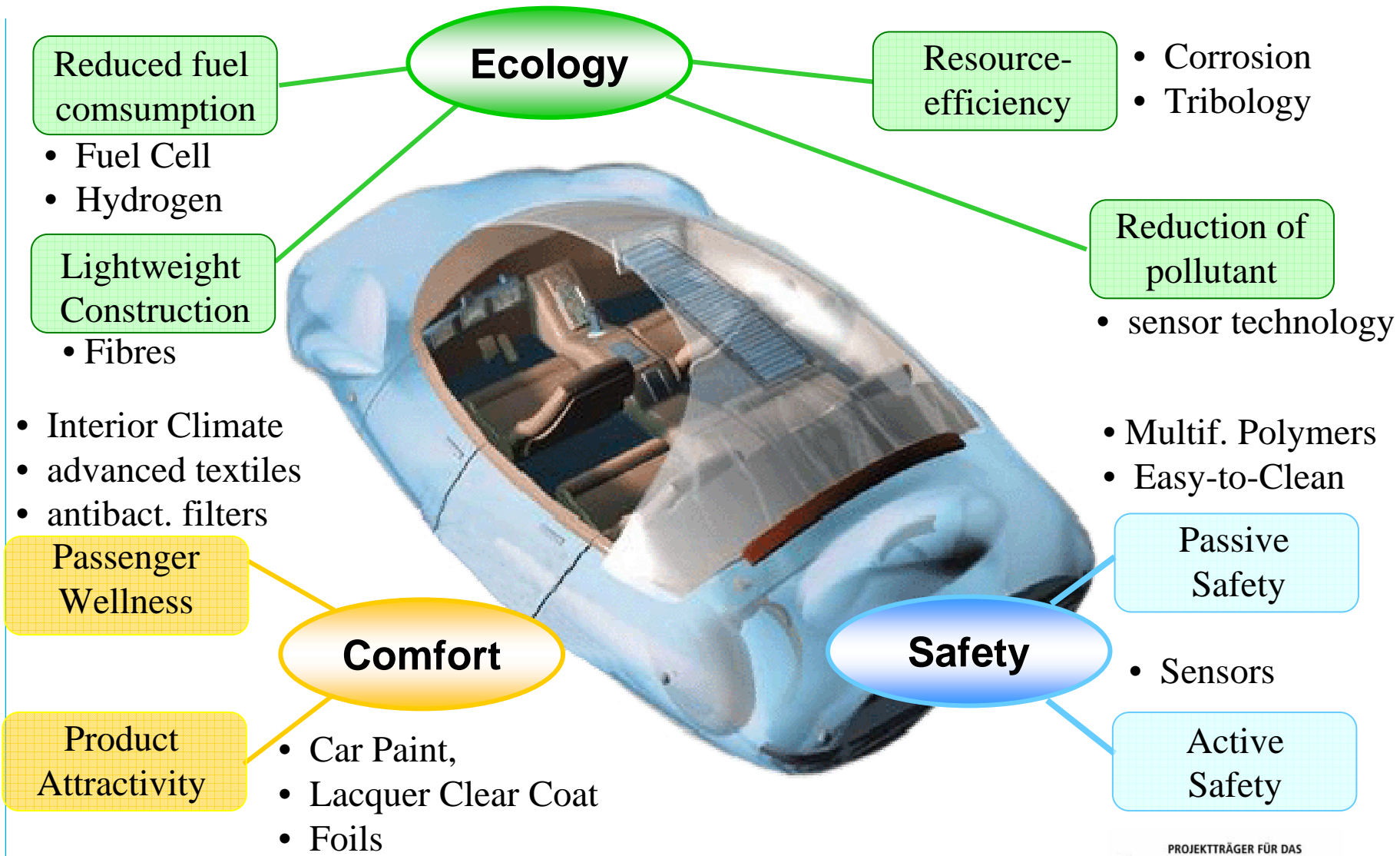


Comfort

Safety



Source: Geo, Faszination Forschung



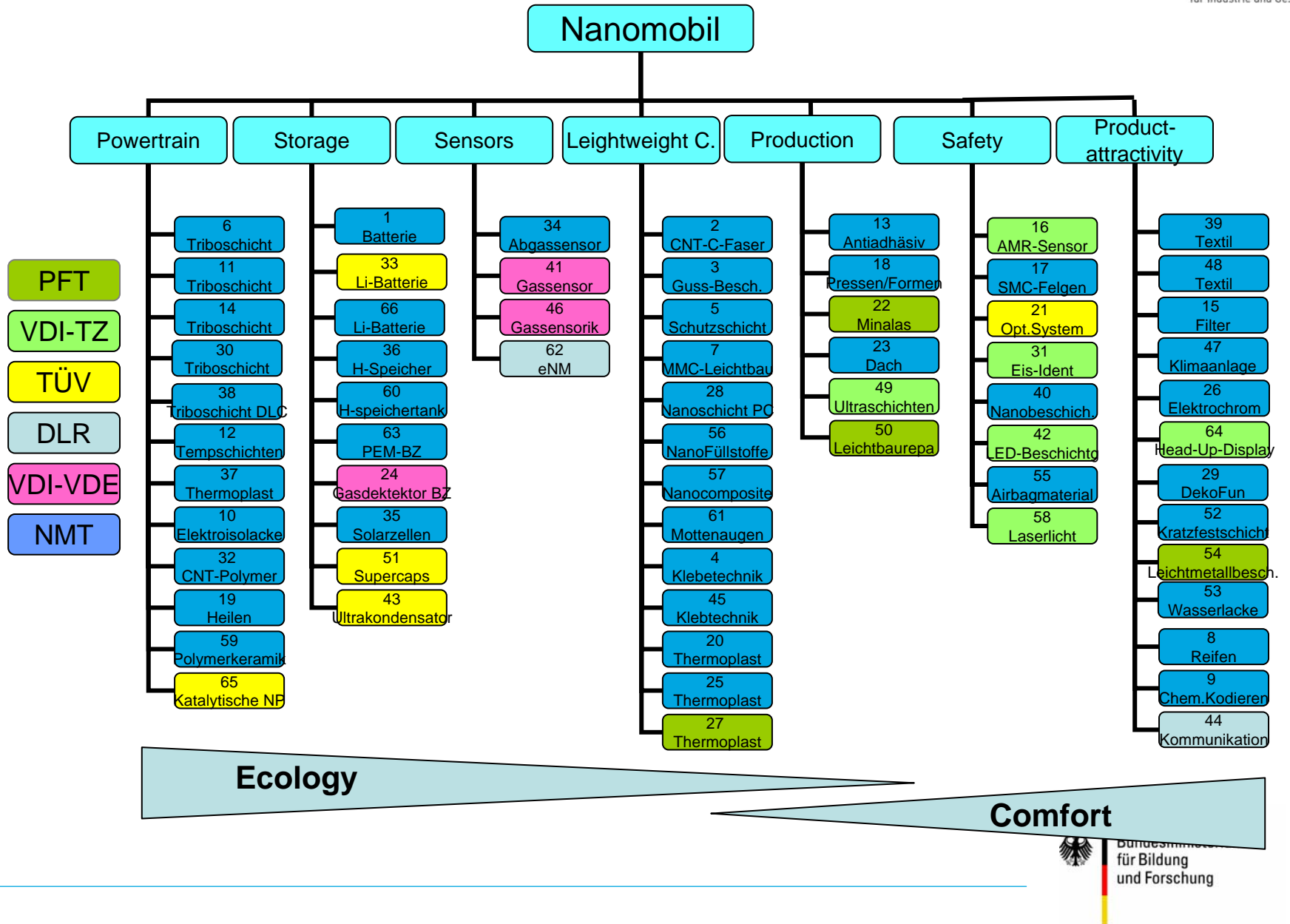
Customer wants combination of **Comfort**, **Safety** and **Ecology**

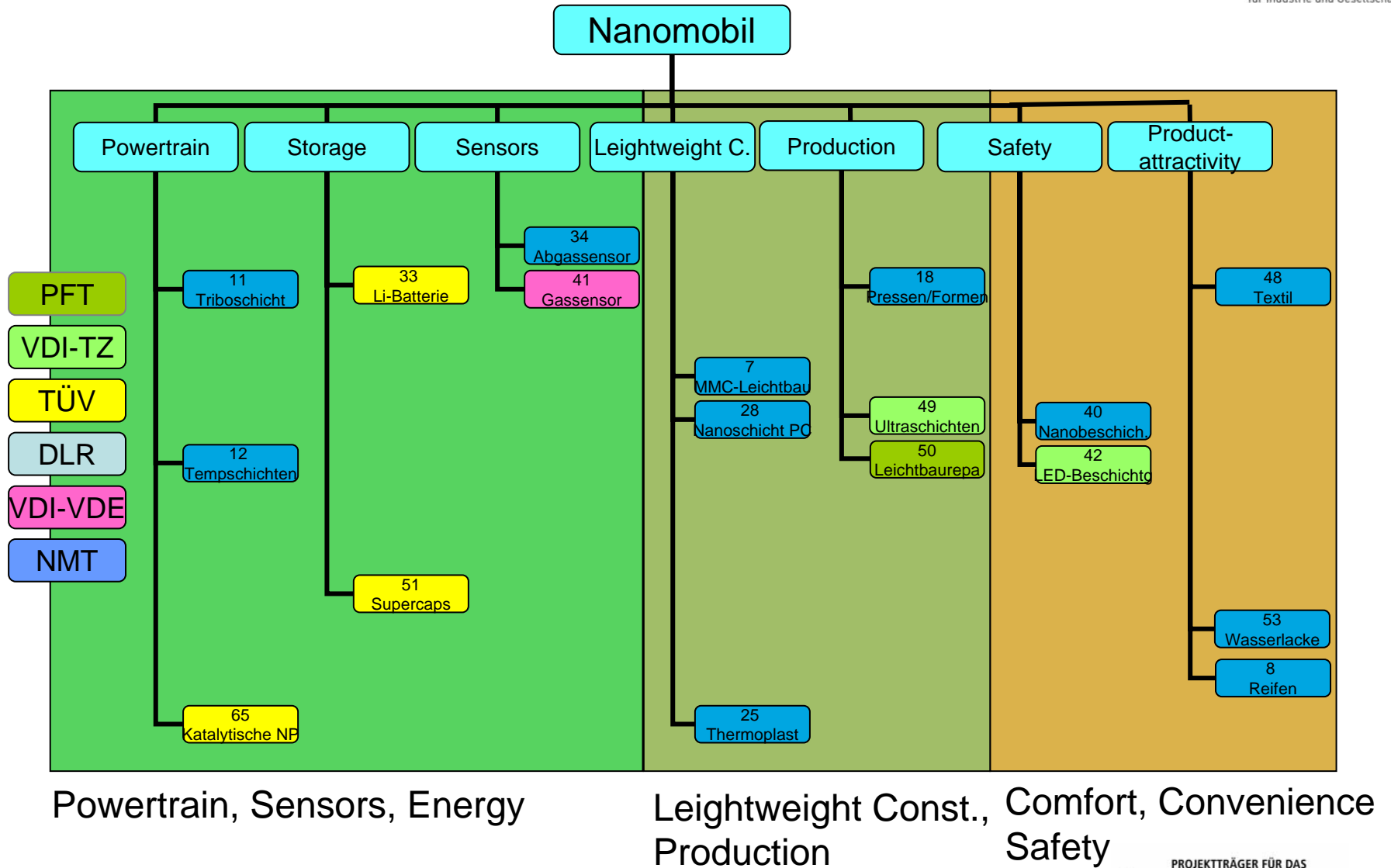
Research Topics within the BMBF Leitinnovation „NanoMobil“

- **Lightweight Constructions**
 - Lightweight → Resource-efficiency
 - Nanomaterials → > hardness > strength
- **Safety**
 - Advanced lighting materials
 - Advanced lacquers
 - Advanced tyres
- **Sustainability**
 - Advanced Batteries → efficient energy storage
 - New concepts for energy storage
 - New coatings within the powertrain
 - Integrated solar cells
- **Comfort and Convenience**
 - Air-conditioning system with antibacterial features
 - Antifogging

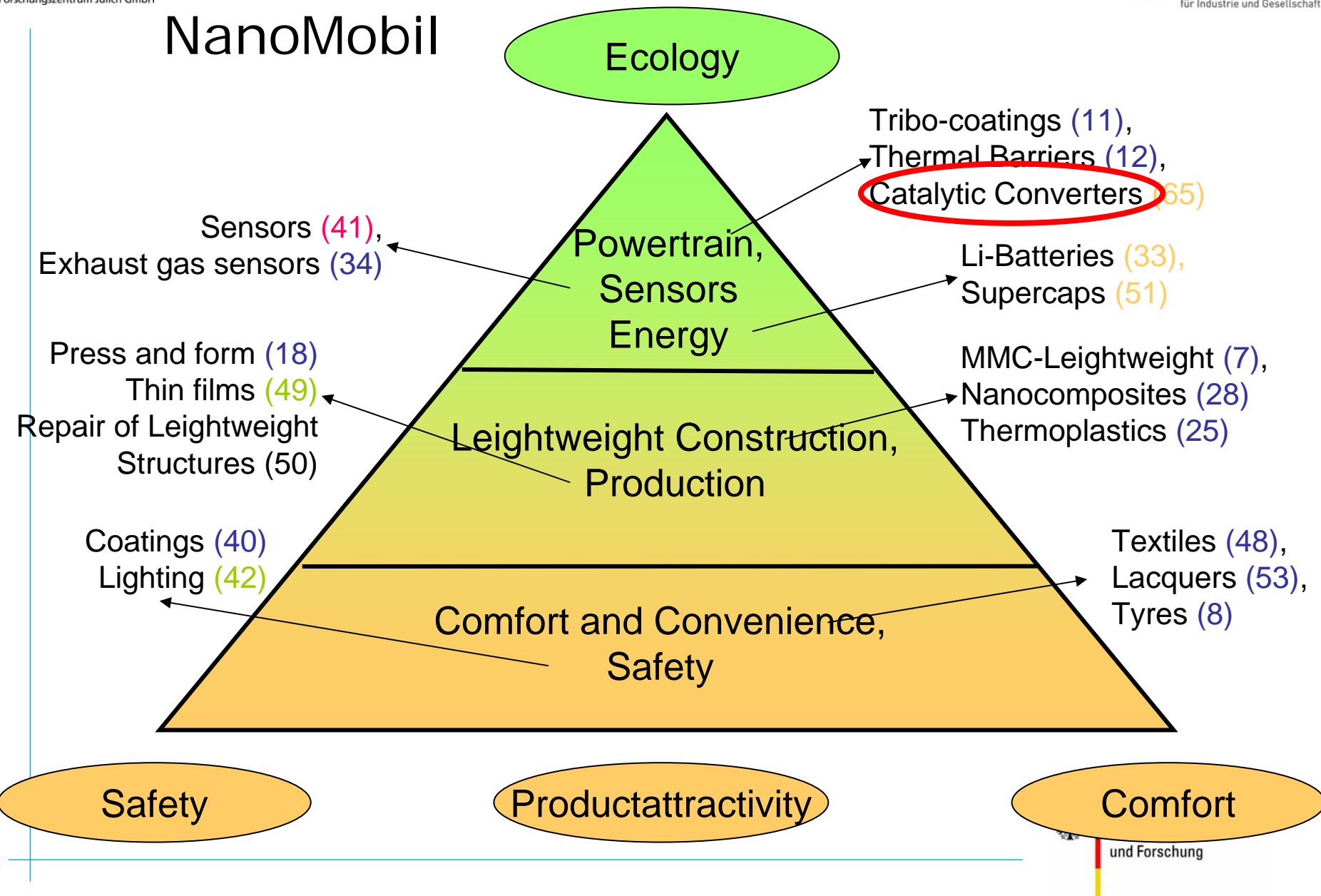
NanoMobil

- Published march 2004
- 66 Proposals (consortia projects)
GK: 228 Mio. €
FS: 119 Mio. €
over 400 Partners
- 18 consortia projects with
120 partners are funded
GK: 69,7 Mio.€
FS: 37,5 Mio. €





Clusters of NanoMobil



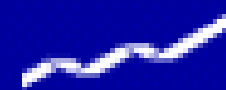
Automobile Technology and Products

11.10 Dr. Péter Krüger,
Bayer MaterialScience AG

11.30 Prof. Volker Warzelhan
BASF AG

**11.50 Dr. Dirk Demuth
hte AG**

12.10 Dr. Stefan Sepeur
Nano-X GmbH



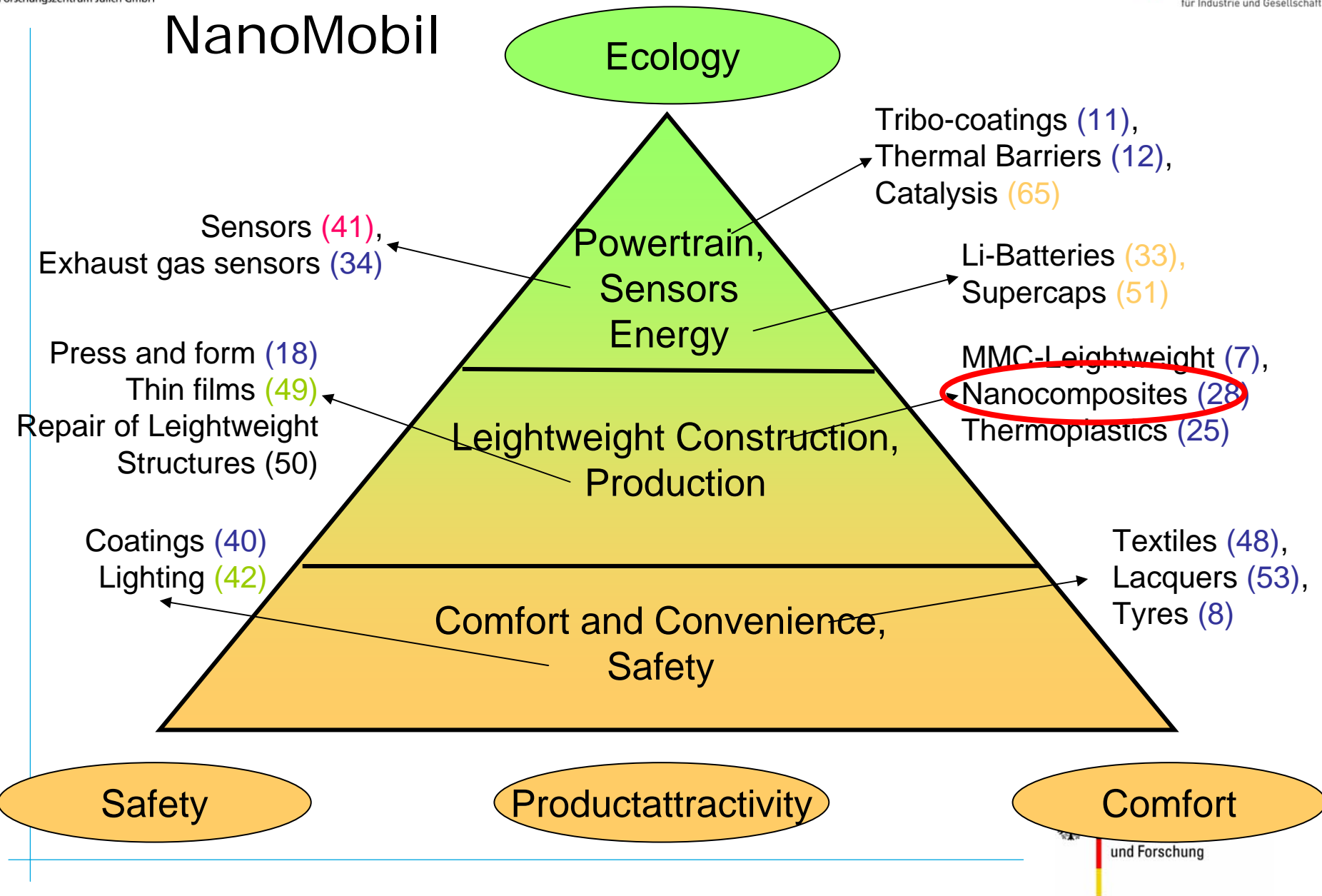
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NanoKat (19U5028)

- Lead by: Volkswagen AG
- Partners: Eberspächer, Degussa AG, **hte AG**, FhG, Uni Heidelberg, Uni Saarland
- Duration: 1.10.05 – 30.09.08
- Finances: GK: 3,0 Mio. € FS: 1,9 Mio. €
- Aim of the project is to develop new nanomaterials with high catalytic effects. These materials should reduce the emission of carbon black in diesel engines.



Clusters of NanoMobil



NanoKomposite (03X0001)

- Lead by: **Bayer MaterialScience AG**
- Partners: BMW, Hella, NMWü, SKZ, FhG-ISC
- Duration: 1.6.05 – 31.5.08
- Finances: GK: 2,5 Mio. € FS: 1,3 Mio. €
- Aim of the project is to develop polymer nanocomposites with high transparency. These nanocomposites, on the basis of Polycarbonate, should yield the same positive properties as PC but increased properties in E-Module, Heat resistance, Scratch resistance, UV-resistance, flame resistance and resistivity against aggressive chemicals.

Automobile Technology and Products

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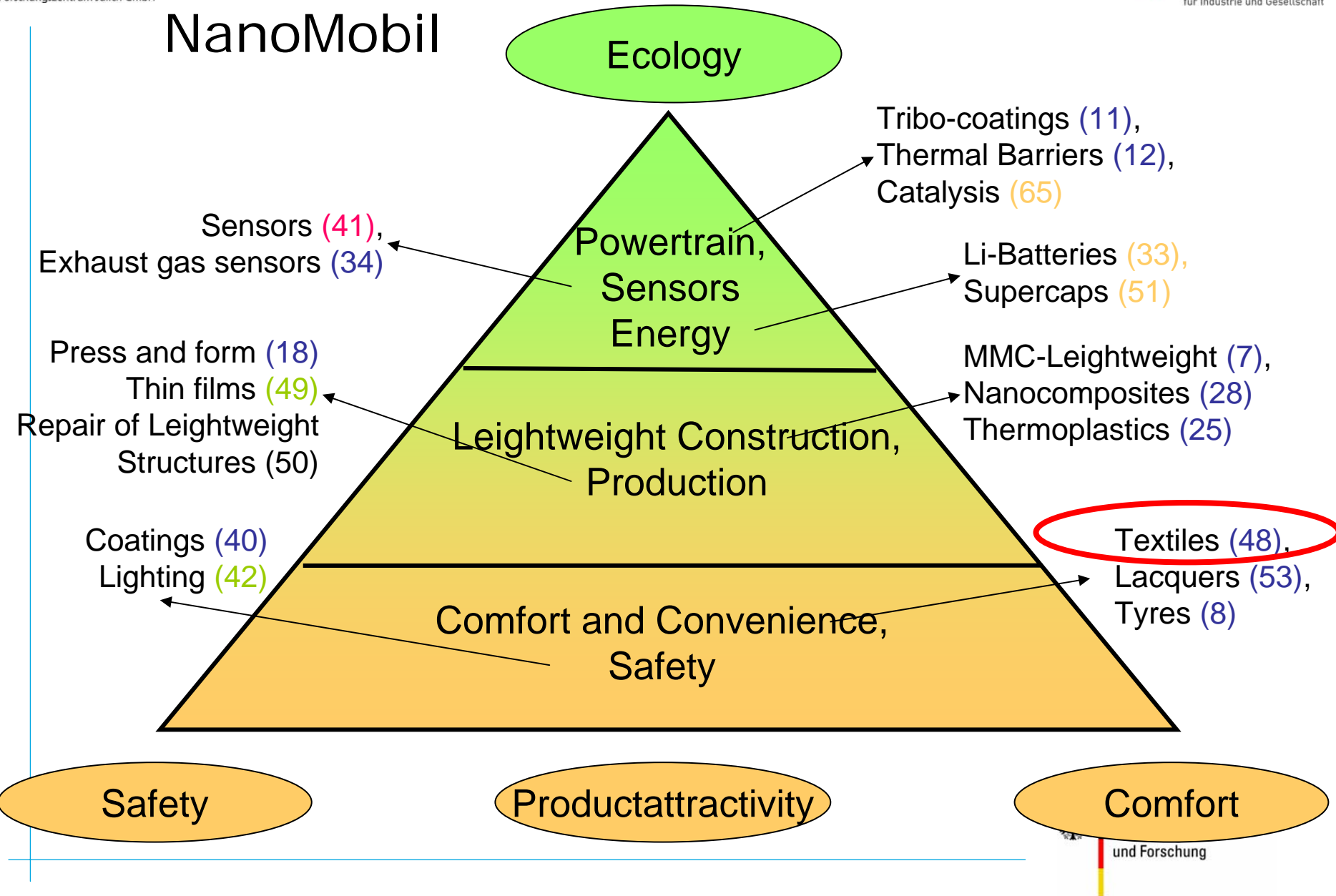
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NanOnTex (03X0001)

- Lead by: **Nano-X GmbH**
- Partners: J. Borgers GmbH, Isringhausen GmbH, ITV Denkendorf, Nanocraft
- Duration: 1.7.05 – 30.6.08
- Finances: GK: 2,0 Mio. € FS: 1,1 Mio. €
- Aim of the project is to develop nanoparticle based coatings for textiles for automotive applications. These textiles will be easy-to-clean, have antibacterial properties and other advanced properties.



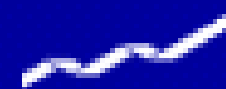
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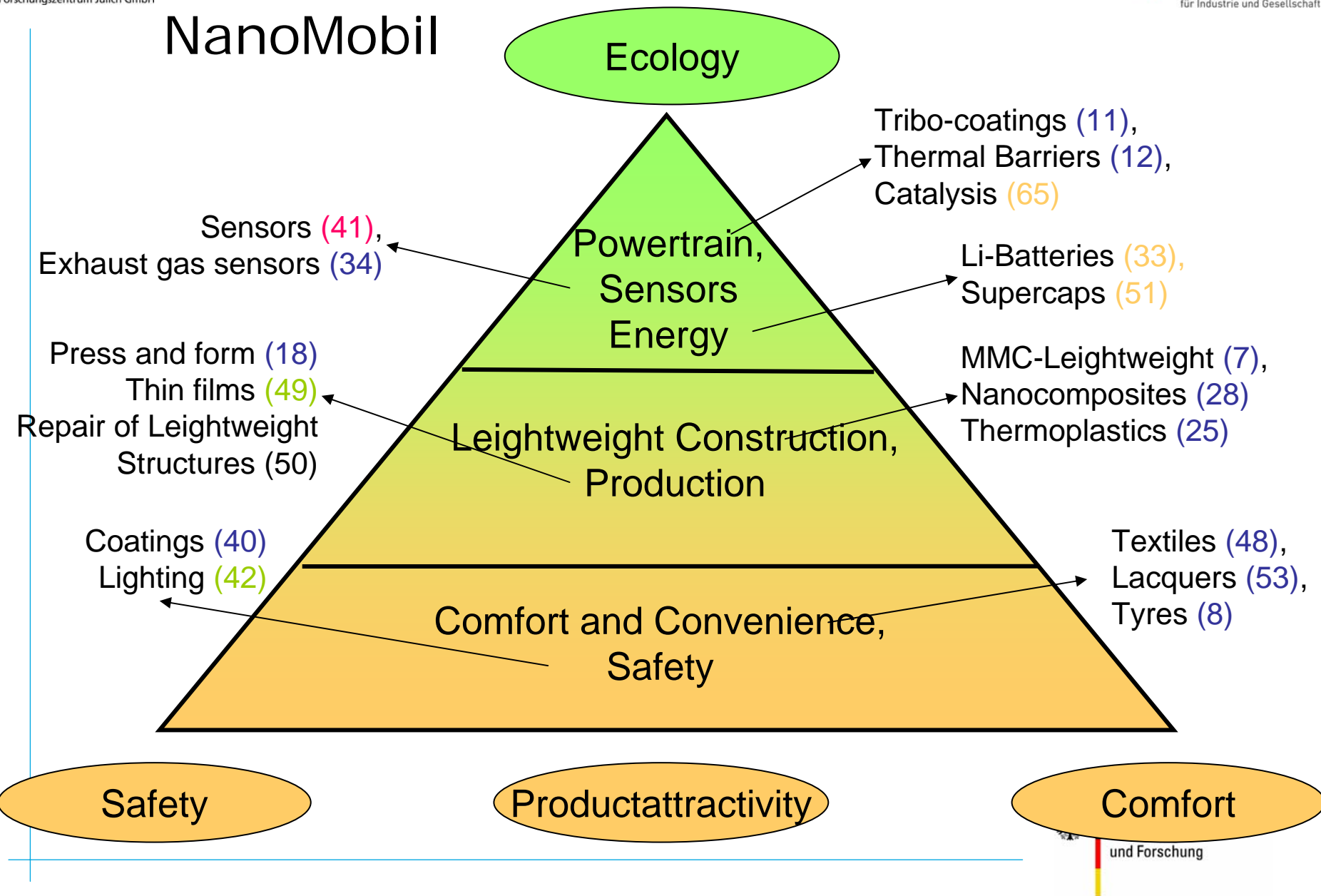
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Source:
BASF AG

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Thank you for your kind
attention

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