



# Symposium on 'Making Science Work for Sustainability'

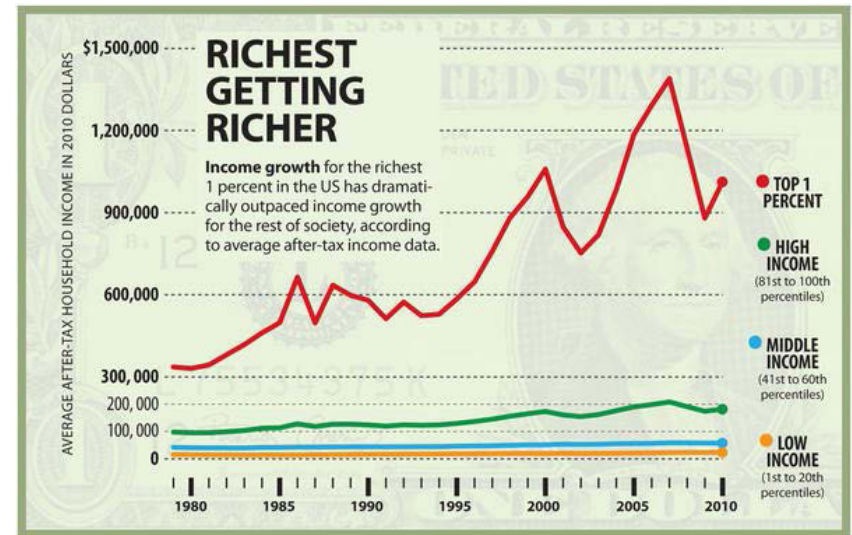
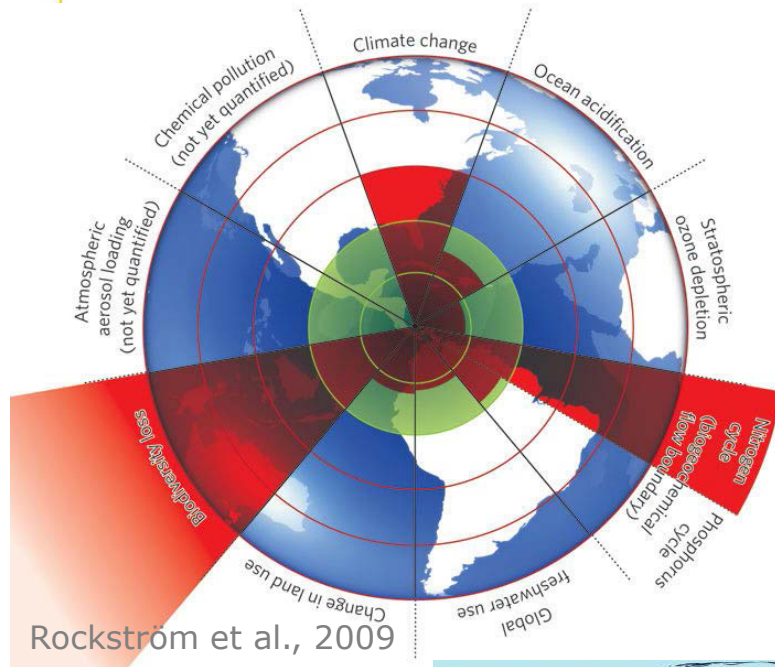
## Where are we now and what do we do next?

Paul Hohnen  
Sustainability Strategies  
Amsterdam

Academiegebouw,  
Utrecht  
Tuesday 13 January 2015



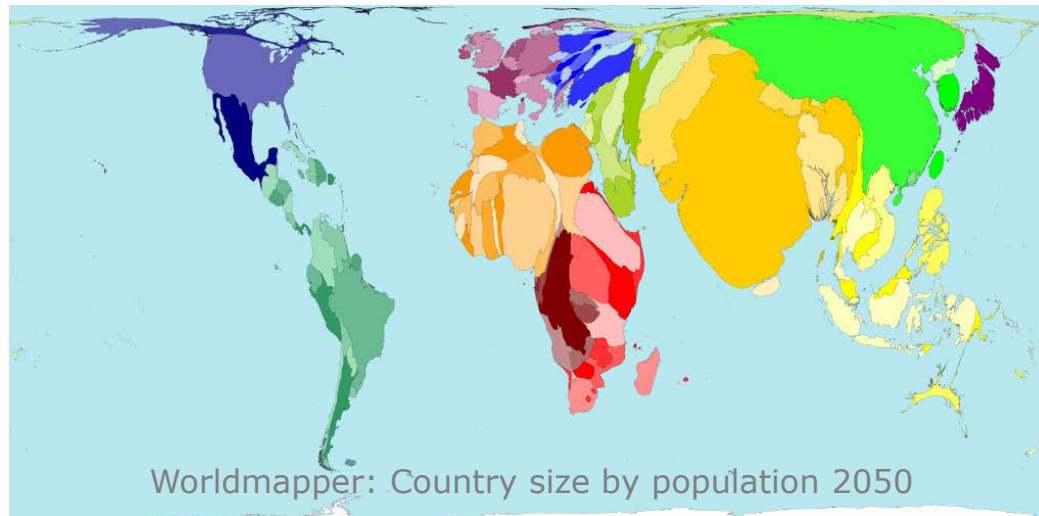
# Change



SOURCE: Congressional Budget Office

US Congressional Budget Office

RICH CLABAUGH/STAFF



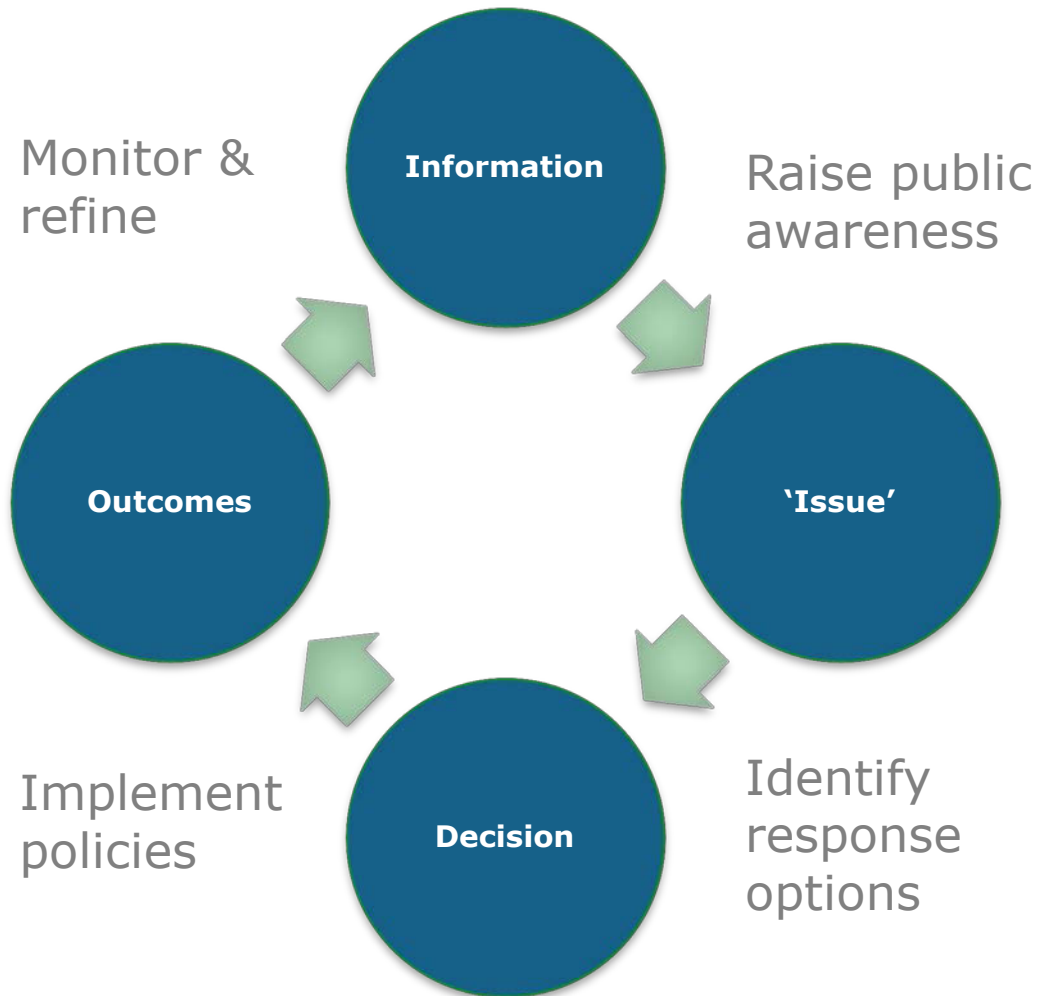
Worldmapper: Country size by population 2050



# The decision-making cycle

Science plays a  
crucial role in  
**all phases**

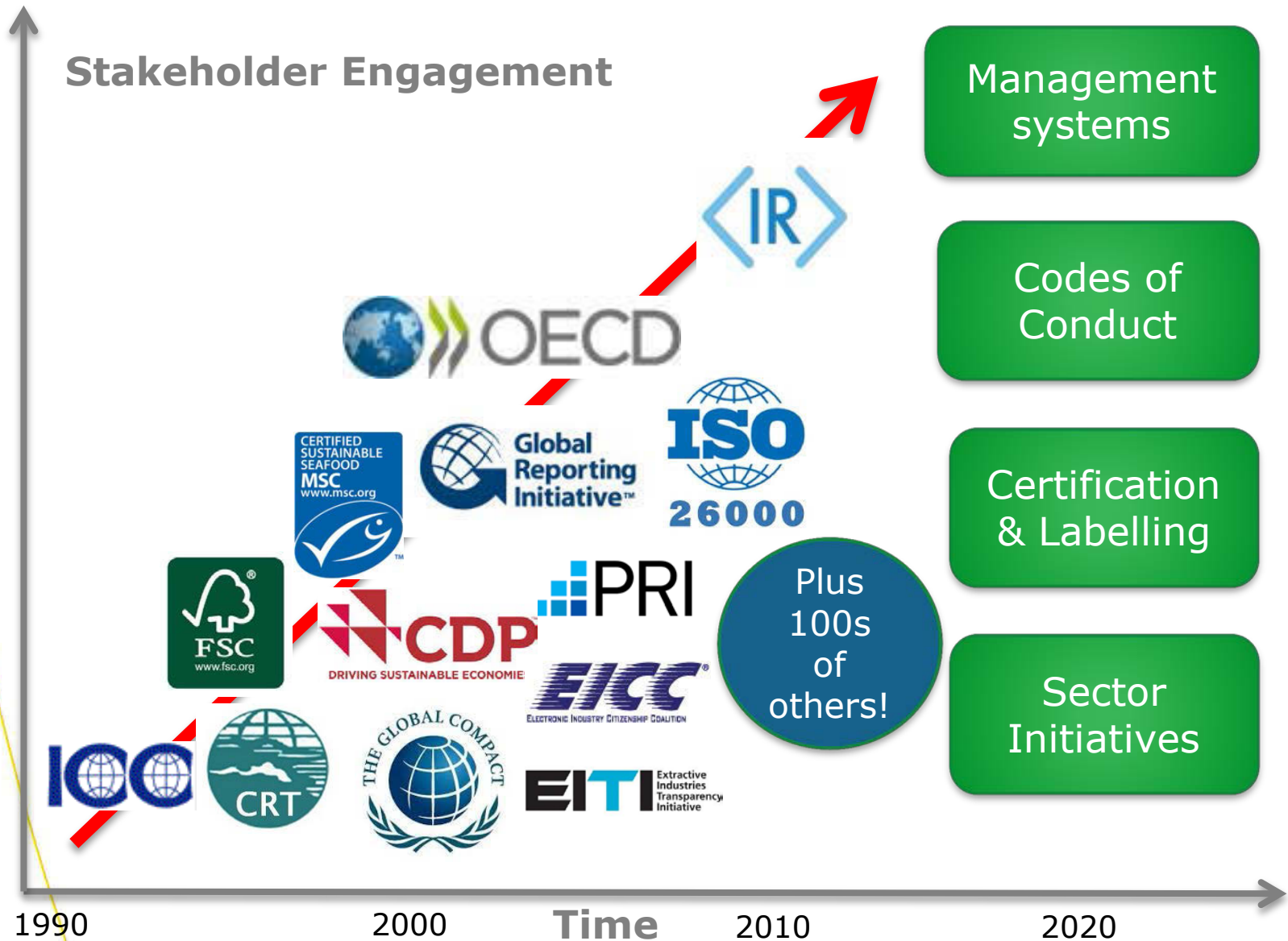
Earth sciences  
Technology  
Economics  
Social  
Business  
models, etc.





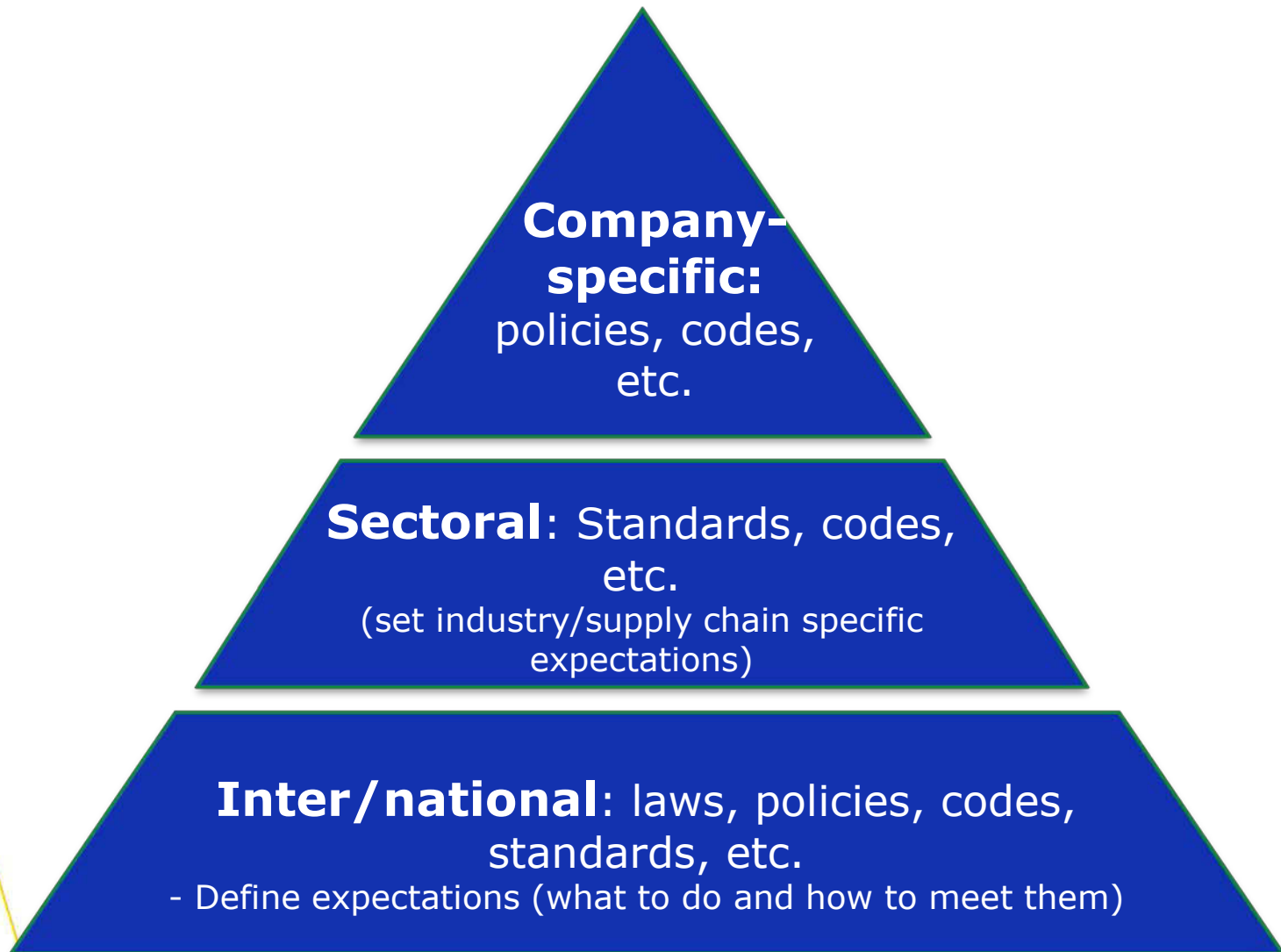


# Sustainability Management



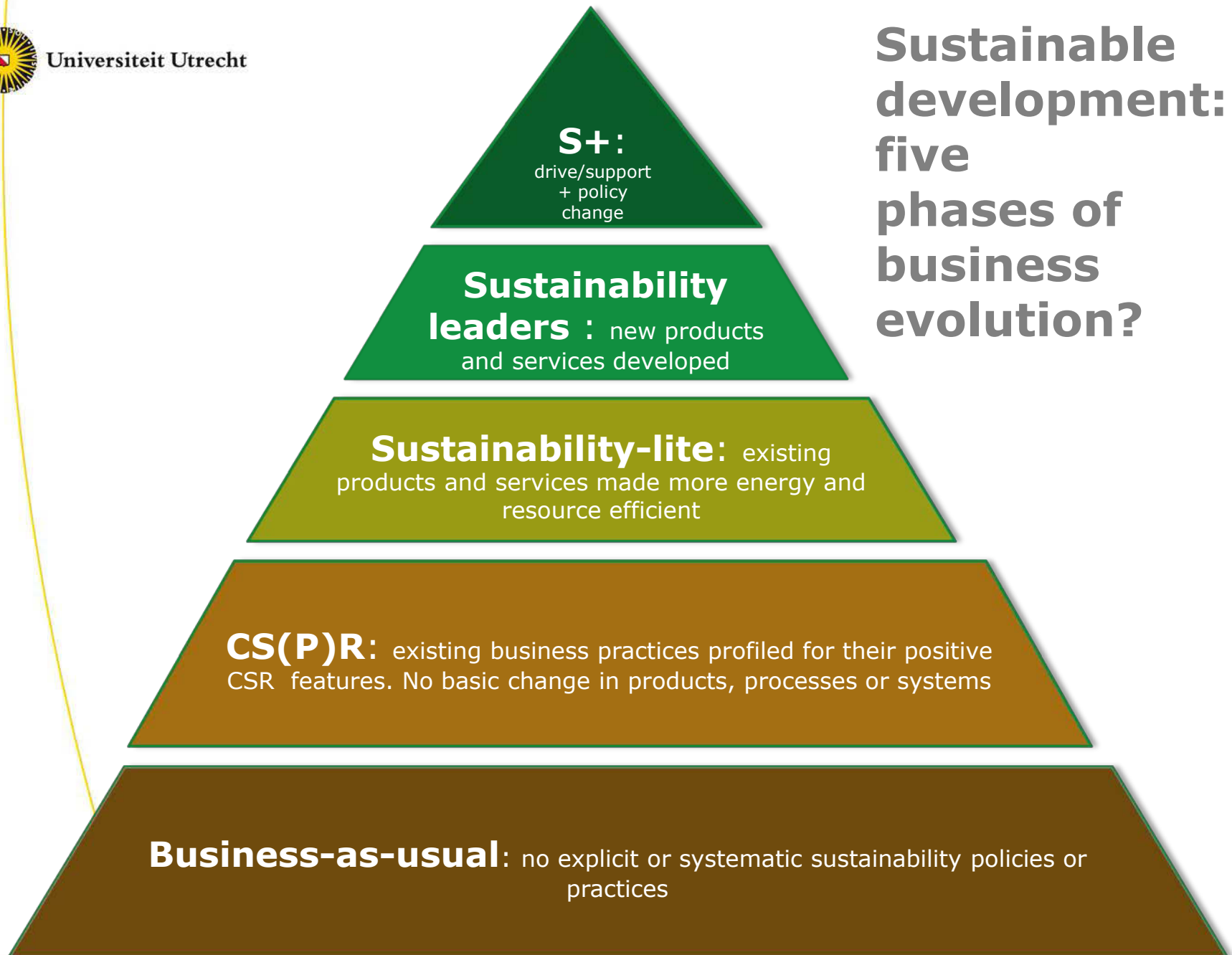


# An emerging architecture?





# Sustainable development: five phases of business evolution?



# Sustainable Development :

## The Challenge of Change

## The Opportunities of Innovation

- Increased demand for business models that respond to societal needs (e.g. 'shared value')
- Increased interest in tools (e.g. management systems) to: improve performance along entire supply chain; measure & communicate value; show superior governance; and strengthen stakeholder relations

### 4. Changing Business Model

- Increased regulatory/consumer pressures to reduce/eliminate activities that contribute to climate change, etc.
- Increased markets for more material & energy efficient products & services
- Increased need to protect/promote reputation
- opportunities to expand/develop business lines & grow markets

### 3. Changing Risks & Opportunities

### 1. Changing World

- Increasing world population
- More middle class, more live in mega-cities
- Increased demand for raw materials
- Increased damage & disruption to natural systems (incl. waste)
- Increased risks of health, economic and social impacts
- Increased scientific, government and media concern

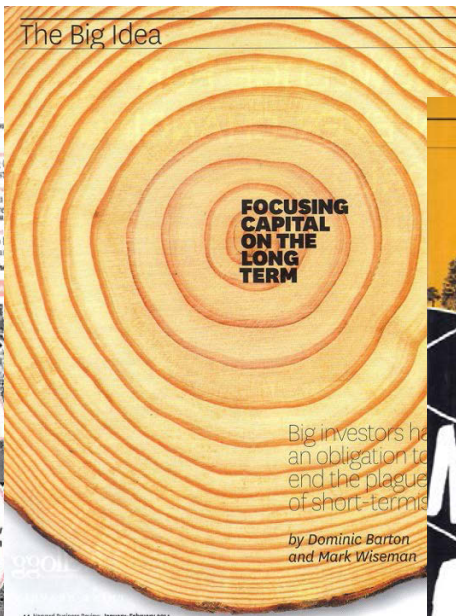
### 2. Changing Needs & Demands

- Increased demand to produce more
- Increased competition for resources
- Increased commodity price volatility
- Increased regulatory pressures
- Changing human behaviours
- Increased innovation
- Increased interest in information on sustainability performance & impacts





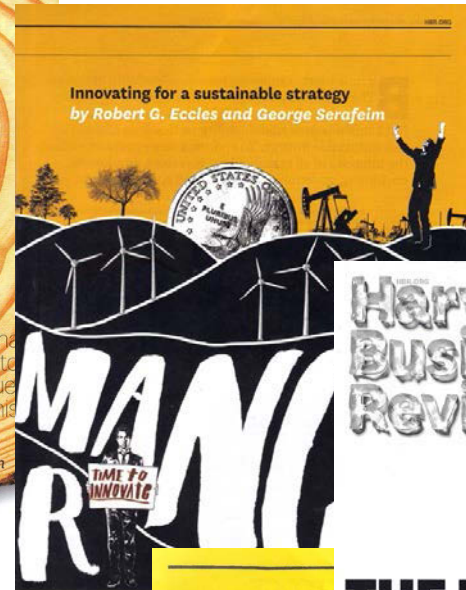
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# Harvard Business Review

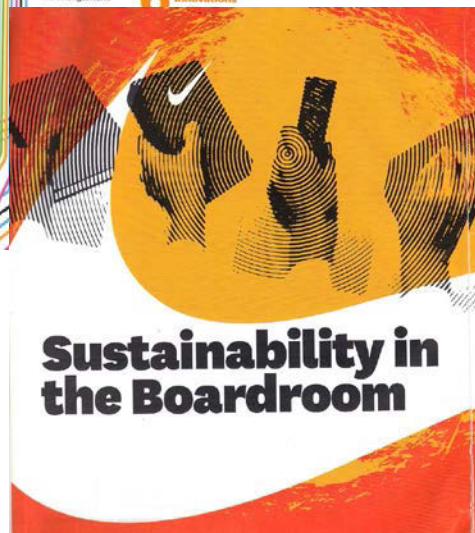
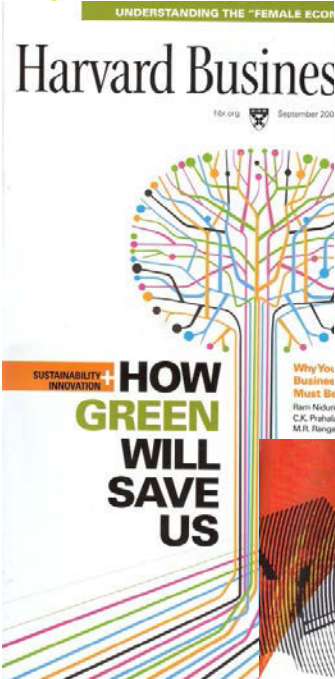


44 Harvard Business Review January-February 2011



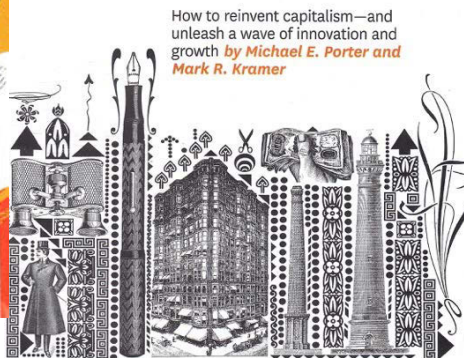
# Harvard Business Review

APRIL 2014  
19 How to Hire  
"Auditions" Are the  
Best Way to Hire  
Most Professionals  
133 Operations  
A Manufacturing  
Renaissance in Europe  
Raymond E. Chitt et al.  
137 Managing yourself  
15 Rules for Negotiating  
a Job Offer  
Dagmar Waldner



trust in business is causing political leaders  
**Business is caught in a vicious circle....**  
redefined around

# SHARED VALUE



January-February 2011 Harvard Business Review 63



# THE RESILIENT COMPANY

## HOW TO THRIVE IN A WARMER WORLD

PAGE 55

# Innovating for Shared Value

Companies that deliver both social benefit and business value rely on five mutually reinforcing elements.

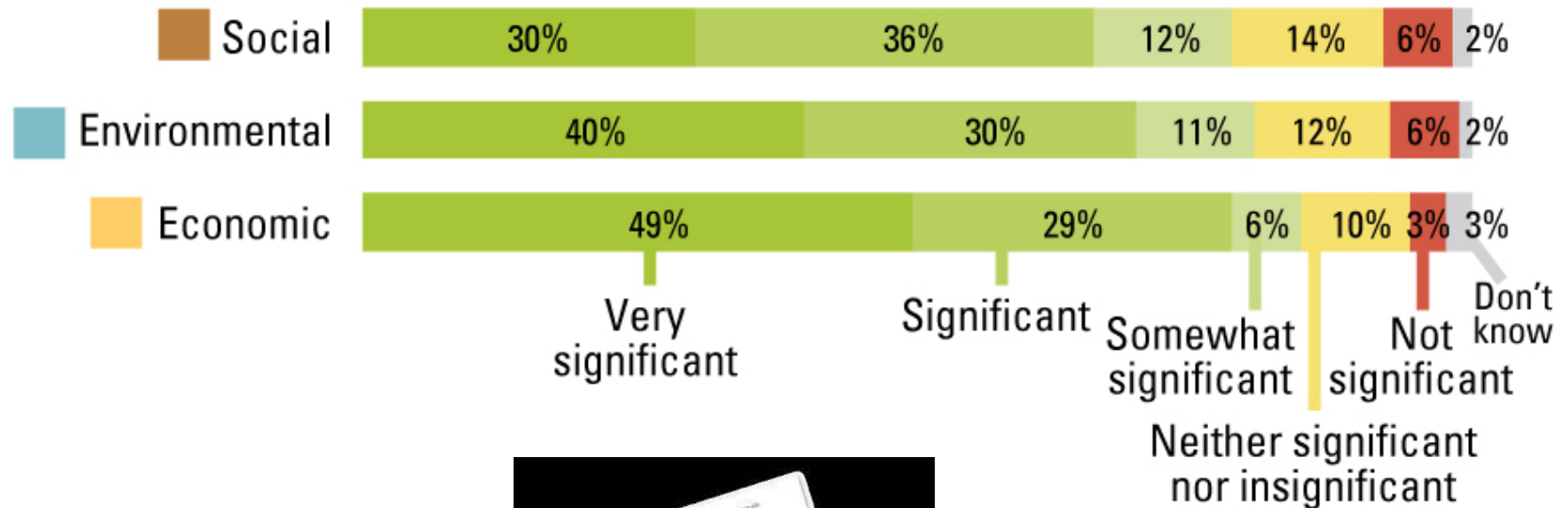
by Marc Pfitzer, Valerie Bockstette, and Mike Stamp





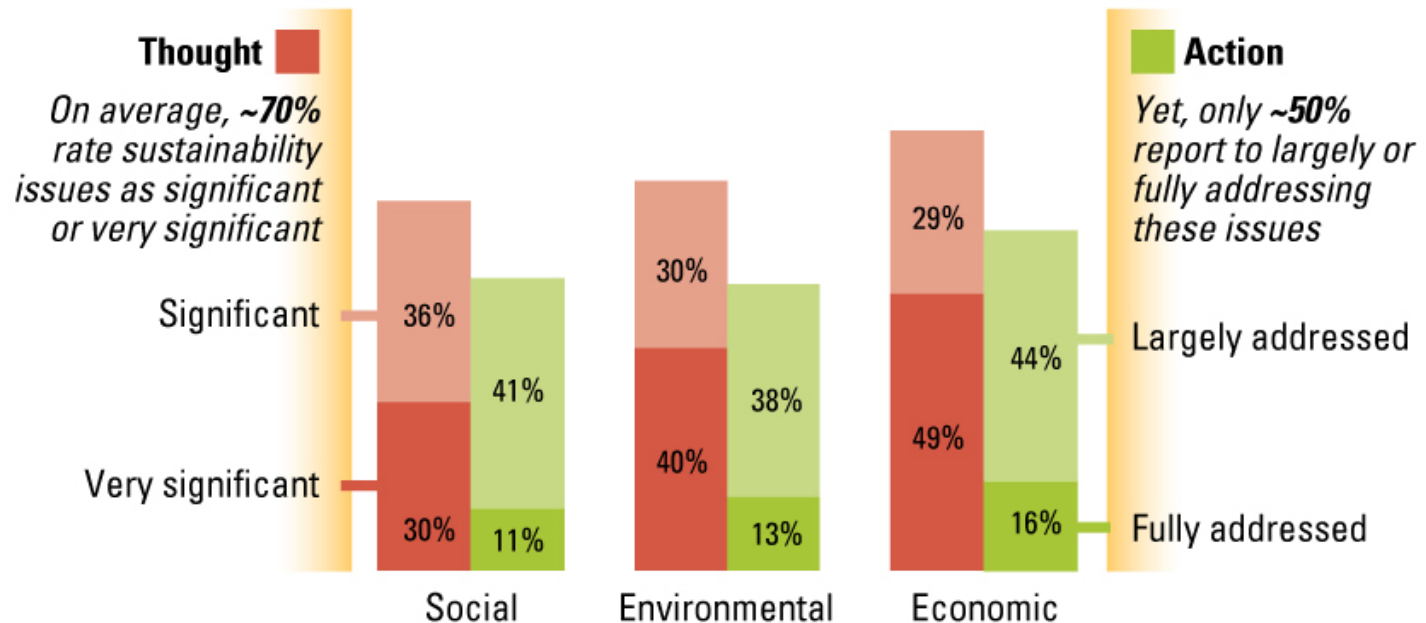
# The perceived significance of sustainability issues

*How significant are the following types of sustainability issues for your company?*





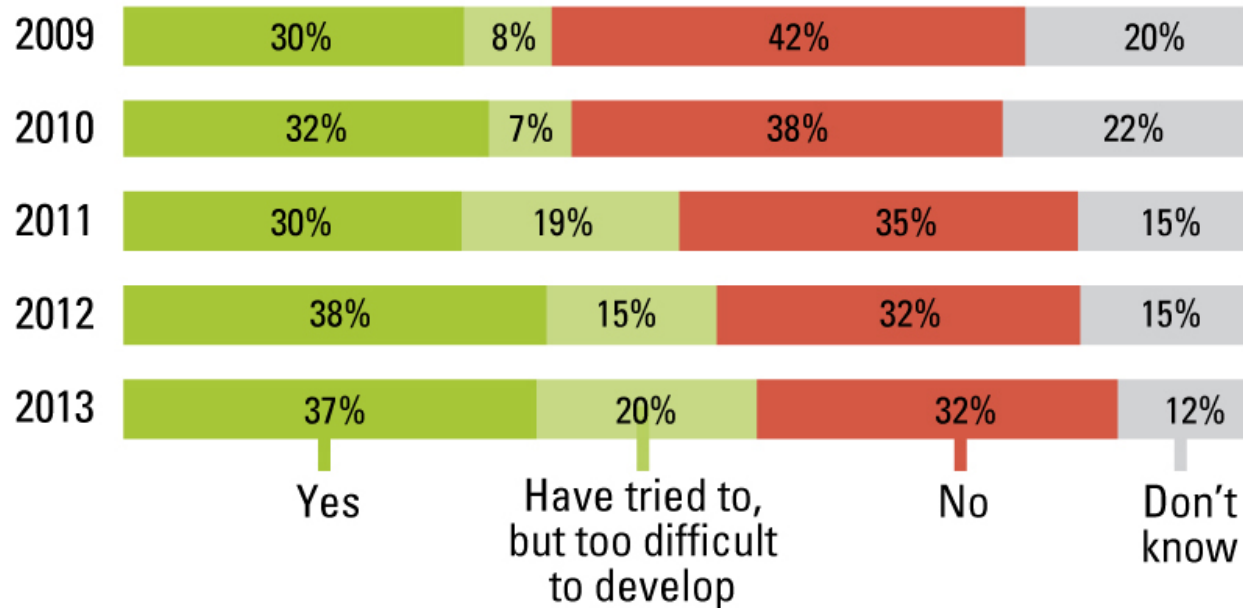
# The significance of sustainability issues are not matched by action.





# In search of the business case ...

*Overall, has your company developed a clear business case or proven value proposition for its approach to sustainability?*







# Disclosure

In 2012, all the world's governments agreed on a global plan for tackling sustainable development. In paragraph 47 of 'The Future We Want' – they agreed the following:

**'We acknowledge the importance of corporate sustainability reporting, and encourage companies, where appropriate, especially publicly listed and large companies, to consider integrating sustainability information into their reporting cycle.** We encourage industry, interested governments and relevant stakeholders, with the support of the United Nations system, as appropriate, to develop models for best practice and facilitate action for the integration of sustainability reporting, taking into account experiences from already existing frameworks and paying particular attention to the needs of developing countries, including for capacity- building.'

The EU and a number of other countries and stock exchanges already require such reporting.



# An end to systemic blindness?

Greenhouse gas emissions Guardian Environment Network

## Mark Carney: most fossil fuel reserves can't be burned

Bank of England governor lends his support to 'carbon bubble' theory that coal, gas and oil assets are at risk, [reports BusinessGreen](#)



Bank of England governor Mark Carney: 'vast majority of reserves are unburnable' Photograph: Lynne Cameron/PA

7 January 2015 Last updated at 18:00 GMT



## Most fossil fuels 'unburnable' under 2C climate target

By Helen Briggs  
Environment correspondent, BBC News



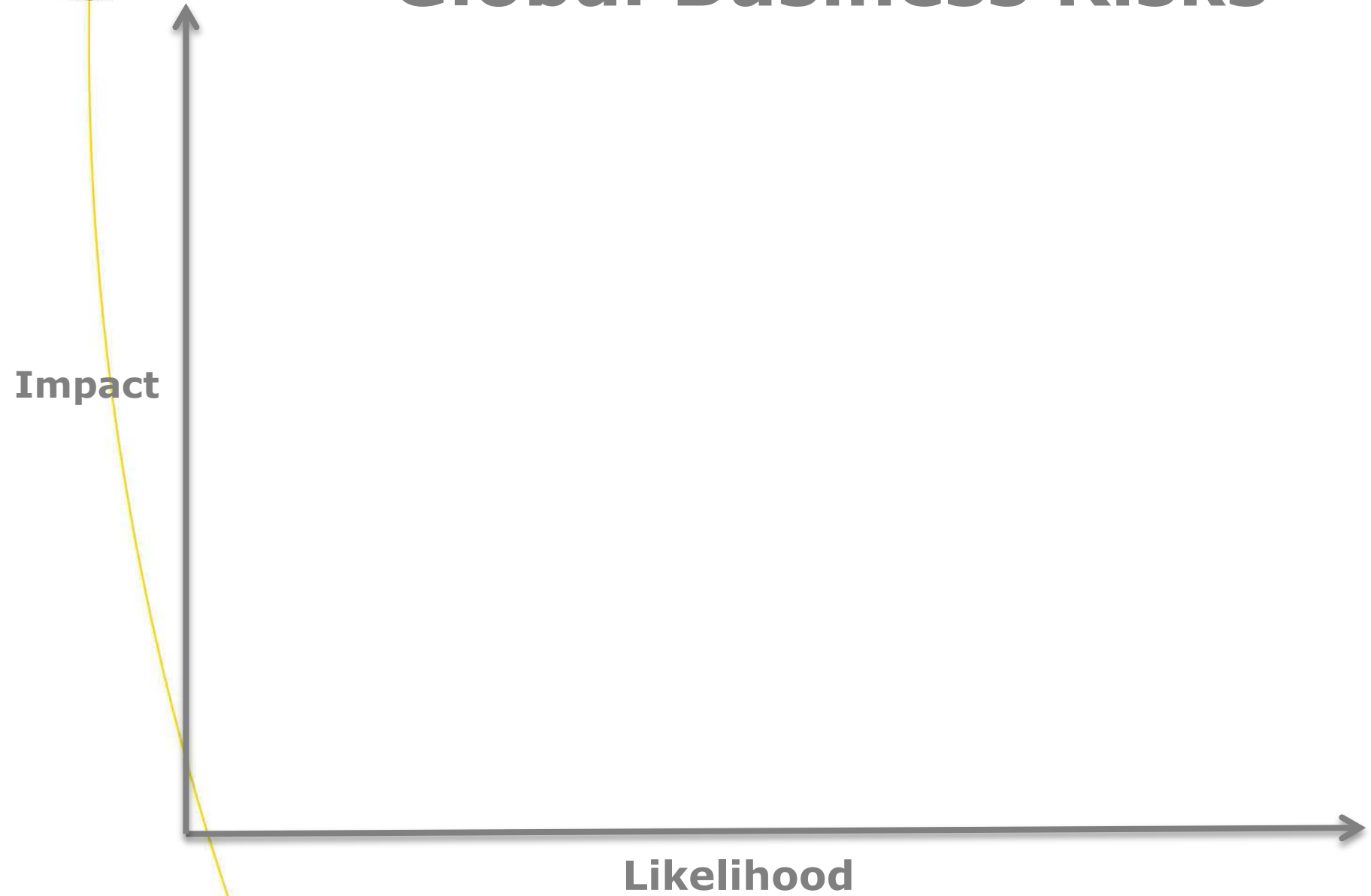
The report raises huge dilemmas for countries seeking to exploit their natural resources

Carney issued a stark warning over the lack of long-term thinking by governments and businesses, warning that a so-called “tragedy of horizons” could lead to market failure. (September 2014)



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# Global Business Risks



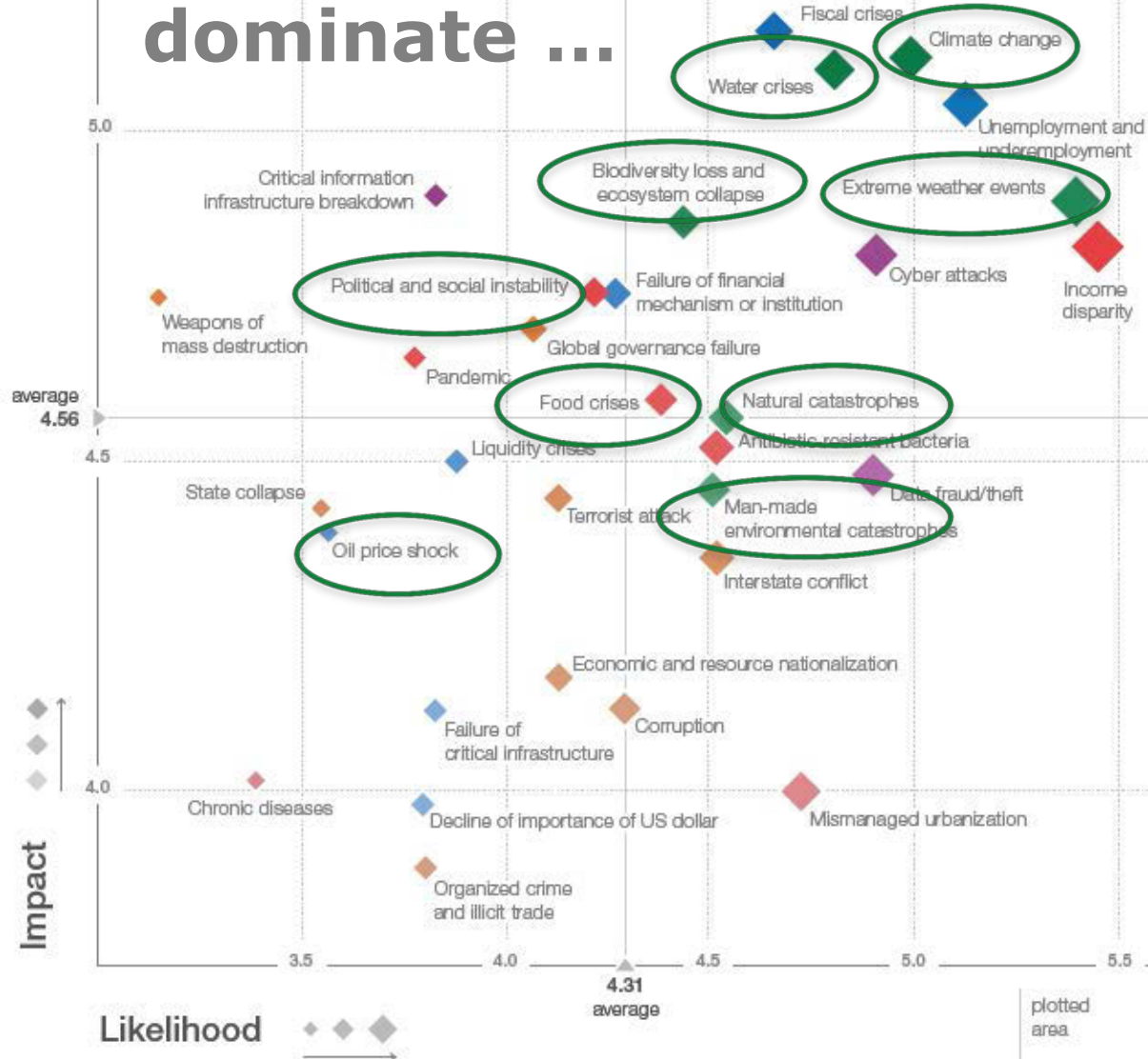
**Impact**

**Likelihood**



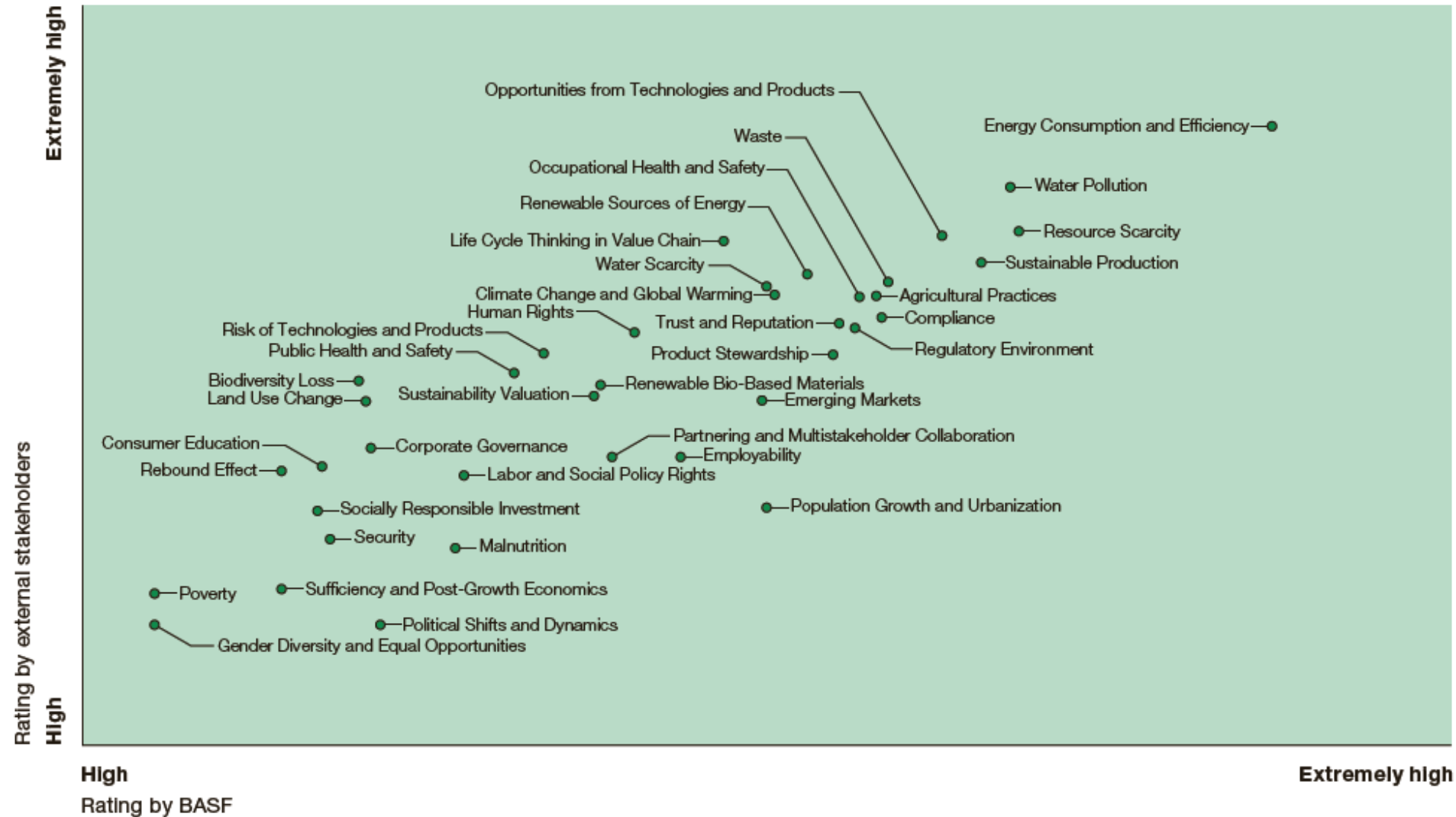


# Sustainability issues dominate ...



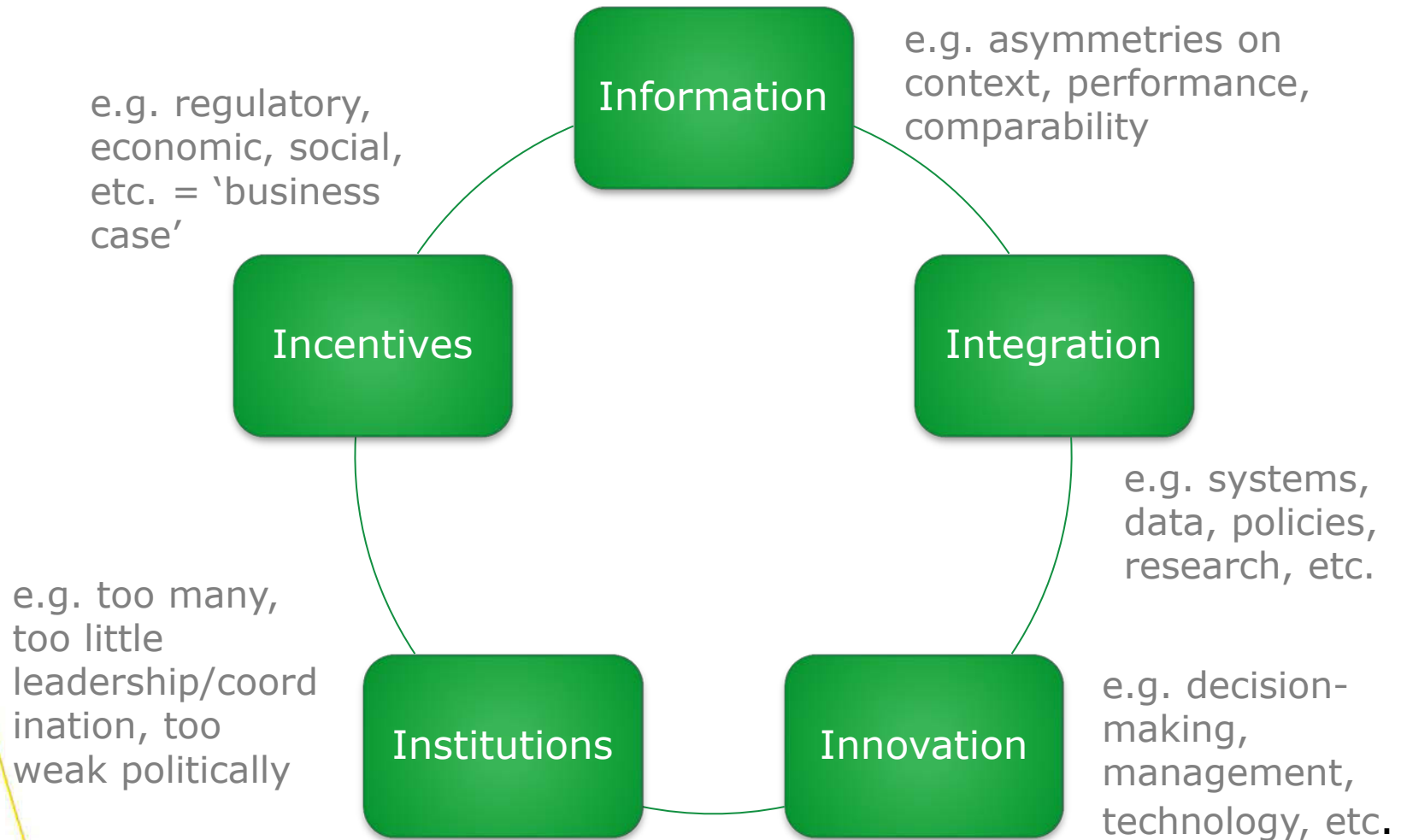


# Materiality Matrix: BASF Sustainability Report 2013





# Sustainability management & governance gaps







# Sustainability Management & Governance: SWOT

## Strengths

- Mature set of sustainability tools ready to take to scale
- Clear intergovernmental policy commitment
  - Significant corporate experience
- Broad-based stakeholder interest

## Weaknesses

- Regulations don't provide necessary incentives, rates of change, etc.
  - Limited governmental/corporate leadership
- Inconsistent transparency & accountability
  - Time short

## Opportunities

- Global change the 'mother of all drivers'
- Increased investor interest
  - Rapidly evolving technology
  - New players (states, companies)

## Threats

- Short-term distractions take policy priority
- Inertia of current economic model
- Limited capacity/will of governments to exercise leadership (e.g. regulatory capture)



# Stakeholders: how they can help more ...

