

# Klimawandel-Risiken: Bewertung & Priorisierung

## Best Practice von Unternehmen und Städten

Susan Dreyer

Director, Head of Programs & Markets  
CDP Deutschland & Österreich

Tel. +49-(0)30-311-777-160  
[susan.dreyer@cdproject.net](mailto:susan.dreyer@cdproject.net)

Carbon Disclosure Project gGmbH  
(CDP Europa Zentrale)  
Reinhardtstraße 14  
10117 Berlin



**CARBON DISCLOSURE PROJECT**



## CARBON DISCLOSURE PROJECT

### Unsere Mission:

**Klimawandel verhindern** und **Ressourcen schonen** durch **Veränderung des Wirtschaftssystems** – indem wir relevante **Informationen** ins **Zentrum** von Entscheidungen rücken: bei **Unternehmen, Eigentümern und Regierungen.**

Kapitaleigner (Investoren)  
&  
Einkaufsbudgets (Konzerne)

Entscheidungsparameter

**CARBON DISCLOSURE PROJECT**

Verhinderung und Anpassung an  
Klimawandel

große Klimawandelverursacher  
(Unternehmen, Zulieferer,  
Städte)

Vollmacht

Informations-  
anfrage

655 Investoren mit 78 Billionen USD  
Anlagevermögen

&

55 Großkonzerne mit > 550  
Milliarden EUR Einkaufsbudget

3.900 Disclosure Scores und  
Entscheidungsparameter  
1.700 Performance Gruppen

### CARBON DISCLOSURE PROJECT

3.000 Risiken, 4.000 Chancen, 10.000  
Verhinderung und Anpassung an  
Reduktionsmaßnahmen, 2.100 CO<sub>2</sub>-  
Bilanzen, 2.800 Managementstrategien..  
Klimawandel

Klimawandel, CO<sub>2</sub>,  
WassergeWald

4.000 Unternehmen = 1/2 des  
gesamten Börsenwertes der Welt  
&  
75 Städte

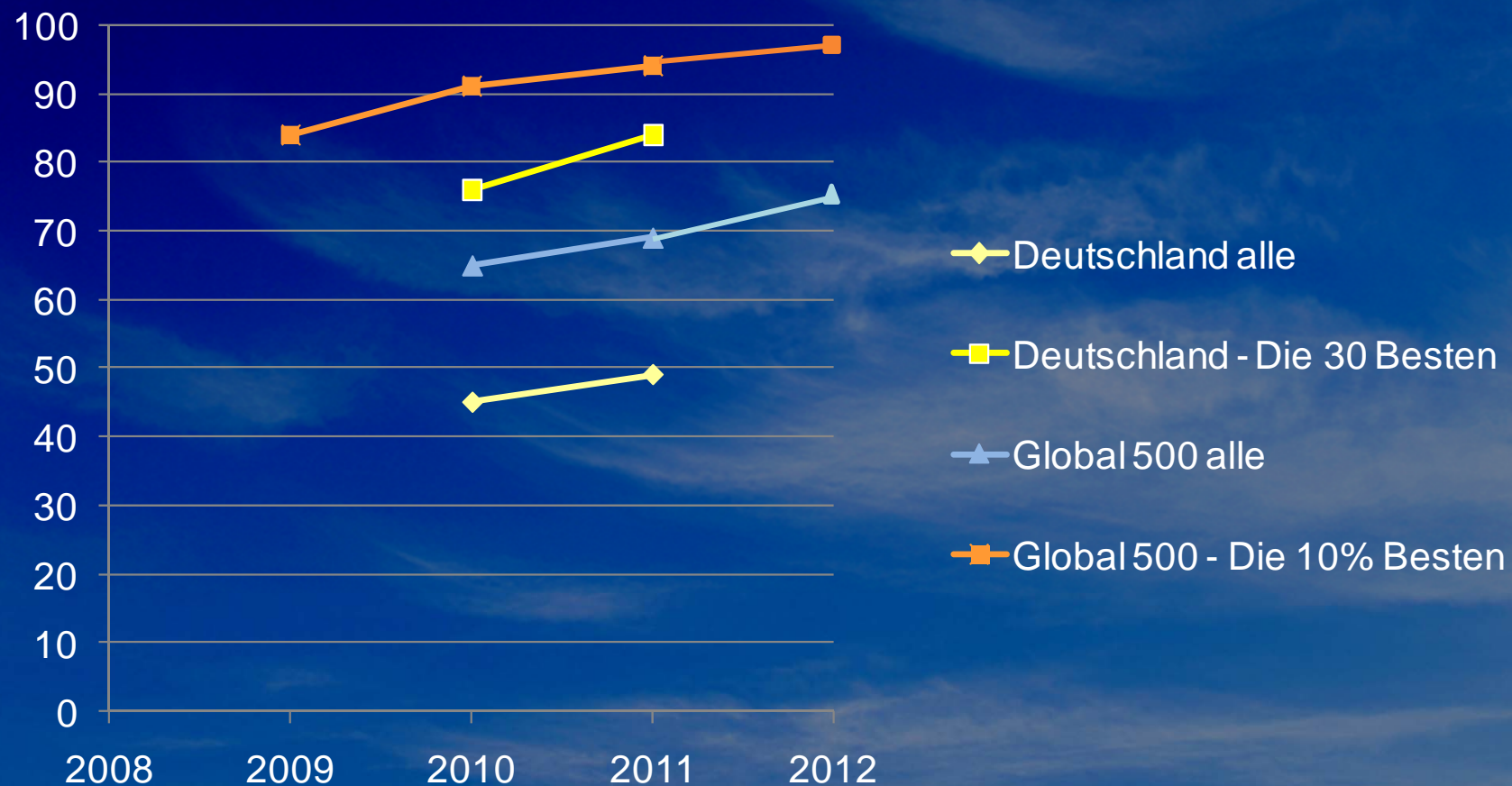
Transparenz &  
Vollmacht  
Maßnahmen

# Klarer Trend: Klimaschutz ist heute Standard

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## CDP Carbon Disclosure Scores

(Bewertung für Datenqualität, Durchdringung und Transparenz)



„Der Fahrstuhl hält **NICHT UNTER 4 ETAGEN**... derzeit haben wir 8 Aufzüge, was ca. **2.160 kWh pro Tag** einspart oder KRW 78.840.000 pro Jahr. “

Woori Investment & Securities,  
Süd-Korea



**EINSPARUNG:**  
**53.653 € pro Jahr**  
**INVESTITIONS-**  
**KOSTEN: nahezu 0**



Wie bewerten wir Risiken – und  
verwandeln diese in  
Entscheidungsparameter?

# Welche Risikodaten erwarten Stakeholder?

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## 5. Risiken verursacht durch den Klimawandel

5.1 Haben Sie Klimarisiken (aktuell oder zukünftig) identifiziert, die das Potenzial haben, substantielle Veränderungen Ihrer Geschäftstätigkeit, Ihres Umsatzes oder Ihrer Ausgaben zu bewirken?

Bitte identifizieren Sie die relevanten Kategorien:

- Risiken durch Gesetze/Regulierungen
- Risiken durch Veränderung der physikalischen Klimaparameter
- Risiken durch andere klimabedingte oder -bezogene Veränderungen

*Bitte geben Sie Details für alle identifizierten Risiken und/oder Chancen in der Tabelle an, die im ORS zur Verfügung steht:*

- Faktoren/Treiber für Risiken/Chancen
- Beschreibung
- Potentielle Auswirkung
- Zeitraumen
- Direkt/Indirekt
- Wahrscheinlichkeit der Auswirkung
- Ausmaß der Auswirkung



# Welche Risikodaten erwarten Stakeholder?

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## 6. Chancen entstehend durch den Klimawandel

- Chancen durch Gesetze/Regulierungen
- Chancen durch Veränderung der physikalischen Klimaparameter
- Chancen durch andere klimabedingte oder -bezogene Veränderungen

- Faktoren/Treiber für Risiken/Chancen
- Beschreibung
- Potentielle Auswirkung
- Zeitraumen
- Direkt/Indirekt
- Wahrscheinlichkeit der Auswirkung
- Ausmaß der Auswirkung

Bitte beschreiben Sie:

- i. die potentiellen finanziellen Implikationen der Chancen/Risiken vor Beginn einer Reaktion/präventiven Maßnahme;
- ii. die Methoden, die genutzt werden um, Chancen/Risiken zu managen, und
- iii. die Kosten, die mit den Aktivitäten in Verbindung gebracht werden


*Wenn Chancen und/oder Risiken für keine der Kategorien identifiziert werden konnten:*




Bitte erklären Sie, warum Ihr Unternehmen diesen Chancen/Risiken nicht ausgesetzt ist.

# Welche Risikodaten erwarten Stakeholder?



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## 5. Risiken verursacht durch den Klimawandel


- Risiken durch Gesetze/Regulierungen 
- Risiken durch Veränderung der physikalischen Klimaparameter
- Risiken durch andere klimabedingte oder -bezogene Veränderungen

- Faktoren/Treiber für Risiken/Chancen
- Beschreibung
- Potentielle Auswirkung
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# ERKANNTA RISIKEN

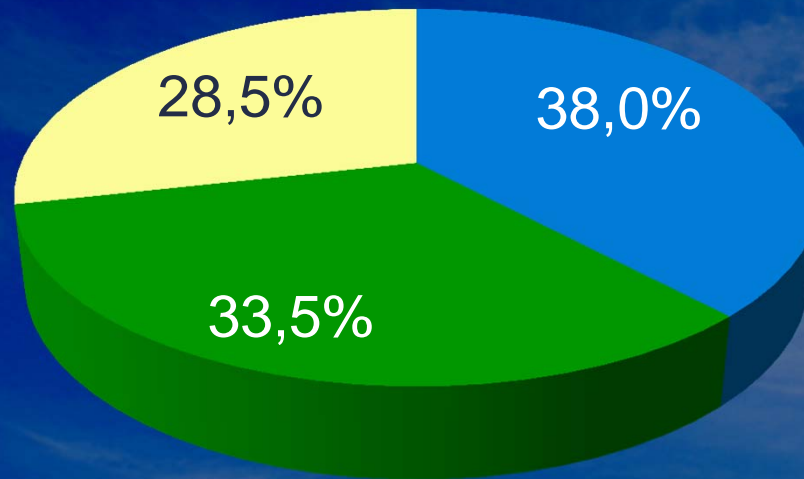


2011 wurde global >3.000 mal über Risiken berichtet – und >4.000 mal über Chancen

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andere Risiken

regulatorische Risiken



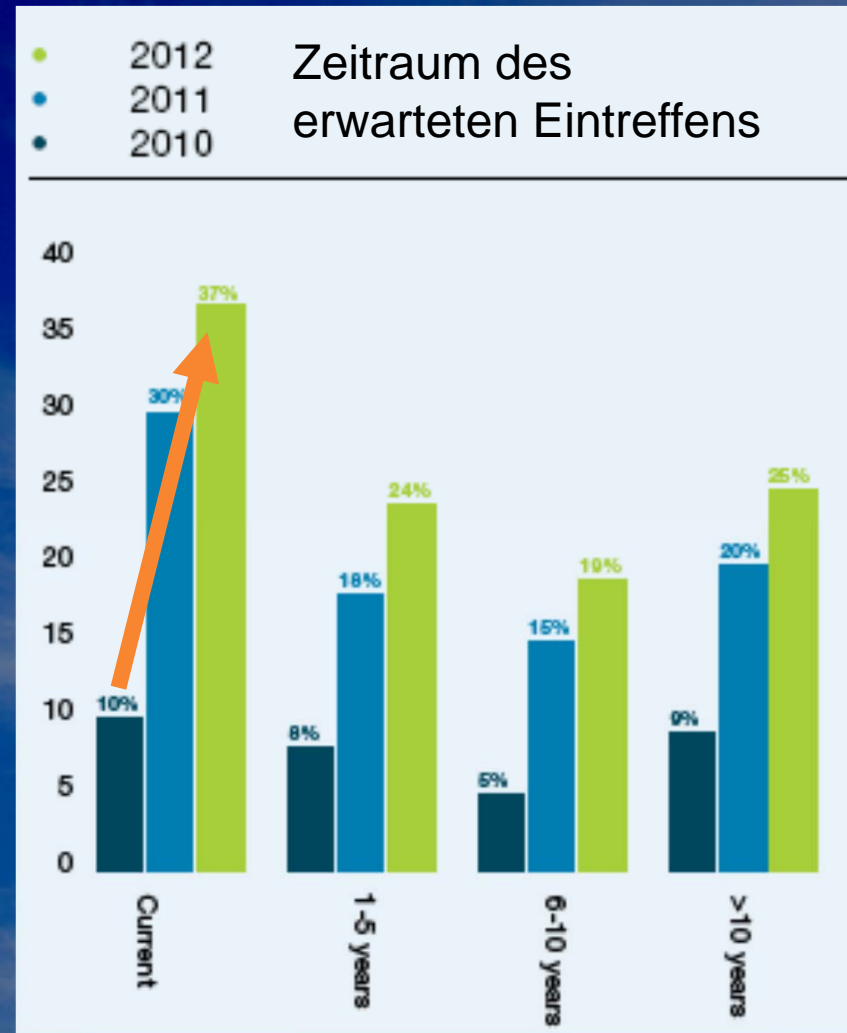
physische Risiken

# Physische Risiken rücken deutlich näher

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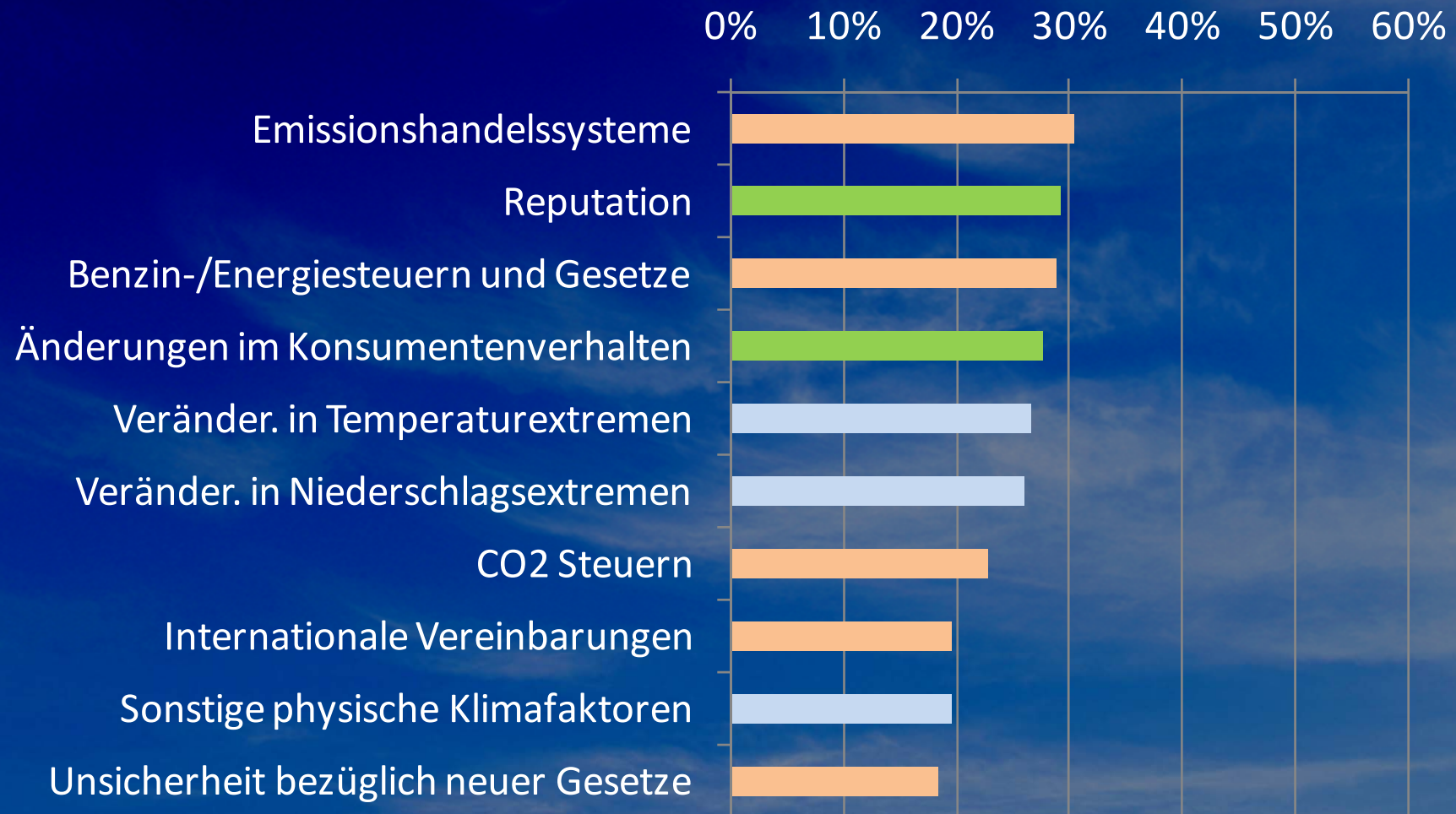
CDP Global 500  
Climate Change Report 2012

**37%** der Unternehmen,  
die **physische Verän-  
derungen durch  
Klimawandel** als Risiko  
sehen, erwarten diese  
schon **heute** („current“):  
beinahe **viermal mehr**  
als noch vor zwei Jahren  
**(10%)**



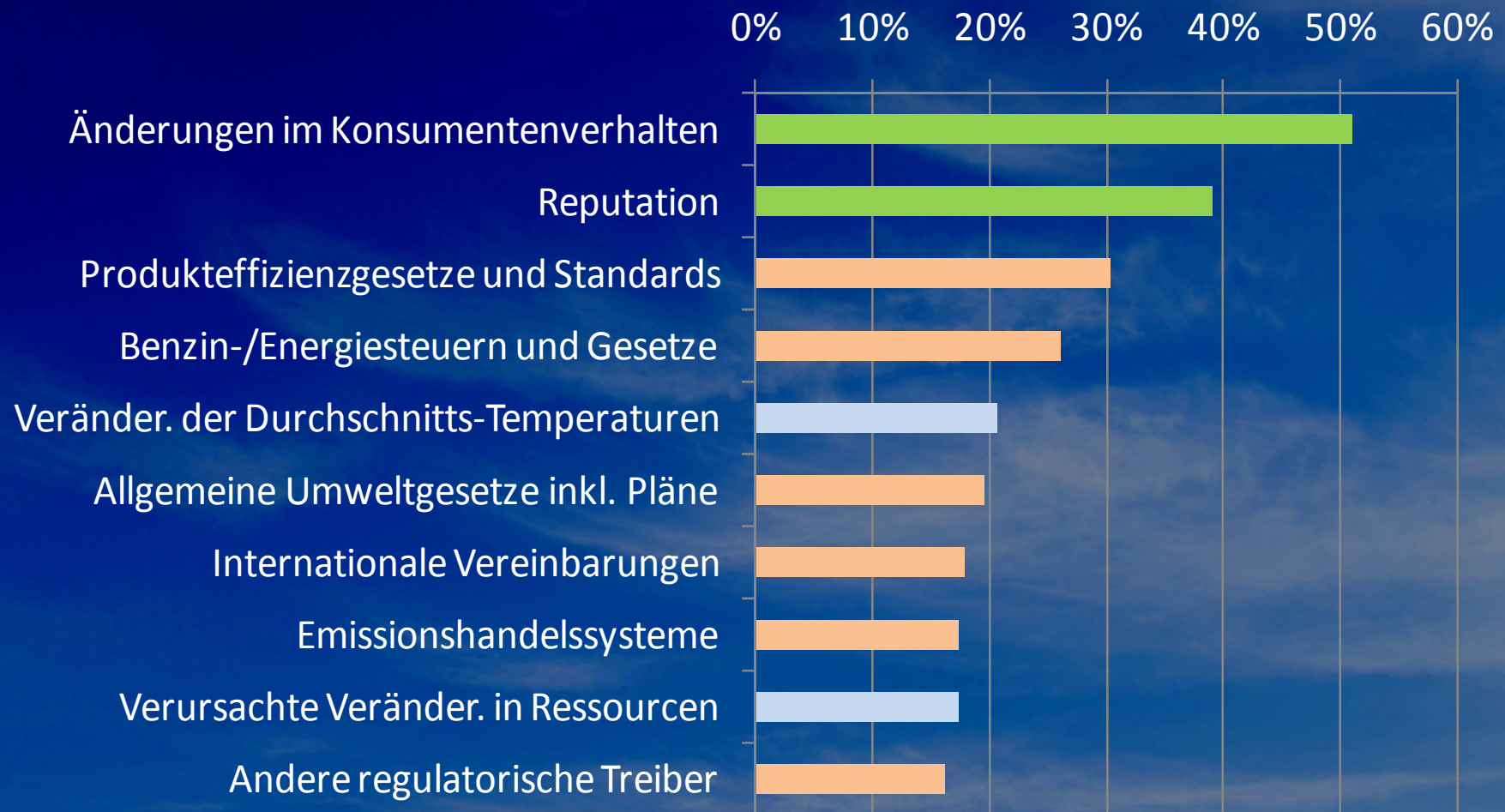
# Risiken „Top 20“ – jüngste D,A,CH Erhebung

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# Chancen „Top 20“ – jüngste D,A,CH Erhebung

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WIE

GEHEN UNTERNEHMEN

DAMIT UM?

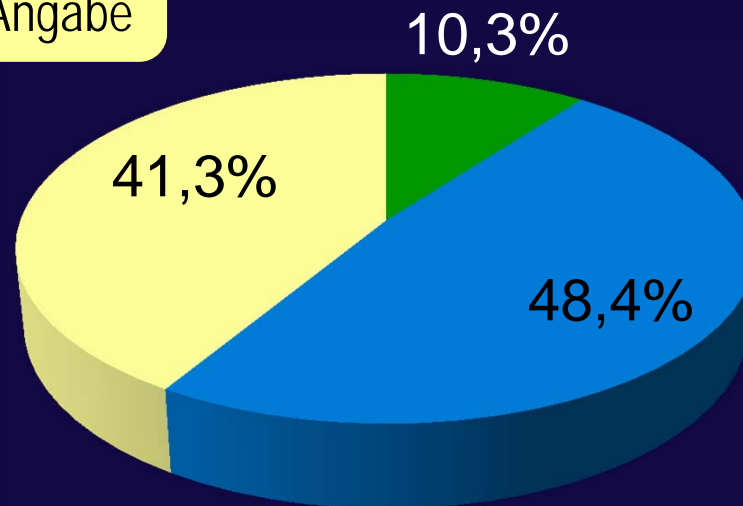


# Fast 60% der Unternehmen integrieren schon heute Klimawandel in ihr Risikomanagement

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Keine dokumentierten Prozesse / keine Angabe

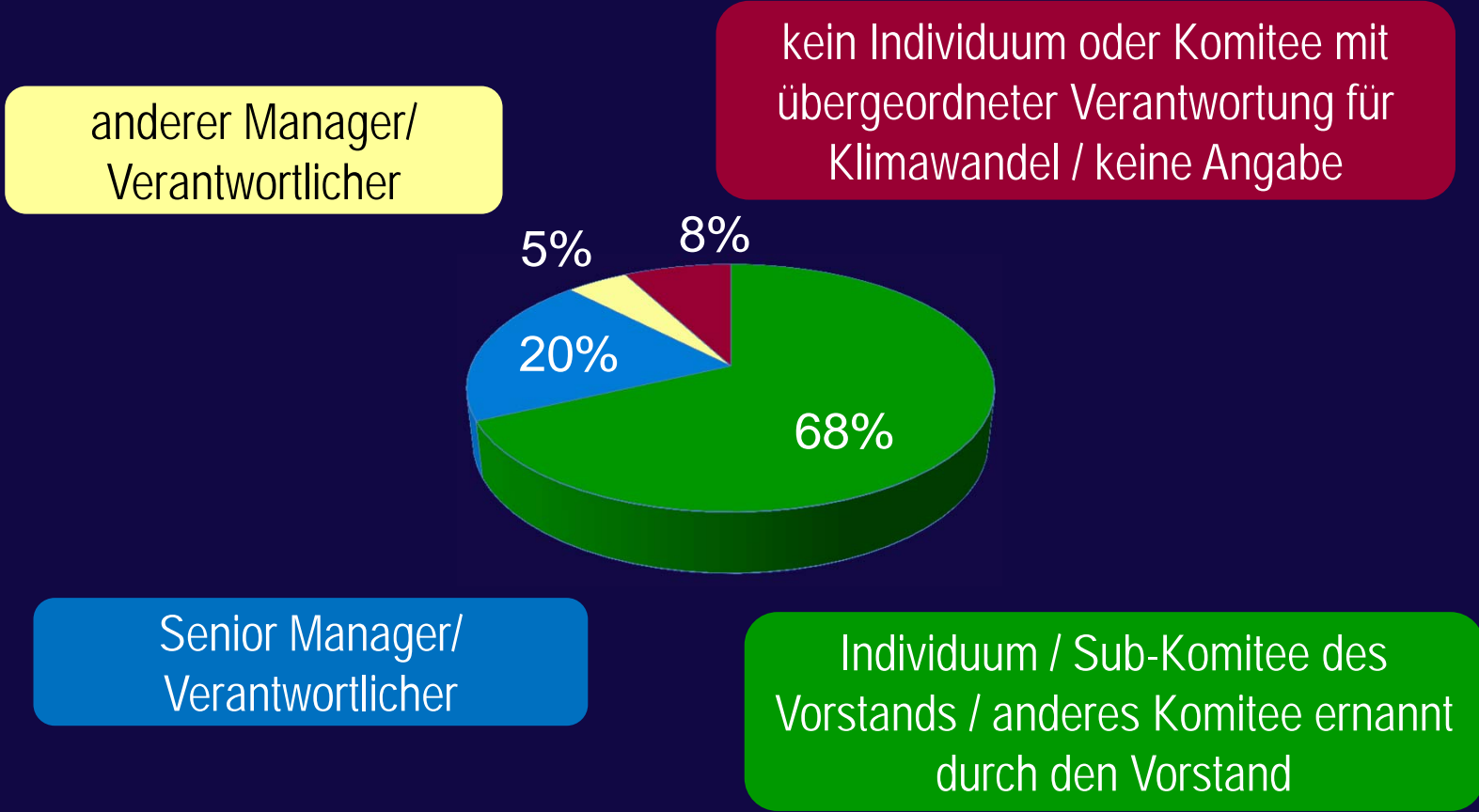
Spezifischer Risikomanagement-Prozess für Klimawandel



Klimawandel in einen multi-disziplinären unternehmensweiten Risikomanagement-Prozess integriert

# Vorstandsverantwortung für Klimawandel dominiert

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Top Answers for Governance & Strategy for Pharmaceuticals, Biotechnology & Life Sciences Industry

Group

Company Name: Bayer AG - Investor CDP 2011

2.1

Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities

Integrated into multi-disciplinary company wide risk management processes

2.1a

Please provide further details (see guidance)

i) Process scope: Managing opportunities and risks is an integral part of the corporate strategy. Sustainable increases in the company's value are recorded in our risk management process. Risks and opportunities are identified from the following areas (among others): Environment; economic and political factors; Health, Safety and Environment (HSE); Human Resources (HR) development; HR. Thus, our risk management process considers climate-change-related regulatory, physical and other risks.

Our HSEQ and sustainability managers as well as our Climate Champions in the business units, together with the Corporate Center, as well as academic research, e.g., regarding physical climate-related changes. Potential risks and opportunities are identified and managed through the Bayer Corporate Center. Physical risks related to climate change are further covered by the Bayer Group's Risk Management System. It is the task of the subgroups and strategic business entities to make use of the strategic opportunities that arise in their respective markets, which the Corporate Center supports the process as a sparring partner or challenger. Opportunities identified and exploited by our subgroups include regulatory, physical and other opportunities (e.g., demand driven by the growing awareness of customers on climate-related topics). To further identify and exploit climate-related opportunities, the "Energy and Climate" project was initiated in 2010 involving R&D and New Business experts from all subgroups.

ii) Risk & opportunity assessment at company level: Risks and opportunities, including those at the business unit level as an integral part of the planning and controlling process. All subgroups, service companies and the units of the holding company have risk management coordinators and executives at upper managerial level who are designated as being responsible for the identification and documentation of risk areas throughout the Group.

The opportunities and risks that are evaluated both qualitatively and quantitatively are discussed at regular conferences held to discuss business performance.

The Community Board for Sustainable Development brings together different subgroups and business units and facilitates the sharing of information where risks and opportunities apply to several organizational units in the Bayer Group.

Our Climate Change and Legislation Summit serves to discuss relevant legislative developments, such as international policy frameworks and national regulations, identify mid- and long-term risks, and discuss climate-related initiatives and opportunities with our business unit managers and the officers of our liaison offices. Furthermore, political developments are discussed with our business unit managers and the officers of our liaison offices.

iii) Risk & opportunity assessment at asset level: Risks that apply to individual facilities, such as weather-related risks such as hurricanes or storms that could impact our sites located close to the sea such as Baytown, Caojing or Antwerp.

Physical risks related to climate change are covered by the Bayer Emergency Response System (BayERS). BayERS is a mandatory element of the integrated HSEQ management system at Bayer production sites designed to ensure appropriate crisis management in the event of unusual occurrences. For non-ad-hoc and non-catastrophic

Energy & Climate Project

Community Board Nachhaltigkeit

Climate Change and Legislation Summit

Strategische Chancen

Bayer Emergency Response System

Risikodatenbank „BayRisk“

Sustainability Managers

Regional „Climate Champions“

# Best Practice Beispiele: 2) alstria office REIT

CARBON DISCLOSURE PROJECT

## Carbon Disclosure Project

CDP 2012 Investor CDP 2012 Information Request  
alstria office REIT-AG

### Risk management

alstria has implemented a Group-wide structured risk management system for climate change risk management. All risks are recorded, evaluated and monitored on at least a quarterly basis. The goal of alstria Group's risk management strategy is to minimize the impact of risks associated with entrepreneurial activity in order to safeguard the Company as a going concern. The system of the early detection of risks is in active use.

### How risks/opportunities are assessed

Every single risk issue is assessed quarterly with regard to the criteria impact and likelihood. The first step in assessing risks is to specify identified risks more precisely. The primary goal of the risk assessment is to quantitatively evaluate the extent to which identified risks (impact). Through an analysis, environment and climate change have been identified as relevant to our business. Being aware of the risk climate change poses to the Group and opportunities.

### The frequency of monitoring

All risks are recorded, evaluated and monitored on at least a quarterly basis. The goal of alstria Group's risk management strategy is to minimize or, where possible, completely avoid the risks associated with entrepreneurial activity in order to safeguard the Group against potential concerns. The system of the early detection of risks is in active use.

### To whom are the results reported

The reporting on alstria's risk situation is created quarterly as part of the standard reporting process. On the occasion of a quarterly held risk meeting the report is presented to the Management Board. Basis for the preparation of the risk report are the reports from the risk owners responsible for a particular risk area. The risk report presents the organisational measures and regulations that are to be observed with regard to risk identification, assessment, response, reporting and monitoring. At the same time, the comprehensive documentation of this report ensures an orderly assessment, which is conducted by the responsible departments and by the supervisory board.

Frühwarnsystem

Quartalsweises Monitoring

- Wahrscheinlichkeit

-Auswirkung / Schadenshöhe

„Risk Owners“

UND STÄDTE?



# CDP Cities 2012

[Download the report](#)

Cities	Emissions Reporting	Risks + Adaptation	Emissions Reductions	Opportunities	Water
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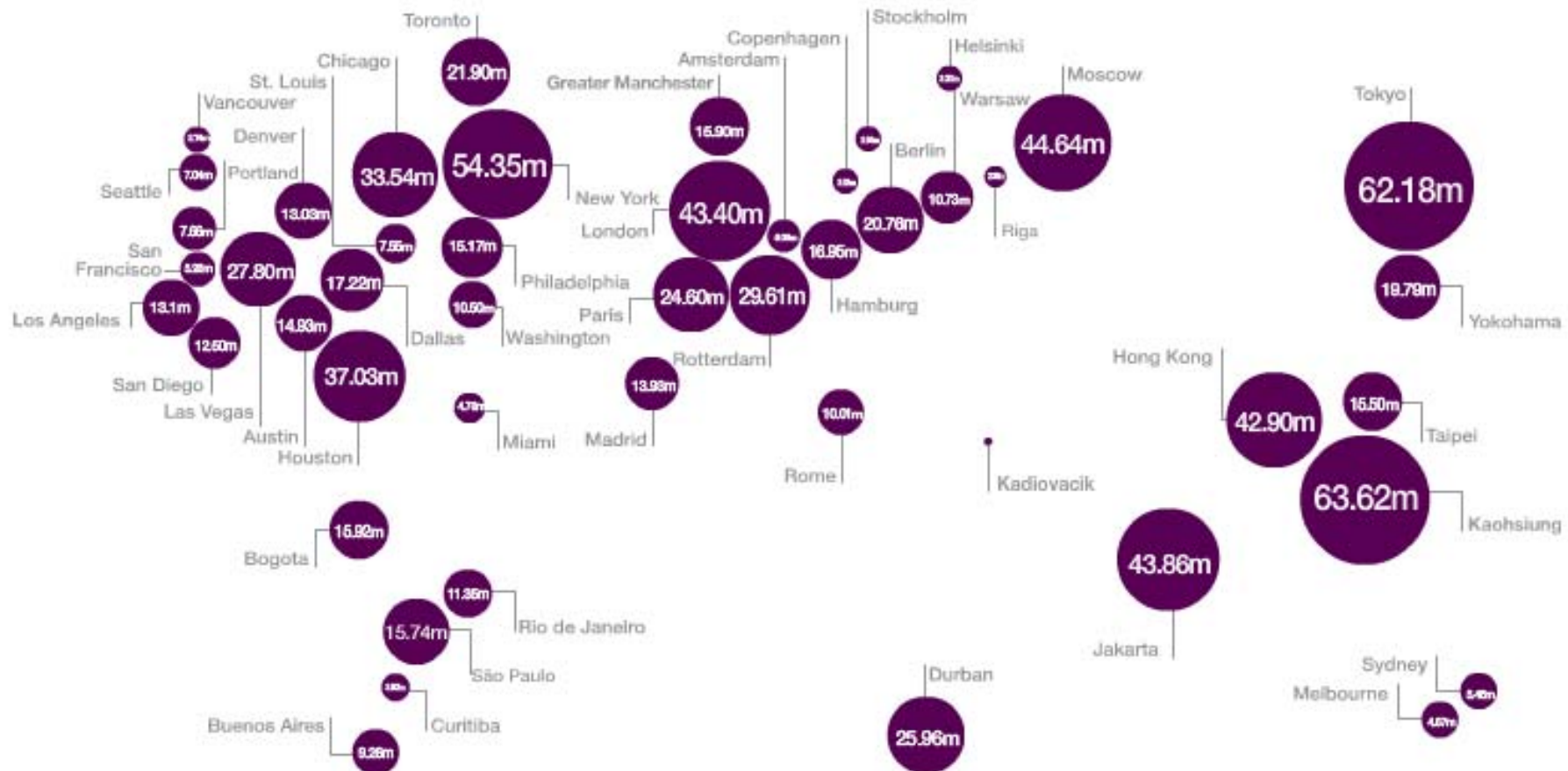
2011

**2012**

Per capita

Efficiency

Hover over the cities to find out the reporting year, inventory methodology used and other vital statistics. Due to the differences in these factors, it is hard to compare city emissions even if they are of similar population or geographical area.



Figures in millions of tonnes of greenhouse gas (GHG) emissions per year. Emissions figures are current as of April 30, 2012. The emissions reported are calculated with a variety of methodologies, are from a mix of reporting years and as such are not strictly comparable.

# CDP Cities 2012

[Download the report](#)

- Cities
- Emissions Reporting
- Risks + Adaptation
- Emissions Reductions
- Opportunities
- Water

Risks reported

Adapting to risks



# Hamburg

## Strategy/Management

Several Hamburg administrative and research institutions are dedicated to the issue. The Helmholtz-Zentrum Geesthacht (Centre for Materials and Coastal Research) is one of the worldwide leading institutes in this field. Currently, a Masterplan Climate is being developed in order to define the overall fields of action and priorities. The corresponding measures will be implemented for Climate Issues.

## Examples of Actions:

Flood defences and additional measures to manage high storm surges are being planned and realised in cooperation with the neighbouring districts and the federal states of Lower-Saxony and Schleswig-Holstein. A special concept has been developed to slow the surge by underwater barriers in the very estuary of the river Elbe.

Nationale Studien für physische Risiken

Master Plan zur Priorisierung



# Madrid

## Strategy/Management

In the "Plan for the Sustainable Use of Energy and Climate Change Prevention 2008-2012" a survey on the physical risks was accomplished. It was mainly based on the methodology designed for European countries under the frame of the ACACIA project. A group of experts was formed in different fields of knowledge, from different institutions and geographical points of Spain. Fifteen subject areas of impact were selected. An hydrological risk assessment were carried out to estimate the impact of the network of storm tanks.

## Examples of Actions:

- Network of recycled water for irrigation and cleaning
- Public awareness campaigns for responsible use of water resources
- Less water demanding parks and green areas
- Groundwater resources exploitation

Risikoanalyse

Innovative Maßnahmen

Parks, die weniger Wasser brauchen

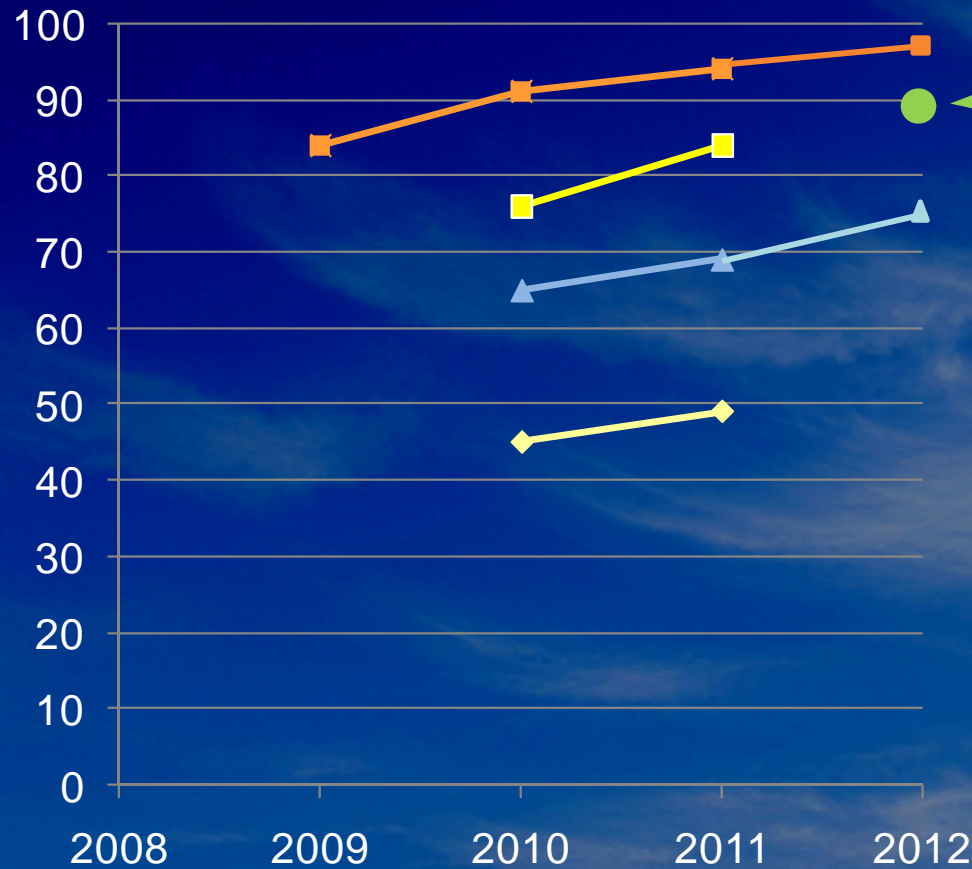
Unterwasser-Flußbarrieren



# Durchdringe Klimawandel!

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## CDP Carbon Disclosure Scores:



## CDP Mittelstand Initiative

Bestes Mittelstandsmitglied

- ◆ Deutschland alle
- Deutschland - Die 30 Besten
- ▲ Global 500 alle
- Global 500 - Die 10% Besten

 **PE INTERNATIONAL**  
SUSTAINABILITY PERFORMANCE




**„The CARBON DISCLOSURE PROJECT is vital – and that is why we got to get everybody to participate in it!“**

**BILL CLINTON  
2007**



# ANHANG

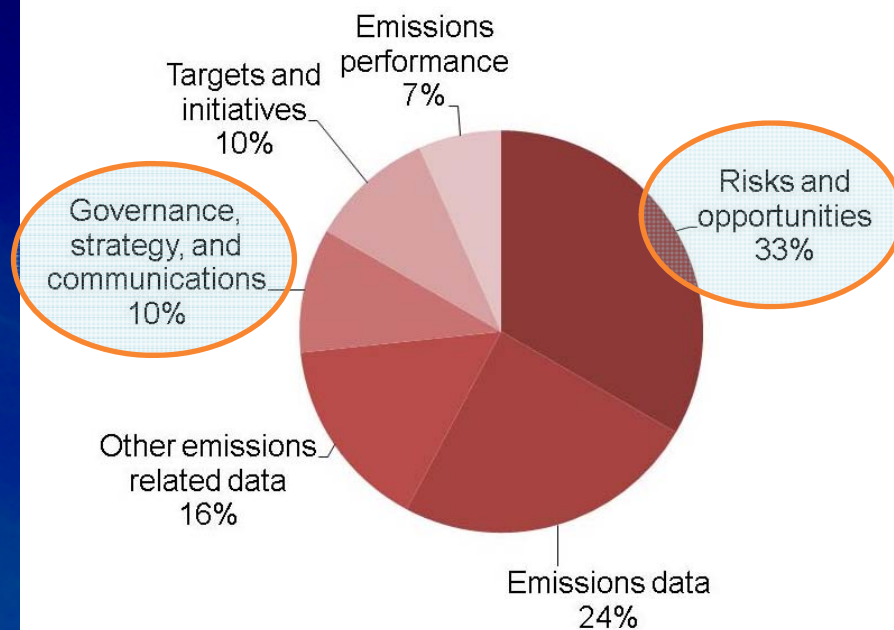


CDP Questionnaire  
& Scoring Methodik:  
Know-How,  
Standardisierung,  
Harmonisierung

# Risiken und Risikomanagement wesentliche Bestandteile der CDP Scores

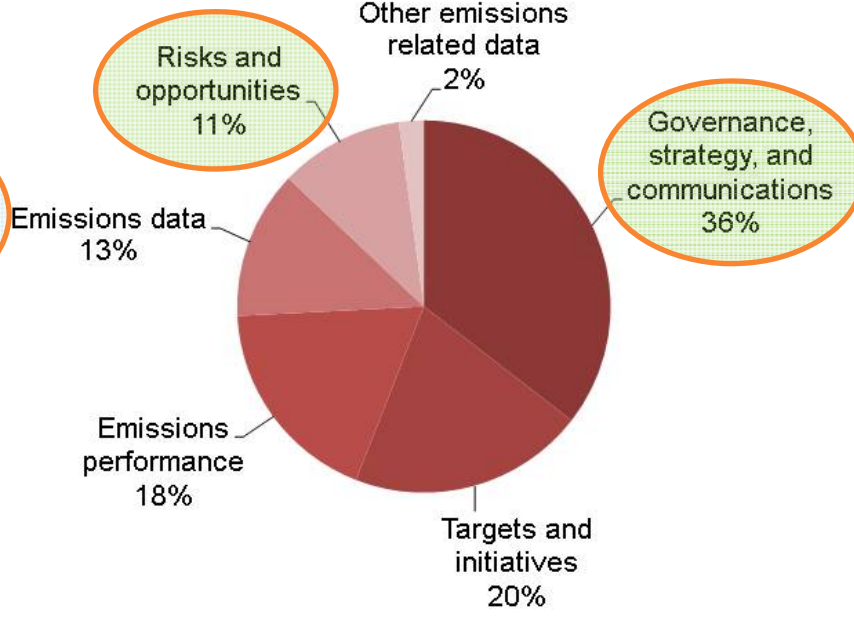
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## Zusammensetzung Disclosure Score



**43%**

## Zusammensetzung Performance Band



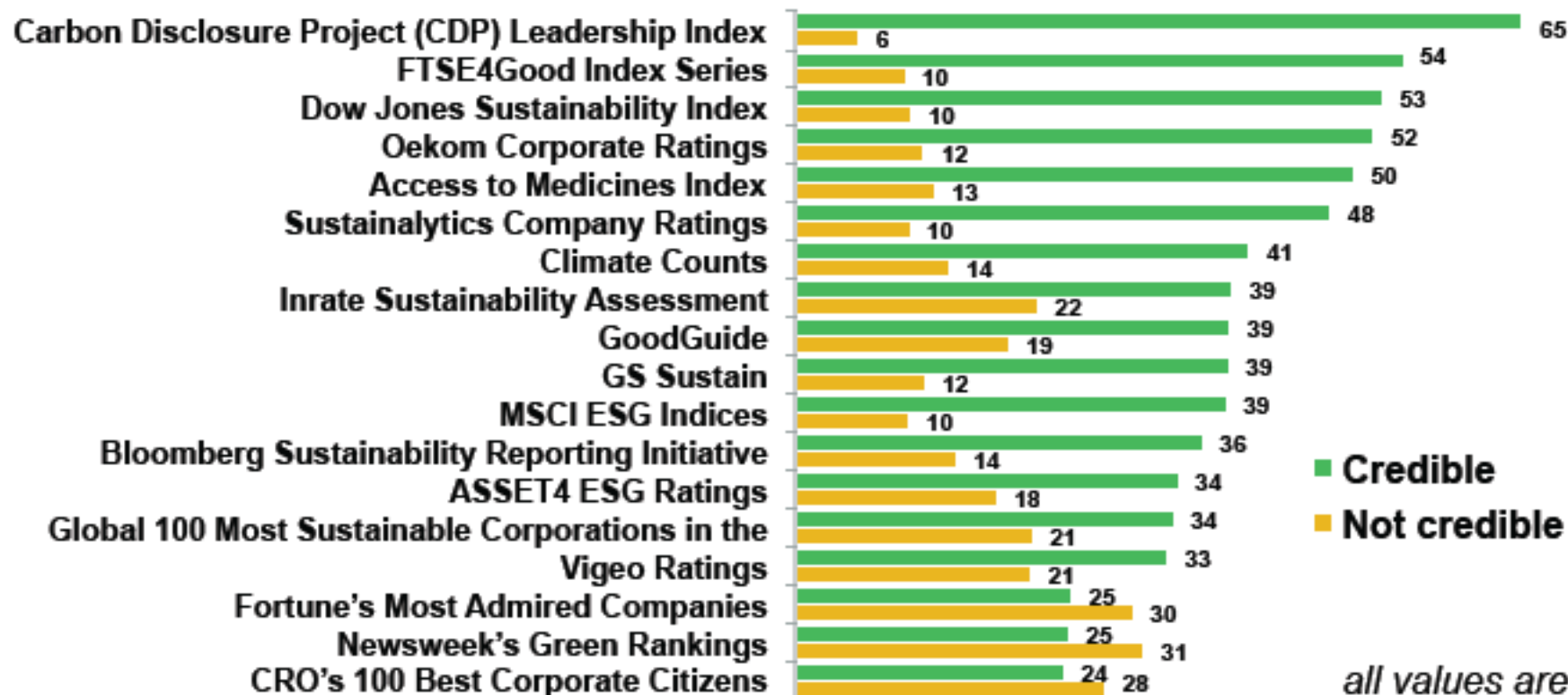
**21-47%**

# Rate the Raters 2012 Polling the Experts

A GlobeScan/SustainAbility Survey



## How credible do experts find particular ratings and rankings to be?



■ Credible  
■ Not credible

*all values are percentages*

Q. How credible do you find the following ratings and rankings to be? Please use the 5-point scale provided, where 1 is "not at all credible" and 5 is "very credible." Only respondents at least somewhat familiar with a rating were asked.

Allein unser **CDP Carbon Disclosure Score**

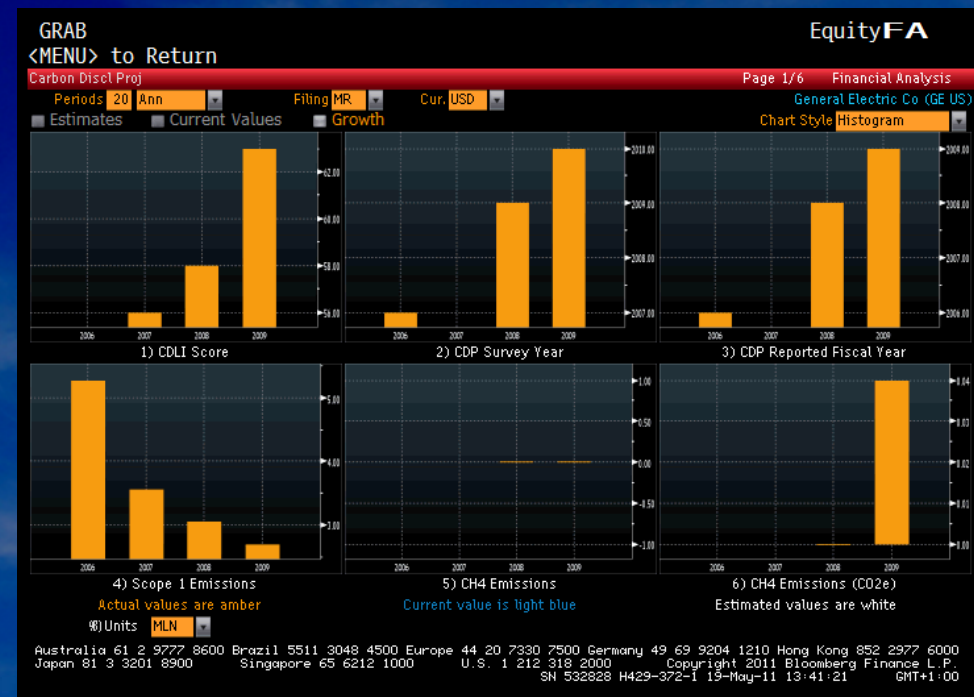
wird von Investoren  
via Bloomberg

**1,5 Millionen mal**

im Jahr abgerufen

(alle CDP Datenpunkte

**8,8 Millionen mal)**



... plus **öffentliche Verfügbarkeit:**

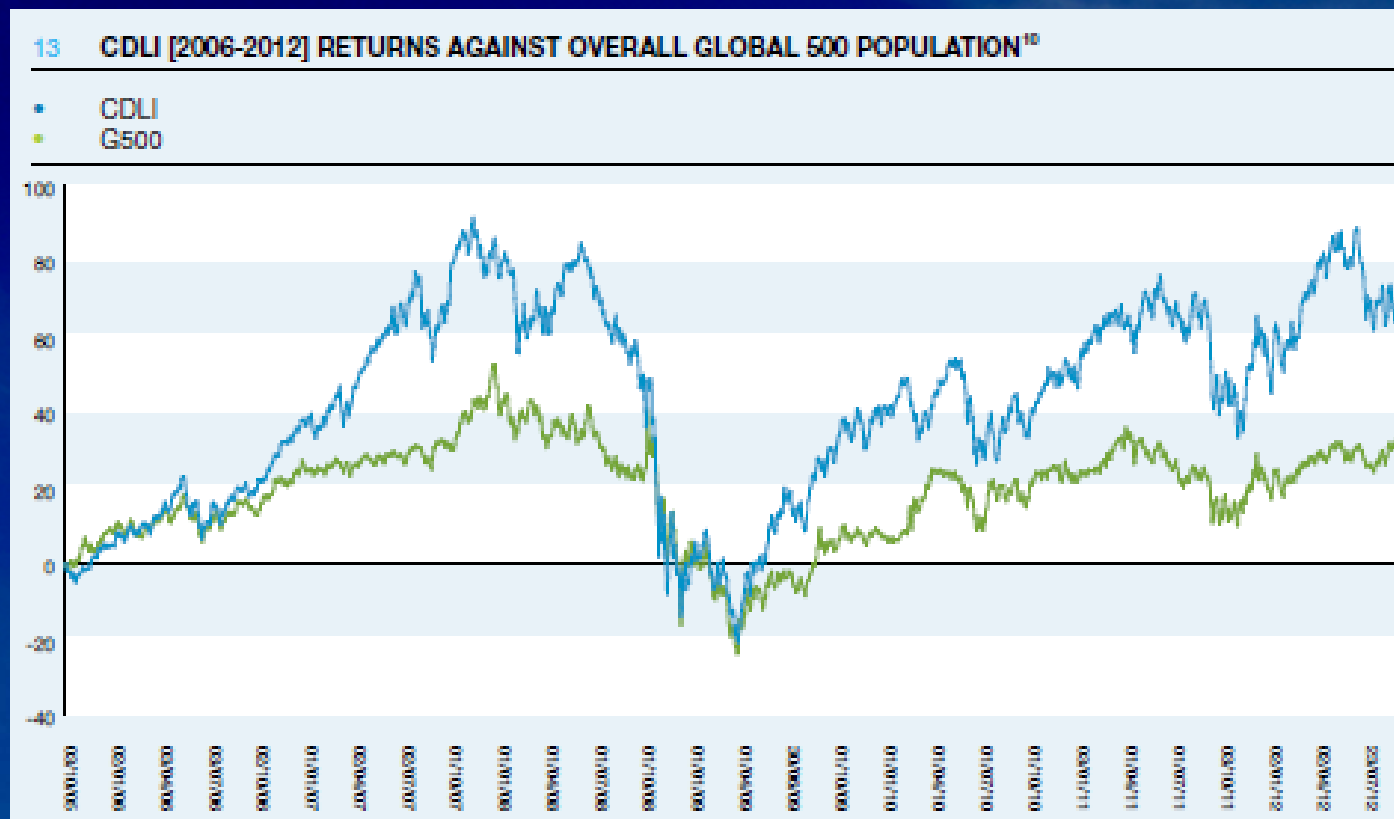


DEUTSCHE BÖRSE  
GROUP

# Business Case „Saving the Climate“

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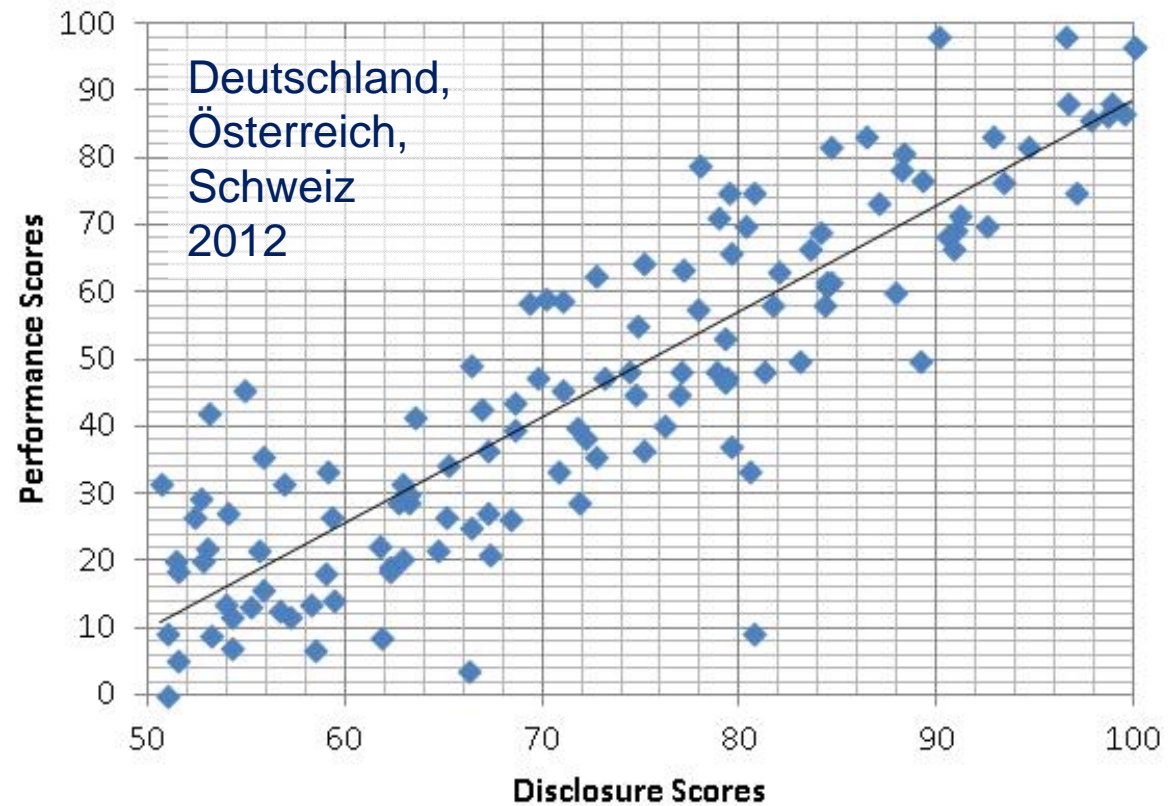
## Aktienkurs CDP Performance Leader versus FTSE Global 500 Index 10/ 2005 bis 10/ 2012



**+36%**  
seit  
Okt. 2005



**Klare  
Korrelation**  
zwischen dem  
**CDP  
Performance  
Band**  
und den  
**CDP  
Disclosure  
Scores**



# Treibhausgasemissionen 2010 versus Vorjahr

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## Deutschland

Insgesamt:

aus der Wirtschaft:

+4,3%

+4,8%

## Global

Insgesamt:

+6%

2 -Ziel erfordert:

-2,65%

## Deutschland

Insgesamt:

aus der Wirtschaft:

Deutsche CDP Teilnehmer:

## Global

Insgesamt:

Global 500 CDP Teilnehmer:

2 -Ziel erfordert:

