

Science For A Better Life

BAYER's Stake in Climate Change

Three dimensions of sustainability

Dr. Christoph Sievering

Climate KIC Innovation Festival 22 OCT 2013

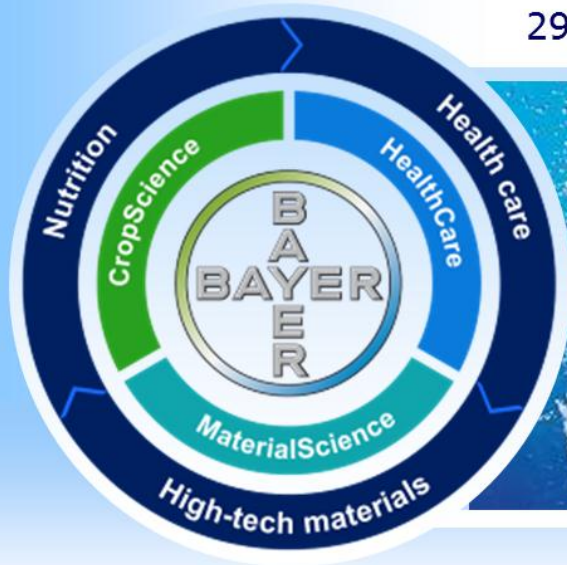
BAYER at a Glance

Short orientation towards the company



111.800 Employees
291 Legal Entities

Sales 2011 : EUR 36.5 bn
R&D 2011 : EUR 2.9 bn



Subgroups:

HealthCare

- Pharma
- Consumer Care
- Medical Care
- Animal Health

CropScience

- Crop Protection
- EnvironmentalScience
- BioScience

MaterialScience

- Polycarbonates
- Polyurethanes
- Coatings, Adhesives and Specialties

Perspectives of Climate Change

Major sources of GHG emissions



30% GHG by Buildings



15% GHG by Transportation



20% GHG by Manufacturing



Perspectives of Climate Change

BAYER competences target the right markets



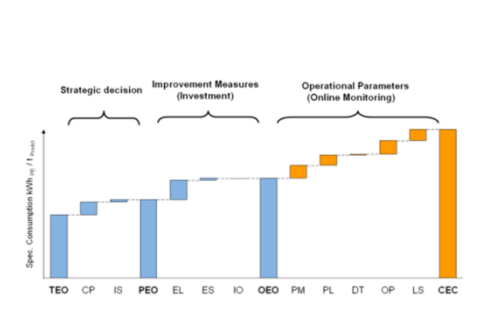
Poly-Urethane insulation saves 50-70 times the energy it costs producing it

30% GHG by Buildings



High-tech materials contributes to light-weight solutions

15% GHG by Transportation



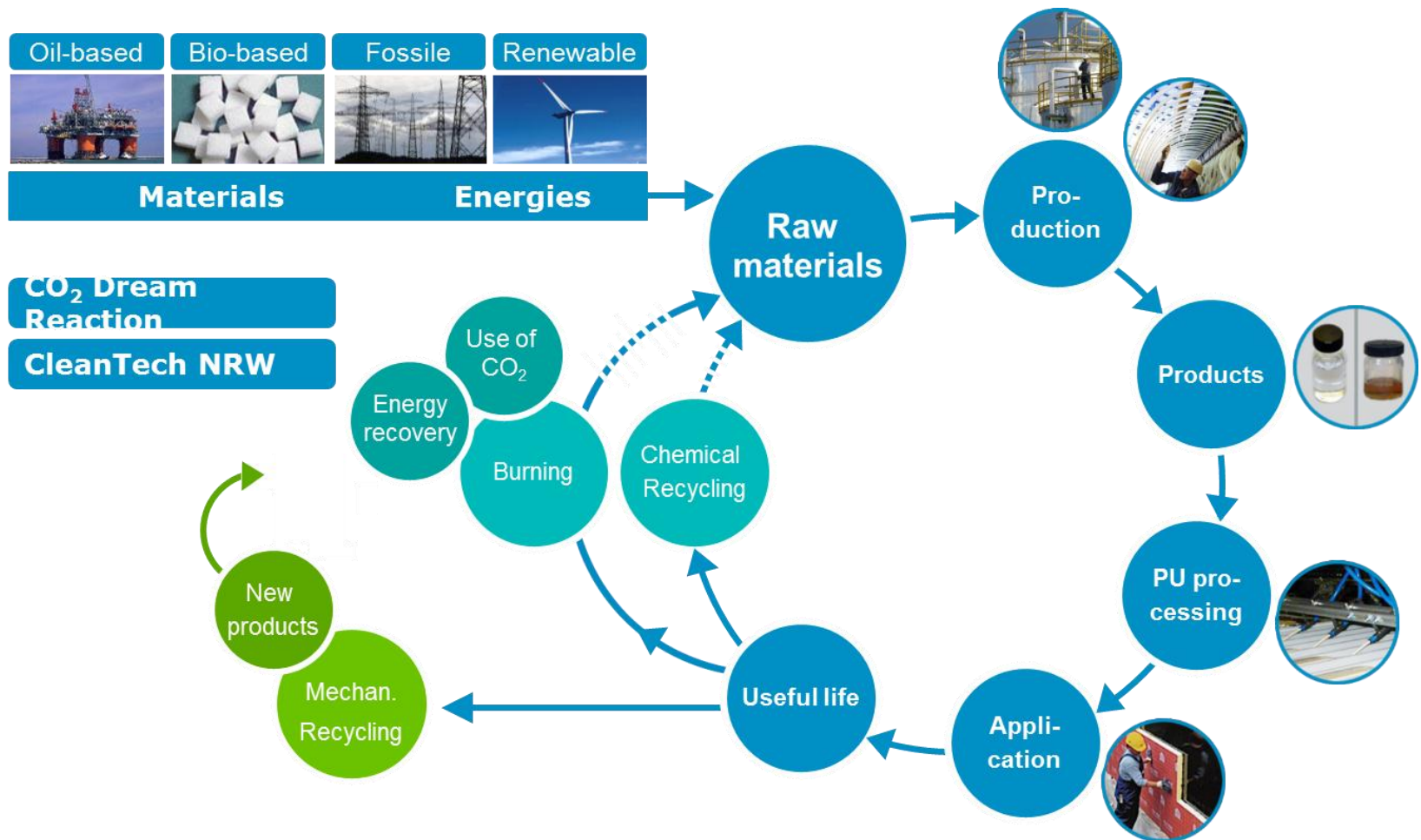
Systemic analysis of all major production sites saved already 20% of overall energy consumption



20% GHG by Manufacturing

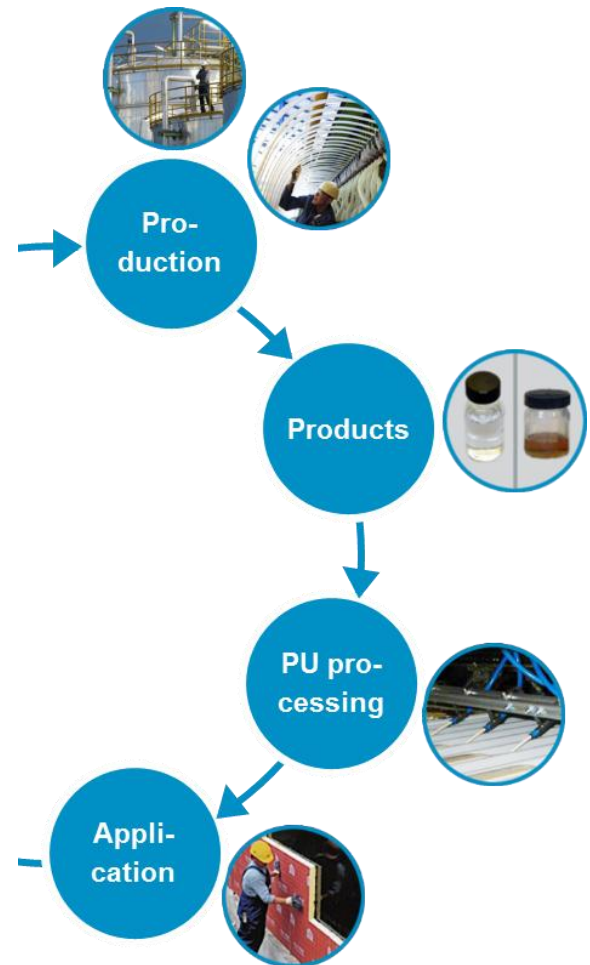
Bayer MaterialScience & Climate Change

Holistic approach to Sustainability



Sustainability is Teamwork

Bayer programmes together with partners



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Bayer programmes together with partners



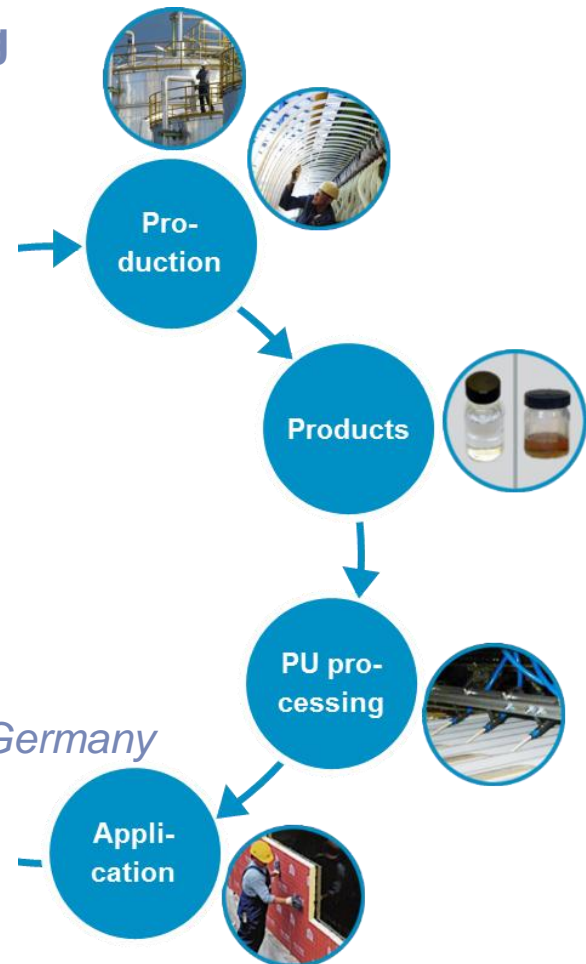
Eco-Commercial Building
5 pilots around the globe demonstrates Zero-Energy Housing



Solar-Impulse: Zero fuel flight around the world

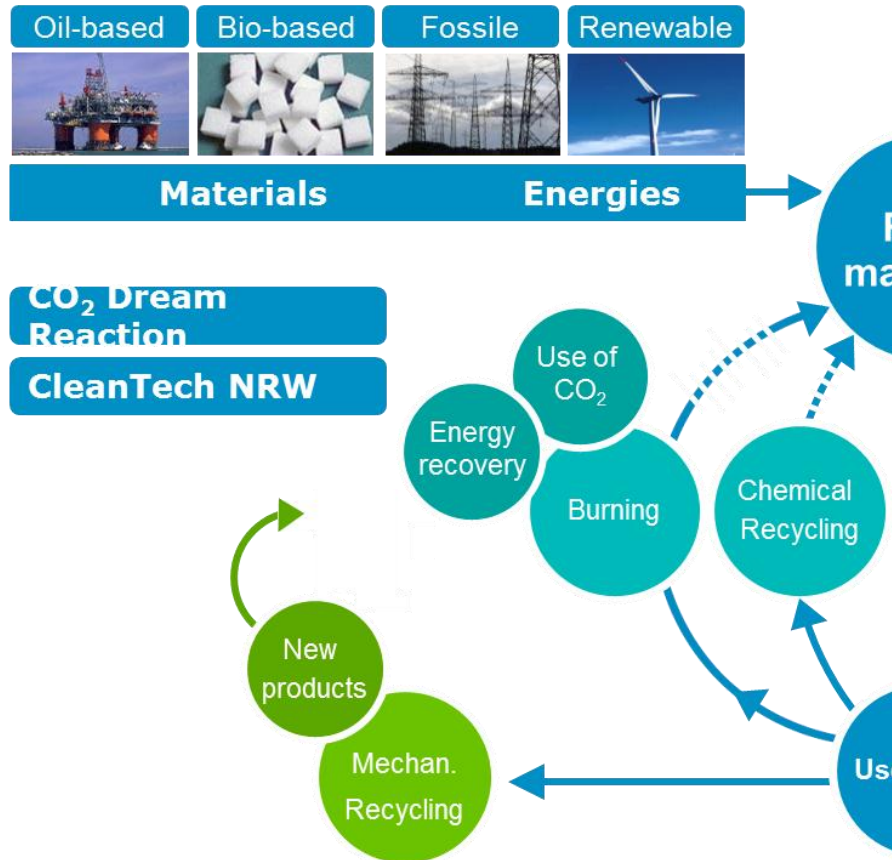


CleanTech NRW
Industrial Symbiosis made in Germany
**Bringing together:
Steel-Power-Chemical-
Biotech- Industries**



Partnership of BAYER & Climate KIC

C.KIC community to join our sustainability concept



Dream Reaction

CO_2 as feedstock for Polymer Production



Abtrennung und
Bereitstellung von CO_2

VORWEG GEHEN



Prozessentwicklung und
Verarbeitung von CO_2

 Bayer Technology Services



Herstellung und Testung
von Polyurethan aus CO_2

 Bayer MaterialScience

Grundlagenforschung



RWTHAACHEN
UNIVERSITY

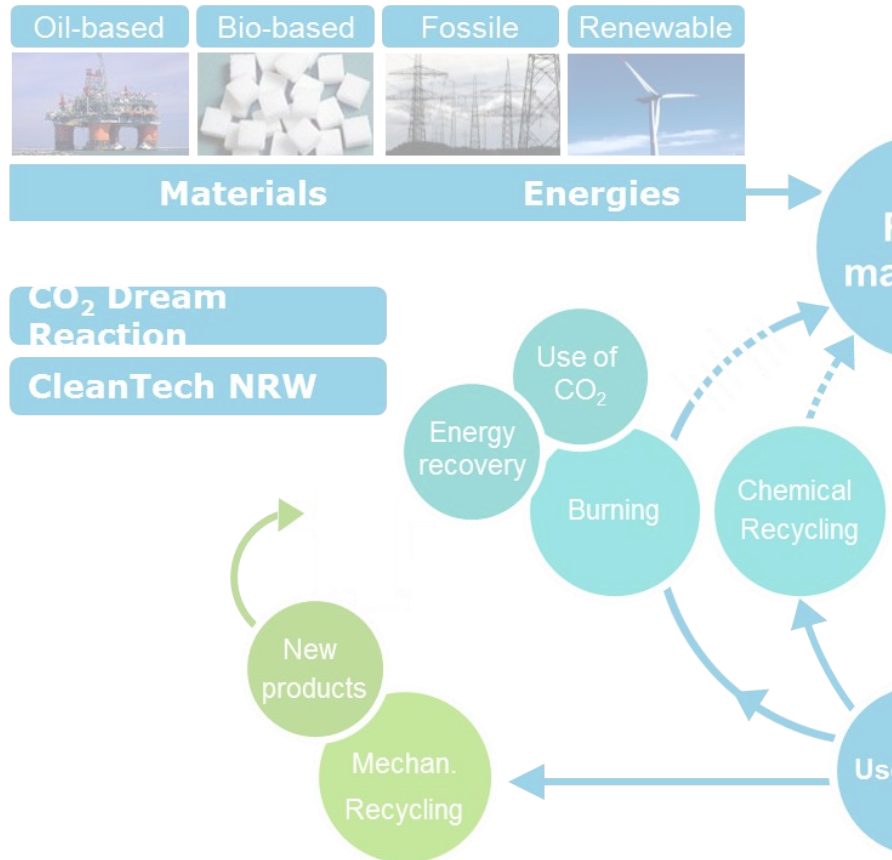
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of Education
and Research

Partnership of BAYER & Climate KIC

C.KIC community to join our sustainability concept



Invitation to C.KIC

- **Rycling of products**
- **Bio-based raw materials**
- **CO₂ as industrial feedstock**

Sustainability: Integral Part of our Strategy

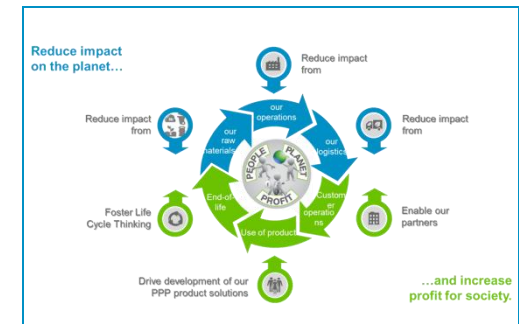
Some activities ranging from 2005 towards 2020



Bayer MaterialScience set clear targets for 2020

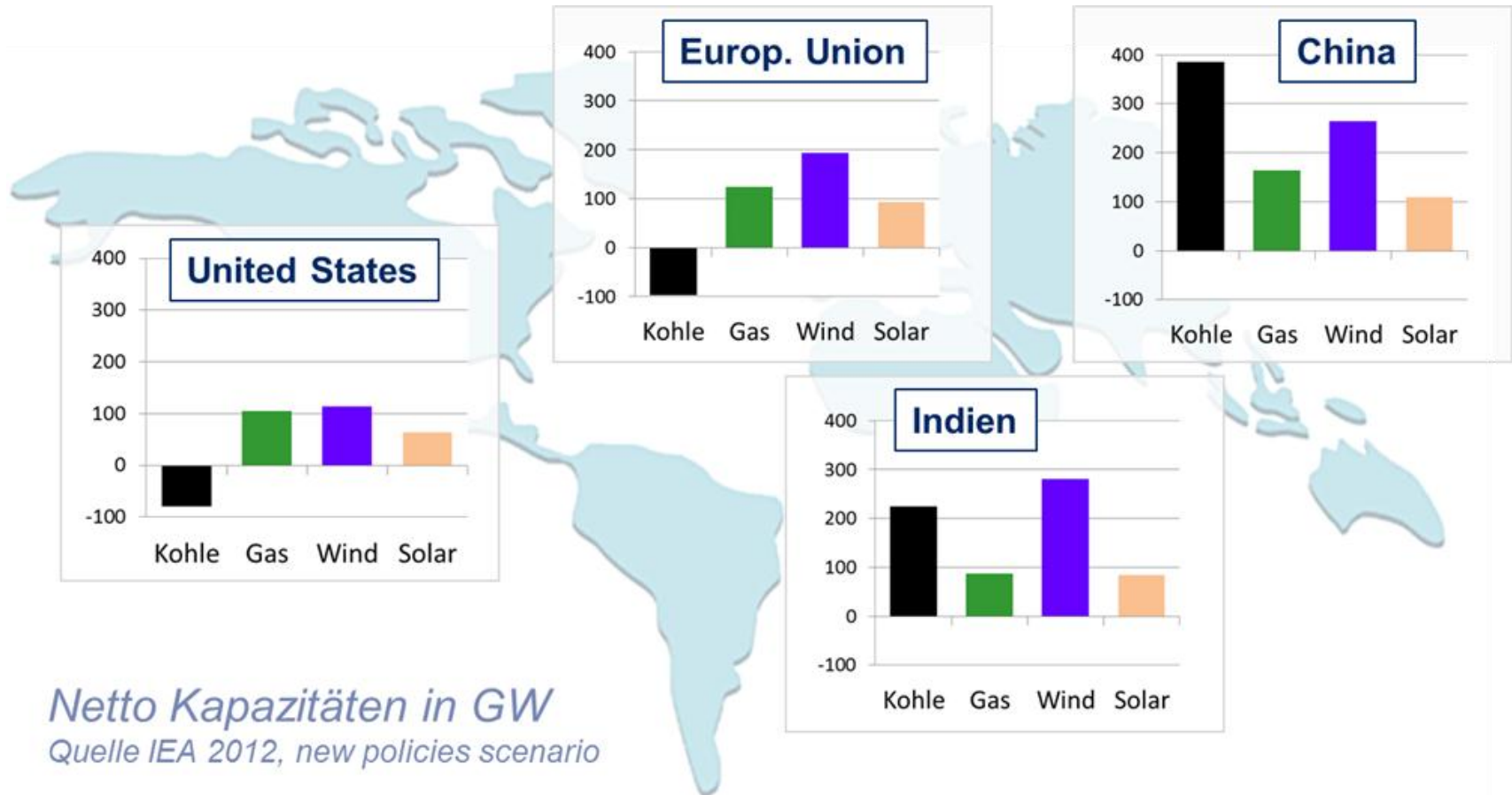
e.g. on manufacturing (based on 2005)

- **Specific CO_{2eq} reduction of 40%**
- **Energy efficiency of 30%**



Sustainability: Integral Part of our Strategy

Some activities ranging from 2005 towards 2020



Sustainability: Integral Part of our Strategy

Some activities ranging from 2005 towards 2020



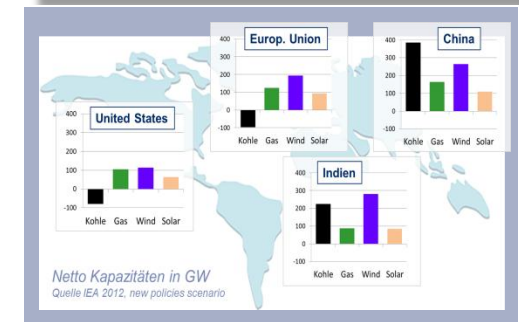
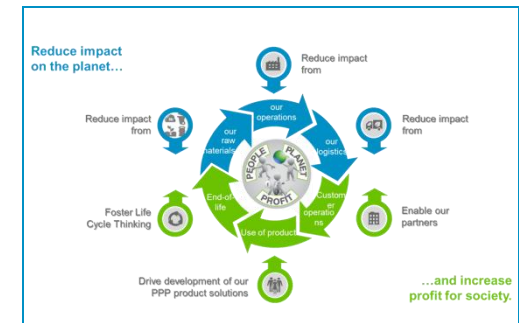
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e.g. on manufacturing (based on 2005)

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Uneven pace of regional developments lead to structural changes ...

... and huge challenges for individual industries



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Bayer MaterialScience set clear targets for 2020

e.g. on manufacturing (based on 2005)

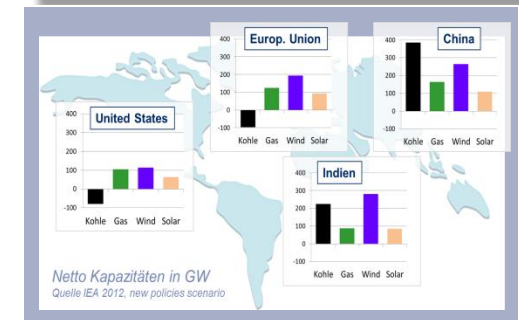
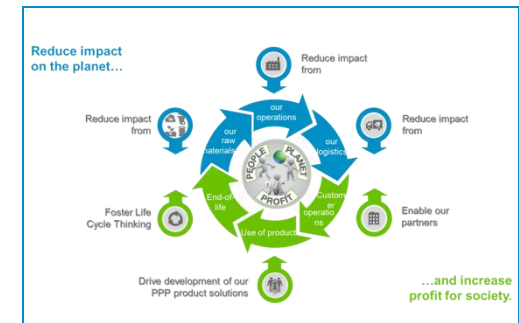
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... and huge challenges for individual industries

Besides contributing to PLANET and PEOPLE, sustainability means PROFIT, too...

.... in order to stay in the game.





Thank for your attention