

Mainstreaming Green Chemistry Webinar Series

CEO Perspectives on Sustainability: What this Means for Green Chemistry

January 6, 2015



What is the GC3?

- Cross-sectoral, B2B network of over 70 companies and other organizations
- Formed in 2005
- Collaboratively advances green chemistry across sectors and supply chains



Today's Speaker

DONALD REED



**Managing Director, PwC
Sustainable Business Solutions**



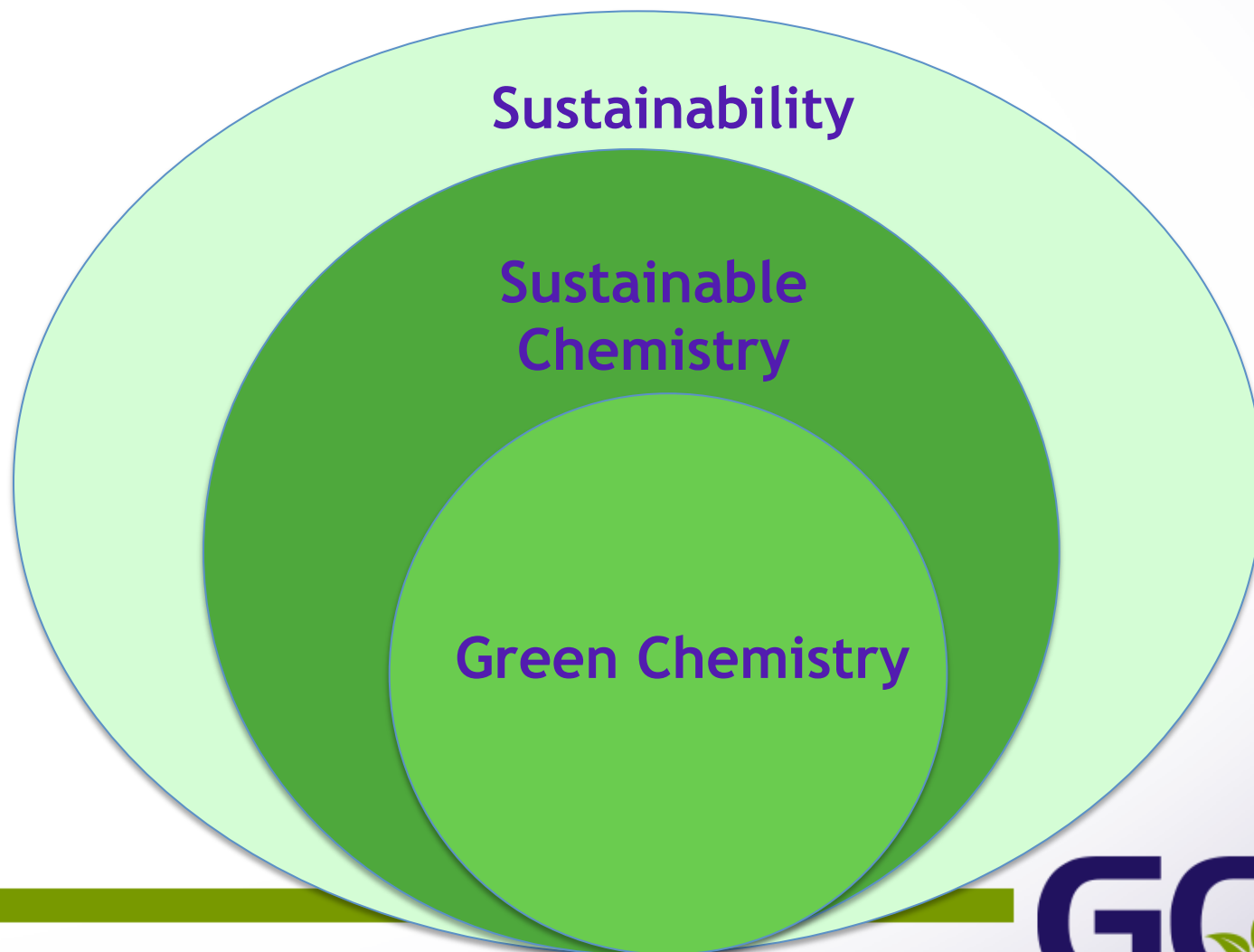
Mainstreaming Green Chemistry

when all chemistry

=

green chemistry

What is Green Chemistry?



Mainstreaming Green Chemistry

Project Overarching Questions:

- What can be done to make all chemistry green chemistry?
- What are the current barriers and drivers?
- What partnerships will have to be built, policies put in place, educational needs met, and investments made?
- How are the challenges of mainstreaming green chemistry different from or similar to challenges in other industries, and what can we learn from those examples?

Mainstreaming GC Project

Member survey on drivers, barriers, needs

+

Input from Advisory Committee

+

Discussions at Roundtable

+

Interviews with thought-leaders

+

Articles



AGENDA FOR MAINSTREAMING GREEN CHEMISTRY



Ground Rules

- Due to the number of participants in the webinar, all lines will be muted
- If you have a question or comment, please type in the Q&A box located in the drop-down control panel at the top of the screen
- Questions will be answered at the end of the presentation

www.pwc.com/sustainability

DRAFT: CEOs views on Sustainability

What this Means for Green Chemistry

January 2015

pwc

Big picture

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Megatrends are creating sustainability risks and opportunities for businesses

Megatrends . . .

Resource scarcity, climate change, technology innovation, and urbanization are rapidly changing the economic, social and environmental context for business

. . . create material financial risks and opportunities for our clients. . .

Many of our clients are experiencing material financial consequences from these trends today

. . . along with far higher expectations from stakeholders.

In this rapidly shifting context, investors and other stakeholders now expect economic value creation AND exceptional environmental and societal performance

We help clients prepare for and take advantage of megatrends . . .

- Innovation & growth
- Improved efficiency & return on investment
- Greater risk resilience
- Higher quality decision making

. . . with offerings that deliver sustainable long-term growth.

Sustainability comes from building economic, social and environmental considerations into strategy through execution

Chemical industry trends

The increase in low cost shale gas production may be a boon to US players, as costs shift downward compared to other regions, leading to a competitive advantage over many offshore competitors

Energy and feedstock prices

Because of the high energy content in many chemicals, increased energy prices can greatly impact production costs. For many producers, energy can account for 30% or more of total costs. The increase in low cost shale gas production may be a boon to US players, as costs shift downward compared to other regions. An analysis of the relationship between natural gas prices and gross margins shows a strong negative correlation across the board for chemical players.

US more attractive as investment destination

Direct investments by US companies in offshore facilities continue to decelerate, as companies seek opportunities for growth in the US. At the same time, offshore firms are investing heavily in the US, seeking to tap into lower cost energy resources and a well educated workforce. This trend is expected to continue, at least in the near term, as the Eurozone continues to grapple with recession and emerging economies see declining growth.

Mergers and acquisitions

In the fourth quarter of 2013, chemical deal volume and value rebounded, and advanced to its highest level of the year. While PwC expects to see volumes remain close to the 10-year average in 2014, deal values are likely to remain lower than usual, given that acquirers appear to be more risk averse, and will probably be less likely to engage in the larger, more transformative deals.

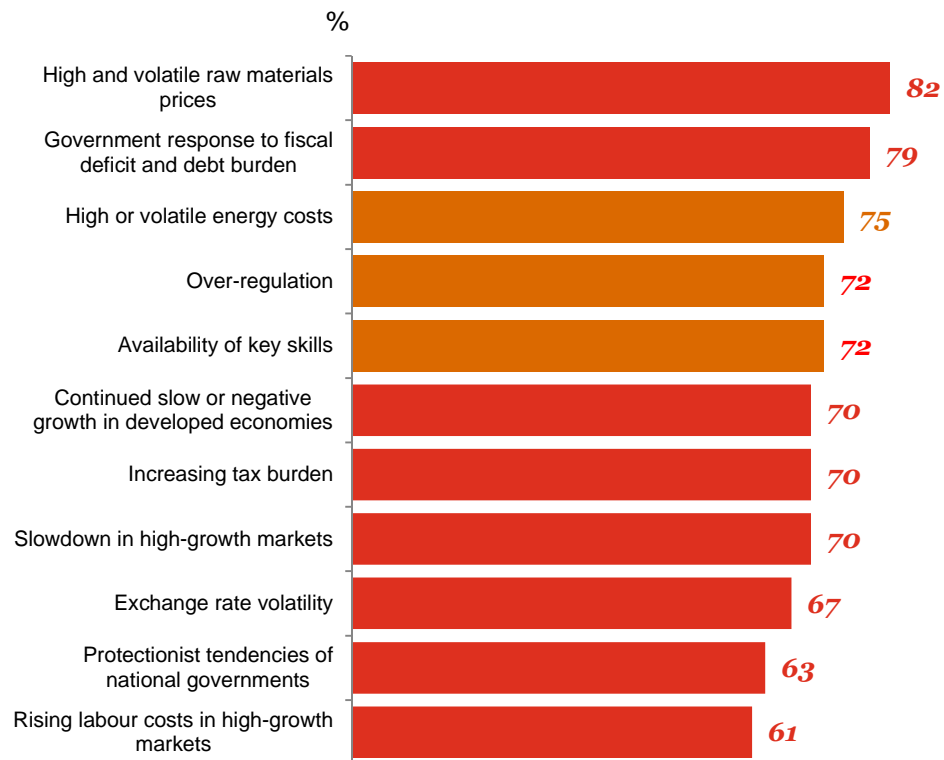
Chemical industry summary

Chemicals CEOs are optimistic about future prospects, despite worries about energy costs, raw materials prices, and skills shortages. They're looking to technological advances, climate change and resource scarcity to transform their business over the next five years. To adapt, they're already changing supply chains, production capacity and R&D and innovation capacity.

Key findings: chemical industry CEOs

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Chemicals CEOs are concerned about a wide range of issues



- 75% of chemicals CEOs worry about high and volatile energy costs. Across the sample, just 55% are concerned.
- 72% of chemicals CEOs are more concerned about over-regulation this year, far more than last year when just 57% of chemicals CEOs were concerned.
- Concern about the availability of key skills has jumped sharply too. It's up 20 percentage points vs. last year.

Q: How concerned are you, if at all, about each of the following threats to your growth prospects? Top choices listed

Base: All respondents (Total sample, 1344; Chemicals, 57)

Note: Respondents who stated 'extremely' or 'somewhat' concerned.

17th Annual Global CEO Survey – Key findings in the chemicals industry

Concerns around raw materials prices stand out

- **82% of chemicals CEOs** worry about high and volatile raw materials prices. Across all CEOs, **just 55%** are concerned.
- That reflects the high proportion of costs bound up in chemical feedstocks.
- Many chemicals producers are reacting by looking to regions where feedstock costs are anticipated to be lower – particularly the US.

Percentage of
chemicals CEOs who
worry about raw
materials prices

82%

Chemicals CEOs are looking most to the US for growth

Looking to the US for growth

Nearly half of chemicals CEOs rank the US as one of the most important countries for their overall growth prospects. That's more than across the overall sample (30%).

Chemicals CEOs who rate the US as a top growth market over the next 12 months

44%

North America as a continent stands out

Compared to the overall sample, more chemicals CEOs are planning deals in North America, compared to the overall sample (30%). That probably reflects the shift towards shale gas in the US.

Chemicals CEOs expecting an M&A, JV or strategic alliance who are looking to North America

41%

China still strong, but other countries are important too

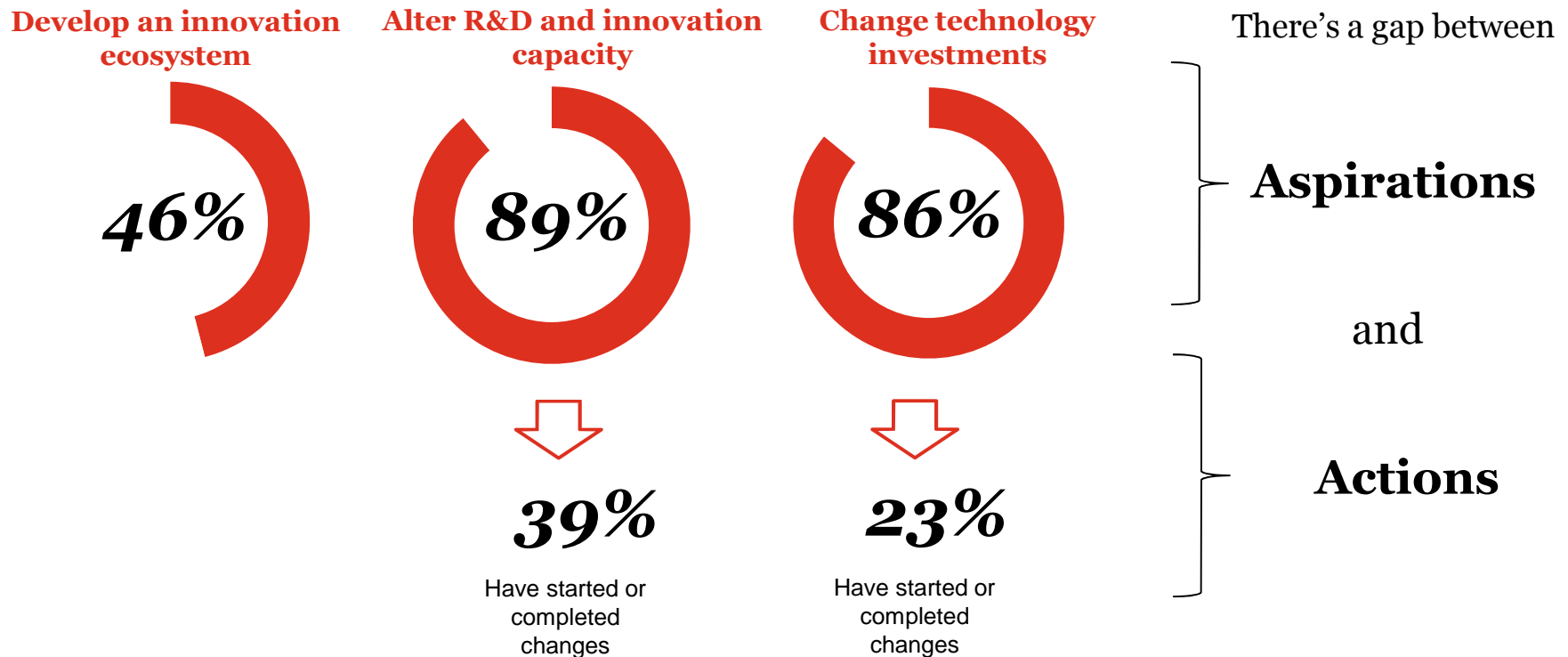
China's #2 on the list of growth markets for the next 12 months. But when looking beyond the BRICS out over three years, other countries like Indonesia, Germany and Turkey are important too.

Chemicals CEOs who ranked Indonesia as an important 3-5 year growth market for their sector

26%

Innovation and technology investments are a focus area

Most chemicals CEOs want to improve their company's ability to innovate. More have already gotten started with innovation. But there's a ways to go.



Q: Which, if any, of these national outcomes is your organization focusing on as a priority over the next three years? To what extent are you currently making changes, if any, in the following areas? (two listed)

Base: All respondents (Chemicals, 57). Aspiration answers include: recognise need to change, developing a strategy to change, have concrete plans to implement change programmes, and change plan underway or completed. 'No need to change' answers not shown.

Source: PwC 17th Annual Global CEO Survey 2014

CEOs on Sustainability

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Climate change and resource scarcity are still high on the agenda

- Concerns about climate change and resource scarcity reflect both chemicals CEOs' concerns about raw material prices and the sector's strong commitment to tackling CO₂ reduction.
- In other research we've found that many chemicals companies are innovating to help their customers improve their environmental footprints.

Many chemical CEOs believe that resource scarcity and climate change will transform their business

61%

Key findings – headline statistics

1,344 CEOs in **68 countries**

46% CEOs agree **resource scarcity and climate change** megatrend will transform their business

80% CEOs believe it's important to **measure** and try to **reduce their environmental footprint**

60% CEOs put **demographic shifts** in their top three megatrends that will transform their business

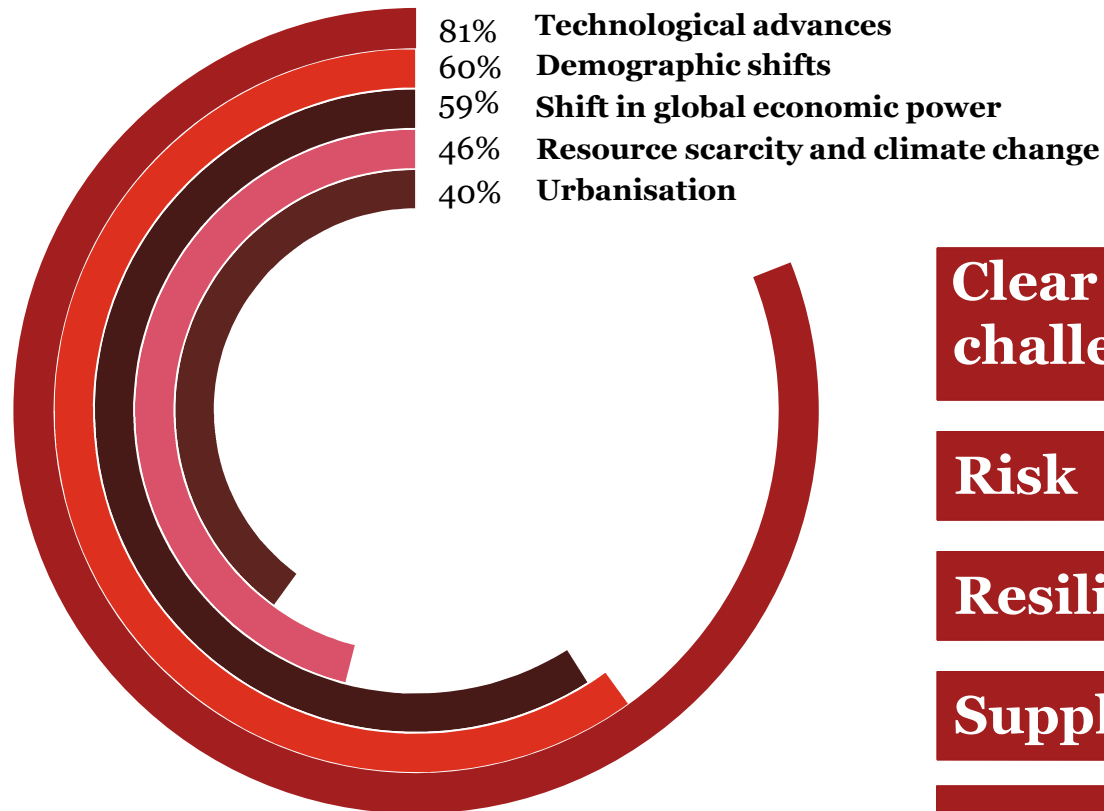
40% CEOs ranked **urbanisation** in their top three global trends transforming business

74% CEOs told us **that measuring and reporting their total (non-financial) impacts** contributes to their long term success

Only 5% CEOs say **sustainability and climate change** will be the next big thing to impact business

Global trends set to transform business

CEOs put these trends in their top three that will transform their business in the next 5 years



Clear sustainability challenges around

Risk

People

Resilience

Reputation

Supply

Strategy

Trust

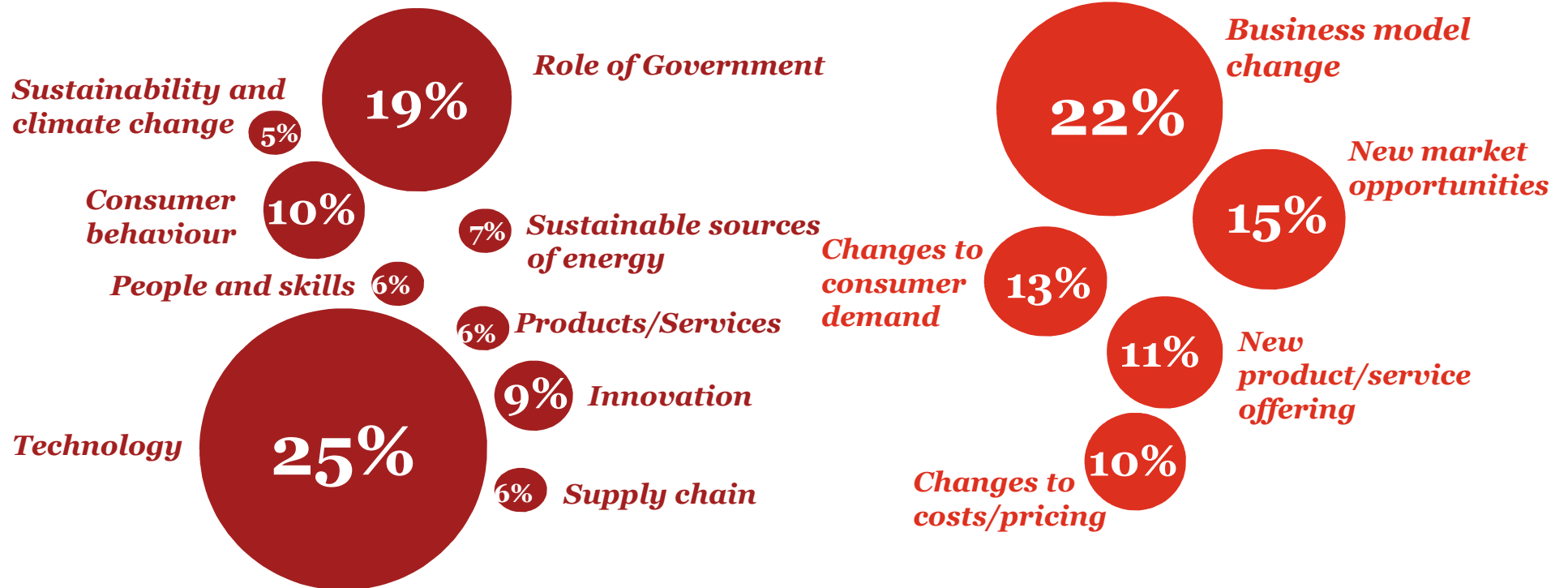
Base: All respondents (1,344)

Creating value in totally new ways

The 'next big thing' according to global CEOs

What's the next big thing you think will impact your business, industry and society over the next 10 years?

Why do you think it will do so?



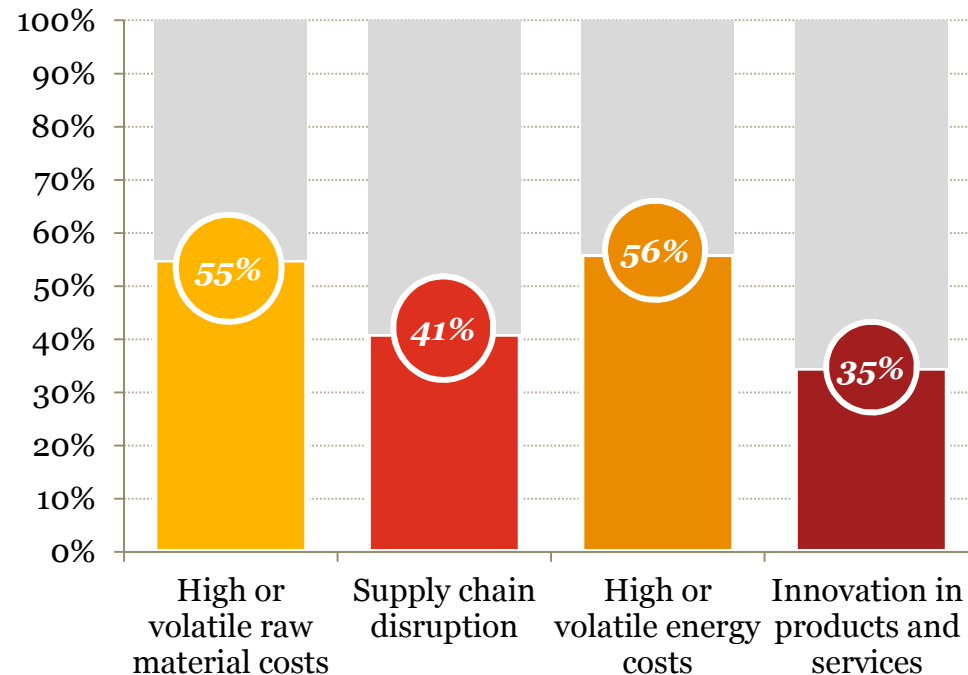
Client challenges and key messages

Scarce resources and unpredictable extreme weather are impacting business



CEOs agree **climate change and resource scarcity** will transform their business in the next 5 years

CEOs have sustainability issues on their agenda ... and many see innovation as a solution



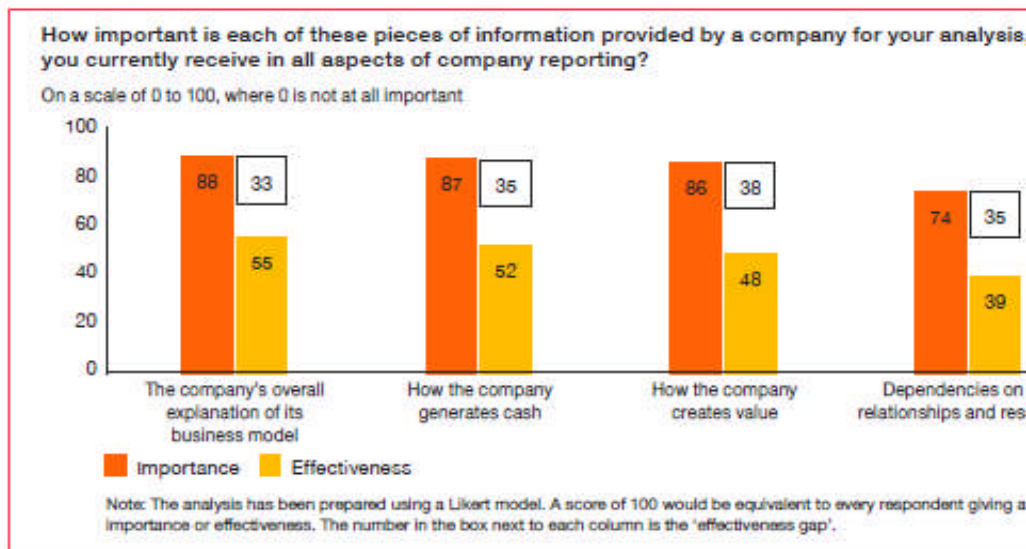
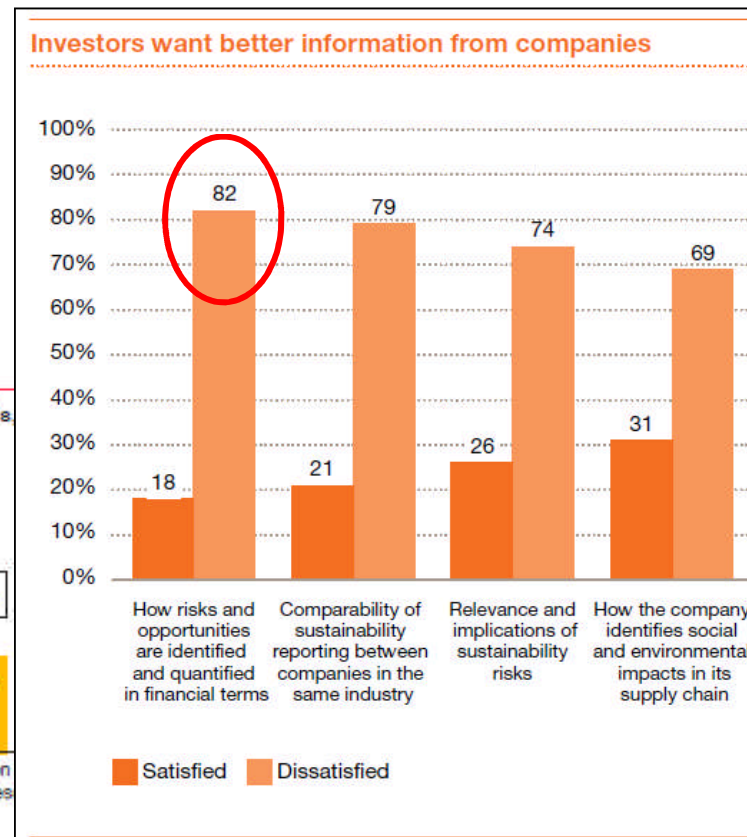
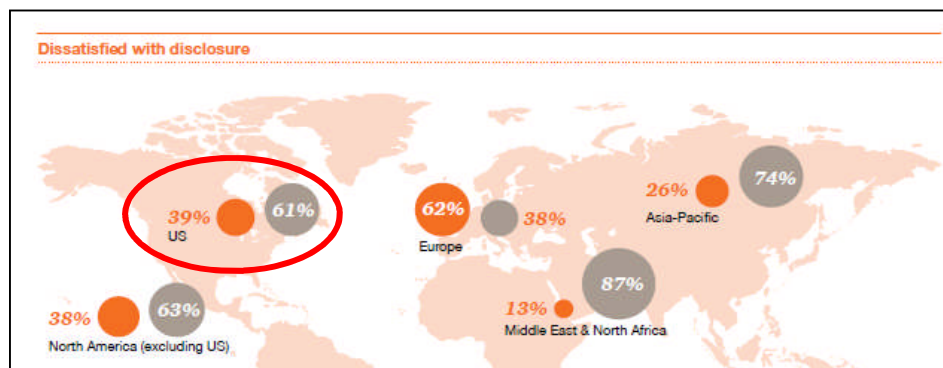
To reduce or remove the risk, businesses must

- build resilience into their supply chain through innovative new products and more efficient use of resources
- collaborate and build stronger relationships with their suppliers.

Connecting to CEO agenda

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Investors are integrating sustainability into decisions, *BUT* there are big gaps



Connecting green chemistry to CEO agenda

Putting green chemistry “on the agenda” vs. how it affects what’s already on the agenda

What strategies to advance green chemistry with executives have been most effective for my organization?

- A. It’s already firmly a priority of executive leadership
- B. Connecting to innovation agenda
- C. Connecting to voice of the customer and/or end user
- D. Connecting to investor comments or actions
- E. Something else (be prepared to discuss)

Business success beyond the short term

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Upcoming Events

GC3 Retailer & Education Webinar

Training and Incentivizing Merchants to Purchase Sustainable Products - Three Perspectives

Wednesday, February 6, 2015 | 12:00 p.m. EST

10th Annual GC3 Innovators Roundtable

April 28-30, 2015 | NIKE World HQ, Beaverton, OR



Thanks for joining us!

For more information about the GC3:
www.greenchemistryandcommerce.org

