

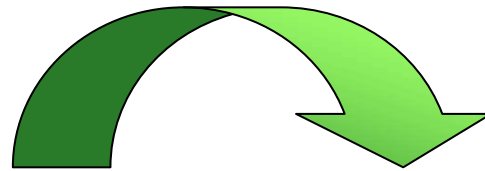
Coatings for Sustainable Buildings

Green Retrofit

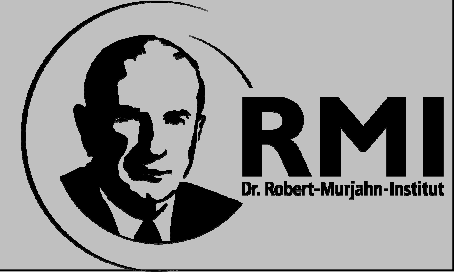
Dr. Engin Bagda

15. December 2009

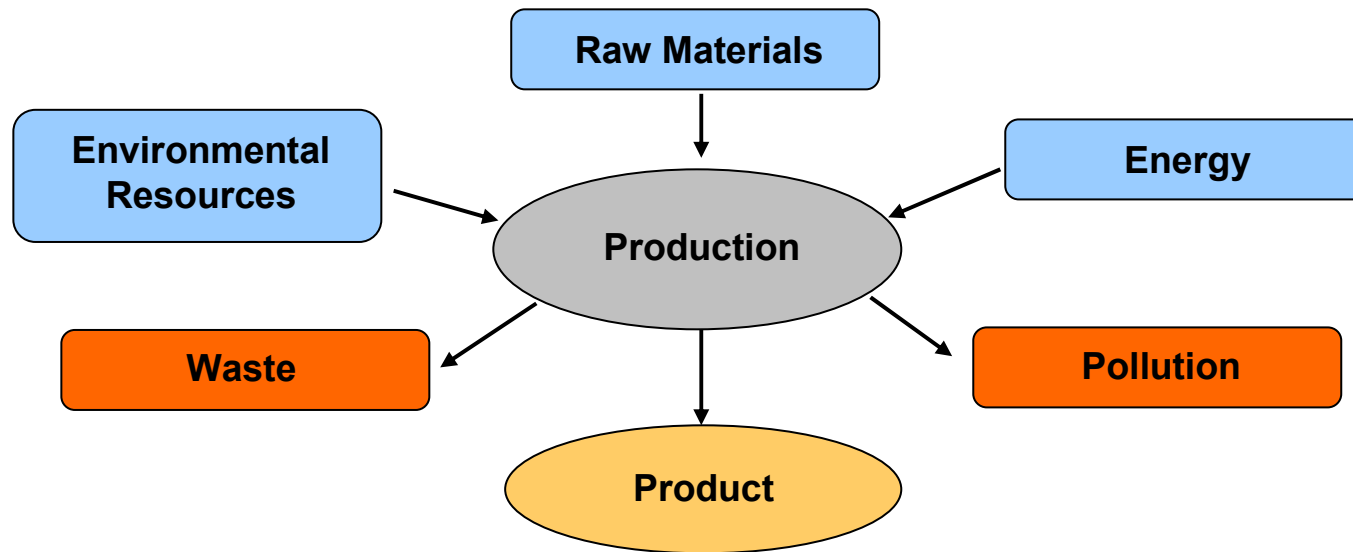
Green Retrofit ?



Environmental Aspects

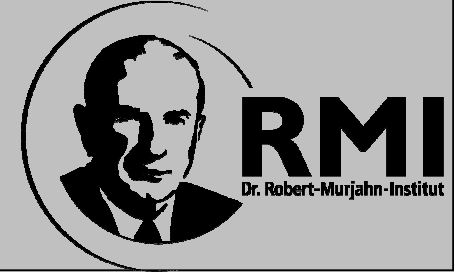


- **Global Warming Potential with emission CO₂**
- **Energy Consumption**
- **Ozone Depletion and Ozone Creation Potential with VOC emissions**
- **Emissions to air, leaching to water and soil**
- **Water Acidification and Eutrophication Potential**
- **Potable Water Consumption**
- **Waste Production**
- **Renaturation**



**But nobody uses a product because it has
a „good“ EPD**

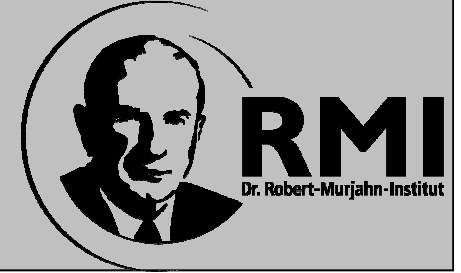
What is the sense of an EPD



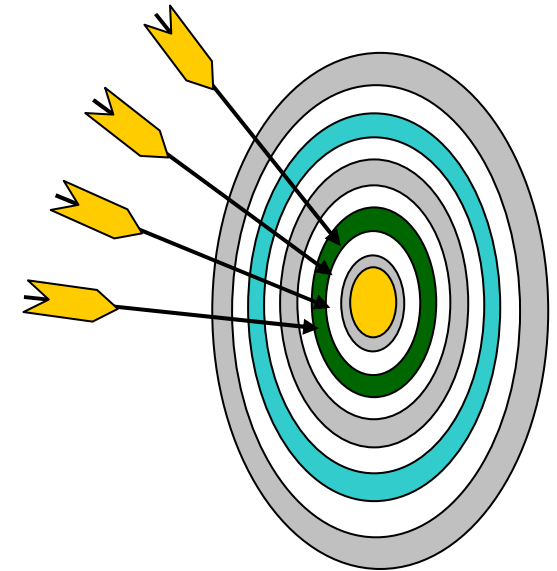
- You are sure that no toxic, mutagenic or cancerogenic components are used
- You know roughly the impact of the products to the environment
- You **don't** know the benefit of the products for your building

No benefit, no sense

Target

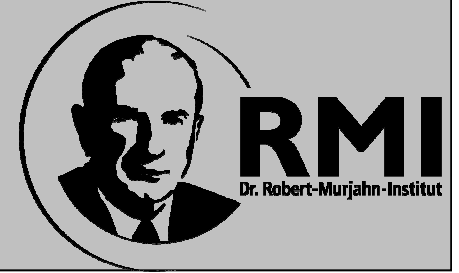


- Happy customers
- Which pay for their happiness
- That you can make profit
- With a low impact to the environment



This is sustainability

Aspects for the sustainability



Environmental

it must take care to the ecology

Social

it must make „happy“ (health)

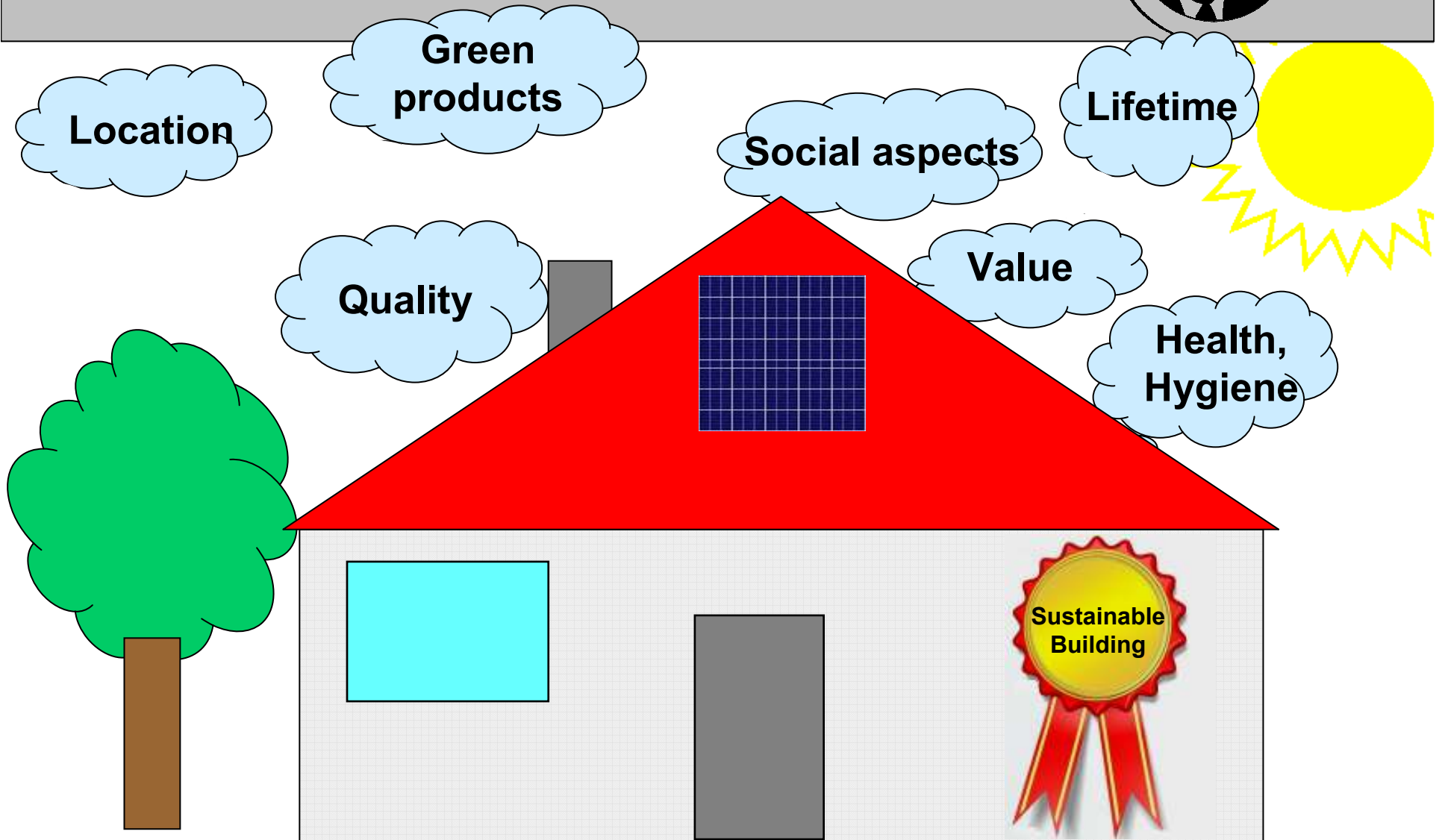
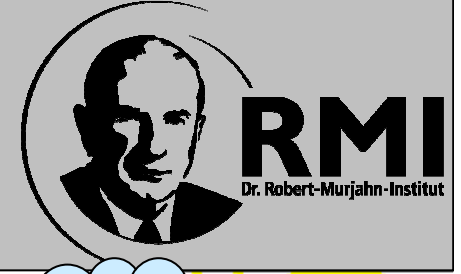
Technical

it must be functional (usability and durability)

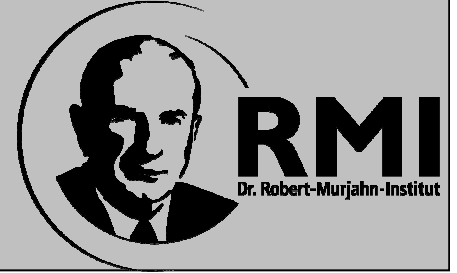
Economic

it must be affordable (expenses acceptable)

Sustainable Building

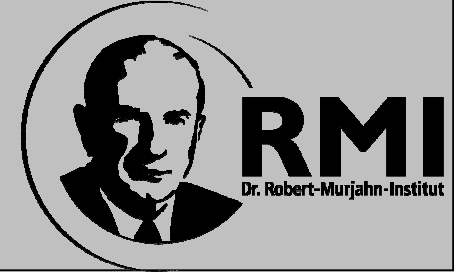


Social Aspects of Coatings



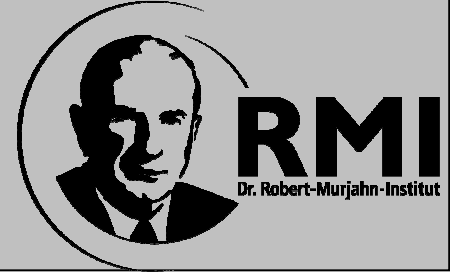
- **Health and Hygiene in Indoor (no toxic ingredients, no VOC, no emission, no odours, no heavy metals, no azo compounds, no fungi...)**
- **Visual comfort (nice colours, nice surfaces, nice texture)**

Technical Aspects of Coatings



- Energetic proofing of the building's shell
- Moisture proofing quality of the building's shell
- Easy to clean and easy maintenance of the structure
- Protection of surfaces

Economical Aspects of Coatings



- **Low life cycle coats (long durability, low service expenses)**
- **Value stability (nice surfaces, nice colours)**
- **Energy saving by heat retention (low share cost, high rent)**



Thanks for your attention